DEPARTMENT OF INFORMATION RESOURCES

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June 28, 2005

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

RE: Examination of Accupoll voting systems

Dear Ms. McGeehan:

I attended a scheduled re-examination on June 9, 2005, at 8:30 am, for the purpose of examining the voting system from Accupoll. The report below summarizes my findings.

Hardware/Software Version	**Date Previously Certified**
AccuPoll DRE Voting System v2.5	N/A

Accupoll consists of the following components and subsystems:

- AccuPoll Voting System and Server software (VSS) release 2.5
- AccuPoll Election Management System release 2.5
- AccuPoll Ballot Builder Application release 2.5
- AccuPoll Voting Station AVS-1000-B1
- AccuPoll Keypad AKP-1000-B
- AccuPoll Voting Administrative Workstation VAW-1000-B
- AccuPoll GoVote Writer GVW-1000-A
- AccuPoll Privacy Panels PNL-1000-A
- AccuPoll GoVote smartcards GVK-1000-A
- Central Count Server (hardware to be provided by Customer)
- Central Vote Consolidator CVC-1000-B

Accupoll was examined January 5, 2005 but apparently was not certified. This examination is to review resolution of some issues raised during previous examinations.

Description of changes

Many of the changes the vendor has made focus on security, particularly in the Ballot Builder module. The Independent Testing Authorities (ITA) require that the ballot preparation software be separate from the central count server for security reasons. Accupoll software complies with this requirement; users who have access to Ballot Builder do not have access to the Central Count server unless it is specifically granted by an elections administrator. Backend logging required in 2002 requirements make it almost impossible to run other software on the same system.

When the election administrator finishes defining an election, the system produces a CD-ROM with all the ballot styles and other key election definitions on it. The CD-ROM is digitally signed and encrypted with a 'key'. This signature key changes with every version of the election, even if the same version is saved at a different time.

The CD is used to initialize Voter Administration Workstations (VAW) prior to the election. Software on the VAW checks the key to ensure the CD has been produced by a valid version of the election definition software. The vendor recommends that the VAW be initialized in the warehouse, so it is unlikely that personnel at a voting location will have access to the CD at all.

The key is also printed at the bottom of every page of every report and signature page such as a poll-open report. This signature key can be published so that the public can check that every report has been produced from the same election definition. The examiners also suggested that election judges at polling locations be required to verify that the key produced on the poll-open report is the same key published by the elections office.

When the polls close, all Cast Vote Records (CVR) and activity logs are written to a 'results' CD. This CD is used to transfer the data to the central count facility. The signature key is also recorded on that CD along with the ID of the person who created the CD at the polling location. A results CD with an invalid key will be rejected by the consolidator at the central count. Note that the system uses only writeable media. Rewriteable disks will be rejected by the software.

The database for all machines is MySQL. The data is encrypted, and only the voting application is allowed access to the database. Note that the CVR is written in so many different formats in so many different places that successfully tampering with the records at the polling location is virtually impossible.

The voting machines are connected to the VAW through an Ethernet switch rather than a hub to reduce the chance that a network sniffer could be used to intercept communications between the VAW and the voting stations.

Additional functionality has been added to the audit log viewer to make it much more effective. Some form of this might be made available for use by the general public to give more transparency to the vote tabulation processes.

Results of the examination

The voting test did not uncover any anomalies in counting votes and the user interface. The vendor demonstrated the use of the barcode scanner to identify and approve provisional ballots.

The vendor appears to have addressed concerns noted at the prior examinations. DIR finds no objections to certifying this system.

Respectfully,

Nick Osborn
Systems Analyst