



EAC Decision on Request for Interpretation 2008-02, Battery Backup for Optical Scan Voting machines

Date:

February 19, 2008

Question(s):

Do optical scan systems require battery backup? The actual voting is done via paper and pen/pencil therefore normal voting operations can continue without power.

Section of Standards or Guidelines:

- 2002 VVSS Volume I, Section 3.2.2.4c, and 2005 VVSG Volume I, Version 1.0, Section 4.1.2.4c (Electrical Supply)
- 2002 VVSS Volume I, Section 3.2.2.5, and 2005 VVSG Volume I, Version 1.0, Section 4.1.2.5 (Electrical Power Disturbance)

Background:

Because paper ballots are used for voting, loss of power does not stop the voting process although it would slow down the tally and counting process.

It should be noted that the interpretation proposed by the requestor would find that Optical Scan systems that are utilized as Ballot Marking Devices for HAVA compliance are not exempt from these requirements and must have a battery backup.

3.2.2.4c/4.1.2.4c Electrical Supply (Proposed Interpretation)

Optical scan systems do not require backup power as long as no voting data is lost or corrupted during power outage and system restores itself automatically when power is restored to voting mode.

3.2.2.5/4.1.2.5 Electrical Power Disturbance (Proposed Interpretation)

Optical Scan systems without battery back up power may reset or have momentary interruption so long as normal operation is resumed without human intervention or loss of data reset after surges of >95% interrupt @5 sec.

EAC Conclusion and Interpretation:

The EAC does not agree with the proposed interpretations.

Section **3.2.2.4 of the 2002 VSS** (Electrical Supply) and Section **4.1.2.4** of the 2005 VVSG state:

Components of voting systems that require an electrical supply shall meet the following standards:

- a. Precinct count systems shall operate with the electrical supply ordinarily found in polling places (120vac/60hz/1);*
- b. Central count systems shall operate with the electrical supply ordinarily found in central tabulation facilities or computer room facilities (120vac/60hz/1, 208vac/60hz/3, or 240vac/60hz/2); and*
- c. All systems shall also be capable of operating for a period of at least 2 hours on backup power, such that no voting data is lost or corrupted, nor normal operations interrupted. When backup power is exhausted the system shall retain the contents of all memories intact. (Emphasis added)*

The definition of a voting system in the 2005 VVSG is as follows:

voting system: The total combination of mechanical, electromechanical or electronic equipment (including the software, firmware, and documentation required to program, control, and support the equipment) that is used to define ballots; to cast and count votes; to report or display election results; and to maintain and produce any audit trail information; and the practices and associated documentation used to identify system components and versions of such components; to test the system during its development and maintenance; to maintain records of system errors and defects; to determine specific system changes to be made to a system after the initial qualification of the system; and to make available any materials to the voter (such as notices, instructions, forms or paper ballots).

The definition in the 2002 VSS is very similar. Optical scan voting systems, whether precinct count or central count, obviously meet the definition of a voting system. Because both types of optical scan systems are included in the definition of a voting system, and since Sections 3.2.2.4 and 4.1 2.4 state that “***All systems shall also be capable of operating for a period of at least 2 hours on backup power...***” the EAC finds that all forms of optical scan voting equipment must include battery backup as defined in the VSS and VVSG.