

**FINAL TITLE 19  
COMMITTEE REPORT**

To: Nina Wells, NJ Secretary of State  
Donna Kelly, Assistant Attorney General  
Division of Elections  
State of New Jersey  
Department of Law and Public Justice  
P.O. Box 304  
Trenton, NJ 08625-0304

From: Richard C. Woodbridge, Esq.  
Robert Lester  
John Fleming

Date: June 20, 2008

Re: Sequoia Advantage VVPRS  
Our Client No. 4108-139//G34,248

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On Thursday, May 22, 2008 representatives from Sequoia Voting Systems re-presented the Sequoia Voting Systems' new "Sequoia Advantage Voter Verified Paper Records System" at 225 West State Street, First Floor, Trenton, New Jersey. This was a continuation of the meeting with the vendors first held on July 24, 2007, the results of which are set forth in a report to the New Jersey Attorney General, Anne Milgram, dated August 21, 2007. That report and all the attachments thereto are incorporated in total by reference into this report. At the July 24, 2007 meeting the Title 19 Committee, with the assistance of representatives from the New Jersey Institute of Technology, found ten (10) issues (noted on pages on 4 & 5 of the earlier report) that made the Title 19 Committee reluctant to approve the Sequoia Advantage VVPRS as presented on July 24, 2007. Since that time the vendor has addressed those ten (10) issues and as a consequence this is a continuation of the hearing on July 24, 2007. Present for the State Title 19 Committee on May 22, 2008 were:

John Fleming, Management Information Specialist, Dept. of Law and Public Safety  
Robert Lester, Mercer County Voting Machine Supervisor  
Richard C. Woodbridge, Patent Attorney, Synnestvedt & Lechner LLP  
Princeton, New Jersey – Chair

Appearing for the Applicant, Sequoia Voting Systems:

Mr. David Allen, VP Development – Electronic Voting Solutions  
Ms. Christine Valeriano, Sales Executive  
Mr. Andrew Wynham, Sr., Sales Technical Support Manager  
Mr. Arthur Chagaris, Esq., Sequoia Counsel

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Appearing from the Attorney General's Office:

Donna Kelly, Assistant Attorney General  
Jason Postelnik, Deputy Attorney General

Appearing for the New Jersey Secretary of State's Office were:

Nina Mitchell Wells, New Jersey Secretary of State  
Kay Wolcott-Henderson, Chief of State, NJ Department of State  
Robert F. Giles, Director, Division of Elections, NJ Department of State

The purpose of the hearings was to determine whether the new Sequoia Advantage VVPRS met the State of New Jersey standards entitled "Criteria for Voter-Verified Paper Record for Direct Electronic Voting Machines". As previously described, the May 22, 2008 meeting was a continuation of the meeting held on July 24, 2007.

The meeting opened at approximately 10:15 a.m. with introductory comments by Richard C. Woodbridge, Chairman of the Title 19 Committee. It was noted that after a number of years, primary responsibility for voting machines has been returned to the New Jersey Secretary of State Office from the New Jersey Attorney General's Office, but with the understanding that the NJ Attorney General's Office would continue to provide legal and other support for the indefinite future. Mr. Woodbridge noted, with thanks, the exceptionally good support the Title 19 Committee has received from the NJ Attorney General's Office in the past and suggested that one of the reasons that New Jersey has been fortunate in having very few voting machines problems has been because of the tight oversight of the Title 19 Committee and the excellent help of the NJ Attorney General's Office.

Nina Mitchell Wells, the new Secretary of New Jersey, then provided some additional opening remarks that helped to set the stage for the meeting and explained the continuing role of the Secretary of State's Office in regard thereto.

The meeting was then turned over to Mr. Woodbridge, Chair of the Title 19 Committee, who introduced Mr. Fleming and Mr. Lester. Mr. Woodbridge then asked all those present in the room, including the vendors and the audience, to introduce themselves for the record so that the information could be captured by the hearing stenographer.

Mr. Woodbridge then asked the vendor to demonstrate the operation of the machine and to identify which changes, if any, had been made to the machine since the first hearing held on July 24, 2007. The vendor proceeded to demonstrate the machine to the Title 19 Committee and the audience. For the record, the DRE portion of the machine had previously been certified and re-certified by the State of New Jersey and, accordingly, emphasis was placed upon the VVPRS portion of the device as incorporated into the certified DRE machine.

The vendor indicated that it had made modifications to the machine and that those modifications had been seen by the staff at NJIT, some of whom are listed in the August 21, 2007

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report of the July 24, 2007 hearing. After the vendor demonstration, the Title 19 Committee read each of its ten (10) issues on pages 4-5 of the August 21, 2007 report and asked the vendors to respond thereto. For purposes of clarity, this report will include each of the ten (10) comments and headings with the vendors response thereto.

1. Inability of the voter to verify his or her third paper ballot.

When the voter casts his or her third and final ballot, the paper ballot portion is presented only momentarily and the voter is not given enough time to verify that the paper ballot is consistent with the electronic vote. The voter needs to be able to review and made to hit the button cast vote again so that the State knows the voter's real intention. This will make sure that there is no question as to the accuracy and intent of the voter's choices. The vendor indicated that this error could be and would be corrected with firmware in the near future.

**Vendor Response:** The vendor demonstrated that this change had been made and seen by NJIT in their last round of testing.

2. NJIT pointed out with regard to a sight-impaired voter that "the voter is prompted to print next page after first page on the write-in LCD screen rather than through audio message".

The vendor said that this would be corrected also.

**Vendor Response:** The vendor indicated this had been corrected but was unable to demonstrate it at the time. The Committee asked that the vendor provide documentation, perhaps in the form of an MPEG clip that the Committee could review before the report was drafted. This correction was subsequently demonstrated on the CD's provided by the vendor. The vendor indicated the NJIT had seen this corrected feature in it's latest round of testing.

3. The printer needs to be sealed by seals and locking mechanisms.

The vendor demonstrated that the clear plastic paper cover could be locked or sealed even though it was not tested in such a state. In addition, the printer paper did not appear to be secured during the election testing. It is recommended that either seals or mechanical locks be used to prevent unauthorized individuals from tampering with the paper during the election process.

**Vendor Response:** The vendor indicated that tamper evident seals had been added. In addition, the paper hopper had been changed from an accordion fold to a long roll having approximately 800 ft of paper on it capable of producing approximately 680 ballots of 14 inch each.

4. The paper trail ballots need to identify the particular election by name (e.g. Primary or General).

The Committee examined some of the paper ballots and indeed they did not include the proper election designation. The vendor indicated that this would be corrected in the next round of software enhancements.

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**Vendor Response:** This issues appears to have been corrected. The Committee was shown ballots indicating that either a General Election or a Primary Election had taken place on the face of the paper ballot. Copies of the ballots are included in the attachments to this report.

5. The Committee agrees that there should be a “digital signature” on each digital record.

The vendor indicated that this would be corrected.

**Vendor Response:** The vendor indicated that this matter had been corrected and that it had been seen by NJIT. However, the vendor did raise the issue that there is currently a patent infringement suit involving this particular feature.

6. If a mechanical error occurs the machine needs to better differentiate between problems, eg. specify “paper jam”, and the like.

Presently the machine only presents two different error messages, neither of which are sufficient to differentiate between the types of mechanical errors that typically occur, e.g. how do you tell when the paper jams? The vendor indicated that this could and would be corrected in the next version of software.

**Vendor Response:** The vendor has increased the number of error codes from two (2) to seven (7). The seven (7) error codes appear to be much more self explanatory. Even though the specific words “Paper Jam” weren’t included in the error codes nevertheless the additional error codes appear to be much more self explanatory and helpful.

7. There was debate as to whether or not the machine needs to be able to process 750 votes without a paper change.

The State statute requires that there should be one voting machine for every 750 registered voters. The statute and the State Criteria, however, do not appear to require that the machine be able to print 750 ballots without a paper change. The vendor indicted that the paper supplier provides cartridges of folded paper in units of 500 sheets each but that they could probably provide more. After consideration the Committee decided that it should be acceptable for the machine to go through at least 500 ballots before a paper change.

**Vendor Response:** As indicated above, the vendor had changed the ballot feed from accordion fold to 800 ft. of roll fed stock. This should be sufficient to produce approximately 680 ballots, but obviously less if several are “spoiled” ballots.

8. If the printer is broken the voting machine does not record the event in the DREs internal audit log.

The vendor indicated that that would be fixed with the appropriate software within 2-3 months.

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**Vendor Response:** The vendor, after an initial break, provided the Committee with a log indicating on the record when an event, such as when a printer is unplugged, occurred. A copy of that log is annexed hereto as part of the attachments.

9. The Committee noted that there was no box on the side of DRE including the required 30 emergency ballots as has been standard practice in the State of New Jersey for many many years.

The vendor indicated that this would be corrected as it has been on other Sequoia Advantage DREs.

**Vendor Response:** The vendor demonstrated a standard emergency ballot box including up to 30 emergency ballots (and, perhaps, as many as 60, in case of a Democratic/Republican primary).

10. The vendor is presently negotiating a Non-Disclosure Agreement (NDA) with the Attorney General's Office in order to provide source code.

The vendor indicated that it had entered into similar agreements with other states. The Committee encourages the vendor and the AGs office to expedite the process, complete and execute the NDA and obtain the source code.

**Vendor Response:** The Committee was informed that the VVPAT source code had been deposited with Iron Mountain and that NJ had been designated as a beneficiary thereto in case it had to obtain emergency access.

The vendor indicated that it would provide further information with regard to issue #2, before the comment period closed for the report.

After reviewing the ten (10) specific issues raised in the July 24, 2007 hearing, the Committee then reviewed two (2) pages of notes provided by the vendor entitled "D-10 Functional Change Summary Advantage 10.4.8 to 10.5.2. That table included some additional changes beyond the initial ten (10) requested by the Title 19 Committee at its July 2007 hearing. The Committee then walked through each of the items on the 2-page table, the Committee asked the vendor if it would provide a real life example of a "improbable key combination that lead the system to lock up" as identified on page number 2 of the table. The vendor said that it would comply within the comment period.

The meeting was then opened up to questions from the public. Present and speaking for the public were the following individuals whose comments are on the record:

1. Professor Penny Venetis of Rutgers Law School, among other issues, Professor Venetis questioned whether or not a full re-certification hearing was necessary. The Committee pointed out that the DRE had previously been certified, including its latest form of software and that the May 22, 2008 meeting essentially a continuation of the July 24, 2007 meeting and as such, should be considered part of a full re-examination

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proceeding that started almost a year previous. Professor Venetis and some of the other members of the public raised issues with regard to notice. The NJ Secretary of State responded that adequate notice had been provided both via the web and in advertisements in NJ newspapers.

2. Irene Etkin Goldman, who also provided a 2-page letter on behalf of the Coalition for Peace Action, Princeton NJ, a copy of which is annexed hereto.
3. Stephanie Harris, Coalition for Peace Action.
4. Professor Andrew W. Appel, Princeton University. Professor Appel made some comments early in the hearing, especially as they related to the bag for receiving ballots after they are cast.

At the completion of the hearing, the Committee indicated that it would continue to accept comments and reports up until 5:00 pm Friday, May 30, 2008. The deadline was subsequently extended to 5:00 pm, Wednesday June 4, 2008.

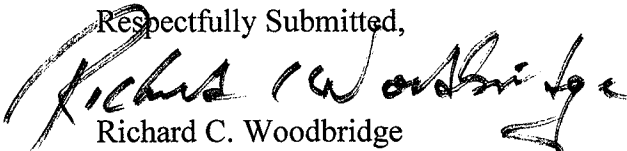
After the comment period had passed, the Committee had received a number of items which are identified on the schedule of exhibits at the end of the report. All of those materials have been reviewed by the Title 19 Committee.

The Committee subsequently deliberated and, after receiving the additional information from the vendor, is of the opinion that the machine as revised appears to meet the standards of the State of New Jersey entitled "Criteria for voter-verified paper record for direct electronic voting machines." As such, it should be approved by the State of New Jersey for use by its citizens.

The Title 19 Committee does, however, offer the following caveat – VVPAT devices are very new and New Jersey is a pioneer in this area. VVPAT devices add an additional level of complexity to the voting process, as well as expense, and problems should be anticipated, at least for the first several rounds of voting, given the fact that poll workers are unfamiliar with these devices and that the technology has a limited operating history. It is recommended that the NJ Secretary of State in conjunction with the NJ Attorney General's Office keep a very close eye on the first few elections and have procedures in place in case there is a discrepancy between the VVPAT record and the internal record of the DRE's.

Again, the Title 19 Committee wishes to express its appreciation to the NJ Secretary of State and the NJ Attorney General's Office for the privilege of being able to assist in the voting process.

Respectfully Submitted,

  
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**ATTACHMENT A**

**LIST OF DOCUMENTS PERTAINING TO THE  
SEQUOIA ADVANTAGE VVPRS**

- 1. Report dated, August 21, 2007 of the July 24, 2007 meeting.**
- 2. Two (2) page table provided by the vendor entitled “D-10 Functional Change Summary Advantage 10.4.8 to 10.5.2.**
- 3. “State of NJ Criteria for Voter-verified Paper Record for Direct Recording Electronic Voting Machines”.**
- 4. Two (2) page summary entitled “Final Agency Determination in the Sequoia Voting Systems ABC Advantage Voter-verified Paper Record System”.**
- 5. “Report to the Office of the Attorney General” / “Sequoia ABC Advantage D10 Voter-verified Paper Record System Reassessment” prepared by NJIT and dated December 22, 2007.**
- 6. Wiley Report for the Advantage Machine, dated May 6, 2008.**
- 7. Copy of a operator log report indicating that the instances where the “DVPat Printer Unplugged” error code occurred.**
- 8. Examples of paper ballots indicating whether they were general or primary elections.**
- 9. 8-Page Testimony of Professor Penny M. Venetis of Rutgers Law School, dated May 30, 2008.**
- 10. Email from Mary Stevens dated May 30, 2008.**
- 11. Email from Robert Fleming dated May 30, 2008.**
- 12. Email from Susan Kapoor dated May 30, 2008.**
- 13. Email from Len Newton dated May 30, 2008.**

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- 14. Email from Debra Lambo dated May 30, 2008.**
- 15. Email from Jerry Palin dated May 30, 2008.**
- 16. Email from Mary Ellen Marino dated May 30, 2008.**
- 17. Email from Sheila Siderman dated May 30, 2008.**
- 18. Email from Peter Wolanin dated May 30, 2008.**
- 19. Email from Tony Cline dated May 30, 2008.**
- 20. Email from Dan Preston dated May 30, 2008.**
- 21. Email from Phyllis Teitelbaum dated May 30, 2008.**
- 22. Email from Jenny Crumiller dated May 30, 2008.**
- 23. 6-Page Letter from Professor Andrew W. Appel, Computer Science Dept. at Princeton University, dated May 27, 2008.**
- 24. Email from Jim Tobias dated May 28, 2008.**
- 25. 3-Page Letter from David Allen, VP Development, e-Voting Solutions, Sequoia Voting Systems, dated May 29, 2008 to Donna Kelly, Asst. Attorney General.**
- 26. Email from Liz Cohen dated June 1, 2008.**
- 27. Email from Robert Giles dated June 2, 2008.**
- 28. 9-Page Letter from Flavio L. Komuves, Deputy Public Advocate, dated June 5, 2008 to Robert Giles, Director, Division of Elections.**
- 29. State of NJ, Division of Elections, Formal Hearing, May 22, 2008 – Transcript of Proceedings.**
- 30. D-10 Audio only mode, with VVPA7 – Demo.**
- 31. D-10 Audio-Visual mode, with VVPA7 – Demo.**