Proposed ANSI/NIST-ITL 1-2007 Standard

IAI AFIS Mid-year Meeting
Feb 28, 2007

Minutiae Updates (Type 9)

- **INCITS M1-378 Template Support**
  - **Defined a reserved block of fields as a registered vendor block (126-150)**
  - **Specified the minutiae position for ridge endings and bifurcations**
  - **Common rules for angle determination**
  - **Used by PIV**
- **ISO 19794-2 Not used**

IRIS Image Record (Type 17)

- **New record type interoperable with the M1 Iris data format**

- **Iris image representation only (polar coordinate representation excluded)**

Facial Record Updates (Type 10)

- **Subject Acquisition Profile Levels (SAP)**
- **Subject Pose Angles**
- **Expanded list of subject facial descriptors**
- **Encoding of MPEG4 subject feature points**
- **Use of JPEG, JPEG 2000, and PNG compressions algorithms**
- **Provision for image quality metrics**
- **3-D Provisions in future updates**

Fingerprint Quality Metric

- **FBI EFTS 7.1 requires NFIQ finger score (1-5)**
- **Alternate Fingerprint Metric**
  - Finger Number
  - Predictive Quality Score (0-100 254 & 255)
  - Registered IBIA vendor Id,
  - Vendor algorithm code
- **Quality fields**
  - Reflect the format used in existing schemes (i.e. M1 standards)
  - Utilize the existing IBIA registry

Finger Segmentation Fields

- Field 14.021 Finger Segment Positions
  - Finger Number
  - X(left) X(right) y(top) y(bottom)

- Field 14.025 Alternate SEG
  - Finger Number
  - Total number of vertices
  - Set of consecutive vertices (X & Y pixel offsets)

Latent Fingerprint Issues

- Develop an approach to encode first- and third-level details
- Require a minimum scanning resolution of 1000 ppi for the capture of latent images
- Develop codes for major case prints
- Update Finger Impression type codes by sensor type (live, contact, optical, etc.)

CBEFF Record Type - 99

- Biometric data conforming to data format standards developed by organizations registered with IBIA
- Carry items not carried in other ANSI/NIST record types
  - Finger Pattern Spectral Data (377)
  - Hand Geometry Silhouette Data (396)
  - Signature/Sign Behavioral Data (395)
  - Pattern Skeletal Data (380)
  - Vascular Data

Approved XML Resolution

- Incorporates all 2007 updates
- NIEM / GJXDM objects used
- One standard: Two Parts
- Develop a Part 2: alternative XML
- Conventional followed by XML

Steps to an ANSI Standard

- Develop a Canvass list of materially affected and interested parties
- Develop draft of proposed standard
- Canvass ballot
- Consensus on a proposed standard by users, producers, integrators, & others
- Broad-based public review on draft

Interest Categories

- **Canvassees/alternates: 80**
- **Organizations: 60**
  - **Users:**   23   39%
  - **Producers:**   17   28%
  - **Integrators:**   8   13%
  - **Consultants:**   10   17%
  - **Others:**   2   3%

Government / Non-government

- Government: 40%
  – Local   3%
  – State   13%
  – Federal   12%
  – International   12%
- Commercial: 38%
- Private Consultants: 22%

Status of Proposed ANSI/NIST-ITL 1-2007 Standard

- Released January 17, 2007

- Letter ballots due March 5, 2007
  - 60 Canvassees, 80 total members
  - 17 Ballots returned

- Public Review Period closes Mar 12, 2007

- See http://fingerprint.nist.gov/standard/ for draft document

ANSI/NIST-ITL 1-2007 Standard

- Conventional version developed

- Currently developing an XML version of ANSI/NIST-ITL 1-2007, which will be balloted after approval of the standard.

- The Committee to Define an Extended Fingerprint Feature Set (CDEFFS) is developing and evaluating an addendum, which will be balloted at a later date.

- For more information, contact

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