

M1/04-0293

NOTE:

This draft project proposal is being submitted to M1 by the National Institute of Standards and Technology and DoD's Biometric Management Office

Draft Project Proposal – Conformance Testing Methodology for INCITS 381 - 2004, Information Technology - Finger Image Based Data Interchange Format

1. Source of the Proposed Project

1.1. Title

“Conformance Testing Methodology for INCITS 381 - 2004, Information Technology - Finger Image Based Data Interchange Format.

1.2. Date Submitted

April 16, 2004

1.3. Proposer

INCITS Technical Committee M1

2. Process Description for the Proposed Project

2.1. Project Type

D – This is a standards 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

This proposal uses vocabulary and terms as currently listed in M1/03-0128: M1 Vocabulary and Definitions and the following terms from ISO/IEC Guide 2:

Conformance- The fulfillment of a product, process or service of specified requirements

Conformance Testing: Evaluation of conformance by means of testing.

Assertions – The specification (description) for testing a conformance requirement. These are specific class of conditions that can be tested.

Test case – a description of the actions (e.g., condition of the test, expected results) required to achieve a specific test purpose or combination of test purposes.

2.4. Expected Relationship with Approved Reference Models, Architectures, etc.
None.

2.5. Recommended INCITS Development Technical Committee
INCITS Technical Committee M1, Biometrics
(INCITS Technical Committee M1.3 – Biometrics Data Interchange Formats)

2.6. Anticipated Frequency and Duration of Meetings
It is anticipated that this project would require one-half 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 in May 2005.

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 would establish the specifications of the framework, concepts, methodology for testing, and criteria to be achieved to claim conformance to INCITS 381 - 2004, Information Technology - Finger Image Based Data Interchange Format. The proposed standard will include:

- (1) Specification of abstract test suites,
- (2) Specification of conformance testing procedures,
- (3) Specification of required data streams and error indices to be used with the testing procedures,
- (4) Specification of a critical set of test assertions useful to develop test tools to test, at a minimum, the normative requirements of INCITS 381, and
- (5) Guidance for creating conformance testing samples.

3.2. Existing Practice and the Need for a Standard

Currently there are no existing standards for conformance testing of finger image data interchange format implementations. It is expected that a standard conformance testing methodology will encourage wider adoption by users of biometric solutions conforming to INCITS 381 and promote among the industry the development of conformant implementations of INCITS 381.

3.3. Implementation Impacts of the Proposed Standard

3.3.1. Development Costs

Technical editor labor is expected to total approximately one quarter of a staff year.

3.3.2. Impact on Existing or Potential Markets

The proposed standard will increase the interoperability of finger image data interchange format implementations based on INCITS 381. Existing markets for providing finger image data technology should experience added growth from the benefits of interoperability.

3.3.3. Costs and Methods for Conformity Assessment

There is no data at this time on which to make an estimate.

3.3.4. Return on Investment

There is no data at this time 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 Standards

The 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.

4. Related Standards Activities

4.1. Existing Standards

- ANSI/NIST-ITL 1-2000, Data Format for the Interchange of Fingerprint, Facial, & Scar Mark & Tattoo Information
- CJIS-RS-0010 (V7), Electronic Fingerprint Transmission Specification
- IAFIS-IC-0110, Wavelet Scalar Quantization
- ISO 15444-1, Joint Photographic Experts Group 2000
- NISTIR 6529-A, Common Biometric Exchange Formats Framework

4.2. Related Standards Activity

- INCITS 381, Finger Image Based Data Interchange Format
- ISO/IEC FCD 19794-4, Biometric Data Interchange Formats – Part 4: Finger Image Data
- ISO/IEC CD3 19785-1, Common Biometric Exchange File Formats Framework: Part1: Data Element Specification

4.3. Recommendations for Close Liaison

International Biometric Industry Association
National Institute of Standards and Technology
National Biometric Security Project

5. Units of Measurement used in the Standard

If units from a physical dimensioning system are needed for specifying the requirements of this standard, the goal would be to use the International System of Units (SI).