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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 45284.5-2025

**Information technology - Extensible biometric data interchange
formats - Part 5: Face image data
(English Translation)**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is Part 5 of GB/T 45284 "Information Technology Extensible Biometric Identification Data Exchange Format". GB/T 45284 The following parts have been published.

- Part 1: Framework;
- Part 4: Fingerprint image data;
- Part 5: Face image data;
- Part 6: Iris image data;
- Part 9: Vascular image data;

--- Part 16: Full body image data;

--- Part 17: Gait image sequence data.

This document is equivalent to ISO /IEC 39794-5:2019 "Information technology - Extensible biometric data exchange format Part 5 Part. Face Image Data. The following minimal editorial changes were made to this document.

---Increased 3.45 bets;

---Based on the large number of applications related to elderly people's faces, a note was added to D.2.4 to supplement the content related to elderly people's face collection. To guide the facial image collection of the elderly.

Introduction

GB/T 45284 establishes an extensible biometric data exchange format and defines the basic rules, Common data elements and data structures, basic test methods; for different biometric recognition modalities, scalable The data element definitions, data formats, test methods, and application guidelines for typical application scenarios of the data exchange format are provided.

GB/T 45284 "Information Technology Extensible Biometric Identification Data Exchange Format" is intended to consist of seventeen parts.

--- Part 1: Framework. The purpose is to establish rules, guidelines, common data elements, Common data structures and compliance testing methods.

--- Part 2: Fingerprint detail point data. The purpose is to establish an extensible fingerprint detail point data record exchange format and Compliance test methods.

--- Part 3: Fingerprint data. The purpose is to establish an extensible fingerprint data record exchange format and conform to Sex testing method.

--- Part 4: Fingerprint image data. The purpose is to establish an extensible fingerprint image data record exchange format and conform to Sex testing method.

--- Part 5: Face image data. The purpose is to establish an extensible face image data record exchange format and conformity Sex testing method.

--- Part 6: Iris image data. The purpose is to establish an extensible iris image data record exchange format and conformity Sex testing method.

--- Part 7: Signature/signature time series data. The purpose is to establish an extensible signature/signature data record Interchange formats and conformance testing methods.

--- Part 8: Fingerprint skeleton data. The purpose is to establish an extensible fingerprint skeleton data record exchange format and conform to Sex testing method.

- Part 9: Vascular image data. The purpose is to establish an extensible data record exchange format for vascular image data and Compliance test methods.
- Part 10: Hand shape profile data. The purpose is to establish an extensible data record exchange format for hand shape profile data and Compliance test methods.
- Part 11: Processed signature/signature dynamic data. The purpose is to establish an extensible processed signature/signature dynamic Data record exchange format and compliance test method for dynamic data.
- Part 12: Facial feature data. The purpose is to establish an extensible facial feature data record exchange format and conformity Sex testing method.
- Part 13: Sound data. The purpose is to establish an extensible sound data record exchange format and conformity test method.
- Part 14: DNA data. The purpose is to establish an extensible DNA data record exchange format and conformance test Try method.
- Part 15: Palmprint image data. The purpose is to establish an extensible data record exchange format for human palmprint images and Compliance test methods.
- Part 16: Whole body image data. The purpose is to establish an extensible whole body image data record exchange format and conformity Sex testing method.
- Part 17: Gait image sequence data. The purpose is to establish an extensible data record exchange format for gait image sequences. format and compliance test methods.

Face images have been widely used to verify personal identity, including manual inspection and computer automatic face recognition.

In applications where images are used for personal identity authentication, an exchangeable digital face image data format standard is needed to achieve interoperability.

This interoperability is necessary, and its typical application scenario is the electronic passport system, in which facial images are stored for use by The multiple purposes of automated border control.

In order to standardize this interoperability, the International Standards Organization ISO /IEC compiled and released the first generation of face image data exchange in 2006.

The format standard ISO /IEC 19794-5:2006 "Biometric data exchange format Part 5: Face image data" has been It has been transformed into my country's recommended national standard GB/T 26237.5-2014. In 2011, ISO /IEC revised ISO /IEC 19794-5:2006.

Based on the revision and update of the standard, the second generation face image data exchange format standard ISO /IEC 19794-5:2011 was released.

The first generation standard (ISO /IEC 19794-5:2011) adds some new data elements

based on the first generation standard (ISO /IEC 19794-5:2006).

For example, the elements related to face image quality, the ISO /IEC 19794-5:2011 standard has been converted into a recommended national standard in my country. Standard GB/T 26237.5-2023.

Based on the limitations of the overall design of the ISO /IEC 19794 series of standards, ISO /IEC 19794-5:2006 is different from ISO /IEC 19794-5.

2011 is not compatible, which brings difficulties to the expansion of products applicable to ISO /IEC 19794-5:2006 to support ISO /IEC 19794-5:2011. The obstacle.

In order to avoid compatibility issues in the future, the ISO /IEC organization has compiled the third-generation face image data exchange format standard, which abandons Instead of further revising and updating the ISO /IEC 19794-5 standard, the standard was redesigned and renamed ISO /IEC 39794-5 "Information The Scalable Biometric Data Exchange Format Part 5: Face Image Data was published in 2019.

This document aims to provide a general and extensible face image data format for face recognition application systems that need to exchange face image data. Typical applications are.

---Automatic verification (one-to-one comparison) and identification (one-to-many comparison) of facial biometrics;

---Manual verification of biometric claims by comparing the data subject to a facial image, including checking for sufficient detail face image.

In addition to the data format, this document also specifies the basic requirements for specific application scenarios, including scene restrictions, shooting parameter requirements and data The basic requirements for these application scenarios are specified in Appendix D.

This document proposes a mechanism for maintaining future extensions in a forward-and-backward compatible manner. This will mean that parsers will be able to read data records.

The parser can record and understand data items formatted with a standard version that is earlier, contemporary, or newer than the parser.

All the new data items will not interrupt the parsing process. However, during the parsing process, these new data can be ignored.

An updated version of a document shall include at least the necessary data items of the previous version.

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