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

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