

Electronic Voting Machine Information Sheet & Glossary

What to Look for (for poll workers and observers on election day)¹

1. The results from each machine (if available) and totals for each precinct should be printed at the end of the day and posted at the polling place and compared with the number of voters checking in at each polling place.
2. Machines should be calibrated at least once per day preferably right before polls open. If voters notice that the machine is not highlighting the choice that corresponds to where the voter touched on the screen, they should ask that the machine be recalibrated or taken out of service.
3. Any malfunctioning machine must be pulled out of service and kept in a secure location. No repairs should be made on election day.
4. Is the machine hooked up to a network or another machine? What kind? Internet, LAN, Intranet, serial network (note that Hart InterCivic's eSlate and the Unilect Patriot are normally hooked up this way).
5. Equipment administered by election officials, not vendors -- All tasks associated with administering electronic voting equipment should be managed by the elections department and not "outsourced" to the vendor.
6. Polling places should post the vendor, equipment name and model number, and all software and firmware version numbers of their voting equipment.
7. Does the polling place have a supply of paper ballots available in case the voting equipment fails? Paper ballots should be available to cover at least 25 percent of a jurisdiction's registered voters.
8. Chain of custody of equipment and software. What procedures are in place to ensure that machines are protected before and after the election? Voting equipment should also be sealed in a way that prevents tampering before and after the election.

¹ Note that this is a partial list. Additional items may be needed depending on local conditions and technologies used.



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For logic and accuracy tests and parallel monitoring

Information and questions are included Doug Jones' document "Testing Voting Systems": <http://www.cs.uiowa.edu/~jones/voting/testing.shtml>

For interviewing election officials

Verified Voting Questionnaires:
<http://www.verifiedvoting.org/voterprotect/questionnaires/>

Glossary

This Glossary covers common computer-related terms used in association with electronic voting machines. It is intended to accompany the series of "Electronic Voting Machine Information Sheets" released by America's Families United, the Electronic Frontier Foundation and the Verified Voting Foundation.

Federally-Qualified Voter-Verified Paper Audit Trail Capability – This refers to a voting system's ability to provide a voter-verifiable paper audit trail (VVPAT). The voter's choices are displayed under glass or plastic (out of reach of the voter to avoid manipulation) and the voter confirms or denies that they are the choices they intended to vote. If this capability exists but the machine has not yet been federally approved, it is noted in the Electronic Voting Machine Information Sheet.

Firmware – software loaded into a sort of computer memory that cannot be easily changed, called "read only" memory, as opposed to "read/write" memory, which is more easily changed. Computers use firmware to execute basic functionality like starting up.

Flash memory – a type of computer memory that is both readable and writable by the computer and its users. This sort of memory retains its contents when power is removed. Flash memory cards are used in most digital cameras, for example.

Infrared signals – Signals sent by infrared light from one device to another device. This is how most television remote controls function; the remote sends infrared (a/k/a IR) signals to the television which then does something based on the signals received.

Independent Testing Authority (ITA) – An Independent Testing Authority (ITA) is a laboratory that tests a vendor's voting system to make sure it follows either the Federal Election Commission's 1990 or 2002 standards. Current ITA's include Wyle Laboratories (hardware only), SysTest Labs, LLC (hardware and software) and CIBER, Inc. (software only). ITA testing is paid for by the vendors and access to the results of ITA testing is often limited to the vendor whose product is being tested.

NASED qualification status – NASED (the National Association of State Election

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Directors) “qualifies” a vendor’s voting system once it has passed testing through an Independent Testing Authority (ITA).

PCMCIA card – A PCMCIA (Personal Computer Memory Card International Association) card is a removable computer cartridge about the size of a credit card, but considerably thicker. PCMCIA cards are used to add features to a computer like memory or networking.

Raw vote data – (also referred to as “ballot images” or “vote vectors”) Raw vote data is data that is stored per cast ballot. This kind of data shows how each voter voted for each race in an election. Raw vote data can be turned into summary data by aggregating or summing up the number of votes for each candidate or ballot item (race, proposition, etc.)

Serial cable – A serial cable is a cable used to connect two serial ports between a computer and another device, such as a printer or another computer. A serial port connection has nine (9) pins (or nine (9) holes) with five (5) on top and four (4) on bottom.

Smart card – A smart card is a removable computer card that looks almost exactly like a credit card in size and thickness. The main difference is that a smart card has a computer chip (usually visible) embedded in the plastic. Smart cards have limited memory and are called “smart” because they can even perform limited calculations (such as with encryption).

Summary data (as opposed to raw vote data) – Summary data is data that is aggregated or summed up. For example, data that shows how many votes each candidate received in a certain precinct is summary data. Contrast with “raw vote data” above.

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