

Campaign for Verifiable Voting in Maryland

“Not secure unless voter verified”

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December 22, 2003

Karl S. Aro
Department of Legislative Services
90 State Circle
Annapolis, MD 21401

Re: Integrity of Electronic Voting Machines and Maryland Election Procedures

Dear Mr. Aro:

I am writing on behalf of the Campaign for Verifiable Voting in Maryland regarding the report you are preparing on electronic voting machines. This filing highlights security problems with electronic voting, ethical problems with Diebold Corporation, the use of uncertified software – including in a Maryland election – and the conflicts of interest of the corporation. This filing concludes there are grounds to cancel the contract with Diebold or require them to upgrade to a voter verified audit trail for no charge.

We are very pleased that Senator Paula Hollinger and Delegate Sheila Hixson have requested this report that includes a review of whether voter verified paper audit trails (VVPAT) should be required for Maryland voting the machines as they now are in an increasing number of states most recently California and Nevada. The Campaign for Verifiable Voting in Maryland, a rapidly growing group of hundreds of concerned citizens from across the state, strongly favors VVPAT due to the security problems and other weaknesses of electronic voting and the history of ethical, legal and technical problems with the Diebold Corporation.

Included with this letter are the key documents that we urge you to review in making this determination. Industry experts have stated that VVPAT will become the standard in voting technology – as having checks and balances, in ways that allow voters to see for themselves that their vote is being counted correctly – is the only way to assure a reliable voting system that voters will trust.

All Marylanders have a stake in a sound voting system that inspires broad public confidence. Your independent review is critical to inform sensible decision-making to protect this issue from becoming entangled in partisanship, budget concerns and entrenched positions rather than considering the mountain of evidence indicating that VVPAT is essential to ensure reliable election outcomes. The 2001 Willis Commission recognized the need for an independent paper audit trail when they considered this issue several years ago. (See Attachment Section I, G. Special Committee on Voting Systems and Election Procedures in Maryland: Report and Recommendations.) Illogically, those concerns were put aside and paperless electronic machines were chosen anyway. Rather than the State determining what would be the best voting system for Maryland, they allowed the corporations who make the machines to determine what was available.

I. Review of Security Concerns Shows Ongoing Problem With Security

As you know there have been several reviews conducted in Maryland beginning with the Johns Hopkins-Rice University Report this summer, followed by the SAIC report. (See Attachment Section I.) But, also important are two other reviews of the SAIC report conducted by nationally recognized computer security experts David Dill of Stanford University and Doug Jones of the University of Iowa. (See: Attachment Section I, D. Commentary on the SAIC Report and I, E. The Diebold AccuVote TS Should be

Decertified.) These reviews demonstrate that security will continue to be a concern so long as there is not a way to independently check the electronic record with a voter verified paper ballot record. Indeed, the redacting of two-thirds of the SAIC report shows that they know that they have an insecure system.

II. Either Cancel the Contract with Diebold or Upgrade to VVPAT for Free

In considering the issue of VVPAT it is important to examine the ethical behavior of the Diebold Corporation. Diebold not only manufactures these machines but also collects and counts the vote on proprietary, secret, software. There is a strong case to be made for canceling the contract with Diebold but at a minimum when this corporations behavior is examined an independent paper audit trail is essential and Diebold should put such a procedure in place for no charge.

The cost of an upgrade is an issue of importance to the Maryland legislature and governor. Cost is also an issue throughout the many states where VVPAT is being considered. In California after the state moved to require VVPAT, **Diebold Corporation agreed to provide San Diego, CA with an upgrade for no additional charge.** When we met with Linda Lamone of the Board of Elections she let us know that the Maryland contract with Diebold requires upgrading the equipment to legal standards but she was not sure if Diebold is required to cover all or part of these costs. In press statements she has said that Diebold's contract calls for them to match the lowest price for such upgrades. If that is accurate the San Diego precedent is an especially important one. (See Attachment Section III, F. Diebold gives paper trail for free to San Diego County).

Some are calling for the cancellation of the contract with Diebold. For example, The Baltimore Sun urged this in an editorial on November 18, 2003 saying: "Maryland should heed computer scientists' warnings and cancel its \$55.6 million purchase of touch-screen voting machines. E-voting is so susceptible to errors and manipulation, irregularities could negate the whole idea of free and fair elections." They concluded: "Voting is not a computer game; it is a cornerstone of our democracy. Maryland will be making a grievous mistake if it ignores all the red flags about the unreliability of touch-screen voting machines." (See Attachment Section II, B. Baltimore Sun: Urges the cancellation of the Maryland contract with Diebold.)

There is good cause to consider contract cancellation as Diebold has given the public, State of Maryland and the nation a good deal of reason to doubt their ethics, professionalism, veracity, credibility and reliability. Indeed, while we have not been allowed access to the Diebold contract, at a minimum it must require that they count the votes correctly – with all the security problems, software concerns and inability to audit their vote count it is impossible to determine that they have met this basic contractual obligation.

III. Diebold History of Conflicts of Interest, Ethical Violations and Legal Violations

Regarding conflicts of interest, the public comments of their CEO about delivering the critical swing state of Ohio to President Bush certainly presents an appearance of bias that undermines confidence in their machines counting votes – especially when there is no way to independently audit their results and when the counting is done on secret (proprietary) software. Further, the fact that CEO Wally O'Dell has raised over \$200,000 with the support of two-dozen executives at Diebold for the President's re-election shows partisanship runs through the leadership of the corporation. (See Attachment Section III, C. Partisan Vote Counters Undermine Trust in Voting.)

Unfortunately, the problems with Diebold are not only the appearance of a conflict of interest. **This week, Black Box Voting reported that Diebold has used uncertified software in Maryland.** According to Diebold employee emails, in the run up to the 2002 election, certified software was installed, but then overridden by uncertified software - before the election – making the vote count illegal. This also raises questions about the accuracy of the vote count. (See Attachment Section III, A. Use of Uncertified Software in Maryland and Other States.)

Just this week the California Secretary of State reported that in the most recent gubernatorial election Diebold used uncertified software in every county where their machines were used. This is not the first time Diebold has violation of state and federal law using uncertified software. In addition, Diebold had installed the wrong version of the software, which was often uncertified as well, on every machine that was audited in California. The Secretary of State says Diebold may be banned from selling voting machines in

California. Just before the 2002 statewide election in Georgia software patches were added just prior to the vote – a vote that produced anomalous results inconsistent with pre-election polls.

IV. Diebold's Deceptive Practices and Derogatory Comments

The Diebold Manual discusses how employees should deceive state election officials when they are asked about problems in security. Indeed, five years ago Doug Jones reported the security flaws in the Diebold machines – the same security flaws were found in the Johns Hopkins report earlier this year. Rather than fix them, Diebold tried to hide them. See Attachment Section III, B. Diebold Knew Of Flaws In Voting Software And Advised Employees To Misrepresent Them.)

Unfortunately, the problems with Diebold seem to run through the company, including not just the partisanship of its executives, but also employees talking in email exchanges about how the corporation should charge Maryland out the “yin-yang” and make VVPAT “prohibitively expensive.” While the corporation claims these are just the comments of employees, when they talk to the media they have suggested exorbitant prices for VVPAT. (See Attachment Section, III, E. Diebold e-mail discusses price gouging Maryland.) Their employees have also made derogatory comments about members of the legislature and Board of Elections. And this week Bev Harris of Black Box revealed that felons are running the company (including a computer embezzler). (See Attachment Section III, A. Use of Uncertified Software in Maryland and Other States.)

The integrity of our voting system – ensuring that every vote is counted correctly – is fundamental to an effective democracy. With the heightened awareness of the importance of every vote being counted and with the improvements in technology Maryland has an opportunity to put in place a voting system that is the best available and in which the voters will have confidence. We hope your review of electronic voting in Maryland will move us further in that direction.

Sincerely,

Kevin Zeese and Linda Schade
Co-Directors, Campaign for Verifiable Voting in Maryland

cc: Senator Paula Hollinger
Delegate Sheila Hixon

APPENDIX

I. REPORTS AND STUDIES

A. E-Voting Technology and Standards (Policy Brief), Association for Computing Machinery, U.S. Public Policy Committee

Since computers are inherently subject to programming error, equipment malfunction, and malicious tampering, USACM continues to recommend that a voter-verified audit trail be one of the essential requirements for deployment of new voting systems.

<http://www.acm.org/usacm/Issues/EVoting.htm>

B. Analysis of an Electronic Voting System, Johns Hopkins Information Security Institute Technical Report TR-2003-19, July 23, 2003

Recent election problems have sparked great interest in managing the election process through the use of electronic voting systems. While computer scientists, for the most part, have been warning of the perils of such action, vendors have forged ahead with their products, claiming increased security and reliability. ...

<http://avirubin.com/vote.pdf> See also Dr. Rubin's response to Diebold:

<http://avirubin.com/vote/response.html>

C. Risk Assessment Report: Diebold AccuVote-TS Voting System and Processes.

SAIC Report (only 69 pages of the 200-page full report are made public), September 2, 2003

This report presents the results of a risk assessment of the AccuVote-TS voting system as currently implemented in Maryland by the State Board of Elections (SBE) and the Local Boards of Elections (LBEs). This Risk Assessment report includes evaluations of threats, vulnerabilities, security controls, and risks associated with the AccuVote-TS system and possible impacts to the State and the integrity of its elections process from successful exploitation of identified weaknesses. ...

http://www.dbm.maryland.gov/dbm_search/technology/

[toc_voting_system_report/votingsystemreportfinal.pdf](http://www.dbm.maryland.gov/dbm_search/technology/toc_voting_system_report/votingsystemreportfinal.pdf)

<http://www.cs.uiowa.edu/~jones/voting/nist2003.html>

D. Commentary on the SAIC Report, David Dill, computer scientist at Stanford University and founder of Verified Voting.org, September 26, 2003

Even if all of the recommendations of this report are adopted, the most important question remains unanswered: Why should we trust touch-screen voting? The report fails to consider, much less recommend, the most obvious risk-mitigation strategy: Don't use touch-screen voting. ...

http://www.verifiedvoting.org/article_text.asp?articleid=143

E. The Diebold AccuVote TS Should be Decertified: And what this tells us about the certification process, Dr. Doug Jones, University of Iowa, Computer Science Department. Dr. Jones presented this paper at the USENEX Security Symposium in Washington, DC, on August 6, 2003. This excerpt is particularly relevant to the situation in Maryland.

Full text: <http://www.cs.uiowa.edu/~jones/voting/dieboldusenix.html>

<http://www.cs.uiowa.edu/~jones/voting/dieboldacm.html>

<http://www.cs.uiowa.edu/~jones/voting/dieboldftp.html>

F. Final Report of the California Ad Hoc Touch Screen Task Force recommending requiring voter verified paper audit trail: This is a thorough report examining all of the

issues around the need for a voter verified paper audit trail. The Secretary of State required that all DRE's in California have a voter verified paper audit trail.

http://www.ss.ca.gov/elections/taskforce_report_1.htm

G. Special Committee on Voting Systems and Election Procedures in Maryland:
Report and Recommendations, February 2001

A review of voting alternatives done for Maryland in February 2001. The report acknowledges the importance of a voter verified audit trail.

<http://www.sos.state.md.us/sos/admin/pdf/reportall1.pdf>

II. IMPORTANT MEDIA URGING VOTER VERIFIED PAPER AUDIT TRAIL

Editorials in Support of a Voter-Verified Paper Audit Trail:

A. New York Times: Urges a voter verified paper audit trail to inspire confidence in voting. http://www.truevotemd.org/facts_2003-12-08_paper_trail.asp

B. Baltimore Sun: Urges the cancellation of the Maryland contract with Diebold.

http://www.truevotemd.org/facts_2003-11-18_computer_trouble.asp

C. Washington Post: Urges voter verified paper audit trail. Touch & Go Elections, Nov. 9, 2003 <http://www.truevotemd.org/facts.asp#news>

D. Fortune Magazine: Calls paperless voting (DRE) the worst technology of 2003

<http://www.fortune.com/fortune/technology/articles/0,15114,558787,00.html>

E. Voting system too vital to change, Frederick Gazette, October 9, 2003

Urges a system we can trust – verification of vote is essential.

<http://www.gazette.net/200341/frederickcty/columns/181997-1.html>

F. Trusting machines risky, especially at the polls, The Columbia Flier, November 26, 2003

Howard County paper urges a system we can “trust but verify.”

http://www.truevotemd.org/facts_2003-11-26_trusting_machines.asp

III. ETHICAL PROBLEMS WITH DIEBOLD

A. Use of Uncertified Software in Maryland and Other States: BlackBoxVoting.org reports that uncertified software has been used in Maryland and ten other states. See:

<http://www.blackboxvoting.com/bbv/1216presskit.pdf>

B. Diebold Knew Of Flaws In Voting Software And Advised Employees To Misrepresent Them

... “Diebold’s employee guidelines demonstrate why we need more transparency in the development and implementation of voting machines so that such failings are not tolerated,” stated Kucinich. “Unfortunately, instead of working to improve voting

machine accuracy and security, this document shows that Diebold has attempted to cover up voting machine failings with secrecy and false statements.” ...

http://www.house.gov/apps/list/press/oh10_kucinich/031202DieboldEmployeeHandbook.html

C. Partisan Vote Counters Undermine Trust in Voting: Ethical Society of Philadelphia, September 7, 2003

Walden O'Dell wrote a letter the other day. He wrote a fund-raising letter to Ohio Republicans. And, in that letter O'Dell said that he was, "committed to helping Ohio deliver its electoral votes to (President Bush) next year." Walden O'Dell is the Chairman of the Board of Diebold Election Systems, the second largest company in America whose business it is - to count your vote. ...

<http://www.ecotalk.org/VotingForumSpeech.htm>

D. The Case of the Diebold FTP Site, Dr. Doug Jones, University of Iowa, Computer Science Department

On Feb. 4, 2003, employees of Diebold Election Systems admitted that they had been using an insecure FTP server to exchange and update some part of Diebold's software. Bev Harris wrote this up in the on-line journal Scoop. This FTP server was taken offline on Jan 29, and it is alleged to have contained files with names like "rob-georgia.zip", large parts of GEMS (the Global Election Management System), and unknown other software. ...

<http://www.cs.uiowa.edu/~jones/voting/dieboldftp.html>

E. Diebold e-mail discusses price gouging Maryland, Gazette, December 11, 2003

An e-mail found in a collection of files stolen from Diebold Elections Systems' internal database recommends charging Maryland "out the yin-yang," if the state requires Diebold to add paper printouts to the \$73 million voting system it purchased. The e-mail from "Ken," dated Jan. 3, 2003, discusses a (Baltimore) Sun article about a University of Maryland study of the Diebold system:

"There is an important point that seems to be missed by all these articles: they already bought the system. At this point they are just closing the barn door. Let's just hope that as a company we are smart enough to charge out the yin if they try to change the rules now and legislate voter receipts." ...

<http://www.gazette.net/200350/princegeorgescty/state/192070-1.html>

F. Diebold gives paper trail for free to San Diego County

County proceeds on touch-screen voting machines, San Diego Union Tribune , November 26, 2003

... [San Diego] County officials renegotiated its contract with Diebold on Monday after learning that the state would require voting machines to print a list of the voter's choices for review starting in July 2006. The list would be behind glass, and couldn't be removed. The latest Diebold machines come with a built-in printer, but they only print voter reports for poll workers – not statements that voters can view to verify their votes before casting them. Diebold has agreed to modify the county's machines for free by the 2006 deadline so voters can review a printout of their ballots before casting them. ...

http://www.signonsandiego.com/news/metro/20031126-9999_7m26vote.html

