



ISO/IEC JTC 1/SC 37 N11

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Replaces:

**ISO/IEC JTC 1/SC 37
Biometrics**

Document Type: National Body Contribution

Document Title: Iris Recognition Format for Data Interchange

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Project Number:

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U.S. contribution to JTC1/SC37 on an NP for an Iris Image Format for Data Interchange

PROPOSAL FOR A NEW WORK ITEM

Date of presentation of proposal: to be determined	Proposer: ISO/IEC JTC 1/SC 37
Secretariat: U.S.A. (ANSI)	ISO/IEC JTC 1/SC37 N XXXX

A proposal for a new work item shall be submitted to the secretariat of the ISO/IEC joint technical committee concerned with a copy to the ISO Central Secretariat.
 Presentation of the proposal - to be completed by the proposer. Guidelines for proposing and justifying a new work item are given in ISO Guide 26.

Title: Iris Image Format for Data Interchange

Scope

This proposed work item will develop an image-based interchange format for iris recognition algorithms. The interchange format will comprise of a header and data. The header will contain the image coordinate system, the dimensions of the image, and other parameters to be defined. The data will include the grayscale image data.

Purpose and justification –

The interchange of biometric system data will support a large number of user authentication applications. This proposed new work item will define an interchange format for iris images used as data input to iris template generation. This interchange format will allow for cross-vendor compatibility and future algorithmic upgrades.

A standard for iris recognition will:

- Allow interoperability among vendors based on a small data record.
- Support the proliferation of large-scale one-to-all iris identification systems.
- Define an interchange format that can be used between applications.
- Encourage the adoption of biometrics in applications where interoperability is required.

Programme of work

If the proposed new work item is approved, which of the following document(s) is (are) expected to be developed?

- _ x _ a single International Standard more than one International Standard (expected number:)
 a multi-part International Standard consisting of parts
 an amendment or amendments to the following International Standard(s)
 a technical report, type

Relevant documents to be considered – BioAPI(ANSI/INCITS 358), CBEFF(NISTIR 6529 and NISTIR 6529A), ANSI/X9 X9.84-2001

Cooperation and liaison

ISO/IEC JTC1 SC17 and SC27,
 ISO TC68, ISO TC215,
 ICAO Machine Readable Travel Documents, New Technologies Working Group,
 International Biometric Industry Association (IBIA)
 NIST/BC Biometric Interoperability, Performance and Assurance WG

Preparatory work offered with target date(s): To be distributed prior to first meeting on this subject

Signature:

- Will the service of a maintenance agency or registration authority be required?NO.....
 - If yes, have you identified a potential candidate?
 - If yes, indicate name
 Are there any known requirements for coding?NO.....
 -If yes, please specify on a separate page
 Are there any known requirements for cultural and linguistic adaptability? ...NO....
 - If yes, please specify on a separate page
 Does the proposed standard concern known patented items?YES.....
 - If yes, please provide full information in an annex

Comments and recommendations of the JTC 1 Secretariat - attach a separate page as an annex, if necessary

Comments with respect to the proposal in general, and recommendations thereon:

It is proposed to assign this new item to JTC 1/SC 37

Voting on the proposal - Each P-member of the ISO/IEC joint technical committee has an obligation to vote within the time limits laid down (normally three months after the date of circulation).

Date of circulation: YYYY-MM-DD	Closing date for voting: YYY-MM-DD	Signature of JTC 1/SC37 Secretary: Lisa A. Rajchel
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NEW WORK ITEM PROPOSAL - PROJECT ACCEPTANCE CRITERIA		
Criterion	Validity	Explanation
A Business Requirement		
A.1 Market Requirement	Essential <input checked="" type="checkbox"/> Desirable ___ Supportive ___	See attached
A.2 Regulatory Context	Essential ___ Desirable ___ Supportive <input checked="" type="checkbox"/> Not Relevant ___	See attached
B. Related Work		
B.1 Completion/Maintenance of current standards	Yes <input checked="" type="checkbox"/> No ___	See attached
B.2 Commitment to other organizations	Yes ___ No <input checked="" type="checkbox"/>	
B.3 Other Source of standards	Yes ___ No <input checked="" type="checkbox"/>	
C. Technical Status		
C.1 Mature Technology	Yes <input checked="" type="checkbox"/> No ___	See attached
C.2 Prospective Technology	Yes __ No <input checked="" type="checkbox"/>	
C.3 Models/Tools	Yes ___ No <input checked="" type="checkbox"/>	
D. Conformity Assessment and Interoperability		
D.1 Conformity Assessment	Yes <input checked="" type="checkbox"/> No ___	See attached
D.2 Interoperability	Yes <input checked="" type="checkbox"/> No ___	See attached
E. Other Justification		

Additional Notes

A1. Market Requirements

Increased awareness in the capabilities of biometric technologies has produced a demand for generic biometric standards. This proposed NWI will define a data interchange format for iris recognition algorithms.

A2. Regulatory Context

The storage and transmittal of generic biometric interchange formats is supported by standards such as ANSI X9.84-2001.

B1. Completion/Maintenance of current standards

ANSI X9.84-2001 is a current ANSI standard.

C1. Mature Technology

Iris recognition technology was developed in the early 1990's and commercial iris identification systems have been available for more than five years. The controlled geometry and image reproducibility of the iris, and the widespread deployment of iris recognition algorithms from a single vendor has created a *de facto* standard that is sufficiently mature for standard definition.

D1. Conformity Assessment

The interchange format is expected to be a prescriptive transform from raw image data to the interchange format. As such, conformance can be achieved through the establishment of test images with known outputs.

D2. Interoperability

The interchange format is intended to produce interoperability between iris recognition algorithms.

Annex 1

Requirement for Patented Items

Certain formats for encoding iris images may constitute intellectual property that is disclosed in patents owned by Iridian Technologies. Specifically, the use of a polar image representation, in which the origin is defined as the center of the pupil and the radial coordinate is measured as a percentage of the distance between the pupillary and scleral boundary, is disclosed in US Patent 5,291,560. Iridian will provide, in a suitable format, assurances that a license, if required, will be made available at no cost to applicants under reasonable terms and conditions that are demonstrably free of any unfair discrimination and will enable the licensee to utilize the standard.