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February 20, 2007

Ms. Ann McGeehan
Director of Elections
Texas Secretary of State
Elections Division
208 East 10th Street
Austin, Texas 78711

Re: Inspection of ES&S Voting Systems conducted on January 18 and 19, 2007

Dear Ms. McGeehan:

Pursuant to my appointment by the Texas Secretary of State as a voting systems examiner under TEXAS ELECTION CODE § 122.035, please allow this letter to serve as my report concerning the above referenced examination. I, along with the other statutory examiners and staff from the Secretary of State's office, examined the following ES&S voting systems on January 18 and 19, 2007, at the offices of Elections Division of the Texas Secretary of State in Austin, Texas:

<p>Unity Election System Software v 3.01.1 which includes: Election Data Manager (EDM)(v. 7.4.4.0) ESS Image Manager (ESSIM) to include BOD (v. 7.4.2.0) Hardware Program Manager (HPM) (v. 5.2.4.0) Data Acquisition Manager (DAM) (v. 6.0.0.0) Election Reporting Manager (ERM) (v. 7.1.2.1) Audit Manager version (v. 7.3.0.0) iVotronic Image Manager (iVIM) (v. 2.0.1.0)</p>	
<p>DRE - iVotronic 12" Non-ADA Voter Terminal with Attached RTAL printer (v. 9.1.6.2)</p>	
<p>DRE - iVotronic 12" ADA Voter Terminal with 3 Button Audio with Attached RTAL printer (v. 9.1.6.2)</p>	
<p>DRE - iVotronic 12" Supervisor iVo Terminal (v. 9.1.6.2)</p>	

DRE – iVotronic 15” Supervisor iVo Terminal (v. 9.1.6.2)	
DRE – iVotronic 15” Non-ADA Voter Terminal with Attached RTAL printer (v. 9.1.6.2)	
DRE – iVotronic 15” ADA Voter Terminal with 3 Button Audio with Attached RTAL printer (v. 9.1.6.2)	
DRE – iVotronic 15” ADA Voter Terminal with 4 Button Audio with Attached RTAL printer (v. 9.1.6.2)	
Printers ES&S Communications Pack	
Printers Seiko Stand Alone Printer	
Compact Flash Multi-Card Reader/Writer (Gang Burner) (v. 9.1.0.0)	
Precinct Ballot Counter M100 OMR Precinct Counter (v. 5.2.1.0)	
Precinct Ballot Counter/Optional Auxiliary equipment: Metal Ballot Box	
Central Count Ballot Tabulator M650 Central Count Ballot Tabulator v. 1.0 or 1.1 (Visible Red and Green) (v. 2.1.0.0)	
ES&S AutoMARK Voting System AutoMARK Voter Assist Terminal (v. 1.1.2258)	
ES&S AutoMARK Voting System AutoMARK Information Management System (v. 1.2.18)	

I examined the above referenced software and equipment (collectively referred to herein as “the ES&S Unity 3.0.1.1 System”) for compliance with the relevant provisions of the TEXAS ELECTION CODE and Texas Administrative Code related to the requirements for election machines and software. I also reviewed the written materials submitted by ES&S about the various components of the System for compliance with the TEXAS ELECTION CODE and Texas Administrative Code requirements for voting equipment.

ACCESSIBILITY TESTING

On Thursday, January 18th, Paul Miles and I tested AutoMark voting terminal and accompanying software and the other iVotronic terminals and software for accessibility compliance with the applicable state laws and regulations. In particular, we made measurements and pressure tests on each machine to ensure the voting terminals fell within the acceptable ranges under Texas regulations. We also measured the decibel level of the audio portions of the machines and used various devices available to physically challenged individuals to cast votes on the AutoMark device (i.e.- touch pads and “sip and puff” devices). These devices were not compatible with the iVotronic machines. Also, each device (both AutoMark and iVotronic) allowed the machine to be set to use 18 point font, fit within the reach parameters set out by the Texas Administrative Code (“TAC”), did not require more pressure to operate the buttons or touch-screen than is set forth in the TAC, had audio assisted options for each machine that fit within the decibel ranges (and were adjustable) set forth in the TAC, and had available table set-ups that would allow each machine to be approached by a person in a wheelchair. Each tablet iVotronic was also removed from its stand as would be done with curbside voting or placement in the lap of a voter. The tablet was maneuverable and able to be lifted with minimal force.

The only concerns I had with the accessibility of the ES&S systems presented were:

- The iVotronic devices disable the viewing screen once the audio version of the device is used;
- The speed of the audio portions of the iVotronic are not adjustable because it uses a recorded human voice;
- The audio portions of the AutoMark roll into one another for different candidates or races as you toggled between the options rather than clearly stopping to show that a new candidate or race is being described.

None of these concerns rise to the level of violating any state law or regulation; however, they are items that can be improved in future versions

TESTING OF HARDWARE AND SOFTWARE

On the same day as the accessibility testing, other examiners and Secretary of State staff witnessed the loading of all the programs presented by ES&S for certification. These attempts were successful.

On the second day of the inspection, officials from ES&S first addressed recent issues that have arisen in the press related to various problems experienced in different counties around Texas with ES&S equipment and programs.

Also on the day of the inspection, ES&S officials gave an overview of each piece of equipment and detailed the software being reviewed. A physical inspection and testing of each piece of equipment was also completed by the examiners and the Secretary of State staff. In so doing, the examiners cast a script of 10 ballots on each Direct Recording Electronic (“DRE”) voting machine, including the AutoMark machine, and paper ballots were fed into the optical scanners. Both mock votes were tabulated and sorted with the ES&S software.

OBSERVATIONS

1. Each of the separate pieces of hardware examined that were used for actually casting a ballot met the listed requirements of § 122.001 of the TEXAS ELECTION CODE in that each:

- (a) preserved the secrecy of each ballot cast by the examiners;
- (b) was suitable for use as ballot casting device;
- (c) operated safely and accurately reflected the votes cast;
- (d) permitted voting on all offices and ballot measures;
- (e) excluded improper multiple votes in a single race by a single voter;
- (f) did not count a vote for the same office or measure more than once;
- (g) permitted write-in voting;
- (h) allowed straight party voting; and
- (i) produced adequate records of the votes cast on the machine for purposes of audits.

2. The printer module used to create a verified voter paper audit trail (“RTAL Printer”) could be detached from the hardware and the operation of the iVotronic machines were not materially affected once the printer was removed. The RTAL printers were reviewed to ensure they met the current requirements of Texas law and regulation, but since there is not a

specific set of requirements or guidelines for such verified voter paper audit trails, the examiners did discuss a specific certification for these devices.

3. The voting of mock ballots by the examiners showed that DRE systems for the ES&S 3.0.1.1 System: (1) allowed a voter to review and change their selections before casting a ballot; (2) notified voters if more selection are made in a race than are allowed; (3) provided an on site paper record of the voting done on the machine; (4) provided access and voting capabilities for persons with physical disabilities; and (5) allowed for use of languages other than English in casting ballots.

4. The DRE's and optical scan ballots counters met the requirements of TEXAS ELECTION CODE § 122.033 in that each contained adequate physical security devices to guard against tampering; protected registering counters; a public counter; and a protective counter.

5. The required audit logs for the central tabulators and related software in the ES&S 3.0.1.1 System had adequate audit log capabilities as required by § 81.62 of the Texas Administrative Code. ES&S informed the examiners that some counties were using the M100 Precinct Counter as a central tabulator rather than the prescribed ES&S equipment for such a task. Because these M100's *do not* have audit log capabilities, they should not be used as central tabulators and any certification should expressly state that the M100's are certified only for use as a precinct counter.

6. The examiners cast provisional ballots, blank ballots and incomplete ballots during the examination on each piece of equipment and the tabulation and accumulator software eventually correctly counted and accounted for these differing types of ballots. The initial attempt at accumulating all of the votes cast showed an error in that the central accumulator software and firmware did not include all of the votes cast. ES&S provided explanation for the reasoning for this malfunction that satisfied the examiners.

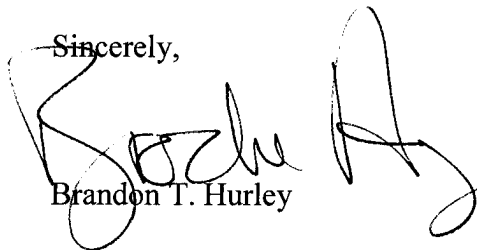
RECOMMENDATION

Based on the foregoing observations and my examination of the ES&S 3.0.1.1 System, its accompanying literature and the representations made by ES&S officials both in its literature and at the examination, I recommend that the components of ES&S 3.0.1.1 System listed above be certified as compliant with the requirements of the TEXAS ELECTION CODE and the Texas Administrative Code.

This report should not be construed as a tacit or implied comment on any of the technical aspects of the ES&S 3.0.1.1 System as except expressly stated herein. In the event any of the equipment, software or security devices examined are altered, changed or decertified by any accrediting agency (other than a “minor modification qualified for administrative certification process” as that term is defined in § 81.65 of the Texas Administrative Code), this report should be considered withdrawn and not relied upon from that point forward.

Thank you for the opportunity to serve as an examiner and participate in this important process that protects the integrity of Texas’ voting systems.

Sincerely,

A handwritten signature in black ink, appearing to read "Brandon T. Hurley". The signature is stylized and cursive, with a large initial "B" and "H".

Brandon T. Hurley