

The following letter (and attached supporting document) was hand delivered to commissioners Kellner, Kelleher, Aquila, and Donohue, Co-Executive Directors Kosinski and Zalen, and Robert Brehm and Anna Svizzero at the New York State Board of Elections on March 21, 2007. It was written by Robert Millman of Scotia, NY, and co-signed by Aimee Allaud, Elections Specialist for the New York State League of Women Voters.

March 21, 2007

Honorable Commissioners,

I am writing in reference to questions regarding the Liberty permanent paper record or VVPAT in the Board Minutes of February 20, 2007,

Question #1: Does the Liberty "Final Summary" Comply with 2005 VVSG?

Problems with the Liberty VVPAT "Final Summary" were recognized by the AIR contractor hired by the New York State Board of Elections to create a time study for voting machine use. The draft AIR Research Report noted the following:

"When AIR reviewed the Liberty DRE before the study began, we noticed that the paper printout was difficult to read and presented the voter with a series of coordinates, e.g., A1, B6, rather than actual names. In our expert opinion, this printout is less understandable to voters and may be one factor, among others, that accounts for the fact that voters spent less overall time on the Liberty DRE than the Sequoia DRE or the Avante DRE."

The Final Summary created by the Liberty DRE requires matching alpha/numeric coordinates to the names or ballot issues on the printed paper overlay on the push-button surface. This scheme adds difficulty and confusion to the voting process, because it requires comparing code ballot position with human readable text. It does not minimize cognitive difficulties and does not provide a consistent relationship between the name of a candidate and the mechanism used to vote for that candidate. Thus the paper record or VVPAT of the Liberty DRE does not meet the 2005 Voluntary Voting System Guidelines:

3 Usability and Accessibility Requirements, Page 45;

Voters should encounter no difficulty or confusion regarding the process for recording their selections.

3.1.4 Cognitive Issues, Page 49:

The voting process shall be designed to minimize cognitive difficulties for the voter. And, on page 50;

There shall be a consistent relationship between the name of a candidate and the mechanism used to vote for that candidate.

Question #2: If Liberty's "Final Summary" is Removed, Do the Remaining Elements Sufficiently Comply With the 2005 VVSG and Election Law?

Should the commissioners rule that Liberty's "Final Summary" does not comply with the 2005 VVSG and relevant election law, the commissioners must then decide if the remaining elements of the Liberty paper record satisfy the 2005 VVSG and relevant election law.

As the Liberty DRE is currently configured, the paper record is displayed through a one-inch high view window located at the back of the voting machine. This window

displays the paper record of a voter's current ballot selection. The moment a voter touches any button on the full-face display, even if only to de-select a ballot choice, the previous paper record is no longer visible; it cannot be viewed again. Voters are required to incrementally "verify" the paper record by this method. Every time a voter touches any button, that action serves as both selection of a new ballot choice and verification of the previous paper record.

This method of concurrent selection and verification requires voters to constantly consider two things at once as they proceed through the voting process.

To use the language of the 2005 VVSG, the method employed by Liberty requires a voter to be constantly engaged in two separate and different cognitive functions at the same time. On its face, this appears to be contrary to the 2005 VVSG, *"The voting process shall be designed to minimize cognitive difficulties for the voter."* The scheme employed by Liberty increases difficulty and confusion regarding the voting process.

In addition, New York State requires a full face ballot, and the Liberty paper record is displayed only one selection at a time. This is contrary to the 2005 VVSG requirement: *"There shall be a consistent relationship between the name of a candidate and the mechanism used to vote for that candidate."* The mechanism used to present the ballot in New York is full face. The mechanism used to display the Liberty paper record is individual.

Another section of the VVSG that addresses paper records is **C.1.2.4 Direct IV Systems**, Page C-7, *"The voter inspects and directly verifies that the paper record matches the displayed electronic record."* Again, in order to verify that the Liberty paper record matches the displayed electronic record of a full face ballot, it is necessary to compare the entire paper record to the entire electronic display of ballot choices. That can only occur after all ballot selections have been made.

Conclusions

It is the opinion of these citizens that the 2005 VVSG and current election law requires the entire paper record to be displayed to the voter after all ballot selections have been made. The Liberty DRE as currently configured does not do this. Voters must be able to view the VVPAT in its entirety and in a manner equivalent to the display of a full face ballot, rather than scrolling past individual ballot selections one viewing inch at a time.

Lastly I wish to add that should the commissioners find the current Liberty paper record inconsistent with standards adopted by the New York State Board of Elections, it follows that any time study results concerning the Liberty DRE voting machine should be removed from any further drafts of the AIR time study.

Robert Millman

Aimee Allaud, Elections Specialist, NYS League of Women Voters

Cc: Neil W. Kelleher, Douglas A. Kellner, Evelyn J. Aquila, Helena Moses Donohue, Peter S. Kosinski, Stanley L. Zalen, Anna Svizzero, Robert Brehm