Technical Guidelines Development Committee
23 March 2007 Plenary Meeting

Laboratory Accreditation as a Component of the Help America Vote Act – Status Report

Mary Saunders

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The Help America Vote Act Requires

- That NIST conduct an evaluation of independent, non-Federal laboratories not later than 6 months after the Election Assistance Commission (EAC) first adopts voting system guidelines

- That NIST submit a list of qualified laboratories to the EAC for EAC accreditation

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Current Program Status

- Two laboratories have completed NIST's comprehensive technical evaluation and were recommended to the EAC on January 17, 2007
  - iBeta Quality Assurance
  - Systest Labs
- The EAC accredited these laboratories on February 21, 2007
- NIST is proceeding with the evaluation of four additional laboratories:
  - BKP Security Labs
  - Ciber Labs
  - InfoGuard Laboratories
  - Wyle Laboratories

How Does NIST Qualify Laboratories?

- **Through the National Voluntary Laboratory Accreditation Program (NVLAP), which is administered by NIST**
  - **A well-established laboratory accreditation program that is recognized both nationally and internationally**
- **NVLAP accreditation criteria are codified in the Code of Federal Regulations (CFR, Title 15, Part 285)**
- **NVLAP accreditation is a finding of laboratory technical qualifications and competence to carry out specific calibrations or tests**

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NVLAP Accreditation Criteria

- NIST Handbook 150, *NVLAP Procedures and General Requirements*

- ISO/IEC International Standard 17025, *General requirements for the competence of testing and calibration laboratories*

- Help America Vote Act of 2002

- The 2002 Voting System Standards and 2005 Voluntary Voting System Guidelines

- Any other criteria deemed necessary by the Election Assistance Commission (EAC)

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NVLAP Laboratory Accreditation Procedures

- Laboratory
  - Submits application for accreditation
  - Undergoes on-site assessment
  - Responds to nonconformities
  - Conducts proficiency testing (if possible)

- NVLAP
  - Reviews all assessment information
  - Makes accreditation decision
  - Makes public announcement of accreditation

What Does NVLAP Assess?

- The operation of the laboratory's management system
- The laboratory's competence to test in-house both voting system hardware and software to a core set of voting system requirements:
  - Technical data package review
  - Physical configuration audit
  - Source code review
  - Witnessed build and system installation testing
  - Functional configuration audit
  - System integration testing
  - Telecommunications and security testing
- Non-core tests may be subcontracted to other accredited laboratories

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How is the Assessment Conducted?

- NVLAP contracts with a team of expert assessors – a 17025 expert and a voting systems expert – to evaluate a candidate laboratory
- The laboratory submits its quality manual, a crosswalk between its procedures and test methods and the VSS 2002 and VVSG 2005, and other documentation for review
- The experts review lab documentation and perform a detailed on-site review of laboratory operations
  - A sampling of laboratory procedures related to VVSG 2005 requirements is conducted
  - Security, accessibility and usability test procedures are always sampled

Ensuring Continued Compliance

- Laboratories undergo an on-site assessment prior to initial accreditation
  - A second on-site assessment is conducted during the first renewal year
  - And every two years thereafter to evaluate ongoing compliance with specific accreditation criteria
- Re-assessments are also conducted when requirements change

NIST conducts these activities on behalf of the EAC and makes recommendations to the EAC based on NVLAP's findings

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Where NVLAP Fits in the Testing Picture

- Testing during design and development (vendor can use any laboratory)
- **National Certification Testing (use of NVLAP-evaluated, EAC-accredited laboratory required)**
- State Certification Testing (State can use any laboratory)
- Acceptance Testing (purchasing election authority can use any laboratory)

All can benefit from the use of accredited testing laboratories

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