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Biometrics — Identity attributes verification services —

Part 1: IAVS services

Biométrie — Services de vérification d'attributs d'identité — Partie 1: Services IAVS

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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.

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 or www.iec.ch/members_experts/refdocs).

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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 30108-1:2015), which has been technically revised.

The main changes are as follows:

— Biometric Identity Assurance Services (BIAS) have been renamed to Identity Attributes Verification Services (IAVS), including in the title of this document;

— the use of encounters has been clarified, and the encounter-based parameters in the services have been debugged;

— fusion identity list type has been removed;

— the information about capabilities has been restructured;

— the lack of definition of namespaces related to the use of ISO/IEC 19785-3, has been resolved.

A list of all parts in the ISO/IEC 30108 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

This document defines the architecture, operations, data elements, and basic requirements for Identity Attributes Verification Services – a framework for the implementation of generic, biometric-based identity services within a service-oriented environment. An identity in the context of IAVS comprises a subject, biographic data, and biometric data. Other parts are intended to define specific IAVS implementations (or bindings) within specific environments, for example, Simple Object Access Protocol (SOAP) Web services.

IAVS services are generic in nature, being modality neutral and not targeted at any particular business application. These services include those related to identity data management, transformation, and biometric comparison. Services are invoked by an IAVS requester and implemented by an IAVS service provider (responder). This document does not prescribe the architecture or business logic of either the requester or service provider.

Two categories of identity services are defined in this document – primitive and aggregate. Primitive services are more atomic and well-defined, whereas the aggregated services tend to be higher level and enable more flexibility on the part of the IAVS service provider.

Two identity models are also defined in this document – person-centric and encounter-based. Person-centric systems maintain a single up-to-date record (set of data) for a given subject, whereas an encounter-based system retains data related to each interaction the subject has with the system.

This document represents a version of IAVS subsequent to that previously standardized by INCITS and OASIS, under the name "Biometric Identity Assurance Services (BIAS)". In this second edition of the document, it is therefore denoted as Version 3.0.

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Biometrics — Identity attributes verification services —

Part 1:
IAVS services

1 Scope

This document defines biometric services used for identity assurance that are invoked over a services-based framework. It provides a generic set of biometric and identity-related functions and associated data definitions to allow remote access to biometric services.

The binding of these services to specific frameworks is not included in this document but is the subject of other parts of the ISO/IEC 30108 series.

Although focused on biometrics, this document includes support for other related identity assurance mechanisms such as biographic and document capabilities. IAVS is intended to be compatible with and used in conjunction with other biometric standards as described in Clause 6.

Specification of biometric functionality is limited to remote (backend) services. Services between a client-side application and biometric capture devices are not within the scope of this document.

Integration of biometric services as part of an authentication service or protocol is not within 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 19785-1, *Information technology — Common Biometric Exchange Formats Framework — Part 1: Data element specification*

ISO/IEC 19785-3, *Information technology — Common Biometric Exchange Formats Framework — Part 3: Patron format specifications*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 2382-37 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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3.1
encounter
individual interaction within the system related to a specific subject, either for enrolment or for recognition

Note 1 to entry: The event may involve collection of biographic, biometric, document, contextual data (or a combination of them) during an enrolment or recognition interaction.

3.2
encounter-centric system
system that supports encounter processing, maintaining a one-to-many relationship between subjects and encounters, and which does not necessarily contain a single, unique set of information for each subject

3.3
gallery
group of subjects, related by a common purpose, designation, or status

EXAMPLE A watch list, or a set of subjects entitled to a certain benefit

3.4
identity assurance
process of establishing, determining, confirming, or any combination of those three actions, a subject identity

3.5
merge
combination of biometric data during the process of updating an enrolment record

Note 1 to entry: The "merge" operation is implementation specific; however, it may include either adding a new sample to a multi-sample record or performing some level of biometric fusion (e.g. sample or feature level fusion).

3.6
person-centric model
identity model in which a single primary record is maintained on a subject, which is updated over time when additional, newer, or better biographic, biometric or document information becomes available (or any combination of them), and which does not maintain separate historical data records for each system encounter with the subject

3.7
subject
person who is known to an identity assurance system

Note 1 to entry: The person can also be a biometric capture subject or biometric data subject, but this is not the case in all situations.

4 Symbols and abbreviated terms

ABIS	automated biometric identification system
IAVS	identity attributes verification services
BIR	biometric information record
CBEFF	common biometric exchange formats framework
ESB	enterprise service bus
FBI	Federal Bureau of Investigation
ID	identity/identification/identifier
IDMS	identity management system

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