Testing and Certification 101- An Overview

Prepared for the EAC Roundtable Meeting- June 12, 2014

HAVA

Pursuant to our discussion topic for this roundtable, the Help America Vote Act of 2002 (HAVA) placed the following responsibilities with the U.S. Election Assistance Commission (EAC):

> **SEC. 231. CERTIFICATION AND TESTING OF VOTING SYSTEMS.**
>
> (a) CERTIFICATION AND TESTING.—
>
> (1) IN GENERAL.—The Commission **shall provide for the testing, certification, decertification, and recertification of voting system** hardware and software by accredited laboratories.
>
> (b) LABORATORY ACCREDITATION.—
>
> (1) RECOMMENDATIONS BY NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.—…. **the Director of the National Institute of Standards and Technology shall conduct an evaluation of independent, non-Federal laboratories and shall submit to the Commission a list of those laboratories the Director proposes to be accredited to carry out the testing, certification, decertification, and recertification provided for under this section.**
>
> (2) APPROVAL BY COMMISSION.—
>
> (A) IN GENERAL.—**The Commission shall vote on the accreditation of any laboratory under this section**, taking into consideration the list submitted under paragraph (1), and no laboratory may be accredited for purposes of this section unless its accreditation is approved by a vote of the Commission.
>
> **SEC. 221. TECHNICAL GUIDELINES DEVELOPMENT COMMITTEE.**
>
> (a) ESTABLISHMENT.—There is hereby established the Technical Guidelines Development Committee (hereafter in this part referred to as the ‘‘Development Committee’’).
>
> (b) DUTIES.—
>
> (1) IN GENERAL.—The Development Committee shall assist the Executive Director of the Commission in **the development of the voluntary voting system guidelines.**

In order to carry out these duties in a repeatable and systematic manner, the EAC has developed Program Manuals for both Testing and Certification and Laboratory Accreditation. These manuals follow national and international guidelines for all organizations conducting such activities. To administer these programs, the Division currently has four (4) full-time staff and three (3) part time Technical Reviewers.

Certification Division staff is responsible for:

- VVSG development, maintenance and improvement in cooperation with Technical Guidelines Development Committee (TGDC) and the staff of the National Institute for Standards and Technology (NIST).
- Laboratory Accreditation including bi-annual EAC lab audits to supplement the work of NVLAP, the development of a laboratory accreditation program handbook and program SOPs.
- Administering the testing and certification of voting systems including day-to-day project management and coordination of the work of the labs and communication with the voting system manufacturers as well as the drafting of Requests for Interpretation of ambiguous sections of the VVSG and Notices of Clarification for program manual related issues.

Timeline

Following are some of the important dates related to the EAC Certification Program:

December 2005	- EAC votes to adopt 2005 Voluntary Voting System Guidelines
December 2006	- EAC votes to adopt the Testing and Certification Program Manual
January 2007	- Implementation of Certification Program begins at EAC.
January 18, 2007	- NIST recommends first laboratories to EAC for accreditation.
January 29, 2007	- First Manufacturer Registration approved by EAC. (Diebold/Premier/Dominion)
February 28, 2007	- EAC Accredits first VSTL (iBeta Quality Assurance)
April 30, 2007	- EAC Cost of Testing Meeting – Denver
January 29, 2009	- Unified Test Initiative /Cost of Testing II - Miami
February 6, 2009	- EAC certifies first voting system. (MicroVote EMS)
December 2, 2010	-EAC Voting Systems Roundtable Meeting
February 14, 2011	-EAC COTS Roundtable Meeting

May 5, 2011 - EAC Voting System Sustainability Roundtable Meeting

February 26, 2013 -EAC/NIST Future of Voting Systems Symposium

EAC's Continuing Commitment to Constant Improvement

As the above timeline demonstrates, the EAC has been committed to the discussion of relevant topics related to testing and certification by convening special regional meetings and EAC Roundtables to receive input for all constituencies and allow for reasoned discussion of such issues.

Another method by which EAC is responsive to concerns related to clarifications of our program manuals is through the issuance of Notices of Clarification (NOCs). A NOC provides guidance and explanation on the requirements and procedures of the EAC's Voting System Certification or Voting System Testing Laboratory programs. NOCs may be issued pursuant to a clarification request from an EAC voting system test laboratory or an EAC registered manufacturer. EAC may also issue NOCs when it determines general clarifications are necessary. Since 2007 the EAC has written and implemented 19 such NOCs.

The EAC also clarifies VVSG requirements through the issuance of Request for Interpretation (RFI). RFIs are a means by which a registered Manufacturer or VSTL may seek clarification on a specific EAC voting system standard (VVSG or VSS). An Interpretation is a clarification of the voting system standards and guidance on how to properly evaluate conformance to it. Since 2007 the EAC has written and implemented 41 RFIs.

The EAC has also issued 8 formal letters to manufacturers or laboratories related to things such as our support for the use of automated source code review tools. Outreach to election officials and other interested parties are done via a bi-monthly e-newsletter from the Certification Program and through weekly Voting System Testing Update Blogs posted on the EAC web site. Finally, users have the opportunity to sign up for automated voting system advisory alerts. 10 of these alerts have been distributed, some provided by the voting system manufacturer and others by the EAC.

Where we are now

As of today's date, the EAC has certified 18 voting systems and system modifications, with 4-5 systems currently engaged in various stages of the testing process. 17 States currently use complete EAC certified systems or major certified components of those systems. At least 3 other States are currently or will very shortly be doing State certifications of EAC certified systems to allow jurisdictions within their State to purchase and use these systems. Approximately 241 separate jurisdictions in the United States use EAC certified systems, and considering the systems currently under test as well as the number of jurisdictions looking to purchase within the next 1-2 years, we expect the number of jurisdictions using EAC certified systems to double within that time period.