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Part 7: Signature/sign time series data

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Partie 7: Données de série chronologique de signature/signe

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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.

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 or www.iec.ch/members_experts/refdocs).

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) or the IEC list of patent declarations received (see patents.iec.ch).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html. In the IEC, see www.iec.ch/understanding-standards.

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

This third edition cancels and replaces the second edition (ISO/IEC 19794-7:2014), which has been technically revised. It also incorporates the Amendment ISO/IEC 19794-7:2014/Amd 1:2015.

The main changes are as follows:

— inclusion of ISO/IEC 19794-7:2014/Amd 1:2015, *XML encoding*, and correction of technical defects therein.

A list of all parts in the ISO/IEC 19794 series can be found on the ISO and IEC websites.

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.

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Information technology — Biometric data interchange formats —

Part 7: Signature/sign time series data

1 Scope

This document specifies data interchange formats for signature/sign behavioural data captured in the form of a multi-dimensional time series using devices such as digitizing tablets or advanced pen systems. The data interchange formats are generic, in that they can be applied and used in a wide range of application areas where handwritten signs or signatures are involved. No application-specific requirements or features are addressed in this document.

This document contains:

— a description of what data can be captured;

— three binary data formats for containing the data: a full format for general use, a compression format capable of holding the same amount of information as the full format but in compressed form, and a compact format for use with smart cards and other tokens that does not require compression/decompression but conveys less information than the full format;

— an XML schema definition; and

— examples of data record contents and best practices in capture.

Specifying which of the format types and which options defined in this document are to be applied in a particular application is out of scope; this needs to be defined in application-specific requirements specifications or application profiles.

It is advisable that cryptographic techniques be used to protect the authenticity, integrity, and confidentiality of stored and transmitted biometric data; yet such provisions are beyond the scope of this document.

This document also specifies elements of conformance testing methodology, test assertions and test procedures as applicable to this document. It establishes test assertions on the structure and internal consistency of the signature/sign time series data formats defined in this document (type A level 1 and 2 as defined in ISO/IEC 19794-1) and semantic test assertions (type A level 3 as defined in ISO/IEC 19794-1).

The conformance testing methodology specified in this document does not establish:

— tests of other characteristics of biometric products or other types of testing of biometric products (e.g. acceptance, performance, robustness, security); or

— tests of conformance of systems that do not produce data records claimed to conform to the requirements of this document.

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.

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ISO/IEC 8825-1, *Information technology — ASN.1 encoding rules — Part 1: Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER) and Distinguished Encoding Rules (DER)*

ISO/IEC 19794-1, *Information technology — Biometric data interchange formats — Part 1: Framework*

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