



Initial Analysis of Problems with LibertyVote Accessibility Features

NYS Lot 2 (BMD) Submissions to SBOE Machines delivered to SBOE as of 1/17/08

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Citizens Election Modernization Advisory Committee
January 22, 2008

Vendor Name: Liberty

System Name: LibertyVote (BMD) with EMS LibertyControl, EPU 1

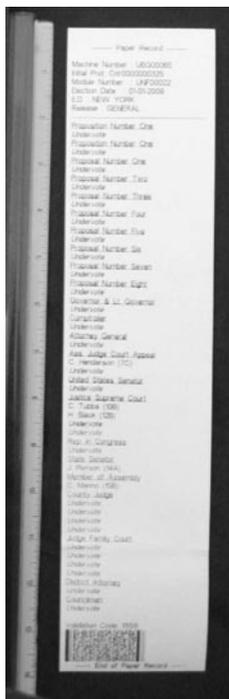
System Description: This submission is essentially the LibertyVote DRE with a modified VVPAT. This model DRE does not have a touch screen, but uses a printed overlay positioned over pressure switches. Because the full face ballot display on the front of the machine is printed, it provides no ability to change font sizes or display contrasts and colors.

Independent Verification of Paper Ballot

The Liberty DREs mechanism for independently verifying the printed ballot is unusable for voters with disabilities. In particular, voters with visual disabilities and mobility impairments will not be able to use it.

Problem 1 - The Liberty VVPAT

The “ballot” is not a ballot, but a 3” wide, VVPAT style piece of paper. Like a VVPAT, it produces the printout from a paper roll which is positioned behind the back screen of the device. The printed output is a line by line text description of race and result, with a bar code on the bottom containing unknown information.



The Liberty VVPAT



The VVPAT slot is located quite far from the voter

Problem 2 – VVPAT delivery to voter

After the voter has completed voting and presses the “Cast Vote” button, the machine pushes the VVPAT out of the slot by only 1 inch. Since the slot is located at least three feet higher than table height, a voter using a wheelchair might not be able to reach the paper.



The VVPAT sticks out only about 1 inch after the voter is finished

In this case, if the voter presses the “Cast Vote” button a second time, the VVPAT is ejected from the slot towards the front of the machine. Since this is not guided but literally sent flying, it would be nearly impossible for many voters with disabilities to be able to catch the VVPAT as it comes out.



After the second press of the “Cast Vote” button, the VVPAT is ejected out the front.



It is difficult if not impossible for many voters with disabilities to find, hold, and orient the VVPAT.

Problem 3 – Independent Verification

After the voter has located and retrieved the VVPAT, (possibly from the floor), they must place the VVPAT on some solid surface (presumably a clipboard), take up a digital pen which must be connected to the voters' earphones (requiring the voter to unplug earphones from the DRE and plug them into the pen), and run the digital pen over each line of the VVPAT, one at a time. The digital pen audio reads the characters on the VVPAT and reads them back via the earphones.

This solution proved unworkable, even for those of us testing the machine who were not disabled. It is nearly impossible to run the pen precisely over each line of the VVPAT, even when it can be seen. Even if it could be done for one or two races, it was nearly impossible to verify the entire VVPAT.

This solution is unusable for almost any voter with visual disabilities, mobility impairments, cognitive disabilities, and many others. The Liberty DRE provides no usable mechanism for independent verification.

The LibertyVote submission is unsuitable for almost any voter with visual disabilities or mobility impairment. In light of the fact that this device provides no usable mechanism for independent verification, it should not be used as a ballot marking device.

The lack of an ability for a voter to independently verify the contents of the ballot violates New York State Election Law Section 7-202(1)(e) and HAVA Section 301.