

The State of Texas

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REPORT OF REVIEW OF ES&S UNITY 3.0.1.1 and AutoMARK 1.1 VOTING SYSTEMS

PRELIMINARY STATEMENT

On January 18th and 19th, 2007, Election Systems & Software (the "Vendor") presented Unity 3.0.1.1 and AutoMARK Voting Systems for examination and certification. The examination was conducted in Austin, Texas. Pursuant to Sections 122.035(a) and (b) of the Texas Election Code, the Secretary of State appointed the following examiners:

1. Mr. Stephen Berger, an expert in electronic data communication systems;
2. Mr. Tom Watson, an expert in electronic data communication systems;
3. Mr. Brandon Hurley, an expert in election law and procedure; and
4. Mr. Paul Miles, an expert in election law and procedure.

Pursuant to Section 122.035(a), the Texas Attorney General appointed Dr. Jim Sneeringer, an expert in electronic data communication systems and Texas Attorney General's employee, Katherine Cary.

On January 18, 2007, a staff member of the Secretary of State's Office, Mr. Berger and Dr. Sneeringer, witnessed the installation of the Unity 3.0.1.1 and AutoMARK 1.1 software and firmware that the Secretary of State Office received directly from the Independent Testing Authority. Mr. Miles and Mr. Hurley examined the accessibility components of the iVotronics and AutoMARK.

On January 19, 2007, the Vendor demonstrated the system, answered questions presented by the examiners, and test ballots were then processed on each voting device. The results were accumulated and later verified for accuracy by the Secretary of State staff.

Examiner reports on the system are attached hereto and incorporated herein by this reference.

BRIEF DESCRIPTION OF UNITY 3.0.1.1 & AutoMARK 1.1

Unity 3.0.1.1 Voting System supports both paper ballots and electronic voting. The election management system software runs on a Windows-based computer configured with Windows XP Professional Operating System, Service Pack 2.

With the exception of the Printers, Compact Flash Multi-Card Reader/Writer (Gang Burner) and Optional Auxiliary Equipment Metal Ballot Box, all of the products listed below are upgrades to previous qualified versions of either hardware and/or software that have been certified for use in the State of Texas.

Component	Version	Description
Election Data Manager (EDM)	7.4.4.0	Database system that stores all of a jurisdiction's election information data
ES&S Image Manager (ESSIM)	7.4.2.0	Software to design and print ballots with the election information stored in Election Data Manager
Hardware Programming Manager (HPM)	5.2.4.0	Software to import, format, and convert the election definition files for ballot scanning equipment
Data Acquisition Manager (DAM)	6.0.0.0	Software to transmit election results over a network connection from ballot counting equipment to a central count location
Election Reporting Manager (ERM)	7.1.2.1	Software to tabulate and generate reporting of election results

Audit Manager	7.3.0.0	Software to track user activity
iVotronic Image Manager (iVIM)	2.0.1.0	Software to create and format graphic ballot screens for the iVotronic voting device
iVotronic 12" Non ADA	9.1.6.2	Direct Recording Electronic Voting System
iVotronic 12" ADA (3 Key)	9.1.6.2	Direct Recording Electronic Voting System
iVotronic 12" Supervisor	9.1.6.2	iVo Terminal
iVotronic 15" Supervisor	9.1.6.2	iVo Terminal
iVotronic 15" Non ADA	9.1.6.2	Direct Recording Electronic Voting System
iVotronic 15" ADA (3 Key)	9.1.6.2	Direct Recording Electronic Voting System
iVotronic 15" ADA (4 Key)	9.1.6.2	Direct Recording Electronic Voting System
Personalized Electronic Ballots (PEB)	1.07	A device that is used with the iVotronic to open polls, load ballots and collect votes from each terminal at the end of an election day.
M100 Precinct Counter	5.2.1.0	Precinct optical scanner
Optional Auxiliary Equipment Metal Ballot Box	N/A	Hardware piece to help process large amounts of ballots on the M650 Central Counter
M650 Central Counter	2.1.0.0	Central optical scanner
Compact Flash Multi-Card Reader/Writer (Gang Burner)	9.1.0.0	Multi-card reader that reads and writes data to and from multiple flash cards.
ES&S Communication Pack	Seiko Instruments Printer & Modem	Storage case which includes a printer and modem to be used with the iVotronics
Seiko Stand Alone Printer	Seiko Instruments Printer	

COTS consists of the following Unity Applications:

Applications	Version	Manufacturer	Description
Acrobat	7.0 (Standard)	Adobe	ESSIM & iVIM
Acrobat Distiller	6.0	Adobe	ESSIM & iVIM
Type Manager	4.1	Adobe	ESSIM & iVIM
Norton Antivirus Protection	2005	Symantec	N/A
RM COBOL Runtime System	7.50.01	Liant Software Corp.	HPM & ERM
COBOL WOW	3.12.00	Liant Software Corp.	HPM & ERM
PC Card Manager / PCM	1.3(1.60)	Magic Ram	HPM & ERM
Omni Drive USB Professional	1.72	CSM	HPM & ERM
Crystal Reports	9.0	Business Objects	EDM
Java 2 Runtime Environment, SE	1.4.2_08	Sun	ESSIM, iVIM, HPM & ERM
MS Office (Standard Edition)	2003	Microsoft	ERM
MYSQL	4.1.10a		iVIM
PRO Ethernet Adapter and Software		Intel	DAM
RTAL	Firmware v.11	Future Logic	Printer for iVotronic

AutoMARK 1.1 Voting System consists of the following:

Component	Version	Description
AutoMARK (AIMS)	1.2.18	Information management software that compiles and organizes the data needed to print ballots and prepare the AutoMARK Voter Assist Terminal (VAT)
AutoMARK (VAT) v. 1.0 & 1.1	1.1.2258	Accessible electronic ballot marker

NATIONAL ASSOCIATION OF STATE ELECTION DIRECTORS (NASED)
QUALIFICATION NUMBER

Unity 3.0.1.1 and AutoMARK Voting Systems were qualified by NASED on August 31, 2006, under the designation N-2-02-22-22-007, with the 2002 Voluntary Voting System Standards.

FINDINGS

The following are the findings, based on written evidence submitted by the Vendor in support of its application for certification, oral evidence presented at the examination, Texas voting system examiner reports and comments received at the public hearing held on March 19, 2007.

The Unity 3.0.1.1 and AutoMARK 1.1 voting systems:

1. Preserve the secrecy of the ballot;
2. Are suitable for the purpose for which they are intended;
3. Operate safely, efficiently, and accurately;
4. Are safe from fraudulent or unauthorized manipulation;
5. Permit voting on all offices and measures to be voted on at the election;
6. Prevent counting votes on offices and measures on which the voter is not entitled to vote;
7. Prevent counting votes by the same voter for more than one candidate for the same office or, in elections in which a voter is entitled to vote for more than one candidate for the same office, prevent counting votes for more than the number of candidates for whom the voter is entitled to vote;
8. Prevent counting a vote on the same office or measure more than once;
9. Permit write-in voting;
10. Are capable of permitting straight-party voting; and
11. Are capable of providing records from which the operation of the system may be audited.

CONDITIONS

The complexity of the system makes it vulnerable to unintentional errors. As witnessed during the examination, even experienced operators can cause errors. This is due to its complexity, lack of operator prompting during the use of the programs, and the lack of exclusion of inappropriate choices. The mistakes are likely to be detected during auditing or the official canvass, but at the expense of lost time and possibly the public's confidence. ES&S should take a long look at improving the user interfaces on all the election-central programs. Accordingly, the Unity 3.0.1.1 and the AutoMARK 1.1 are certified in Texas with the following conditions:

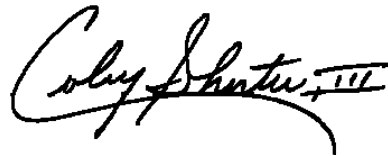
1. Election Systems and Software has created a Texas Use Procedure document which must be distributed to all Texas users. Texas users must follow the procedures detailed in this document. The document created will provide instructions for election officials to follow to meet Texas specific requirements and reduce the incidence of known procedural errors.
2. The ERM computer and the DAM computer are prohibited from being connected to each other. The data can be transferred by using a flash card from the DAM computer and uploading the data from the flash card into ERM computer.

3. The Gang Burner PC should not be part of the network during tabulation since it could be used to manipulate the database and files used by ERM. Instead, the Gang Burner PC can burn a CDROM with the files from the iVotronic flash cards and uploaded into ERM on the ERM PC.
4. The Model 100 should be configured to prompt the user in order to determine if an under-vote was intentional.

CONCLUSION

Accordingly, based upon the foregoing, I hereby certify the Unity 3.0.1.1 and the AutoMARK 1.1 Voting Systems for use in elections in Texas.

Signed under my hand and seal of office, this 3rd day of March 2008.



COBY SHORTER, III
DEPUTY SECRETARY OF STATE