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Foreword

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

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Introduction

The development of a mass-market in connected mobile devices, e.g. smartphones and tablets, has allowed users the convenience of accessing remotely a variety of services which previously needed face-to-face interactions or to have physical access to the service provider's infrastructure.

For some services, convenience should nevertheless remain secondary to the security needs. These services include for example remote payment on commercial websites, banking transactions or certified signing of official documents. To allow these trustful interactions, the need of reliable user authentication is of paramount importance.

One way to certify the user's identity is to implement biometric authentication ability in the device.

It is then important to properly evaluate the accuracy of biometric authentication to ensure that security is strong enough to allow mobile sensible transactions.

Several biometric modalities are widely utilized in consumer-focused mobile devices. Evaluation of biometric performance for all of these modalities should be consistent and follow the same guidelines, methodologies and requirements. Nevertheless, some modality specific considerations should also be addressed when conducting an evaluation. This document provides a general framework usable for all modalities as well as dedicated recommendations when needed.

ISO/IEC 19795-1 describes three types of biometric performance evaluations: technology, scenario and operational evaluations. ISO/IEC TR 30125[1] recommends scenario evaluation as the most proper type of evaluation for testing biometric performance on mobile devices.

A scenario evaluation is an "end-to-end" biometrics evaluation in which the full system is tested with a careful control of the surrounding conditions. However, when applying this type of evaluation to biometric systems working on mobile devices, testing and reporting methods should consider the particularities and constraints of these use cases.

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