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Traveller processes for biometric recognition in automated border control systems

Processus relatifs au voyageur pour la reconnaissance biométrique par les systèmes de contrôle aux frontières automatisées

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Contents

Page

Foreword ... **iv**

1 Scope ... **1**

2 Terms and definitions ... **1**

3 Key drivers ... **2**

4 Overview of automated border control system ... **2**
4.1 General ... 2
4.2 The biometric process at the border ... 2
4.3 The processing steps ... 3

5 Key Success Factors ... **4**
5.1 Operational considerations ... 4
5.1.1 Traveller considerations ... 4
5.1.2 Traveller processing ... 5
5.1.3 Operational environment ... 5
5.1.4 Border stakeholder engagement ... 5
5.1.5 System management ... 6
5.1.6 Vulnerabilities ... 6
5.2 Technical considerations ... 7
5.2.1 Security/Privacy ... 8
5.3 Standards for interoperability ... 8
5.4 Enrolment for automated border control systems ... 8
5.5 Privacy background for ABC systems ... 8

6 Guidance relating to specific modalities ... **9**
6.1 Face ... 9
6.1.1 Presentation of subject to camera: ... 9
6.1.2 Other factors ... 9
6.2 Vascular (vein) ... 9
6.2.1 General ... 9
6.2.2 Presentation of subject to vein sensors ... 10
6.2.3 Other factors ... 10
6.3 Fingerprint ... 10
6.3.1 General ... 10
6.3.2 Enrolment ... 11
6.3.3 Verification ... 11
6.4 Iris ... 12
6.4.1 Presentation of subject to camera ... 12

Annex A (informative) **Different types of ABC systems** ... **13**

Annex B (informative) **Examples of automated border control systems** ... **14**

Annex C (informative) **Malaysia Autogate System** ... **15**

Annex D (informative) **Nexus iris recognition system** ... **18**

Annex E (informative) **United Kingdom** ... **19**

Annex F (informative) **Global Entry** ... **22**

Annex G (informative) **Examples of Signage used in ABC Systems** ... **23**

Bibliography ... **26**

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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. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: Foreword — Supplementary information.

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, Subcommittee SC 37, *Biometrics*.

This corrected version of ISO/IEC TR 29195:2015 incorporates the following corrections.

Title: The title was corrected to *Traveller processes for biometric recognition in automated border control systems.*

5.4: The footnote "to be published" was removed from the reference to ISO/IEC TR 29196.

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Traveller processes for biometric recognition in automated border control systems

1 Scope

This Technical Report provides recommended best practices and processes for automated border control systems using biometrics to verify an identity claim by a traveller that uses an ePassport or equivalent identity card as the basis for the claim. It indicates areas that organisations proposing to use biometric technologies will need to address during design, deployment, and operation. Much of the information is generic to all types of applications especially around signage; however, some information will be specific to the modality of biometric technology used and how that technology is physically implemented.

Biometric automated border control systems can have various biometric implementations, they can be manned or unmanned, and might or might not require the presentation of documentation. This Technical Report points out the different requirements relating to many of the different types of biometric application implementations.

The following are out of scope for this Technical Report.

a. Watch lists, although biometric technology can be used to check watch lists as part of traveller processing in automated border control systems.

b. Manual customs and immigration systems mandated by government for travellers.

c. Trusted traveller systems (including token-less systems).

d. ePassport PKI: Whilst PKI/PKD systems exist, they are not covered in this Technical Report. This subject is referenced in ICAO 9303.

The recommendations contained in this Technical Report are not mandatory.

2 Terms and definitions

For the purposes of this document, the following terms apply.

2.1
traveller
person subject to biometric verification by an automated border control system

2.2
automated border control system
employs biometric verification of travellers to meet the requirements and regulations of border stakeholders

Note 1 to entry: Often referred to as ABC systems.

2.3
border stakeholder
state or state-sanctioned entity that carries out border functions including, but not limited to, customs, immigration, transportation, and tourism

2.4
automated gate
subsystem of an automated border control system that incorporates physical entry/exit control, travel document reading (where applicable), and biometric verification.

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2.5
kiosk
separate physical device that is part of the ABC system which can be used for assessing the eligibility of travellers for self-process.

3 Key drivers

Automated border control systems using biometrics have several key business drivers including increases in security, improving business processes and improving the traveller‘s experiences. Airlines are now starting to use larger aircraft, fitting more travellers on existing aircraft and deploying more flights. This creates problems when processing travellers due to the increase in traveller numbers and creates many key drivers for authorities (airport, border control etc.) to look at automated processing of travellers.

The key drivers for use of automated border control systems include to:

— Reduce the costs of the related processing of travellers.

— Decrease the traveller processing times.

— Make better use of finite floor space in border control processing areas.

— Contribute to making the traveller experience through border control points a positive one.

— Provide consistent and secure border control processing of travellers.

— Provide a lower cost scalable platform to meet growing traveller processing demands into the future.

— Give greater flexibility for workforce planning including staffing levels for the processing of increasing traveller numbers.

4 Overview of automated border control system

4.1 General

Automated border control systems may consist of one or more physical devices with which the traveller needs to interact.

Some systems use a separate physical device (for example: a kiosk) that travellers must use to determine their eligibility to ‘self-process’. In other words, to have their identity claim processed automatically at a subsequent and separate physical device.

Other systems undertake the eligibility check and identify claim processing using a single device.

Typically, automated border control systems include other border control processing as required by a border control authority in addition to the eligibility and identity claim processing.

NOTE ABC systems are not intended to replace all manual/human border control policies and procedures. Current border control initiatives demonstrate a strong need to maintain human oversight and control over ABC systems.

4.2 The biometric process at the border

The automated border control system verifies the traveller’s identity claim by capturing the biometric characteristic presented by the traveller (for example: face or fingerprint) and, using the biometric verification system component, comparing it with that encoded in the identity document.

The system will then, based on results, accept the claim and allow the traveller to pass, or not accept the claim and refer them for processing by a border control officer.

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