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Information technology — Transition examples from the ISO/IEC 19794:2005 series to the ISO/IEC 39794 series for ID documents

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National foreword

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Foreword

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

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Introduction

Face images, fingerprints and iris patterns have been used for many decades to verify the identity of individuals. In recent years, digital face images have been used in many applications of automated face recognition. Photographic formats are standardized, for example for electronic machine-readable travel documents (eMRTDs), identity documents and driver's licences.

Biometric data interchange formats enable the interoperability of different biometric systems. The first generation of biometric data interchange formats was published in 2005 with the first edition of the ISO/IEC 19794 series. From 2011 onwards, the second generation of biometric data interchange formats was published, in which new data elements related to biometric sample quality were added and header data structures were harmonized across all parts of the ISO/IEC 19794 series, along with XML (Extensible Markup Language) encoding.

To meet new and emerging market demands and to avoid future compatibility issues, ISO/IEC JTC 1/SC 37 developed the ISO/IEC 39794 series. This was the third generation of biometric data interchange formats, defining extensible biometric data interchange formats capable of including future extensions in a structured manner. Extensible specifications in ASN.1 (Abstract Syntax Notation One) and the Distinguished Encoding Rules of ASN.1 form the basis for encoding biometric data in binary tag-length-value formats. XML Schema Definitions form the basis for encoding biometric data in XML.

The extended and new data formats documented in the ISO/IEC 39794 series specify application-specific profiles. The structure of the data format in this series is not backward compatible with the previous generations. However, this new generation addresses, for the first time, a mechanism for maintaining future extensions in a backwards and forwards compatible manner.

This document, ISO/IEC TR 49794, is intended to assist organizations in moving from the first edition of the ISO/IEC 19794 series (2005) to the current edition of the ISO/IEC 39794 series (2019) for ID documents by providing transition examples.

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1 Scope

This document provides transition examples from ISO/IEC 19794-4:2005 and ISO/IEC 19794-5:2005 formats to ISO/IEC 39794-4:2019 and ISO/IEC 39794-5:2019 formats for eMRTD application. This document also provides an implementation example for the ISO/IEC 39794-6:2021 format.

This document includes:

— information for eMRTD issuers and eMRTD-reader vendors;

— summarized tables of data elements of ISO/IEC 19794-4:2005 and ISO/IEC 19794-5:2005 and ISO/IEC 39794-4:2019, ISO/IEC 39794-5:2019 and ISO/IEC 39794-6:2021;

— correspondence tables of data elements between ISO/IEC 19794-4:2005 and ISO/IEC 19794-5:2005 and ISO/IEC 39794-4:2019 and ISO/IEC 39794-5:2019, providing:

  — information on whether each data element is normative or optional, and

  — a brief note of each data element from the viewpoint of transition;

— tag, length, value (TLV) data examples of ISO/IEC 39794-4:2019, ISO/IEC 39794-5:2019 and ISO/IEC 39794-6:2021 for implementation, and,

— tag lists of ISO/IEC 39794-4:2019, ISO/IEC 39794-5:2019 and ISO/IEC 39794-6:2021, and an extended example of ISO/IEC 39794-5 as informative annexes.

The following are not within the scope of this document:

— second and later editions of the ISO/IEC 19794 series (2011 and after), and,

— ASN.1 formats and XML formats specified in the ISO/IEC 39794 series.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

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

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

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

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