



DEPARTMENT OF INFORMATION RESOURCES

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February 4, 2005

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Ms. Ann McGeehan
Deputy Assistant
Office of the Secretary of State
1019 Brazos Street
Austin, TX 78701

RE: Examination of voting hardware and software from Diebold Election Systems

Dear Ms. McGeehan:

I attended a scheduled examination January 5, 2005, at 1:30 pm for the purpose of examining the Global Election Management Systems (GEMS) software and changes to firmware produced by Diebold Election Systems. The report below summarizes my findings.

Voting Systems Versions

Hardware/Software Version	Date Previously Certified
GEMS 1.18.22	12/4/2004
Accuvote-TSX w/4.5.2 firmware	None
Accuvote-TS R6 w/4.5.2 firmware	12/4/2004
Accuvote-OS w/2.0.12 firmware	12/4/2004
Voter Card Programmer 4.1.11	None

Results of the examination

This examination is to certify incremental upgrades of GEMS components. The upgrades include a few minor new functions and numerous bug fixes. Initial certification is sought for two components not currently certified in Texas, The AccuVote-TSX and the Voter Card Programmer (VC Programmer).

According to the CIBER report, GEMS 1.18.22 is recommended for qualification under the 2002 standards although the overall system is still qualified only under the 1990 standards. Responding to criticisms from prior examinations, the vendor provided a change list for some of the products at this examination. The list indicates numerous fixes for GEMS, some of which appear to correct potentially serious problems.

The examiners' test results indicate the system counts votes correctly, and the system appears to function as advertised. However, the fixes noted in the change list provide cause for concern about the ITA testing and certification process. It appears that the ITA did not catch these errors, nor did they catch the very serious errors that were uncovered by independent experts when source code of a previous version was leaked through the Internet. The SOS examination team must rely on the ITA's putative fine-grained evaluation of the

systems because the team does not have the resources to do an appropriate level of in-depth analysis. But such reliance may be misplaced if ITA evaluations do not accurately reflect the security, accuracy, or reliability of the systems.

Thus while the examination did not reveal any objections to certification of this component, this examiner is not confident that serious problems may still lurk within the software.

The Accuvote-TSX and TS R6 upgrades fix minor bugs and enhance usability. None of the upgrades affect change core functions. The user interface has improved slightly, and remains one of the best in the industry. The examination uncovered no objections to certification of these components.

The Accuvote-OS is an optical scan device for central count applications such as mail-in voting. The volume testing conducted by CIBER and the short test administered during this examination indicate that the device correctly counts votes. The device was recommended by CIBER for certification under the 1990 standards and the examination uncovered no objections to certification of these components.

The Voter Card Programmer is a PC-based application that is used with an external smart card reading device to create voter access cards for use in the Accuvote TSX and TX R6. It is anticipated that this device will be used in early voting environments. The functional test during the examination indicated that the software performs adequately, and uncovered no objections to certification of this component.

Recommendations

It is strongly suggested that the company provide a comprehensive change log for the Accuvote-OS and the VC Programmer at future examinations.

At this time, the Department of Information Resources (DIR) finds no objections to certifying the system as presented at this examination.

Respectfully,

A handwritten signature in black ink, appearing to read "Nick Osborn", with a long horizontal line extending to the right.

Nick Osborn
Systems Analyst