



ELECTION PROTECTION **YOU HAVE THE RIGHT TO VOTE**
1-866-OUR-VOTE

Electronic Voting System Information Sheet

Hart InterCivic e-Scan

Name/Model: e-Scan

Manufacturer: Hart InterCivic

Voter-Verified Paper Record Capability: Uses paper ballots



Brief Description: The eScan is a precinct-based, digital ballot scanning system. After marking a paper ballot, the voter feeds it directly into the eScan at the precinct. The ballot image is stored as a *Cast Vote Record* on a flash memory card that can be retrieved and tabulated when the polls close. eScan's can be programmed to reject over-voted, under-voted and blank ballots, thereby providing second-chance voting at the precinct. ¹

Detailed Voting Process: The Hart InterCivic E-Scan system functions much like a traditional paper balloting system. Upon entering the voting precinct, the voter will receive a paper ballot; the voter then shades in the boxes on the paper ballot (above right) with any standard pen or pencil and inserts the ballot into the e-Scan machine.

Past Problems: Not many problems have been reported on the operation of the Hart InterCivic E-Scan. However, the E-Scan has been known to have problems reading creased ballots.² Most of the reported problems are with the e-Slate system, which uses an entirely different technology.

Hart InterCivic recently made news by agreeing to comply with a trusted voting open-source mandate, meaning that they will allow their software to be examined for flaws by interested parties.³

¹ From the manufacturer's website, available at: <http://www.hartintercivic.com/files/hartfacts>

² Citing a Colorado newspaper article.

http://www.votetrustusa.org/index.php?option=com_content&task=view&id=322&Itemid=51

³ For more details, go to:

http://www.votetrustusa.org/index.php?option=com_content&task=blogcategory&id=75&Itemid=179



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Things to Look Out For

- Security Seals. Ideally, the eScan's exposed ports, memory card access areas, ballot box doors and case seams would be covered with tamper-evident security seals. The integrity of these seals should be maintained at all times, and only breached under controlled, explained circumstances. A voided seal looks like this: <http://www.flickr.com/photos/joebeone/2247733620/>. Seals should be logged to maintain chain of custody of sensitive materials.
- Ballot Box Access. Optical scan systems have at least one and possible more ballot boxes. Each ballot box should be inspected by a voter at the beginning of voting to make sure that they are empty. These ballot boxes should be locked and/or be sealed with tamper-evident tape.
- The Memory Card is Sensitive. Corrupt memory cards may be able to introduce viruses, cause the main election server to crash and falsify votes. Access to the memory card should be controlled, monitored and logged at all times.
- Correct Inks. Some Optical Scan systems have trouble reading red inks or inks with red in them. Voters should use the writing instrument provided at the polling place or, if voting at home, a black ballpoint pen that does not bleed through paper.
- Ethernet port. Although mentioned above, we need to emphasize that the ports on the eScan should be protected from tampering at all times, and preferably disabled. An attacker could use these ports to replace the software on the eScan, swap votes, and/or change results.

NASED Qualified: No⁴

⁴ Information from the NASED website.

<http://www.nased.org/NASED%20Qualified%20Voting%20Systems%20031706.pdf>