

M1/02-0082

Project Proposal – Application Profile for Interoperability, Data Interchange and Data Integrity of Biometric Based Personal Identification for Border Crossing

1. Source of the Proposed Project

1.1. Title

“Application Profile for Interoperability, Data Interchange and Data Integrity of Biometric Based Personal Identification for Border Crossing”

1.2. Date Submitted

TBD

1.3. Proposer

The Biometric Foundation

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 ANSI/INCITS standard.

2.3. Definitions of Concepts and Special Terms

None

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

None

2.5. Recommended INCITS Development Technical Committee

TBD

2.6. Anticipated Frequency and Duration of Meetings

It is anticipated that this project would require one-day meetings approximately quarterly.

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 in January 2003.

2.8. Estimated Useful Life of Standard

There is no known limitation on the useful life of this proposed standard.

3. Business Case for Developing the Proposed Standard

3.1. Description

The proposed standard will define the data format for representing biometrics in credentials and / or documents used for border crossing. The standard will include:

1. the data record format for storing the biometric data on the credential or document,
2. the data record format for transmitting the data, a) between the enrollment system and the central or distributed database, if any, and b) between the verification system and the central or distributed database, if any,
3. the data record format for storing the data on the central or distributed database, if any,
4. the requirements for insuring the integrity of the biometric data on the credential or document for its required lifetime,
5. image quality requirements.

3.2. Existing Practice and the Need for a Standard

Currently, there is no format for exchange of biometric data in border crossing applications. Converting from one vendor to another requires the use of image or sample data.

Interoperability between technology providers, integrators and agencies requires a standard definition of attributes and data record formats. Facilitating the storage of templates could reduce image storage requirements.

By establishing an application profile based on existing biometric standards for use in border crossing, we will:

- allow interoperability among vendors based on a small data record;
- facilitate placement of biometric information on various storage mediums;
- provide for the use of multiple, or layered biometric technologies;
- encourage adoption of biometrics in applications where interoperability is vital.

A method must be developed for using PKI- Digital Signature technology to insure the integrity of biometric data on documents that are out of the physical control of the issuing agency. This standard shall specify the methods used to insure the authenticity of the biometric data.

3.3. Implementation Impacts of the Proposed Standard

3.3.1. Development Costs

Since relevant work has already been performed within existing standards groups and federal agencies, it is expected that the costs related to further development would be low.

3.3.2. Impact on Existing or Potential Markets

Existing markets for biometric technology should experience added impetus from the benefits of interoperability. New markets (such as interstate driver license verification and passport verification) will open as a result of this standard.

3.3.3. Costs and Methods for Conformity Assessment

Conformity assessment has not yet been defined. It is possible that the standard will define some testing concepts, and allow vendors and customers to jointly define testing to their own requirements.

3.3.4. Return on Investment

There is no 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. There may be distribution constraints as this document reaches different stages of development and processing within INCITS and ISO/IEC JTC1. There are no known IPR issues.

4. Related Standards Activities

4.1. Existing Standards

- X.509
- NISTIR 6529-2001, Common Biometric Exchange File Format
- ANSI/INCITS 358-2002 – Information Technology – BioAPI Specification
- ANSI/NIST-ITL 1-2000, Standard Data Format for the Interchange of Fingerprint, Facial, & Scar Mark & Tattoo (SMT Information)
- ISO/IEC 10918 – Information Technology – Digital compression and coding of continuous-tone still images (JPEG) – parts 1-4
- ISO/IEC 15444 – Information Technology – JPEG 2000 image coding system – parts 1-10

- NIST SP 800-25 – Federal Agency Use of Public Key Technology for Digital Signature and Authentication

4.2. Related Standards Activity

This proposed standard is expected to be compatible with the augmented version of CBEFF (Common Biometric Exchange File Format) being developed by the NIST/Biometric Consortium Biometric Interoperability and Performance Assurance Working Group.

4.3. Recommendations for Close Liaison

INCITS Technical Committee B10
INCITS Technical Committee L3 (JPEG and JPEG2000)
ICAO (International Civil Aviation Organization)
TSA (Transportation Security Administration)
ASC X9F4
NIST/BC Biometrics Working Group
BioAPI Consortium
International Biometrics Industry Association
The Biometric Foundation
International Civil Aviation Organization
Center for Identification Technology Research
US Department of State
US Department of Justice
US General Services Administration