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Information technology — Biometric profiles for interoperability and data interchange —

Part 3: Biometrics-based verification and identification of seafarers

Technologies de l'information — Profils biométriques pour interopérabilité et échange de données —

Partie 3: Vérification basée sur la biométrie et identification des navigateurs

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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 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 24713-3 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 37, *Biometrics*.

ISO/IEC 24713 consists of the following parts, under the general title *Information technology — Biometric profiles for interoperability and data interchange*:

— *Part 1: Overview of biometric systems and biometric profiles*

— *Part 2: Physical access control for employees at airports*

— *Part 3: Biometrics-based verification and identification of seafarers*

Introduction

The International Labour Organization, in response to a request from the International Maritime Organization, has adopted the Seafarers' Identity Documents Convention (Revised), 2003 (No.185). This convention requires all seafarers from ratifying nations to be issued with an identity document that follows a uniform format, has specific physical security features, and uses biometrics to link the seafarer to their identity document. Currently Convention No. 185 specifies the use of two fingerprints stored in a two-dimensional bar code, but the choice of biometric modality and storage medium could be changed provided backwards compatibility is maintained.

In order to support a globally interoperable system of Seafarers' Identity Documents (SIDs), this part of ISO/IEC 24713 establishes a biometric profile to define how to use biometrics for verification and identification of seafarers at the various stages of document issuance and inspection. It defines a set of base standards and criteria for applying those standards in applications where identity documents are issued to seafarers and biometrics are used to link each document to the seafarer to whom it was issued. It attempts to provide information on the processes surrounding the enrolment and verification or identification of seafarers so that the biometric components of the system can be used in a proper context. It also addresses other system components such as the storage medium for the biometric data and the security of the system, since these will affect the use of the biometric technology. This part of ISO/IEC 24713 is intended for use in the maritime industry, but can be applicable to other situations where identification and verification of document holders are necessary during document issuance or inspection.

The use of biometric data includes identification checks during the issuance of the document, when watchlists can be checked and the entire database of existing seafarers can be searched to prevent a single seafarer from establishing multiple identities.

It also includes the use of biometric data for verification when a card is presented at a control point by a person claiming to be the seafarer to whom the card was issued. Such control points can include port entrances, ship gangplanks, border crossing points where a seafarer must verify themselves to immigration authorities and any other situation where the seafarer needs to verify their identity as a seafarer. This verification is expected to be performed not only indoors under controlled conditions, but also outdoors in difficult conditions, including harsh wet weather, salt spray, high humidity and high temperatures. Biometric equipment and credentials have to be capable of functioning in all such environments.

This part of ISO/IEC 24713 is not intended in any way to conflict with the existing international Convention No. 185 established by the International Labour Organization and ratified by various member states of the ILO. Instead, the approaches profiled in this part of ISO/IEC 24713 can be used to satisfy the requirements of the current version of Convention No. 185 while also allowing alternative approaches outlined in this part of ISO/IEC 24713 to be used in the future by the ILO if the technical documents associated with or annexes of Convention No. 185 are modified. To this end, the concept of backwards compatibility is stressed. The fundamental choices already made by the ILO of the use of a minutiae-based, two-finger template for seafarer verification, of the inclusion of a photograph and signature in the visible area of the SID, and of the use of a two-dimensional barcode as a storage medium are respected in this profile. Where alternative technology choices are promoted, they are defined in such a way that there will still be backwards compatibility with existing SIDs.

This part of ISO/IEC 24713 defines a CBEFF patron format in Annex B and a CBEFF Security Block in Annex C that are suitable for the limited storage available in a two dimensional barcode and which may be relevant for other storage constrained environments.