

U.S. contribution to JTC1/SC37 on an NP for a Finger Pattern Based Interchange Format

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: Finger Pattern Based Interchange Format

Scope

This proposed work item will develop an interchange format for pattern-based fingerprint recognition algorithms. The interchange format will comprise a header containing generic biometric attributes, such as finger location and image dimensions, and the finger pattern interchange 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 pattern-based recognition of fingerprints. Pattern-based approaches for the recognition of fingerprints do not generally require high-resolution fingerprint sensors and so can support the deployment of low-resolution, low-cost sensors for mass-market applications.

A standard for pattern-based fingerprint recognition algorithms will:

- Allow interoperability among vendors based on a small data record.
- Support the proliferation of low-cost commercial fingerprint sensors with limited coverage, dynamic range, or resolution.
- Define an interchange format that can be used with portable devices and media, such as smart cards.
- 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?YES.....
 - If yes, have you identified a potential candidate?YES.....
 - If yes, indicate nameInternational Biometrics Industry Association (IBIA).....
 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?Unknown at this time....
 - 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 organization	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 ___	
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 pattern-based fingerprint recognition algorithms. Pattern-based fingerprint algorithms have gained significant market presence in support of low cost fingerprint sensor formats such as low-resolution, or small-area sensors.

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. CBEFF (NISTIR 6529 and NISTIR 6529A) is expected to be the basis for the definition of relevant header information in this interchange format.

C1. Mature Technology

Pattern-based methods for fingerprint recognition have been developed over many years, and have been commercially deployed for several years. The technology 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 pattern-based fingerprint recognition algorithms.