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Guidance for biometric enrolment

Directives pour l'inscription biométrique

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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*, Subcommitee SC 37, *Biometrics*.

Introduction

One of the most important contributions to a successful biometric-based recognition system is a consistent enrolment service that generates the biometric data required for subsequent recognition of individuals. Subsequent verifications or identifications will be compared with the biometric data collected at enrolment. If the quality of capture at enrolment is not maintained consistently, the operators of a recognition system which depends on a good enrolment are likely to experience unreliable performance. For those who are enrolled in a verification system, a poor quality enrolment will result in inconvenience should they fail to be recognized. (Readers of this report should note that quality has a specific meaning when applied to biometric systems; a high quality capture is one that results in biometric data that provides good match scores when compared with other high quality images from the same biometric feature.)

By analysing the requirements for a good enrolment from the perspectives of a range of stakeholders, it is possible to derive a set of principles to guide the development of a biometric enrolment policy and the deployment of a service. Where enrolment is outsourced to a third party, it is extremely important to be able to measure quality metrics rather than quantity metrics, since the technical and business objectives of the two organisations (the Relying Party and the Enrolment Authority as defined in this document) may, in general, not be aligned.

Although the recommendations and guidelines in this report are directed in the main at the parties responsible for the enrolment itself and for management of the enrolment service (noting that these two entities may be one and the same), they will also be of value to the designers and developers of enrolment systems.

Guidance for biometric enrolment

1 Scope

This report consolidates information relating to successful, secure and usable implementation of biometric enrolment processes, while indicating areas of uncertainty that organisations proposing to use biometric technologies will need to address during procurement, design, deployment and operation. Much of the information is generic to many types of application e.g. from national scale commercial and government applications, through to closed user group systems for in-house operations, and to consumer applications where convenience rather than security is the primary driver for adoption of biometric technologies.

The report points out the differences in operation relating to specific types of application, e.g. where self-enrolment is more appropriate than attended operation. This report will focus in the main on fixed location enrolments at a number of sites in an organization, where there is an attendant who supports the biometric applicant in effecting a successful enrolment, and where enrolment is a mandatory requirement. In summary, this report consolidates information relating to better practice implementation of biometric enrolment capability in various business contexts including considerations of legislation, policy, process, function (system) and technology.

The report provides guidance as to the collection and storage of biometric enrolment data and the impact on dependent processes of verification and identification. This report will not aim to include material specific to forensic and law enforcement applications.

The recommendations contained in the report are not mandatory.