Establishment of testing laboratory accreditation under NVLAP – The DHS perspective

Rick Lazarick, CSC

March 3, 2010
International Biometrics Performance Conference



What is NVLAP?

NVLAP is:

-A system for accrediting laboratories found competent to perform specific tests or calibrations or types of tests or calibrations

NVLAP is not:

- -A certifier of test data
- -A certifier of products
- -An operator of a certification program



The National Voluntary Laboratory Accreditation Program (NVLAP)

- A process for accreditation of testing and calibration laboratories
- **NIST** manages NVLAP program
- Based on ISO/IEC standard 17025
- Fee supported program



Laboratory Accreditation

Independent, third party evaluation of a laboratory's technical competence.

- Evaluation is based on a Standard
- Evaluation of specific scope of accreditation
- Evaluation by peer technical experts
- Results in formal recognition



NIST Handbook 150

NVLAP General Procedures and Requirements

- General Information
- ✓ Accrediting a Laboratory
- ✓ Conditions and Criteria for Accreditation
 - ✓ Sections 4 and 5 contain the managerial and technical requirements of **ISO/IEC 17025:2005**
 - ✓ Supplement created for specific subject areas, i.e. Cryptography, and now Biometrics



Stimulus for Biometrics LAP

TSA mandated by Public Law to develop biometric testing guidance and establish a list

Collaboration with NIST and industry

Guidance included testing to be performed by NVLAP accredited laboratory

Guidance published 2005



NIST Handbook 150-25 Biometrics

- NVLAP Specific Biometric Testing Procedures and Requirements
- Defines "Scopes" of Accreditation labs choose which Scopes they seek accreditation
- Initial publication Fall 2009



Biometrics LAP-Scopes

Technical Interface Standards Conf. Testing Data Interchange Standards Conf. Testing 30TISCT

30CT Conformance **Testing**

Conf. to Performance Specs. Testing **30GPT**Graded Performance Testing

30SLT System Level Testing (enrollment / verification)

> **30ST Scenario Testing** - Human crew (lab)

Pure Performance Testing 30BSCT

Biometric Sample Collection Testing

Modality-Specific Template/Matcher Sensor Interoperability Testing Interoperability Testing 30MTMIT

30IT Interoperability **Testing**

Sensor Image Quality Algorithm Testing Performance Testing Sensor Testing 30SIQAT **30SIT**

Modality-Specific Matcher Algorithm

Biometric Image Segmentation Testing Data Compression Software Testing **30TT**

30BIST

30DCST

Technology Testing Non-human/laboratory

30BTA

Biometric Testing and Analysis





Operational Testing

Usability Testing

Biometric Scopes

30/CT Conformance Testing

30/TISCT Technical Interface Standards Conformance Testing

30/DISCT Data Interchange Standards Conformance Testing

30/ST Scenario Testing – Human Crew (Laboratory)

30/SLT System Level Testing (enrollment/verification)

30/CPST Conformance to Performance Specifications Test

30/GPT Graded Performance Testing

30/PPT Pure Performance Testing

30/BSCT Biometric Sample Collection Testing

30/IT Interoperability Testing

30/SIT Sensors Interoperability Testing

30/MTMIT Modality-Specific Template/Matcher Interoperability Testing (one-to-one or one-to-many)

30/TT Technology Testing - Non-human/Laboratory

30/MMAPT Modality-Specific Matcher Algorithm Performance Testing

30/STT Sensors Technology Testing

30/SIQAT Sensor Image Quality Algorithm Testing

30/BIST Biometric Image Segmentation Testing

30/DCST Data Compression Software Testing

30/OT Operational Testing

30/UT Usability Testing



DHS Perspective

- Utilize Biometrics LAP stimulated by TSA
- Strong motivation to share re-usable test results across the Department (potential for inter-Departmental as well)
- DHS SCO collaborated with TSA/TWIC and commissioned NIST to establish a testing results Management Plan
- Desire to add Scopes (e.g. Quality Algorithm)



ONE BIG ISSUE!

- Slow uptake by biometrics testing organizations
 - Low volume of testing demand
 - No ROI (to recover up front costs)
- DHS S&T has interest in methods to incentivize/stimulate testing organizations
- "Chicken-and-Egg" situations:

No demand for qualified product in acquisitions (

No demand to be a qualified product

No demand for accreditation

Thanks for your attention

- Contact Information
 - Rick Lazarick, CBP
 - <u>rlazarick@csc.com</u>
 - **609-883-6767**

- Additional information
 - Program Manager Brad Moore brad.moore@nist.gov
 - http://www.nist.gov/nvlap
 - NIST Handbook 150, 150-25



