SECRETARY OF STATE

Minutes
State Board of Elections Teleconference Meeting
January 8, 2010

10:00 a.m. Central Time, State Capitol, 500 East Capitol, Room 204, Pierre, SD 57501; South Dakota

The meeting was called to order by chair Chris Nelson at 10:04 a.m. Central Time on January 8, 2010 with the following members responding:

Present	Absent
Chris Nelson	Linda Lea Viken
Cindy Schultz	Dick Casey
Karen Layher	
Christopher Madsen	
Matt McCaulley	

Other attendees: Teresa Bray, Deputy Secretary of State; Kea Warne, Election Supervisor; Jennifer Headlee, HAVA Coordinator; Sue Roust, Minnehaha County Auditor and Heather Irwin, Minnehaha County Auditor's Office.

Moved by Layher and seconded to approve the minutes of the December 9, 2009 meeting. The roll being called:

> Yeas 5, Nays 0
> Yeas: Nelson, Schultz, Layher, Madsen, McCaulley
> Motion Passed.

Kea Warne, Election Supervisor, discussed the testing certification process for the AutoMARK 1.3 upgrade. Jennifer Headlee, HAVA Coordinator provided the attached written summary of the certification process to the Board. The Secretary of States Office requested the Board approve the AutoMARK 1.3 upgrade. Moved by Schultz and seconded to approve the AutoMARK 1.3 upgrade.

> Yeas 5, Nays 0
> Yeas: Nelson, Schultz, Layher, Madsen, McCaulley
> Motion Passed.

Moved by McCaulley and seconded to adjourn at 10:15 a.m. The roll being called:

> Yeas 5, Nays 0
> Yeas: Nelson, Schultz, Layher, Madsen, McCaulley
> Motion Passed.

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Chris Nelson, Secretary of State

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Kea Warne, Recorder

AutoMARK Voter Assist Terminal Firmware 1.3 State Certification
January 4th and 5th, 2010
Kea Warne, Election Supervisor
Jennifer Headlee, HAVA Coordinator
Mark Manganaro, South Dakota State Certification Manager ES&S

On January 4th and 5th the Secretary of State's Office tested the 1.3 firmware on the AutoMARK Voter Assist Terminal to the following criteria found in Administrative Rule 5:02:09:02.03, for approving an electronic ballot marking system, sections (1), (2), (3), (4), (5), (6), (7), (16), and (18.) Administrative Rule 5:02:09:02, approval of automatic tabulating systems required before distribution states, "Any changes or modifications in an approved automatic tabulating, direct recording electronic, or electronic ballot marking system may be certified by the state board of elections with or without out the demonstration described in this section for initial approval."

The AutoMARK with the 1.3 firmware upgrade met the criteria tested for the sections of Administrative Rule 5:02:09:02.03 mentioned above. Therefore, it is the recommendation of the Secretary of State's Office that the State Board of Elections certify the 1.3 firmware for use in the State of South Dakota.

Overview of the 1.3 Firmware

Each AutoMARK in the State currently operates using firmware version 1.1. Since 2006 the State has been aware of several limitations to the 1.1 firmware. The most serious limitation was in regards to the marking of the ovals on a 19 inch ballot. An AutoMARK using the 1.1 firmware in isolated instances skewed the printing of the ovals to one side when marking the bottom of a 19 inch ballot, thus affecting the ability of the tabulating machines to read the ballot.

The 1.3 firmware corrects this issue and includes some of the following improvements as well. (*AutoMARK System Change Notes Overview – 1.1 to 1.3, March 30, 2007, AutoMARK Technical Systems, L.L.C.*)

- New scanner intensity measurement test to troubleshoot scanners
- Can substitute .wav files for all labels
- Audio on summary screen now reads the entire race label instead of the shortened version
- Addition of Pause functionality using the Repeat button
- All candidate boxes are the same width and height
- Fixed Speech Dictionary issues that existed in 1.1 firmware
- "Zoom Bug" fix to candidate text box
- There is no longer a delay in using an Assistive Technology device after use of the key pad

- Allow the ability to mix .wav labels and text-to-speech labels in the same data element

State Testing of the 1.3 Firmware

Firmware version 1.3 received Federal certification from the Election Assistance Commission in June of 2009. In December of 2009 Election Systems and Software requested State certification of the 1.3 firmware. This past week our office upgraded an AutoMARK from the 1.1 firmware to the 1.3 firmware and conducted testing of an AutoMARK operating with the upgrade.

Kea Warne and I marked 250 ballots with an AutoMARK borrowed from Hughes County. Hughes County's AutoMARK was used for testing because we believed this would best represent the AutoMARKs throughout the State, in regards to the condition and use of the machines that would receive the 1.3 upgrade.

We tracked how each ballot was marked along with any error messages received and notes on the AutoMARK Firmware 1.3 State Certification spreadsheet. The first 125 of the 250 ballots marked were 19 inch ballots and second 125 ballots marked were 17 inch ballots. Prior to marking the 19 inch ballots and 17 inch ballots we conducted a print calibration on the machines.

The ballots were marked using the touch screen and keypad. While marking the ballots we tested the machine's capabilities for alerting the voter of an under vote in a race and the machine's capabilities of preventing a voter from over voting a race. We tried to simulate a voting experience by not always inserting the ballot into the machine in a straight manner and the AutoMARK marked and printed these ballots properly. There were no ballot jams and all ballots were marked accurately for each position voted.

However, we did receive 10 error messages. One error message was in regards to how the paper was being fed into the machine and several others stated that ballot could not be recognized. In these cases the ballots were immediately returned by the machine; we then re-inserted the ballots and continued to test. There were two instances where the machine only printed one side of the ballot. In both cases we checked the print calibration and then continued to test.

Testing concluded on January 5th with the AutoMARK operating on the 1.3 firmware meeting the following criteria listed in Administrative Rule 05:02:09:03: sections (1), (2), (3), (4), (5), (6), (7), (16), and (18.)

5:02:09:02. Approval of automatic tabulating systems required before distribution. Prior to distribution in South Dakota, a company or corporation dealing in automatic tabulating, direct recording electronic, or electronic ballot marking systems shall give written notice to the state board of elections and demonstrate that its system complies with SDCL 12-17B-2 and § 5:02:09:02.01, 5:02:09:02.02, or 5:02:09:02.03 and is certified as fulfilling the requirements of the Election Assistance Commission 2002

voting system standards by an independent test authority accredited by the Election Assistance Commission. If the State Board of Elections approves the system, it shall issue a certificate of approval.

Any changes or modifications in an approved automatic tabulating, direct recording electronic, or electronic ballot marking system may be certified by the State Board of Elections with or without the demonstration described in this section for initial approval. The modification for the already approved system must have been certified as fulfilling the requirements of the Election Assistance Commission voting system 2002 standards by an independent test authority accredited by the Election Assistance Commission or been certified to meet the national standard by another state. Any change or modification determined to be de minimis by the independent test authority does not need state board of elections certification.

Source: 2 SDR 5, effective July 30, 1975; 6 SDR 25, effective September 24, 1979; 16 SDR 203, effective May 28, 1990; 21 SDR 77, effective October 24, 1994; 22 SDR 95, effective January 18, 1996; 29 SDR 113, effective January 30, 2003; 32 SDR 109, effective December 26, 2005; 33 SDR 230, effective July 1, 2007; 35 SDR 306, effective July 1, 2009.
General Authority: SDCL 12-17B-17(1).
Law Implemented: SDCL 12-17B-2.

5:02:09:02.03. Criteria for approving electronic ballot marking systems. Before the State Board of Elections grants a certificate of approval, the following capabilities of the electronic ballot marking system must be demonstrated to the board or its designee. The board may grant a certificate of approval for a system, if the system fulfills the following requirements:

(1) Accurately mark 250 ballots with at least 10 races on each ballot with no ballot jams;

(2) If the system has the capability of marking a ballot on the back side, the races must be split between the front and back of the ballot;

(3) Enables the voter to vote in absolute secrecy;

(4) Presents the entire ballot to the voter in a series of sequential screens that include methods to ensure the voter sees all ballot options on all screens before completing the vote and allows the voter to review all ballot choices before casting a ballot;

(5) Prevents any voter from selecting more than the allowable number of candidates for any office to prevent over voting, alerts the voter on the screen if the voter attempts to over vote, and provides information on how to correct the over vote;

(6) Alerts the voter to any under vote prior to marking the ballot;

(7) Accurately marks a paper ballot for each vote for each position voted;

(8) Is an electronic computer-controlled voting system that provides for marking of votes cast;

(9) Has a battery back-up system that, at a minimum, allows voting to continue uninterrupted for two hours without external power;

(10) Is designed to accommodate multiple ballot styles in each election precinct and have an option to handle multiple precincts;

(11) Has a real-time clock capable of recording and documenting the total time polls are open in a precinct and capable of documenting the opening and closing of polls;

(12) Complies with the disability voting requirements of the Help America Vote Act of 2002 as of January 1, 2005;

(13) Has a color touch-screen that is at least fifteen inches in diagonal measure;

(14) Has an option to accommodate a voter who uses a mobility device without intervention of the poll worker other than a minor adjustment such as the angle of the display, and the voter must be able to vote in a face-first position so that privacy is maintained with the ballot surface adjusted to a vertical position;

(15) Has wheels so that the system may be easily rolled by one person on rough pavement and rolled through a standard thirty-inch door frame if the net weight of the system, or aggregate of voting device parts, is over twenty pounds;

(16) Has a method to activate the system for each individual voter and which shall prevent any voter from voting more than once;

(17) Has internal operating system software or firmware, that:

    (a) Is specifically designed and engineered for the election application;
    (b) Is contained within each voting device;
    (c) Is stored in a nonvolatile memory within each terminal;
    (d) Includes internal quality checks such as purity or error detection and correction codes; and
    (e) Include comprehensive diagnostics to ensure that failures do not go undetected; and

(18) Marks ballots that can be accurately counted as provided in § 5:02:09:02.01 for each automatic tabulating system which will be counting ballots.

Source: 31 SDR 214, effective July 4, 2005.
General Authority: SDCL 12-17B-17(1).
Law Implemented: SDCL 12-17B-2.