International Standard

ISO/IEC 30107-4

Information technology — Biometric presentation attack detection —

Part 4: Profile for testing of mobile devices

Technologies de l'information — Détection d'attaque de présentation en biométrie —

Partie 4: Profil pour les essais des dispositifs mobiles

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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*.

This second edition cancels and replaces the first edition (ISO/IEC 30107-4:2020), which has been technically revised.

The main changes are as follows:

— removal of terms and definitions present in other parts of the ISO/IEC 30107 series;

— addition of FIDO biometrics requirements;

— addition of Clause 4;

— best practice number of PAI species used in evaluation changed from minimum 3 to minimum 6;

— FIDO biometric presentation attack detection evaluation requirements has been moved to Clause 7;

— removal of Annex A: Roles in PAD testing of mobile devices;

— other minor wording changes to align with ISO/IEC 30107-3.

A list of all parts in the ISO/IEC 30107 series can be found on the ISO and IEC websites.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

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Introduction

The presentation of an artefact or of human characteristics to a biometric capture subsystem in a fashion intended to interfere with system policy is referred to as presentation attack. The ISO/IEC 30107 series deals with techniques for the automated detection of presentation attacks. These techniques are called presentation attack detection (PAD) mechanisms. ISO/IEC 30107-3 establishes principles and methods for performance assessment of PAD mechanisms and for reporting the results thereof.

PAD mechanisms are commonly integrated into mobile devices that use biometrics.[1][2] The following characteristics of mobile devices necessitate the development of an ISO/IEC 30107-3 profile specific to mobile devices:

— Mobile devices often have accelerated product development timelines, therefore time and resources for PAD testing can potentially be limited.

— A single type of biometric subsystem is often integrated into a wide range of mobile devices, such that results from a single test can be applicable to multiple types of mobile devices with the same operating system (OS) or using the same development language.

— Biometric subsystems integrated into mobile devices are typically closed systems, such that performance testing takes place through a full-system evaluation.

This document provides requirements for assessing the performance of PAD mechanisms on mobile devices with local biometric recognition. A general profile is provided in Clause 5 as well as a profile specific to Fast IDentity Online (FIDO) biometric presentation attack detection evaluation requirements in Clause 6.[3]

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Information technology — Biometric presentation attack detection —

Part 4:
Profile for testing of mobile devices

1 Scope

This document is a profile that specifies requirements for testing biometric presentation attack detection (PAD) mechanisms on mobile devices with local biometric recognition and on biometric modules integrated into mobile devices.

The profile lists requirements from ISO/IEC 30107-3 that are specific to mobile devices. It also establishes requirements that are not present in ISO/IEC 30107-3. For each requirement, the profile defines an "Approach in PAD Tests for Mobile Devices". For some requirements, numerical values or ranges are provided in the form of best practices.

This profile is applicable to mobile devices that operate as closed systems with no access to internal results, including mobile devices with local biometric recognition as well as biometric modules for mobile devices.

This document is not applicable to mobile devices with solely remote biometric recognition.

The attacks considered in this document take place at the capture device during the presentation and collection of biometric characteristics. Any other attacks are outside the scope of this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 2382-37, *Information technology — Vocabulary — Part 37: Biometrics*

ISO/IEC 19795-1, *Information technology — Biometric performance testing and reporting — Part 1: Principles and framework*

ISO/IEC 30107-1, *Information technology — Biometric presentation attack detection — Part 1: Framework*

ISO/IEC 30107-3, *Information technology — Biometric presentation attack detection — Part 3: Testing and reporting*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 2382-37, ISO/IEC 19795-1, ISO/IEC 30107-1, ISO/IEC 30107-3 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

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