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Information technology — Identification cards — Conformance test requirements for on-card biometric comparison applications

Technologies de l'information — Cartes d'identification — Exigences relatives aux essais de conformité pour les applications de comparaison biométrique sur carte

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Contents

Page

Foreword ... **iv**

Introduction ... **v**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions ... **2**

4 Abbreviated terms ... **4**

5 Test Methodology ... **5**
5.1 Test assertion ... 5
5.2 Test criteria ... 5

6 Conformance test requirements related to data for on-card comparison ... **5**
6.1 Biometric reference object handling ... 5
6.2 Configuration data (biometric verification) ... 5
6.2.1 Data objects for configuration data elements ... 5
6.2.2 Biometric comparison algorithm parameters ... 6
6.2.3 Biometric product identifier ... 8
6.3 Sharable Interface for multiple applications ... 8
6.3.1 File control parameter ... 8
6.3.2 Access rules ... 8
6.4 Retry counter management ... 8

7 Conformance test requirements for standard processes for on-card biometric comparison ... **9**
7.1 Standard Processes ... 9
7.1.1 Application identifier (AID) for on-card biometric comparison ... 9
7.1.2 Read biometric reference data ... 9
7.1.3 Enrolment ... 9
7.1.4 Verification ... 9
7.1.5 Termination of on-card comparison application ... 9
7.2 Comparison process and result output ... 10
7.2.1 Comparison process and result ... 10

8 Conformance test requirements for work-sharing mechanism using WSR protocol ... **10**
8.1 Biometric reference for work-sharing mechanism ... 10
8.2 Command and response bytes for work-sharing ... 10
8.3 Work-sharing management ... 11
8.3.1 Unique Identifier ... 11
8.3.2 Work-sharing procedure discovery ... 11
8.3.3 Work-sharing procedure operation ... 11

9 Conformance test requirements s for security policies for on-card biometric comparison ... **12**
9.1 Common security policies (CSP) for on-card biometric comparison ... 12
9.2 Security policies (SP1) for global comparison configuration data ... 12
9.3 Security policies (SP2) for local comparison configuration data ... 13

Annex A (normative) **Checklist for Biometric Data Template for Working-Sharing Mechanism** ... **15**

Annex B (informative) **Testing framework** ... **16**

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Foreword

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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).

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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*, Subcommittee SC 17, *Cards and personal identification*.

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Introduction

On-card biometric comparison provides a more secure biometric authentication in that the comparison is executed inside the ICC and the biometric reference is never be revealed outside the ICC. ISO/IEC 24787:2010 specifies a set of requirements for implementing biometric comparison inside the ICC. An ICC application that is claimed to be conformant to ISO/IEC 24787:2010, should fulfil a set of requirements that are stated in this International Standard. The requirements established are for both, the ICCs that fully process the on-card biometric comparison, and those using the work-sharing mechanism, as specified in ISO/IEC 24787:2010.

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Information technology — Identification cards — Conformance test requirements for on-card biometric comparison applications

1 Scope

This International Standard establishes

— conformance test requirements for using general framework for on-card comparison applications,

— conformance test requirements for using work-sharing mechanism for on-card comparison applications, and

— conformance test requirements to check accomplishment of security policies for on-card biometric comparison that are specified in ISO/IEC 24787:2010.

This International Standard only covers the testing of APDU command and response pairs involved for the ICC that has the capability to perform on-card biometric comparison based on ISO/IEC 24787:2010.

Measuring the performance of on-card biometric comparison algorithms in terms of error rates is not within the scope of this International Standard.

2 Normative references

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

ISO/IEC 7816-4:2013, *Identification cards — Integrated circuit cards — Part 4: Organization, security and commands for interchange*

ISO/IEC 7816-11:2004, *Identification cards — Integrated circuit cards — Part 11: Personal verification through biometric methods*

ISO/IEC 7816-15, *Identification cards — Integrated circuit cards — Part 15: Cryptographic information application*

ISO/IEC 19785-1, *Information technology — Common Biometric Exchange Formats Framework — Part 1: Data element specification*

ISO/IEC 19785-2, *Information technology — Common Biometric Exchange Formats Framework — Part 2: Procedures for the operation of the Biometric Registration Authority*

ISO/IEC 19785-3:2007, *Information technology — Common Biometric Exchange Formats Framework — Part 3: Patron format specifications*

ISO/IEC 19794 (all parts), *Information technology — Biometric data interchange formats*

ISO/IEC 24761:2009, *Information technology — Security techniques — Authentication context for biometrics*

ISO/IEC 24787:2010, *Information technology — Identification cards — On-card biometric comparison*

ISO/IEC 29794-1:2009, *Information technology — Biometric sample quality — Part 1: Framework*

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3 Terms and definitions

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

3.1
auxiliary data
data that is dependent on biometric modality and related to the biometric reference but does not include the biometric reference or a biometric sample

EXAMPLE Data such as orientation, scaling, etc.

3.2
biometric (adj.)
of or having to do with biometrics

Note 1 to entry: "biometric" should never be used as a noun.

Note 2 to entry: This definition is derived from SC37 SD2 *Harmonized biometric vocabulary.*

3.3
biometrics
automated recognition of individuals based on their behavioral and biological characteristics

Note 1 to entry: This definition is derived from SC37 SD2 *Harmonized biometric vocabulary*.

3.4
biometric claim
claim that a biometric capture subject is the bodily source of a specified biometric reference

3.5
biometric data
biometric sample or aggregations of biometric samples at any stage of processing, biometric reference, biometric feature or biometric property

Note 1 to entry: This definition is derived from SC37 SD2 *Harmonized biometric vocabulary*.

3.6
biometric data format
structure for representing biometric data

3.7
biometric Information Template
descriptive information regarding the associated biometric data

Note 1 to entry: This definition is derived from ISO/IEC 7816-11:2004.

3.8
biometric product identifier
unique identifier registered with the registration authority in accordance with ISO/IEC 19785-1

3.9
biometric property
descriptive attributes of the biometric data subject estimated or derived from the biometric sample by automated means

Note 1 to entry: This definition is derived from SC37 SD2 *Harmonized biometric vocabulary*.

3.10
biometric reference
one or more stored biometric samples, biometric templates or biometric models attributed to a biometric data subject and used for comparison

Note 1 to entry: This definition is derived from SC37 SD2 *Harmonized biometric vocabulary*.

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