

The State of Texas



Elections Division
P.O. Box 12060
Austin, Texas 78711-2060
www.sos.state.tx.us

Phone: 512-463-5650
Fax: 512-475-2811
TTY: 7-1-1
(800) 252-VOTE (8683)

Geoffrey S. Connor
Secretary of State

MEMORDUM

TO: Ann McGeehan
Elections Division Director

FROM: Glenn Glover
Voting System Examiner

DATE: January 15, 2004

A voting systems certification examination was held at the Radisson Town Lake Hotel on Thursday, Jan. 8, 2004, administered by the Office of the Secretary of State Elections Division.

ES&S submitted their Voting System Product Suite for examination and certification by the State of Texas examination board. The ESS Voting System Product Suite consists of the following components:

- iVotronic DRE Voting System 8.0.0.0
- Model 100 OMR Precinct Counter 5.0.0.0
- Model 650 1.2.0.0
- Model 150/550 Central Count 2.1.0.0Q
- Optech Eagle Precinct Count HPS 1.28, APS 1.50, CPS 1.02a
- Optech IV-C Central Count 1.06a
- Votronic DRE Voting System 5.19
- Unity Election System Software 2.4.2**
- Election Data Manager (EDM) 7.2.1.0
- iVotronic Image Manager 1.2.3.0
- ES&S Image Manager 7.2.0.0
- Optech Image Manager 3.2.0.0
- Hardware Program Manager (HPM) 5.0.2.0
- Data Acquisition Manager (DAM) 5.0.3.0
- Election Reporting Manager (ERM) 6.4.2.0
- Audit Manager 7.0.2.0

Figure 1

ESS began the certification presentation with a discussion of issues regarding their voting systems. ES&S discussed their versioning conventions, the Independent Testing Authority review process and in general terms security for their product suite. After the discussion, the examiners evaluated the Optech Eagle Precinct Count & Optech IV-C Central Count Scanner. Both devices are tabulation products which an operator feeds marked/voted ballots into. The Optech IV-C can handle a stack of ballots whereas the Eagle is fed one ballot at a time. The

examiners began a test election on the Optech IV-C and Optech Eagle Scanners. The test identified an irregularity with the Optech IV-C scanning function. The ink of a "sharpie" pen had soaked through one test ballot and had appeared as a mark on the other side of the ballot. The Optech IV-C erroneously counted a vote in a contest on the reverse side of the ballot because the ink had soaked through to the exact position where a candidate selection would have been marked/voted.

The examination team wanted to replicate the Optech IV-C scanner's miscounts of the bleed-through ink ballot. They fed the same ink spotted ballot multiple times into the Optech IV-C with inconsistent results – sometimes the contest was counted and other times the contest was not counted. ES&S explained that they recommend that the alignment of races on a printed ballot be offset as not to have a contest selection position directly behind another contest selection position on the reverse side of the ballot page, that pencils be used to mark the ballot so as to prevent ink soaking through the ballot, and that customers use their Ballot Image Manager product to create ballot layouts that automatically provide position offsets on the ballot so as to prevent this anomaly from happening. ES&S was unable to produce upon request their Optech IV-C documentation concerning pencil and alignment recommendations.

The examination continued with testing of the other voting components presented to the panel. The Model 150/550 and iVotronic DRE accurately tallied and uploaded to the Unity system with no problems revealed. The panel also examined the Election Reporting Manager's new capability of manually loading scanner totals from Optech IV-C's 3.5 inch diskettes and from the Optech Eagle memory packs; no problems were observed.

The Unity ERM Reporting/Display computer was evaluated and proved to be accurate in reporting election results. It was noted that the attached audit log printer did not report an "exit or close election" event from the software until the next election had begun. An "exit or close election" event should be printed immediately to the continuous-feed printer because of its significance as an election event.

After review of the documentation and ES&S's presentation of their voting equipment, I recommend the following:

- 1) Optech IV-C Central Scanner only be certified for use under the following conditions
 - a) the Optech IV-C Central Scanner has a sign, easily readable by the operator, "pencil marked ballots only".
 - b) the Optech IV-C Central Scanner documentation / manual reflect the pencil and ballot alignment guidelines recommended by ES&S.
also ballots scanned into the Optech IV-C meet the following criteria
 - c) ballots can only be voted with pencils
 - d) ballot image layouts have contests aligned so as not to have a contest selection area directly behind a contest selection area on the reverse side of the ballot
- 2) Full certification of all other ES&S voting system components identified in Figure 1. I find that these components are in compliance with Voting System Certification requirements of the Texas Administrative Code and should be approved for use in Texas elections.