

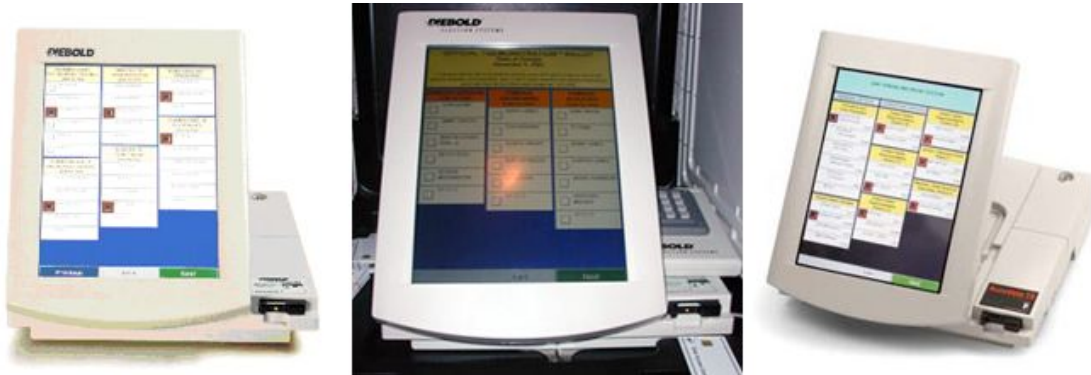
Electronic Voting Machine Information Sheet

Diebold Election Systems — AccuVote-TS

Name / Model: AccuVote / TS¹

Vendor: Diebold Election Systems, Inc. (DESI)

Federally-Qualified Voter-Verified Paper Audit Trail Capability: None.



Brief Description: The AccuVote-TS is likely the widest-deployed of all of Diebold's voting systems. It is a smart-card activated multilingual touchscreen system that records votes on internal flash memory. Voters insert a "smart-card" into the machine and then make their choices by touching an area on a computer screen, much in the same way that modern ATMs work. The votes are then recorded to internal electronic memory. When polls close, the votes for a particular machine are written to a "PCMCIA card" which is removed from the system and either physically transported to election headquarters or their contents transmitted via computer network.

Detailed Voting Process: When the voter enters the precinct, he or she is given a "smart-card" by a poll worker after confirming the voter is registered. A "smart-card" is a card the size and shape of a credit-card which contains a computer chip, some memory and basic data such as the voter's voting language and political party. The voter then takes the smart-card to a voting machine and inserts the smart-card into the machine to allow voting. After using the touchscreen to vote, 1) the record of the vote is directly recorded electronically to multiple, internal flash memory cards and 2) the voter's smart-card is reset to ensure that it can only be used to vote once. The smart-card pops out of the machine with a loud "click" and the voter returns it to a poll worker.

When the polls close, a poll worker or election official inserts a different-type of smart-card, an *administrator* card, into each voting machine and puts the machine into a post-election mode where it will no longer record votes. At this point, the machine writes the

¹ See: http://www.diebold.com/dieboldes/accuvote_ts.htm

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votes from its internal memory to flash memory on a "PCMCIA card". The PCMCIA card is merely a removable form of flash memory. A printed tape of all votes cast or vote totals for the voting machine can also be printed out at this time depending on local procedure and regulations.

The PCMCIA cards are taken out of each machine and either taken to a central tabulation facility or to remote tabulation facilities. At the tabulation facility the votes are read out of the PCMCIA cards and into a central computer database where precincts are combined to result in an aggregate vote. For remote facilities, the votes are transmitted to the central tabulation facility via a closed "Intranet", the Internet or modem. The PCMCIA cards and any printouts from the voting machines can then become part of the official record of the election.

Past Problems

March 2004: *California.* 55% of precincts in San Diego county experienced malfunctions due to battery problems that prevented polling places from opening on time. Voters were told to return later in the day but it is unknown how many were able to do so.²

March 2004: *Maryland.* At least one voter using Diebold election equipment was not presented with the entire ballot. Poll workers indicated that they knew of such errors when the ballot magnification feature was activated.³

November 2003: *Georgia.* Allegations of widespread complaints by citizens who voted "no" on a sales tax proposition but saw Diebold machines register "yes" caused county officials to take the machine out of service during the election.⁴

April 2002: *Kansas.* In Johnson County, an unexplained software error caused voting machines to miscount votes. Some modems used to transmit results from polling places to the central election office failed. After this latter incident, cartridges that record results are hand-delivered to the office. Also, results were misreported in six races. The system miscounted hundreds of votes, and a re-count was ordered.⁵

November 2002: *Maryland.* When voters voted for the Republican candidate for

² *Report on March 2, 2004 Statewide Primary Election.* California Office of the Secretary of State. See: http://www.ss.ca.gov/elections/ks_dre_papers/march_2_report_final.pdf

³ "Think You Voted in Md.? Think Again," THE WASHINGTON POST, March 7, 2004.

⁴ "NAACP disputes sales tax results, DuBose files complaint in Muscogee Superior Court." LEDGER-ENQUIRER, November 13, 2003.

⁵ "New voting technology is questioned: Computer systems can be tampered with, critics say." THE KANSAS CITY STAR, September 21, 2003.



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governor, an 'X' appeared beside the name of the Democratic candidate.⁶

NASED Qualification Status:⁷

07/08/03: AccuVote TS Precinct Counter Rev 6 version 1.0.2

05/20/04: AccuVote TS-R6 Precinct Counter Firmware Version 4.3.15D

References:

Tadayoshi Kohno, Adam Stubblefield, Aviel D. Rubin, and Dan S. Wallach, "Analysis of an Electronic Voting Machine", *IEEE Symposium on Security and Privacy 2004*. IEEE Computer Society Press, May 2004. See: <http://avirubin.com/vote.pdf>

"DRE Security Assessment, Volume 1, Computerized Voting Systems, Summary of Findings and Recommendations," InfoSENTRY, 21 Nov. 2003. See: <http://www.sos.state.oh.us/sos/hava/files/InfoSentry1.pdf>

"Direct Recording Electronic (DRE) Technical Security Assessment Report," Compuware Corporation, 21 Nov. 2003. See: <http://www.sos.state.oh.us/sos/hava/files/compuware.pdf>

"Risk Assessment Report: Diebold Accuvote-TS Voting System and Processes (redacted)", Science Applications International Corporation SAIC-6099-2003-261, Sept. 2, 2003. See: <http://www.dbm.maryland.gov/SBE>

"Trusted Agent Report -- Diebold AccuVote-TS Voting System," RABA Technologies, Jan. 20, 2004. See: http://www.raba.com/text/press/TA_Report_AccuVote.pdf

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⁶ "Glitches cited at some polls." THE WASHINGTON TIMES, November 6, 2002

⁷ *NASED Qualified Voting Systems (06/30/2004)*. National Association of State Election Directors. See: <http://www.nased.org/certification.htm>.

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