



EAC Decision on the Interpretation of the Extensions Clause 2013-01 (Testing and Certifying Innovative Voting Systems)

Date:

March 08, 2013

Question:

Does the Extensions Clause, within the Conformance Clause, of the 2005 Voluntary Voting System Guidelines (VVSG), allow for the testing and certification of voting systems outside the traditional DRE, optical scan, and ballot marking device parameters?

Section of Guidelines:

2005 VVSG Volume 1 Section 1.6.3.3

Discussion:

Section 1.6.3.3 of the 2005 VVSG states:

1.6.3.3 Extensions

*Extensions are additional functions, features, and/or capabilities included in a voting system that are not required by the **Guidelines**. To accommodate the needs of states that may impose additional requirements **and to accommodate changes in technology, these guidelines allow extensions.** (Emphasis added) For example, the requirements for a voter verifiable paper audit trail feature will only be applied to those systems designated by the vendor as providing this feature. The use of extensions shall not contradict nor cause the nonconformance of functionality required by the **Guidelines**.*

Traditionally, a voting system has been defined by the mechanism the system uses to cast votes and is further categorized by the location where the system tabulates ballots. However, the *Guidelines* recognize that as industry develops new solutions and technology continues to evolve, the distinctions between traditional voting system categories may become blurred. The fact that the VVSG refers to specific system types is not intended to stifle innovations that may be based on a more fluid understanding of system types.

However, appropriate procedures must be in place to ensure that new types of voting systems provide the necessary integrity, security and accessibility and can be properly evaluated in the certification process. (VVSG Volume 1, Section 1.5.2 *Types of Voting Systems*)

Consequently, manufacturers that submit a system that integrates components from more than one traditional system type or a system that includes components or technology not addressed in the *Guidelines* **shall** specifically request certification of the voting system with the extensions and shall submit a proposed (or draft) test plan that will be refined and finalized by the VSTL and approved

by the EAC. All other applicable VVSG requirements must be met by the system. Manufacturers **shall** also submit the results of all internal or external testing and, to the extent possible, COTS component tests conducted by COTS manufacturers of the new system when applying for national certification. The *Guidelines* permit manufacturers to produce or utilize interoperable components of a voting system that are tested within the full voting system configuration.

The listing below summarizes the functional requirements that HAVA Section 301 mandates to assist voters. While these requirements may be implemented in a different manner for different types of voting systems, **all** types of voting systems must provide these capabilities:

- permit the voter to verify (in a private and independent manner) the vote selected by the voter on the ballot before the ballot is cast and counted
- provide the voter with the opportunity (in a private and independent manner) to change the ballot or correct any error before the ballot is cast and counted
- notify the voter if he or she has selected more than one candidate for a single office, inform the voter of the effect of casting multiple votes for a single office, and provide the voter an opportunity to correct the ballot before it is cast and counted
- be accessible for individuals with disabilities in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters
- provide alternative language accessibility pursuant to Section 203 of the Voting Rights Act

In addition, the manufacturer shall submit a detailed implementation statement as required by Section 1.6.4 of the VVSG. The implementation statement documents the requirements that have been implemented by the voting system, the optional features and capabilities supported by the voting system, and ***any extensions (i.e., additional functionality beyond what is defined in the VVSG) that it implements.*** (Emphasis added)

An implementation statement may take the form of a checklist to be completed for each voting system submitted for conformity assessment. It is used by VSTLs to identify the conformity assessment activities that are applicable.

- a. An implementation statement **shall** include:
 - i. Full product identification of the voting system, including version number or timestamp;
 - ii. Separate identification of each device that is part of the voting system. Where more than one type of COTS device may be used interchangeably, the manufacturer shall note this and document all internal interoperability testing conducted on these various devices;
 - iii. Version of VVSG to which conformity assessment is desired;
 - iv. Voting variations supported (see Volume I Section 2.1.7.2);
 - v. Device capacities and limits
 - vi. List of languages supported;
 - vii. List of accessibility capabilities; and
 - viii. Signed attestation that the foregoing accurately characterizes the system submitted for testing.

The VSTL shall conduct functional testing of the system and system extensions pursuant to the requirements of Volume 2, Sections 3.2.2, 3.2.3 and 3.2.4 of the VVSG.

Finally, the VSTL shall conduct the detailed Functional Configuration Audit (FCA) required by Volume 1 Section 9.7.2 and Volume 2 Section 6.7 of the VVSG. The Functional Configuration Audit is

conducted by the VSTL to verify that the system performs all the functions described in the system documentation. The manufacturer shall:

- a. Completely describe its procedures and related conventions used to support this audit for all system components.
- b. Provide the following information to support this audit:
 - i. Copies of all procedures used for module or unit testing, integration testing, and system testing.
 - ii. Copies of all test cases generated for each module and integration test, and sample ballot formats or other test cases used for system tests.
 - iii. Records of all tests performed by the procedures listed above, including error corrections and retests.

Conclusion:

The EAC is committed to testing and certifying voting systems incorporating new and innovative solutions emerging in the marketplace. Many of these solutions utilize non-traditional voting architecture centered on election specific software, combined with off-the-shelf laptop computers, tablets, and even smart phones. The VVSG extensions clause, coupled with requirements from the FCA, are the vehicles by which these systems can become federally certified and begin to move into the marketplace. The extensions clause allows for additional functionality and/or features not required by the VVSG, including new and innovative solutions. The Functional Configuration Audit requires that these new and innovative solutions (that are described in the system documentation) must perform according to the documentation. Thus, new innovative solutions are allowed by the VVSG, but need to be tested (and certified) as per the FCA.

Effective Date:

Effective upon final publication.