

InterNational Committee for Information Technology Standards
INCITS Secretariat, Information Technology Industry Council (ITI)
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M1/06-0375

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Project Proposal
Tenprint Capture Using BioAPI

This draft project proposal is submitted by M1.2 to M1.

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Project Proposal

1. Source of the Proposed Project

1.1. Title

Tenprint Capture Using BioAPI

1.2. Date Submitted

6 April 2006

1.3. Proposer

INCITS Technical Committee M1

2. Process Description for the Proposed Project

2.1. Project Type

D - This is a standard development project.

2.2. Type of Document

The project is expected to result in an American National Standard developed by INCITS.

2.3. Definitions of Concepts and Special Terms

Tenprint Capture – the electronic capture of ten human fingerprints, normally for the purposes of law enforcement or background checking.

Rolled prints – an image of a single finger, or set of single fingers, obtained by rolling the finger from the extreme left side to the extreme right side in order to obtain as much information from the fingertip as possible (i.e., “nail-to-nail”).

Slap prints – an image of one or all three “plain impressions” obtained by laying the 4 left fingers, 4 right fingers, or two thumbs flat on a capture surface (e.g., platen of a fingerprint scanner).

2.4. Expected Relationship with Approved Reference Models, Architectures, etc.

This standard will be consistent with the reference architecture described in ISO/IEC JTC1 SC37 SD11.

2.5. Recommended INCITS Development Technical Committee

INCITS Technical Committee M1 – Biometrics
INCITS M1.2 Task Group

2.6. Anticipated Frequency and Duration of Meetings

Meetings will be held as necessary and will coincide with relevant INCITS M1.2 meetings. It is anticipated that there will be approximately 4 meetings per year.

2.7. Target Date for Initial Public Review

It is estimated that the draft document would be ready for submission to INCITS for Milestone 4 processing (Initial Public Review) in October 2006.

2.8. Estimated Useful Life of Standard

This standard will have a useful life exceeding 5 years.

3. Business Case for Developing the Proposed Standard

3.1. Description

The proposed standard will specify requirements for the use of ISO/IEC 19784-1, BioAPI Specification, a software interface standard, for the purpose of performing a tenprint fingerprint capture operation.

This may include one or more of the following:

- Identification of BioAPI functions to be utilized and the order (if any) in which they are to be called
- Specification of values for function parameters
- Definition of GUI events (for use application controlled GUI)
- User interface specifications (for use with BSP controlled GUI)

Sample calling sequences and example inputs/outputs

3.2. Existing Practice and the Need for a Standard

Currently the implementation of tenprint capture (a local/client-side operation) is done in a proprietary fashion, without interchangeability, interoperability, or process standardization in mind. With an increase in the need for and deployment of large-scale identity management and credentialing systems (which generally require a tenprint capture as part of the identity vetting and background checking process), a method of performing this operation based on existing technical interface standards is required. The BioAPI standard is the standard most suited

for this purpose; however, there are a number of areas where options exist or that implementation details are left to the vendor or application. This standard is needed to further constrain the use of the BioAPI standard in the tenprint capture context and to provide additional guidance that will improve both usability and interoperability.

3.3. Implementation Impacts of the Proposed Standard

3.3.1. Development Costs

Technical editor(s) labor is expected to total about 2 months of a staff-year.

3.3.2. Impact on Existing or Potential Markets

Tenprint capture is an existing market; however, the rise of large-scale identity management and credentialing systems (such as border management, national ID, and employee credentialing) which depend on this capability will benefit from standardized methods. The main impact of this standard will be a movement from stovepiped, proprietary systems to more open, interoperable systems which are more vendor independent.

3.3.3. Costs and Methods for Conformity Assessment

The cost of conformity assessment is not known at this time.

3.3.4. Return on Investment

There is no known data on which to make an estimate.

3.4. Legal Considerations

3.4.1. Patent Assertions

There are no known patents relevant to this standard.

3.4.2. Dissemination of the Standard

Drafts of this standard will be distributed electronically.

4. Related Standards Activities

4.1. Existing Standards

There are no existing standards that specify the use of an interface standard for the implementation of tenprint capture.

There are existing standards that relate to the quality of the tenprint capture device, the formats of the captured image data, fingerprint image compression, and the transmission of this data among law-enforcement systems – these include:

- “Electronic Fingerprint Transmission Specification (EFTS)”, Version 7.1, May 2, 2005 (IAFIS-DOC-01078-7), Federal Bureau of Investigation, Criminal Justice Information Services Division, including
 - o Appendix F: IAFIS Image Quality Specifications
 - o Appendix G: Interim IAFIS Image Quality Specifications For Scanners
- ANSI/NIST-ITL 1-2000, “Data Format for the Interchange of Fingerprint, Facial, & Scar Mark & Tattoo (SMT) Information”, July 27, 2000 (ANSI/NIST-ITL 1-2000/NIST Special Publication 500-245)
- “Wavelet Scalar Quantization (WSQ) Grayscale Fingerprint Image Compression Specification”, December 19, 1997 (IAFIS-IC-0010(V3)), Federal Bureau of Investigation

These may be referenced in the resulting standard, as required.

4.2. Related Standards Activity

- ISO/IEC 19784.1 Information Technology – Biometric Application Programming Interface – Part 1: BioAPI Specification
 - o Amd 1, BioGUI Specification (PDAM)
- ISO/IEC 19785.1, Common Biometric Exchange Formats Framework – Part 1: Data Element Specification
- ISO/IEC 19785.2, Common Biometric Exchange Formats Framework: Part2: Procedures for the Operation of the Biometric Registration Authority

4.3. Recommendations for Close Liaison

- BioAPI Consortium
- Ten-Print Capture User Group
(<http://www.fbo.gov/spg/DHS/OCPO/USVISIT/Reference%2DNumber%2DUSV%2D5M%2D03/SynopsisP.html>)

5. Units of Measurement used in the Standard

Indicate units of measurement used in the Standard:

- ___ International Systems of Units (SI)
- ___ Inch/Pound
- ___ Both
- ___ Other
- XX Not Measurement Sensitive