From: ANNA SVIZZERO
To: jnieckarz@libertyelectionsystems.com; rwitko@libertyelectionsystems.com
Date: 2/8/2007 2:41 PM
Subject: Paper Audit Trail

CC: ALLISON CARR; JOHN FERRI

Good afternoon Bobby;
Several questions have arisen, concerning the compliance of your system's voter verifiable paper audit trail, and our regulations, the specific citation of which, appears below. We have tried to validate compliance on this point, using the system we have here, however the machine is not fully configured, and therefore we cannot proceed with our own evaluation of this issue. Would you please contact John Ferri at your earliest convenience, to select a mutually convenient time for you or your team to visit our office and make this system operational? It is important that this matter be reviewed, and addressed if necessary, as soon as possible. John can be reached by phone, at 474-6496 or by e-mail, at jferri@elections.state.ny.us. We look forward to hearing from you. Thank you.
Anna Svizzero

Section 6209.2, F. (1)(e) states:

(e) If the paper record cannot be displayed in its entirety, a means for moving the paper to show all paper record contents shall be provided.

LIBERTY ELECTION SYSTEMS

11 Sand Creek Road, Suite 100 • Albany, New York 12205-1442
Phone: 518.489.4573 • Facsimile: 518.489.1638
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E-mail: info@libertyelectionsystems.com

February 16, 2007

Ms. Anna Svizzero
Director of Operations
New York State Board of Elections
40 Steuben Street
Albany, NY 12207

RE: LibertyVote Testing and Certification Process

I am writing you in response to your e-mail dated February 8, 2007 as well as Commissioner Kellner's comments at the New York State Board of Elections (NYSBOE) board meting held on February 6, 2007 referencing the functionality of the LibertyVote's Voter Verifiable Paper Audit Trail (VVPAT) as it pertains to the compliance of New York State regulations.

Needless to say, we are quite concerned about the inquiry that has been brought forth by you and Commissioner Kellner relating to the testing of the LibertyVote system in New York State. It has been our understanding since the inception of this process that a very clear and prescribed protocol has been implemented by your agency for the testing and subsequent certification on any voting system in New York State. This protocol entails the use of a written report by NYSBOE that itemizes, on a weekly basis, any deficiencies that a given system has encountered during the testing process. This written report is known as an "Anomaly Report" and has proven to be a very valuable tool in the certification testing process between vendors, NYSBOE operations staff and the testing laboratories. These anomaly reports allow all parties involved the ability to review a common document during the testing process that highlights any deficiencies that have arisen in the testing process.

In your e-mail you reference a "specific citation" that you feel our voting machine's VVPAT may potentially be lacking in meeting compliance. **It is our understanding that, as of this date, all hardware testing has been completed by Wyle laboratories on behalf of NYSBOE which includes the testing of our VVPAT hardware in its current configuration. Attached is the most recent anomaly report that was sent to us by your department which makes no reference of your concern.**

It is our opinion that the LibertyVote –VVPAT functionality meets the Section 6209.2, F. (1) (e) – ***If the paper record cannot be displayed in its entirety, a means for moving the paper to show all paper record contents shall be provided.***

As per your request, on Friday - February the 9th, a Liberty technician has been in contact with Mr. John Ferri and has guided him in making the LibertyVote machine operational.

In an effort to further clarify our machines functionality to you; please reference the voting machine's lower right corner of the voter panel. On this panel you will see a *square green button* that is labeled *"SUMMARY"*; this *summary button* provides, as prescribed in the citation referenced above - ***a means for moving the paper to show all paper record contents.***

In closing, it is our position that the LibertyVote VVPAT in its current configuration meets the requirements set forth by the VSS2005 standards as well as the appropriate chapters of Section 6209 of New York States voting machine regulations and is substantiated by the appropriate anomaly reports presented to date.

If we have miscomprehended the testing process, or if there are any other potential issues or "concerns" that are inferred in your e-mail, kindly advise Liberty Election Systems at your earliest convenience so that no further delays will occur in the completion of testing and certification as it applies to our system.

Sincerely,
LIBERTY ELECTION SYSTEMS

Robert F. Witko

Robert F. Witko
President

cc: Co Chairs: Neil Kelleher and Douglas Kellner; Commissioners: Evelyn Aquila and Helena Moses Donohue; Co Executive Directors: Peter Kosinski and Stanley Zalen

Liberty

MILESTONES

- TDP Review 11/21/06
- Source Code Review 01/02/07
- Hardware Testing 01/30/07
- Compliance Build completed 01/05/07
- 2nd Language up Date 01/25/07
- Component Testing 02/09/07
- Ship Date Sent TBD
- Ship Date Received TBD
- Set up in Albany NY TBD
- Integrated Testing TBD

ANOMALY ISSUES

- 2nd Language needs to be on the presentation of the ballot for the State of New York. (English + Spanish)
  Liberty - Completed on 1/25/07.
- 1.5 M ballot test is requiring a restart due the modification required for 2nd language update.
  Liberty – Anticipated Completion 3 weeks Includes Regression Testing - Pending ITA Start Date.
- Power Disturbance failure on hardware test for the Liberty Program - Reading Unit.
  Liberty – Completed on 2/1/07.
- Liberty to set up a tutorial on creating audio and graphics – Set for 01/24/07 and 01/25/07
  Liberty - Completed on 1/26/07.

Source Code Review	1st Review	2nd Review	3rd Review	4th Review	5th Review	6th Review
LES	10/20/06	11/20/06	12/01/06	12/12/06	01/02/06	Completed 01/05/06

February 16, 2007
By: Frank Bongiorno and John Ferri

Re: Liberty Bubble Switch DRE Voting Set Up Procedures

1. Make sure VPAT bag is installed on the back of the machine. Slides over a guide.

2. Make sure to connect parallel cable from the VPAT box to the back side of the DRE.

2A. Insert orange memory cartridge and record serial number:

3. Verify machine and accessories(battery and memory cartridge) serial numbers:

4. Make sure the battery is connected from the VPAT to the DRE and plugged into wall receptacle.

5. Power up the system by using key in back of the DRE turn key to horizontal position. That is facing 90 degrees from the yellow hazard symbol.

6. Boot up system.

7. Open polls. Use key and insert into poll worker panel and turn to function position 2 on key pad while holding down the green "F" button. You'll get screen says public counter and protective counter. Note public counter should read "0" but private counter will some number other than "0" based on the number of previous votes cast on the machine.

8. Select the "A" key from the key pad. Letter "A" is linked to display that reads "Test Programming And Open Poll". The result is that you get (4) new selections A, B, C, E. **Note: This step is performed only during initial start up only.**

9. Select "B" (Check Election Programming). This will test the functionality of the key board and the test buttons (bubble switches) on the ballot face.

10. Press the Select/De-select button and the results of the key board keys will print out on the VPAT tape along with the selections pressed on the bubble switches. This may be a scripted set of selections. The number of times the bubble switch is pressed will also be shown.

11. Visually check the paper VPAT tape to make sure the scripted selections made on the DRE bubble switches match the VPAT tape selections. **Note: The voter does not have the option to scroll the VPAT tape back and forth. The voter only gets to see the current selection through the VPAT tape window.**

12. The new display screen will show A, B, C, and D options. Select "A" (Print Open Poll Statement). The printer at the rear of there machine (internal printer) will start printing the Open Poll statement. When the printer stops printing and you tear off the receipt, make sure you pull the paper out an extra 7 inches and leave it hanging out of the printer. Check the results tape to make sure spelling of names and offices are shown. The vote cast number should be zero and the protective counter number should match that shown on the display. If everything checks out sign the open poll statement.

13. The new electronic display shown will have A, B, C, D, E choices. Select "D" (Accept Open Poll Statement). This will enable the orange memory cartridge to be written over (or else previous selection remain in memory). That is you write over your test selections made earlier with the current mode.

14. You now have a new display screen that reads "Open Poll has Been Accepted" and there will be an "E" key that reads " Return to Previous Menu". Select "E" and this will move to a new screen that reads A

15. Turn the key on the control unit (located at the front of the machine to the right) back to position "1" which is the vertical position. Poll worker display panel shows following: Public Counter : 6 (note this number will change based on previous votes cast) Protective Counter shows: 15 (note this number will change based on previous votes cast) A: 1, B: 2, C: 3 (these numbers 1,2,3 corresponds to the political party in this example A,B.C) In our case this is a primary election.

    The DRE panel reads as follows: Machine ID: U6G00076 Module ID: U6F00053, Election Date: 20/09/2006, ED: NY.

16. Turn the key on the poll worker control panel back to position 2. The poll worker panel display will read the following:

A	B	C
Democrat	Conservative	Liberal
Closed	Closed	Closed
1	2	3

17. We selected "3" "Liberal Party". The VPAT tape reads the following:
    Module # : U6F00053
    Election Date: 20/09/2006
    ED: New York
    Release: Liberal

18. The DRE display reads "Make Your Choice". We selected Carl Purcell on bubble switch (1H). The DRE display shows: Governor, Carl Purcell, Liberal 1H (note display also shows the Spanish languages text). This concludes our first vote.

    Next we placed our second vote through seventh vote (all in real time)on the DRE via the bubble switches for the respective candidates running for office.

The results of the DRE (LCD display) were as follows and reflect the choices made by us, **all in real time**:

Vote number	Race	Candidate	Bubble Switch Selection
2	US Senate	Clinton Schrauf	(2I)
3	State Senate (44th)	Carol Spigel	(4J)
4	Mem. Of Assembly	Peter F. Laviolette	(5I)
5	3rd JD (Vote for two)	Herbert Muhs	(6H)
6	3rd JD (Vote for two)	Gene Unser	(7I)
7	Rep. in Congress (28th)	Danny 32 (OTB)	(3Z)

DRE display reads "Ballot Completed" "Review your choices" "Pressing Cast Vote " is irrevocable. Press "Cast Vote" is flashing. Please note that the DRE does not inform the voter that he or she has the option to view their summary of votes cast. We know this and performed this step in our testing process.

19. We then selected the yellow square "Summary " button on the DRE. The VPAT tape printed out a summary of the selections made in this ballot. The printed Bubble switch coordinates of the candidates are then shown as follows: 1H, 2I, 3Z, 4J, 5I, 6H, 7I, and write in 3Z: Danny. The screen on the DRE display reads Press summary to see more. Please note the DRE does not prompt the voter to press the summary button again to conclude the summary print out, which reads "end of intermediate summary"

DRE screen display now reads:
"Ballot Completed
View Intermediate Summary on paper ballot"

Now we pressed the "Cast Vote" selection and tape went into the VPAT collection bag.

This concludes our Liberal Test Primary.

We now switched to a "Conservative Primary" and repeat steps (17-19) above. Our selections for this primary are as follows again all votes cast are in real time:

Vote number	Race	Candidate	Bubble Switch Selection
1	Gov.	Douglas Stone	(1F)
2	Lt. Gov.	Arnold Parham	(2G)
3	US Senate	Mr. Jones	(3Y)

		(OTB)	
4	Lt. Gov.	De-selected Arnold Parham	(2G)
5	Lt. Gov.	Selected Stephen Noonan	(2E)
6	Mem. Of Assem.	Linda Hall	(5E)

At this point we selected the yellow square intermediate summary button one time. The results were : (1F.2E,3Y,5E, write in 3Y Mr. Jones)

We then selected the square yellow summary button on the face on the DRE a second time to get the end of intermediate summary.

We then voted in real time a candidate for the Rep. in (28th) congress contest Philip Mallia (4G).

We then selected the selected the square yellow summary button two times again to get a revised end of intermediate summary.

Next we selected the "Cast Vote" touch button on the DRE LCD display. And the VPAT tape dumped into the collection bag. Note: We underlined each selection made on the VPAT to record the history of our inputs. While we recorded this history, we compared the selections to the LCD displayed selections for consistency. We did not have any discrepancies in our compared results. End of voting test.

Little nuances:

a. The power switch on the VM (voting machine) to turn it on and off is located at the rear of the machine to the left (when standing at the rear and looking toward the front).

b. You can shut off the machine at any time you want without compromising the stored data on the memory cartridge. So long as you don't close the polls. When you close the polls you effectively cease the ability of the memory cartridge to be written over.

c. Another method to turn off the power to the machine is as follows;
Unplug the bigger black power cord from the receptacle (this kills the power to the battery)

Next unplug the white plastic wire harnesses (2 of them) from the DC power source (battery) to the VM (voting machine). This will disable the DC power source to the voting machine.

d. At any time during an election you can test the voting machine for proper operation. Simply turn the key on the control unit to position 1 and this will cancel the ballot on the VPAT. You will get a display menu that offers choice "A" which reads Test Programming and Open Poll. I believe from here you have the option to place the

machine into test mode and place some test votes and check their appearance on the paper receipt to ensure that the machine is operating properly.

E. Environmental Standards

The voting system shall be designed to protect against dust and moisture during storage and transportation. Testing shall be similar to the procedure of MIL-STD-810F, Method 510.4, for dust, and MIL-STD-810F, Method 506.4 for moisture. These tests are intended to evaluate exposure to these elements when the system or equipment is in a non-operating configuration and the equipment or system's required protective cover is in place.

F. Voter Verified Paper Audit Trails (VVPAT)

(1) The voting system shall print and display a paper record of the voter's ballot choices prior to the voter making the ballot choices final. In the case of a paper-based voting system, the ballot marked by the voter shall constitute the paper record referred to in this Section F.

(a) The paper record shall constitute a complete record of ballot choices that can be used in audits of the accuracy of the voting systems electronic records, in audits of the election results, and in full recounts.

(b) In the case of a DRE voting system, the paper record shall contain all information stored in the electronic record.

(c) The voting system shall be capable of showing the information on both the display screen and the paper in a font size of 3.0mm, and should be capable of showing the information in at least two font ranges, a) 3.0-4.0 mm and b) 6.3-9.0 mm, under control of the voter.

(d) In the case of a DRE voting system, the paper and electronic display of the voter's selections shall be presented and positioned so as to allow the voter to easily read and compare the two.

(e) If the paper record cannot be displayed in its entirety, a means for moving the paper to show all paper record contents shall be provided.

(2) There shall be instructions for performing the verification process made available to the voter in a location on the voting system.

(3) The voting system shall display, print, and store a paper record in any of the alternative languages chosen for making ballot selections. Candidate names and other markings not related to the ballot selection on the paper record shall appear in English.

(4) The voting system shall allow the voter to approve or reject the paper record, in the case of DRE systems, marking the ballot as such in the presence of the voter.

6209

g. Both paper rolls and paper record secure receptacles shall be controlled, protected, and preserved with the same security as a ballot box.

7.9.6 VVPAT Usability

a. All usability requirements from Subsection 3.1 shall apply to voting machines with VVPAT.

Discussion: The requirements in this section are in addition to those in Subsection 3.1.

b. The voting equipment shall be capable of showing the information on the paper in a font size of at least 3.0 mm and should be capable of showing the information in at least two font ranges; 3.0-4.0 mm, and 6.3-9.0 mm, under control of the voter or poll worker.

Discussion: In keeping with requirements in Subsection 3.1, the paper record should use the same font sizes as displayed by the voting machine, but at least be capable of 3.0 mm. While larger font sizes may assist voters with poor vision, certain disabilities such as tunnel vision are best addressed by smaller font sizes.

c. The voting equipment shall display, print and store the paper record in any of the written alternative languages chosen for the ballot.

i. To assist with manual auditing, candidate names on the paper record shall be presented in the same language as used on the DRE summary screen.

ii. Information on the paper record not needed by the voter to perform verification shall be in English.

Discussion: In addition to the voter ballot selections, the marking of the paper record as accepted or void, and the indication of the ballot page number need to be printed in the alternative language. Other information, such as precinct and election identifiers, shall be in English to facilitate use of the paper record for auditing.

d. The paper and electronic records shall be presented to allow the voter to read and compare the records without the voter having to shift his or her position.

e. If the paper record cannot be displayed in its entirety on a single page, a means shall be provided to allow the voter to view the entire record.

Discussion: Possible solutions include scrolling the paper or printing a new sheet of paper. The voter should be notified if it is not possible to scroll in reverse, so they will know to complete verification in one pass.

VVSG

f. If the paper record cannot be displayed in its entirety on a single page, each page of the record shall be numbered and shall include the total count of pages for the record.

Discussion: Possible numbering schemes include "Page X of Y."

g. The instructions for performing the verification process shall be made available to the voter in a location on the voting machine.

Discussion: All instructions must meet the usability requirements contained in Subsection 3.1.

7.9.7 VVPAT Accessibility

a. All accessibility requirements from Subsection 3.2 shall apply to voting machines with VVPAT.

b. If the normal voting procedure includes VVPAT, the accessible voting equipment should provide features that enable voters who are visually impaired and voters with an unwritten language to perform this verification. If state statute designates the paper record produced by the VVPAT to be the official ballot or the determinative record on a recount, the accessible voting equipment shall provide features that enable visually impaired voters and voters with an unwritten language to review the paper record.

Discussion: For example, the accessible voting equipment might provide an automated reader that converts the paper record contents into audio output.

----- Paper Audit Trail -----

Machine Number : U6G00076
Module Number : U6F00053
Election Date : 20/09/2006
E.D. : New York
Release : Democrat

Gobernador
Governor
Howard J. Chahal
Democratic 1B

Gobernador Teniente
Lieutenant Governor
Antonio Buonome
Democratic 2C

General de cuenta
Attorney general
W1 JOE SMITH 3X

Senado Estados Unidos
U.S. Senate
Elizabeth Mack
Democratic 4A

Gobernador Teniente
Lieutenant Governor
Antonio Buonome
CANCELLED/BORRADO 2C

Gobernador Teniente
Lieutenant Governor
Gloria Dillon
Democratic 2A

Member of Assembly
Eric Emden
Democratic 7B

Rep. en Congr. Distr. Num. 28
Rep. in Congress (28th Dist.)
Samual S. Ribley
Democratic 5A

Senador Del Estado Distrito 44
State Senator (44th District)
Erwin Hallock
Democratic 6D

Miembros Com. Est. (Feminino)
Mem. of State Comm. (Female)
Angela Walker
Democratic 9B

Miembros Com. Est. (Feminino)
Mem. of State Comm. (Female)
Angela Walker
CANCELLED/BORRADO 9B

Miembros Com. Est. (Feminino)
Mem. of State Comm. (Female)
Phyllis Vanderzee
Democratic 9C

Miembros Com. Est. (Masculino)
Mem. of State Committee (Male)
Saul Sternberg
Democratic 8A

Delegados Convencion Judicial
Del. to the 3rd Judicial Conv.
Stephen M. Gibson
Democratic 11A

Delegados Convencion Judicial
Del. to the 3rd Judicial Conv.
Doris C. Foltman
Democratic 12B

Delegados Convencion Judicial
Del. to the 3rd Judicial Conv.
Erwin Durso
Democratic 14A

-------- INTERMEDIATE SUMMARY ---------
1B,2A,3X,4A,5A,6D,7B,8A,9C,11A,
12B,14A,
WRITE-IN
3X:JOE SMITH
------- End of intermediate summary -------

Delegados Convencion Judicial
Del. to the 3rd Judicial Conv.
Janet Friday
Democratic 13A

Delegados Convencion Judicial
Del. to the 3rd Judicial Conv.
Samual S. Gogolla
Democratic 10B

Delegates. Alt. Conv. Judicial
Alt. Del. 3rd Jud. Convention
W. Jack Green
Democratic 16A

-------- INTERMEDIATE SUMMARY ---------
1B,2A,3X,4A,5A,6D,7B,8A,9C,11A,
12B,14A,13A,10B,16A,
WRITE-IN
3X:JOE SMITH
------- End of intermediate summary -------

STATEMENT OF CANVASS

STATE OF NEW YORK :
: ss:
STATE BOARD OF ELECTIONS:

Statement of the whole number of votes cast for all candidates for the office of State Senator, 7th district, at a **SPECIAL ELECTION** held in said State on the sixth day of February in the year 2007, wherein the several counties in which the said votes were distinguished.

7th SENATE DISTRICT

PARTY	CANDIDATE	PART OF NASSAU
DEM	Craig M. Johnson	26,103
REP	Maureen C. O'Connell	19,827
IND	Maureen C. O'Connell	1,800
CON	Maureen C. O'Connell	2,368
WOR	Craig M. Johnson	1,529
	Blank, Void, Scattering	134
	TOTAL	**51,761**

RECAP:

PARTY	CANDIDATE	PART OF NASSAU	
DEM	Craig M. Johnson	26,103	
WOR	Craig M. Johnson	1,529	
	Total	27,632	**Elected**
REP	Maureen C. O'Connell	19,827	
IND	Maureen C. O'Connell	1,800	
CON	Maureen C. O'Connell	2,368	
	Total	23,995	

Neil W. Kelleher
Co-Chair

Helena Moses Donohue
Commissioner

Peter S. Kosinski
Co-Executive Director

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George E. Stanton, Chief Information Officer

Douglas A. Kellner
Co-Chair

Evelyn J. Aquila
Commissioner

Stanley L. Zalen
Co-Executive Director

State Board of elections Commissioners,

Since I will be in Dublin Ohio working with Saber on finalizing the configurations for the hardware and software for NYSVoter, I am submitting my report in writing.

Hava Database Infrastructure:
As you know, we had all of our Dell hardware shipped to the Saber data center in Dublin. Dennis Girard, Elizabeth Mowrey and I will be spending two weeks here assisting with the setup and configuration of the approximately fifty servers that make up the production, backup and testing environments for the NYSVoter database. The main purpose of our being here is to take part in the knowledge transfer that is required for SBOE staff to operate and maintain this complex system. I can report that Saber is doing a fantastic job with the hardware. Their system for building the system is very structured and orderly. Everything seems to be meticulously labeled and documented. This week the Dell engineer set up and configured the EMC Storage Area Network (SAN) and Microsoft engineers began installation and configuration of Microsoft components. Next week (2/19 – 2/23) We will continue to work with the Microsoft engineers to complet configuration of the Microsoft components.

Data Center Upgrades:
We are still waiting for confirmation with the building electrician for dates to install the HV/AC and power units in our data center. The equipment is supposed to be in by March 1 and I am hoping for an install beginning March 9. We will be shutting down data center power on a Friday and doing the install Friday, Saturday and Sunday. Once we have that date confirmed, we will arrange with Saber to have the computer equipment moved to arrive the Monday following the installation. We are hoping this will be March 12.

County Interfaces:
We have, starting today, February 14, 2007, suspended the weekly technical question and answer conference call. We are replacing it with individual calls with the four county vendors and the four counties with home grown systems to evaluate the status of their readiness.

Yesterday (2/14) we had status calls with the developers from Essex and Delaware counties. Essex County appears to be making fairly good progress with their interface development. Delaware County also is making progress, but is not as far along as Essex County. This is partially due to the fact that Essex County has committed more staff to the project from the start.

Hamer Enterprises, which is Monroe County's vendor did not call. I contacted Bill Hamer at his office and found out that there was a missed communication for. He was with a client and could not join the call, but we arranged a call for Friday 2/16.

ES&S, which is the vendor for seven counties in New York, also did not join the call. When Tom Ferguson contacted Jason Krohn he stated that they wouldn't be joining the call and were not obligated to reschedule. He gave no reason for this position. This attitude is very troubling in terms of the project schedule and should be especially troubling to the counties that ES&S serves. I have sent an email to several contacts with ES&S to see if I can get some clarification on their position.

I remain concerned about the county vendor contracting issue in general. I have been working with OGS to expedite the contract negotiations but progress has been slow.

Web Casting:
Dan Valvo has been working with Lee Daglian to develop a plan for web casting of Board meetings, but I will leave that to Lee to report.

Other Projects:
There are two other projects that are being discussed.

1. Campaign Finance System re-engineering
2. Voting Machine Inventory Maintenance System

Depending on the approach taken to these two projects, I'm concerned that the demands on IT may become more than current staff can handle. This is especially important since we don't yet have a good sense of the FTE requirements for supporting the NYSVoter database. I don't want to commit to anything I can't deliver. I only mention this because we need to make sure we assess the most cost effective approaches to these projects.

Sincerely,

George E. Stanton

NYS BOARD OF ELECTIONS
BOARD MEETING
February 20, 2007

SIGN-IN SHEET

NAME	ORGANIZATION
Rob Zaglan	NYSTEC
Nils Ekberg	" "
Bob Grozniack	" "
Geoff Plante	" "
Laurie Barone	NYS Assembly
Joseph Pavlucci	DOB
Aimee Allard	LWV NYS
Jim Eskeli	DOB
Adriano Bongiorno	NYSAC