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Information technology — Biometric data interchange formats — Part 5: Face image data

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Foreword

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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 the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member 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.

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Introduction

Face images, also commonly referred to as displayed portraits, have been used for many decades to verify identity of persons. In recent years, digital face images are used in many applications including human examination as well as computer automated face recognition. Although photographic formats have been standardized in some cases such as passport and driver license, it is also demanded to define a standard data format of digital face images to allow interoperability among vendors.

This document is intended to provide a face image format for face recognition applications requiring exchange of face image data. The typical applications are:

- Human examination of facial images with sufficient resolution to allow a human examiner to ascertain small features such as moles and scars that might be used to verify identity;
- Human verification of identify by comparison of persons against facial images;
- Computer automated face identification (one-to-many searching);
- Computer automated face verification (one-to-one matching).

To enable many applications on variety of devices, including devices that have the limited resources required for data storage, and to improve face recognition accuracy, this document specifies not only a data format, but also scene constraints (lighting, pose, expression, etc.), photographic properties (positioning, camera focus, etc.), digital image attributes (image resolution, image size, etc.).

Several image types are introduced to define categories that satisfy requirements of some applications. Each requirement is specified for each image type.

The record format specified in this document is designed to be embedded in a CBEFF-compliant structure specified in the multi-part Standard ISO/IEC 19785. The embedment in the CBEFF structure is described in ISO/IEC 19794-1:2006.

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