Certified Public Manager Project

Improvement of Voting System Certification Process

by

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Goal

By March of 2001, implement a system to improve the current procedure for notifying potential voting system vendors of steps necessary to receive certification in South Carolina.

Problem Statement

Before marketing a voting system in South Carolina, the law requires the vendor of that system to be certified by the State Election Commission. At present, when a voting system vendor seeks certification of its voting system in South Carolina, Election Commission staff sends the company representatives a copy of State election laws dealing with voting equipment and verbally informs them that they must bring the system to South Carolina for testing. These tests include such things as verifying that the machine will allow a straight party vote to be cast, a crossover vote to be cast, and a public count display of the number of votes that have been cast.

Many times, the vendor misinterprets the election laws and programs their machine with these misunderstandings in mind. When the system arrives in South Carolina for testing, it is usually not configured properly. After performing a limited test, staff has to inform the vendor that the system needs to be re-configured and brought back at a later date with the proper
information. This results in a great deal of time and money wasted by Agency staff and the vendor.

We need a procedure in place to ensure that the vendor knows exactly how the voting system should be configured before it arrives in South Carolina for testing. Hopefully, this will give the vendor something better to use when preparing their system for testing and reduce the amount of vendor and state employee time and costs associated with the testing procedure. In addition, we need a procedure for the county election commissions to perform acceptance testing on the voting system, based on information gathered at the State level testing, once they accept delivery of a system.

**Cause & Analysis**

By reviewing past voting system vendor files, I was able to determine that the majority of problems were programming or set-up errors; however; the representatives presenting the system for testing, were unaware of how to correct, or re-program, those errors. My records indicate that only once in the past 15 years did a system require a mechanical change in order to receive certification in South Carolina.
One common problem I was able to track was the fact that these systems would arrive programmed with a ballot from another State. Not all States have the same election laws as South Carolina making it impossible for me to test the South Carolina legalities. For example, if the voting system was programmed not to accept straight party voting, an option we do have in South Carolina, I was unable to determine if the system would accommodate this feature. Another common problem was the protective counter feature. Many States do not require this record of how many people have used the machine since its purchase. After returning to their home office or discussing this procedure via phone with the home office, many times the vendor representative would learn that this was a simple programming procedure that would only take a few minutes to repair; however, the representative would have to return to the home office for repair and then schedule a time to bring the system back to South Carolina for re-testing.

After talking with several voting system vendors, I was able to determine that the information currently dispatched, South Carolina election laws relating to voting systems, is too complicated and not specific enough. The vendors unanimously agreed that they would prefer the information to be in steps and written in non-legal terms so that they do not misinterpret
South Carolina election laws. They would also prefer a checklist of requirements and a sample ballot to use as a guide when programming their system.
State Election Commission (SEC)  
Current Voting System Certification Process

As requested from Voting System Vendor, SEC Sends Information About Certification Testing Requirements to Vendor

Vendor Submits System Through Independent Testing

Vendor Brings System to SEC for State Level Testing

System is configured to meet certification requirements

Does Not Meet Requirements

Vendor Leaves to Reconfigure System

Meets Requirements

SEC Tests system for compliance with State laws

Not Compliant

Vendor Leaves to Fix Problems Incurred in Testing

Compliant

Staff Prepares Report for SEC Board to Approve System

SEC Board Meets to Approve Voting System

Approval Letter is sent to Vendor

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Implementation Plan

When talking with current voting system vendors and reviewing past files on this subject, I found a common thread that the vendors were not receiving simplistic instructions on what was required of them for system certification.

Based on this realization and also the request of the vendors called, I will proceed to develop a packet of information to be delivered to any vendor seeking certification in South Carolina. This packet will contain the following:

- An application for examination of the voting system
- Step-by-step guidelines of certification process in South Carolina. These guidelines will be derived from the flowchart on page 6
- Certification document for vendor to record their NASED qualification testing numbers
- State level testing specifications and instructions on tests that will be performed during examination
- One primary election ballot containing multiple political parties, multiple offices, offices with more than one seat to fill, multiple district offices
• One general election ballot containing multiple political parties, multiple offices, offices with more than one seat to fill, multiple district offices, write in voting provisions, referenda questions

• Configuration management checklist which will follow election law requirements for voting systems

• Copy of State election laws dealing with voting system certification

Once compiled, the costs for this information packet will be minimal since most of its contents are simply reproducible documents.

I will also conduct, along with the agency Executive Director, 3 regional workshops for county election commissions explaining to them the process of voting system certification and its importance to the integrity of elections in South Carolina. Attendees to this workshop will receive credit as a component of our statewide training and certification program.

Another component to our training program will be on acceptance testing of certified equipment. Once a system is certified and sold to a county, it must be tested on the county level to ensure that they are receiving the version that was certified by the State Election Commission.
**Evaluation Method**

The information packet will be reviewed after every voting system certification process. Any relevant information requested by a vendor during the certification process but not available in the information packet, will be added to the packet for future requests. The packet will also be reviewed after the end of each legislative session and updates will be made according to any legislative changes dealing with voting system certification.
Summary of Voting System Certification Requirements for South Carolina

To receive certification of a voting system in South Carolina, you must:

1. Receive qualification by a certified Independent Testing Authority (ITA) accredited by the National Association of State Election Directors (NASED) and the State Election Commission (SEC) as meeting or exceeding the minimum requirements of the Federal Election Commission’s national voting system standards.

   ** This requirement also applies to revisions of software, firmware or hardware of systems certified prior to July 1, 1999.

2. Pay a non-refundable examination fee of $1000.00 for a new voting system and $500.00 for an upgrade to any existing certified system.

3. Submit the system for examination and testing by the SEC in Columbia. System configuration for this process will be supplied by the SEC.

4. Submit a list of all states or jurisdictions in which that voting machine has been approved for use. This list must report how long the machine has been used in the state; contain the name, address, and telephone number of that state or jurisdiction’s chief election official; and disclose any reports compiled by state or local government concerning the performance of the system.

5. Submit copies of all contracts and maintenance agreements used in connection with the sale of the voting system.

6. Conduct, under the supervision of the SEC and any county election commission, a field test of any new voting system. This test must be completed during a scheduled primary, general or special election and must be held in two or more precincts.

7. All source codes for the system must be placed in escrow by the manufacturer, at their expense, with the approved software ITA.

8. After a voting system is approved, any improvements or changes to the system must be submitted to the SEC for approval and re-examination if necessary. This requirement does not apply to the technical capability of a general purpose computer, reader, or printer.

If you need additional information on this matter, please contact Donna Royson at (803) 734-9004.