



United States
Election Assistance Commission

Pilot Program

Testing and Certification Manual &
UOCAVA Pilot Program

Testing Requirements

Overview



Why We Developed the Requirements & Manual

- To meet EAC mandates under the MOVE Act and to begin to address the needs of States that require EAC certification for any voting system used within the State.
- After final adoption by the Commissioners, the EAC will voluntarily forward these requirements to NIST/TGDC for consideration in the development of any future UOCAVA Guidelines.



Working Group Members

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Remote Voting Device

- This device will not store information locally. It is essentially a “dummy terminal.”
- All information will be stored on servers elsewhere via a VPN.
- Every Remote Voting Device will have a person attending to it. This ensures that physical security is being maintained.
- A paper record is created and retained.



Points of Interest

- Cost & Time
- Manufacturer Declaration of Conformity
- Penetration Testing
- Auditability
- Cryptography



Cost & Time

- The scope of the project timeline was for a three month testing engagement.
- Wyle, an EAC accredited VSTL, quoted the Standards at costing ~\$300,000 for a 3 month testing engagement. (Costs could potentially be reduced to ~\$175,000 for a 6 month testing engagement.)



Penetration Testing

- Required. An EAC accredited VSTL will put together an experienced penetration testing team to check the system for vulnerabilities.
- Penetration Testing scope is much narrower than OEVT, which reduces both time and cost.



Auditability

- A great deal of consideration was given to how auditability will be achieved for the Remote Electronic Voting process.
- The vote capture device is required to produce a paper record. This record SHALL be available to the voter to review and verify, and SHALL be retained for later auditing or recounts, as specified by state law. Paper records provide an independent record of the voter's choices that can be used to verify the correctness of the electronic record created by the voting device.



Cryptography

- Extensive use of cryptography
 - Vote data transmission
 - Vote data storage
 - Communications links
- All cryptographic functionality **SHALL** be implemented using NIST-approved cryptographic algorithms/schemas, or use published and credible cryptographic algorithms/schemas/protocols.
- Cryptography used to protect information in-transit over public telecommunication networks **SHALL** use NIST-approved algorithms and cipher suites.



Pilot Program Manual Highlights:

- Follows same general format and procedures as Testing and Certification Program Manual
- The program recognizes that the Federal certification framework should encourage the voting systems industry to pursue technological innovation and experimentation in relation to the design of voting systems.
- Concept is to provide a quick and cost effective method to certify pilot program voting systems for use by States that require EAC certification.



Definitions:

- The accepted definition of ‘pilot program’ means a limited roll out of a new system in order to test it under real world conditions, prior to use by an entire organization. For voting systems, the purpose of any pilot program is to gain first hand experience with the new technology implemented for the pilot program election, and to evaluate the system and its benefits to domestic or overseas voters.



Key Changes:

- No Decertification. Only Denial of Certification. (...with appeal process for denials)
- EAC Review process accelerated. (5 business days to review Test Plans, 10 business days to review test Reports)



Key changes, *Monitoring and Reporting*:

- Two primary tools for assessing the level of effectiveness of the pilot certification process:
 - manufacturer declaration of conformity audits
 - mandatory post election reporting by manufacturers.
- One secondary tool:
 - voluntary pilot program monitoring and reporting by State and local election jurisdiction participating in pilot programs.



Manufacturer Declaration of Conformity Audit

- Each manufacturer shall be subject to a mandatory declaration of conformity audit during every pilot certification test engagement.
- Audit objectives:
 - Gather information and documentation to insure that the attestation in the declaration of conformance agrees with the actual documented testing done on the pilot voting system by the manufacturer;
 - Review documentation to determine the adequacy of manufacturer conformance testing;
 - Gather information and documentation to insure that the manufacturer adheres to their stated quality management system and configuration management system.



Written Audit Report

- Drafted by the EAC and provided to the Manufacturer within 10 business days of completion of the audit.
- Manufacturers that pass these audits may continue in the pilot certification program.
- If the audit report finds the manufacturers quality program, and/or product testing was deficient, or if the audit finds that required records were missing, inadequate or otherwise falsified or fabricated in order to circumvent the EAC process, the auditors will recommend that the pilot voting system be dismissed from the pilot program pending adequate resolution of the nonconformities found during the audit.



Mandatory Post Election Anomaly Reporting

- Manufacturers must record each anomaly that affects the pilot voting system during an election.
- Manufacturer shall identify all root causes for each anomaly, and implement all corrective actions identified for each anomaly.
- Reporting of these anomalies allows the EAC to better evaluate the performance of pilot systems under real election conditions in order to make recommendations for future use of the system.