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Information technology — Biometric data interchange formats —

Part 1: **Framework**

Technologies de l'information — Formats d'échange de données biométriques —

Partie 1: Cadre général

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

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

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.

ISO/IEC 19794-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 37, *Biometrics*.

ISO/IEC 19794 consists of the following parts, under the general title *Information technology — Biometric data interchange formats*:

— *Part 1: Framework*

— *Part 2: Finger minutiae data*

— *Part 3: Finger pattern spectral data*

— *Part 4: Finger image data*

— *Part 5: Face image data*

— *Part 6: Iris image data*

— *Part 7: Signature/sign time series data*

— *Part 8: Finger pattern skeletal data*

— *Part 9: Vascular image data*

— *Part 10: Hand geometry silhouette data*

The following part is under preparation:

— *Part 11: Signature/sign processed dynamic data*

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Introduction

This part of ISO/IEC 19794 is intended to describe the general aspects and requirements for defining biometric data interchange formats.

The notation and transfer formats provide platform independence and separation of transfer syntax from content definition. This part of ISO/IEC 19794 defines what is commonly applied for biometric data formats, i.e. the standardization of the common content, meaning, and representation of biometric data formats of biometric types considered in the specific parts of ISO/IEC 19794.

Figure 1 shows the interrelation of biometric-related ISO/IEC standardization fields. Biometric data complying with a biometric data interchange format of ISO/IEC 19794 represent the core component of biometric interoperability. Biometric formats frameworks such as ISO/IEC 19785 (CBEFF) serve as a wrapper around biometric data. Since biometric data are sensitive data and subject to attack, cryptographic protection is required in interchange environments. Biometric properties with respect to profiles, security evaluation and performance also play an important role. Biometric interfaces are essential to facilitate easy integration and usage of biometric components. The emerging harmonized vocabulary is recommended for use in describing biometric technology. The deployment of applications using biometric verification or identification takes place within the context of societal and cross-jurisdictional requirements.

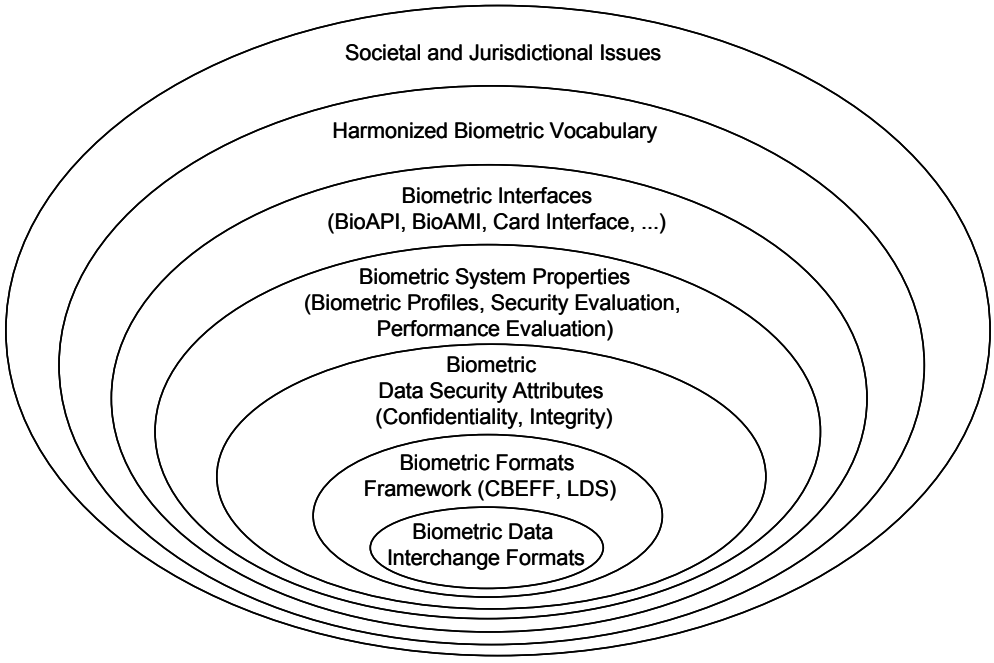

Figure 1 — General interrelation model of biometric issues

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Information technology — Biometric data interchange formats —

Part 1: Framework

1 Scope

This part of ISO/IEC 19794 specifies

— general aspects for the usage of biometric data structures,

— the types of biometric data structure,

— a naming concept for biometric data structures,

— a coding scheme for format types.

Biometric data include but are not limited to finger minutiae, finger pattern, finger image, face image, iris image and signature/sign behavioural data.

2 Normative references

The following referenced documents are indispensable for the application 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 7816-11:2004, *Identification cards – Integrated circuit cards – Part 11: Personal verification through biometric methods*

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

ISO/IEC 19785-3:—, *Information technology – Common Biometric Exchange Formats Framework – Part 3: Patron format specifications* [1]

[1] To be published.

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