

# Electronic Ballot Counting Device Advisory Committee

## Meeting Minutes of April 27, 2009 at 9:30 a.m.

71 South Fruit Street, Concord, NH, HAVA Conference Room

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### Members' Attendance:

Thomas Manning, Assistant Secretary of State and Temporary Chair

Representative Richard Drisko

Walter Fries, Moderator, Danville

Representative Suzanne Harvey

Adrienne Hutchison, Public Member

Representative Robert Perry

Anthony Stevens, Assistant Secretary of State

### Department of State:

David Scanlan, Deputy Secretary of State

### Guest:

Pamela Smith, Verified Voting Foundation, via telephone conference call

### Also Present:

Representative Tim Horrigan

Representative Betty Hall

## I. Call to Order

Temporary Chair Mr. Manning called the meeting to order at 9:38 a.m.

Mr. Manning announced that the minutes of the April 6, 2009 meeting would be approved at the next meeting due to technical difficulties.

## II. Meeting Business

### • System Specifications / Goals and Objectives

Mr. Manning briefly described the highlights of the last meeting. He explained that this meeting agenda would include a review of goals and objectives and a discussion with Pamela Smith of Verified Voting regarding auditing. Mr. Stevens distributed a draft document of system requirement specifications created by Mr. Fries. Mr. Stevens presented the draft mission statement and objectives established by the committee at a previous meeting. Mr. Stevens explained that a Request for Proposal was established previously for an accessible voting system and this format could be used for the Request for Information (RFI) proposal in this committee. There was favorable discussion of the process and experiences during the request for proposal for an accessible voting system.

Mr. Stevens announced that Gregory Miller of Open Source Digital Voting Foundation (OSDV) will be in the area on Tuesday, May 26, 2009 and has offered to meet with the state again. The committee agreed that another meeting with OSDV would be beneficial. Mr. Stevens said he would report back with scheduling details.

### • Mission Statement

Representative Harvey suggested modifying the mission statement for clarification.

Representative Perry was concerned about anything that would modify the wording as set forth in the state statute. Representative Drisko agreed and pointed to the intent of the legislation.

The majority of the committee agreed to follow the wording in the bill. The committee agreed to move the Request For Information (RFI) from the mission statement to the section on objectives. The committee agreed that an action must be included in the mission statement as outlined in the bill (HB 285-V).

The Committee agreed to the following:

### *Draft Mission Statement*

Primary Duty: Facilitate the design of an electronic ballot counting device, or the identification of a ballot counting device, that will be fail safe and provably correct and can be supported by an independent technical review to eliminate potential manipulations of election results by tampering.

Secondary Duty: The committee shall also research the upgrades that are available for voting machines that are currently used in New Hampshire and recommend to the Secretary of State which upgrades should be required for the continued use of the machines by cities and towns.

Deliver a final report with findings and recommendations to the Secretary of State.

- **Objective – Ease of Use**

The committee discussed “ease of use” objective, and some members indicated that ballot configuration must be under the control of the government. Mr. Stevens expressed a desire to obtain a wide range of vendor proposals, and thought that too strong a statement here might unduly limit vendor participation and input. If the state specifies that the government must be the one that configures ballots, that would alter the current business model, and might discourage vendors from coming forth with creative ideas and presenting pro-forma budget estimates to back them up. If the EBCDAC Committee receives back very few proposals, it would have less material to digest and think about. This would render it more difficult for members of the committee to identify and quantify potential savings from competing opportunities.

There was further discussion about ease of use, visibility, and verification process.

Mr. Scanlan arrived at 10:41 a.m.

Ms. Hutchison recommended splitting up the RFI into two separate documents, and Representative Drisko concurred. Mr. Manning suggested a broadly directed RFI for information gathering purposes. He suggested that the committee could narrow it down later with questions to the vendors and alternatives as a way to focus on the vision.

Mr. Fries noted confusion with including ballot configuration in ease of use as it seems to be a reliability and validity topic. Mr. Stevens explained that “ballot programming” would best be termed “ballot configuration”; ballot configuration applies to data entry of candidates and contests, and contest definition such as “Vote for not more than ‘n’”.

Ease of use should apply to (a) the voter and (b) the election official.

Mr. Stevens highlighted the difference between the goals and the procedures. There was discussion of disclosure for vendor information.

- **Goal – Transparency**

Mr. Fries said that transparency should apply to ballot configuration, and Mr. Stevens agreed.

There was discussion of additional language needed.

The Committee agreed to the following, noting that “accounting of” and “accounting for” would be addressed again in the future:

***Goal – Transparency***

The electronic ballot counting device should permit the general public to observe, understand, and have confidence in the entire electronic ballot counting process,

including but not limited to, ballot configuration, counting, and accounting of and accounting for ballots cast in each device.

- **Goal – Security**

The discussion of this goal included electronic and physical security. Representative Drisko stated that a vendor should not have the option to conduct ballot configuration in the State of New Hampshire. There was discussion of vendor access and control.

The Committee agreed to the following noting that definitions will be addressed again in the future:

***Goal – Security***

Programming of counting software: disclosed, paper ballot, tamper evident, resists attempts at tampering, confirm consistency of software application in each device

- **Objective – Reasonable Cost**

There was discussion of cost per voter versus cost per ballot.

- **Goal – Auditability**

There was discussion of what should be printed by the device. Ms. Hutchison recalled in previous meetings a discussion about providing a receipt for the voter. Mr. Scanlan suggested showing results on the screen. Mr. Fries observed that the purpose of the paper ballot is for verification.

Printout should provide:

- Total number of ballots cast
- Reports total candidate votes, undervotes, overvotes, write-ins, and total of these categories for each race

- **RFI Introduction**

The committee wanted to establish and point out the specific processes and requirements.

New Hampshire Processes Discussion:

- Paper ballots (include weight of paper) for all votes
- Markers (specialized that do not bleed through paper)
- Processing speed of ballots (e.g. 2 seconds per ballot) and 4 orientations
- Ease of ballot ingress (assists voters with disabilities)
- Continue hand counting in some districts
- Machine-by-machine reporting
- No central electronic accumulation (tabulation) or networking
- Indicates number of ballots cast
- Privacy screen for voter placing ballot in device
- Notification that ballot was accepted or rejected (subtle message)

- Minimal error rate on false ballot readings
- Device data retention and format (electronic or paper)
- System production timeframe

- **Objective – Reconciliation Requirements**

There was discussion of item a., with concern expressed regarding risk to privacy if there is reference to a particular ballot. There was discussion of case law and the impact on the state's voting criteria. Item b. continued to be an item that required further discussion.

***Objective – Reconciliation Requirements***

- a. Enable simple reconciliation of ballots cast and votes tallied for all races, highlighting discrepancies
- b. May enable post election recount by non-election officials such as in Humboldt County, CA (further discussion needed)
- c. Provide for third party review of number of ballots cast
- d. Communicates accurately whether a ballot has been counted (e.g. red mark on Optech counted ballots)
- e. Printed machine tally sheet (or tape) needs to be easy to understand for election officials and public
  - 1. race by race detail including totals for each candidate, total undervotes, total overvotes, and total write-ins (further discussion needed)
  - 2. better defined formatting on print-out from device for easy reading and understanding
- f. 8.5 x 11/14/17 inch integrated printer that prints different ballot sizes and formats

- **Goal – Accuracy Requirements**

The committee reviewed the accuracy requirements and added further specific details noting more research is needed in item c.

***Goal – Accuracy Requirements***

- a. Ability to scan area in and around oval and evaluate to recognize percentage of darkened pixels, shapes such as circles, checkmarks, and x-marks.
- b. Ability to recognize shapes such as circle, checkmark, X
- c. Ability to highlight and segregate ballots with extraneous marks for further review by:
  - 1. diverting ballots to a separate bin/box (needs further discussion)
  - 2. diverting the ballot back to the voter for clarification (This type of requirement would be controversial because of potential equal treatment requirements for those voters in hand count jurisdictions and privacy of the voter's ballot. It could jeopardize hand counting over the long term. Also, it is potentially time consuming for moderators and voters, particularly large jurisdictions, which in NH are many of the largest in the country.)

d. Certification and evidence of counting accuracy and error rate, consistent with federal standards

- **Pamela Smith, President, Verified Voting Foundation**

Mr. Stevens reminded everyone of the document provided at a previous meeting entitled “Manual Audit Requirements” by state from the Verified Voting Foundation dated October 16, 2008. Mr. Manning distributed a booklet entitled “Principles and Best Practices for Post Election Audits” dated September 2008 from ElectionAudits.org. Pamela Smith, President of Verified Voting Foundation, was available via telephone and discussed post election audits with the committee. Ms. Smith indicated she would be sending updated information on legislation changes regarding audits by state. (This one-page email will be distributed at the May 26, 2009 meeting.)

Mr. Fries asked if Ms. Smith could recommend a best practice for recounts. Ms. Smith explained that her organization has focused on audits as opposed to recounts. She noted that automatic recounts are generally predetermined and that recounts are normally not random. She provided examples of how other states audit and select batches to audit. She suggested that a best practice for contests to audit would be to start with the top of ticket such as the gubernatorial or presidential race, then select additional contests to audit based on some criteria, including possibly random selection. She feels audits are necessary for fraud protection. Random selection of contests to audit down the ballot saves time when compared with auditing every race on the ballot.

She stated that an audit unit (the amount of ballots that might be counted in a audit) varies from voting machine batches to precincts to counties (with centralized voting). She noted a new technique of ballot-based audits that selects individual ballots to audit from within a unit using unique number identifiers placed on the ballot. She explained that the benefit of this approach lies in having to count fewer ballots. However, some people have concerns with an identifier that is placed on the ballot. She subsequently emailed a pertinent analysis entitled Understanding the Security Properties of Ballot-Based Verification Techniques, by Eric Rescorla. (This will be distributed to the committee on May 26, 2009.)

Mr. Stevens explained that New Hampshire’s current machine batch sizes vary from about 700 ballots to about 7,000 ballots, one of the widest ranges that could exist in the country. He asked for suggestions on how to deal with this characteristic. Ms. Smith pointed him to Eric Rescorla’s article above.

Ms. Hutchison asked Ms. Smith’s recommendation on what a device should print out at the end of the election. Ms. Smith recommended reporting standard election results in an easy-to-use data format such as xml that could be readily passed along and quickly analyzed.

Representative Perry inquired about cooperation between Verified Voting Foundation and other agencies to establish randomization protocols. Ms. Smith said she is aware of other organizations’ efforts but does not work together directly with such entities. She discussed the differences between cold and hot audits and noted the benefits of each. Hot audits are completed in time to request a recount or other judicial action to challenge an election result, whereas cold audits occur after it is possible to request a recount or judicial action regarding an initial count.

Mr. Fries questioned the calculation on the risk limiting audit procedure. (Risk-limiting post-election audits use statistical and administrative measures to limit the chance of certifying an electoral outcome if the outcome is not what a full hand count would show.) Ms. Smith noted that there are statisticians who have studied this and provided an example of theories.

There was discussion of why transparent auditing is useful for public understanding, trust, and confidence.

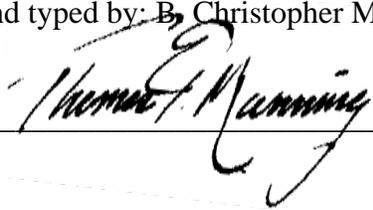
Ms. Hutchison inquired if Ms. Smith received any feedback about random numbers on ballots. Ms. Smith explained that the level of concern differs between states. She said that in practice voters generally are not able to point out individual voters. She suggested randomization and not placing a number on the ballot that reflects the order of voting, which could create voter privacy concerns.

The committee agreed that the RFI section on goals and objectives needs more work, as well as the section on system specifications.

Mr. Manning said the next meeting will be Monday, May 11, 2009 from 9:30 a.m. to 2:30 p.m. (this meeting has been subsequently cancelled) and Tuesday, May 26, 2009 at 9:30 a.m. (which has been officially confirmed.)

The meeting was adjourned at 3:45 p.m.

Minutes taken and typed by: B. Christopher Maxwell

Received by:  \_\_\_\_\_, Thomas Manning, Temporary Committee Chair