



EAC Decision on Request for Interpretation 2008-07
2002 VSS Vol. I, Sections, 2.3.4, 2.3.5, 2.3.6, 2.4.1, 4.4.3, 9.4
2002 VSS Vol. II, Sections, 3.3.1, 3.3.2
2005 VVSG Vol. I, Sections, 2.2.4, 2.2.5, 2.2.6, 2.3.1, 5.4.3
2005 VVSG Vol. II, Sections, 1.3, 3.3.1, 3.3.2

Date:

August 27, 2008

Question(s):

Should a voting system warn and report the existence of votes that may be retained in memory or on disk at the start of an election? If so, how must this condition be reported?

Section of Standards or Guidelines:

2002 VSS Vol. I, Section 2.3.4, Readiness Testing

2005 VVSG Vol I 2.2.4, Readiness Testing

2002 VSS Vol. I, Section 2.3.5, Verification at the Polling Place

2005 VVSG Vol. I, Section 2.2.5, Verification at the Polling Place

2002 VSS Vol. I, Section 2.3.6, Verification at the Central Location

2005 VVSG Vol. I, Section 2.2.6, Verification at the Central Location

2002 VSS Vol. I, Section 2.4.1, Opening the Polls

2005 VVSG Vol. I, Section 2.3.1, Opening the Polls

2002 VSS Vol. I, Section 4.4.3, In-process Audit Records

2005 VVSG Vol. I, Section 5.4.3 In-process Audit Records

2002 VSS Vol. I, Section 9.4, Testing Scope

2005 VVSG Vol. II, Section 1.3, Testing Scope

2002 VSS Vol. II, Section 3.3.1, Functionality Testing in Parallel with Hardware Testing for Precinct Count Systems

Background:

There have been several instances of equipment in the field where memory or disk locations were not cleared prior to the start of an election resulting in erroneous tabulation of results. The Sections listed above state that:

VSS Volume I

2.3.4.1.a - Verify that voting machines or vote recording and data processing equipment, precinct count equipment, and central count equipment are properly prepared for an election, and collect data that verifies equipment readiness;

2.3.4.1.f - Segregating test data from actual voting data, either procedurally or by hardware/software features.

2.3.5.e - The contents of each active candidate register by office and of each active measure register at all storage locations (showing that they contain only zeros);

2.3.5.g - Other information needed to confirm the readiness of the equipment, and to accommodate administrative reporting requirements.

2.3.6.b - The contents of each active candidate register by office and of each active measure register at all storage locations (showing that they contain all zeros);

2.3.6.c - Other information needed to ensure the readiness of the equipment and to accommodate administrative reporting requirements.

2.4.1.1 - To allow voting devices to be activated for voting, the system shall provide:

- a. An internal test or diagnostic capability to verify that all of the polling place tests specified in Section 2.3.5 have been successfully completed; and*
- b. Automatic disabling any device that has not been tested until it has been tested.*

2.4.1.2.2 - In addition to the above requirements, all paper-based precinct count equipment shall include a means of:

- a. Activating the ballot counting device;*
- b. Verifying that the device has been correctly activated and is functioning properly; and*
- c. Identifying device failure and corrective action needed.*

2.4.1.3 - To facilitate opening the polls, all DRE systems shall include:

- a. A security seal, a password, or a data code recognition capability to prevent the inadvertent or unauthorized actuation of the poll-opening function;*
- b. A means of enforcing the execution of steps in the proper sequence if more than one step is required;*
- c. A means of verifying the system has been activated correctly; and*
- d. A means of identifying system failure and any corrective action needed.*

4.5.3b.2 - The “zero totals” check conducted before opening the polling place or counting a precinct centrally;

9.4 - The qualification test process is intended to discover errors that, should they occur in actual election use, could result in failure to complete election operations in a satisfactory manner.

2005 VVSG Vol. I, 5.4.2 – (d) The software shall check and record the status of all data paths and memory locations to be used in vote recording to protect against contamination of voting data; (e) Upon the conclusion of the tests, the software shall provide evidence in the audit record that the test data have been expunged

VSS Volume II

3.3.1. a3 - Verify program memory device content;

3.3.1. c2 - Obtain "zero" printout or other evidence that data memory has been cleared;

Conclusion:

The standards require more than a simple pre-election “zero report” for the voting system. Both VSS and VVSG require all memory locations be reset before the election. The VSS Volume II 3.3.1.c2 should be applied so that any system component (including central count) which stores votes or consolidate results **must provide a visual (screen) warning** to the election officials if memory locations (including data on disk) contain votes or consolidate results as part of the readiness check of the system before counting results. This includes verifying that no residual votes from the Logic and Accuracy test or other tests conducted as part of the pre-election process are present and capable of being added to the election totals. . A report (with a time stamp) must be produced indicating the status of the votes/results memory and disk storage locations. The report(s) will be part of the official audit trail records to be retained showing the readiness of the system for voting. If a unit or system has a non-zero counter or residual votes this is considered a failure to activate correctly under the requirements of VSS 2.4.1/VVSG 2.3.1. The requirements of VSS 2.4.1/VVSG 2.3.1 should be interpreted to mean that such a failure to active correctly is a device or system failure and therefore requires both that the device be disabled from use in the system and that election officials are advised of the proper corrective action.

Given the potential impact of an election being started with non-zero counters or residual votes it is not sufficient to only enter a note in the device audit log. The occurrence shall be recorded in the device audit log. In addition, a clear, unambiguous warning must be passed to the system level where an election official will be clearly notified that an attempt has been made to initiate an election with non-zero totals.

The certification testing of the components and system readiness by the VSTL shall include attempts to initiate an election with non-zero totals on counters or residual ballots, validating that the ‘zero’ report procedure will correctly identify and **warn the election officials** of the presence of any previously stored results which are in a form that may be deliberately or accidentally processed.

Effective Date:

Immediate- for all voting systems not having an approved test plan as of the date of publication.