ANSI/NIST 2015 Update

Working Group for Fingerprint Impression and FAP Device Levels

Minutes from 1st Teleconference call, November 17, 2014

The meeting was called to order at 10:00 AM, Eastern. In attendance were:

Daniel Asraf, MorphoTrak

Tom Buss, Integrated Biometrics

Greg Cannon, Cross Match

Michael Garris, NIST

Tony Misslin, MorphoTrak

Anne Wang, 3M

First, we examined impression codes. The following points were made:

1. The existing table 7 is somewhat messy, as it incorporates concepts such as
   1. Technology used to capture fingerprint
   2. Process used to capture fingerprint (latent, swipe,etc..)
   3. Friction ridge position (Palm, Plantar, Finger)
   4. Roll or Flat
2. We went over 4 broad options
   1. Continue to use Table 7 approach to integrate new technologies, processes, positions
   2. Pull out positions from Table 7
   3. Pull out technologies from Table 7 (Like the ISO standard did)
   4. Both b&c
   * There seemed to be consensus on b and probably c…
   * Greg will distribute a strawman proposal by next meeting
3. We went over broad goals for Impression codes that had been laid out by industry or standards users
   1. Support for Multispectral Technology captured fingerprints
   2. Support for LES-Technology captured fingerprints
   3. Support for contactless captured fingerprints
   4. Clarification for FTIR captured fingerprints vs Optical contact fingerprints
4. We discussed interoperability
   1. We noted that ANSI/NIST does not presuppose Appendix F or PIV
   2. We noted that the expanding market being served by ANSI/NIST should include these technologies
   3. We noted that we need to establish interoperability principles. In general, there is probably an expectation that a plain impression from a fingerprint scanner of type ‘A’ should ‘match’ with a plain impression from a fingerprint scanner of type ‘B’. Similarly for rolls, and similarly for the existing matching infrastructure that supports flat to roll matching. That interoperability currently consists of Appendix F concepts like resolution accuracy, MTF, usable grayscale levels, and signal to noise ratio. For technologies that have not reached this level of certification, we need to determine how the standard will both include these technologies and maintain its utility/expectation for interoperable performance. Mike G volunteered to propose a recommended criteria for “inclusiveness/interoperability” for fingerprints that originate from devices that are not certified under PIV or Appendix F.

Second, we considered the fingerprint acquisition profiles:

1. The broad goal is to support 4 finger enrollment on mobile devices without implicitly specifying a large device that would be necessary to host a FAP 60 platen.
2. We discussed FAP 55 proposal by Tom Buss. Summarized, this is an Appendix F profile that encourages the use of a 3.2” by 2” platen to capture up to four fingers that is suitable for enrollment. There was broad support for this profile at the meeting and at the working group
3. We discussed FAP 50 (a 3 finger Appendix F profile using a 2.5” X 1.5” platen). There was broad support for replacing this profile with the 3.2”x2” proposal.
4. We discussed FAP 45 (the 2 finger Appendix F profile using a 1.6” x 1.5 platen). Specifically, we discussed the fact that it is currently being used to collect 2 sets of 2 fingers, to allow for enrollment. There was support for this at the meeting, and strong support for this at the working group.
5. We discussed FAP40 (the 2 finger PIV profile using a 1.6’ x 1.5” platen). While there was broad support for removing this profile, as it would reduce the possibility of unnecessary market fragmentation, the fact that it existed in a standard gave us some pause about removing it, especially for a maintenance release.
6. We discussed the issue of FAP levels for friction ridge scanners that are not focused on mobile devices. As the FAP table is now in the ANSI/NIST standard, it looks strange not to support 1000 dpi scanners in the table, nor to support the platen sizes called out in the EBTS standard (5.5” x 5.5”) or (5.5” x 8”). It seems that several commercial devices that are adopted support (5”x5” or 5”x8”). The concept of Palm Acquisition Profile came up, as well as an unanswered question about 1000 dpi fingerprint scanners. We have no consensus on this issue.
7. As part of the discussion of the previous 2 points, the philosophy of including the FAP table in the ANSI/NIST standard was also discussed. As it originated in the mobile best practices document, which has been very helpful to many government agencies as well as technology providers, it was argued that it should be returned there. It was included in the ANSI/NIST standard as the concept of the FAP device level was useful beyond the mobile device context. However, it was noted that these levels are profiles, and in general, like EBTS, should exist in a separate document. The working group had consensus for removing it from ANSI/NIST. If we were to remove it, we would be more inclined to remove FAP40. By removing it, we allow the ANSI/NIST to remain silent about agency issues such as enrollment requirements. These issues would then be covered by best practices documents that refer to (include?) the FAP levels.
8. We discussed the concept of minimum resolution in the existing table, and there was broad support to change this to acceptable resolution.
9. We will have a concrete proposal to examine at the next meeting with respect to these points.

The meeting was concluded at 11:00 AM.

Our next meeting will be at 2:00 Eastern, on December 18, 2015.

Greg Cannon,

Working Group Chair