TECHNICAL REPORT

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Information Technology — Biometrics — Guide on designing accessible and inclusive biometric systems

Technologies de l'information — Biométrie — Guide sur la conception des systèmes biométriques accessibles et inclusifs

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Foreword

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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*.

Introduction

This Technical Report provides support for the further development of ISO/IEC biometrics international standards in the context of cross-jurisdictional and societal applications of biometrics, including standardization of both existing and future technologies.

ISO/IEC/TR 24714-1:2008 lays down the principle that inclusive designs of biometric systems are ones that as many subjects within the target population as is reasonably possible can use the systems effectively and with minimum discomfort. This Technical Report offers guidance in the dialogue between writers of system specifications for biometric systems and the developers of biometric systems, in reaching a common understanding of the target population and agreement of what is reasonably possible. This Technical Report aims to aid the procurement process of biometric systems, provide a means of acceptance of inclusive design, and ultimately improve accessibility of biometric systems.

Central to a common understanding of target populations is an agreed taxonomy. This Technical Report establishes taxonomy based upon a person's inability to perform a function. This enables a writer of a system specification for a biometric system to specify those categories that must be handled by the primary biometric system and those categories that would be required to use the exception handling process. Conversely the taxonomy enables biometric system suppliers to specify which parts of the population they have accommodated for in their designs.

Agreed quantification of the target population and how accessibility and inclusivity is to be achieved enables acceptance testing to be devised.

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1 Scope

Procurements of biometric systems often stipulate requirements for the systems to be inclusive and make provision for exception handling.

This Technical Report provides guidance for biometric system design and procurement to handle the range of accessibility and usability issues. This report will build upon the generic guidance in ISO/IEC/TR 24714-1, *Information technology — Biometrics — Jurisdictional and societal considerations for commercial applications – Part 1: General guidance*.

The biometric modalities addressed in this technical report include those described in the ISO/IEC 19794, (All parts), *Information Technology — Biometric data interchange formats:*

— Finger

— Face

— Iris

— Signature

— Vascular

— Hand-geometry

— Voice