Summary -- Meeting August 22, 2005

SJR 371 (2005) HJR 174 (2004)

Joint Subcommittee to Study the Certification, Performance, and Deployment of Voting Equipment

PUBLIC HEARING

The meeting opened with a public hearing that produced comments from 19 speakers covering a number of topics and conflicting points of view:

- Larry Haake, Chesterfied County General Registrar, summarized the process by which the County decided to purchase optical scan equipment to replace their punch card voting equipment. He cited the similarities of their old punch card and new optical scan equipment as pluses for voters and election officers, cost savings, and the desire to avoid the DRE and paper trail controversy. He demonstrated their optical scan equipment and described the AutoMark equipment now submitted for certification which is an accessible touch screen device for marking an optical scan ballot.

- Twelve speakers advocated changes to meet problems perceived with DRE equipment and other voting equipment with a majority of the speakers advocating a voter verified paper audit trail (VVPAT) requirement. There were various recommendations brought forward:

    - Create an independent task force of computer experts to test DRE equipment because the manufacturers and current certification process have not performed satisfactorily to assure that only well-designed DREs are approved. Move cautiously on any VVPAT or printer requirement.

    - Follow the recent North Carolina example and require a paper ballot in some form, a state RFP procedure, and random post election equipment and ballot audits to determine the accuracy of the equipment.

    - Require an accessible VVPAT for use with DRE equipment or require VVPAT for DREs and other accessible alternatives for the disabled community in each precinct.

    - Utilize redundant testing procedures for DREs and voting equipment in an open process, provide adequate training for election workers and voters, and provide more stringent security for all equipment as possible alternatives to a VVPAT requirement.

- Require paper ballots for recount purposes.

- Two local elections officials cautioned that there were significant costs in enacting a VVPAT requirement for the certified DRE equipment already in use in many localities. One suggested that any VVPAT requirement should be (i) preceded by a pilot program run in actual precincts to document the costs and logistics of VVPAT, (ii) enacted to provide for random testing and require VVPAT printers for only a percentage of DREs, and (iii) delayed until manufacturers develop better VVPAT equipment and the Election Assistance Commission develops standards for such equipment.

- Two speakers addressed concerns of the disabled community and the need to continue to improve the accessibility of voting equipment and to assure that any requirement for a VVPAT be proven to be accessible for visually and physically disabled voters. Voting equipment should meet Election Assistance Commission standards and be subject to continuing quality assurance review.

- A representative of Ferey International, Inc., demonstrated their voter verified ballot printer which they offer as compatible with any certified DRE equipment. This printer is relatively small, costs between $800 and $1,000 per unit, and produces a paper ballot (shown behind a window in the printer) that the voter reviews before casting his ballot. The voter can cancel that ballot and it is marked void. The voter can then cast a corrected ballot. The paper ballot is then cut and dropped into a secure ballot box so that the ballots are mixed and not retained in the order in which voted.

- Dave Andrews, General Registrar, Williamsburg, gave a presentation on the use of electronic pollbooks (EPBs) that they tested in two precincts in the June 14 primary elections. He cited the benefits to voters in the shorter time needed to find a voter's name, the avoidance of split pollbooks with long lines for some voters (A to M) and not others (N to Z), and the ability to find a voter's proper precinct on the EPB database. He also cited paper and storage cost savings and the advantage of producing almost immediate reports on voter participation for media, parties, and candidates compared to the months now required for the reports to be produced from the current paper pollbook system.

The Chairman thanked all the participants, and the meeting continued.

EXPERT PANEL

Dr. Dan Wallach, Associate Professor, Rice University Department of Computer Sciences, and manager, Rice University computer security lab, spoke first and noted that computer-driven voting equipment can fail just as any computer can fail, so a back-up paper ballot is essential as a check. On the issue of paperless versus paper, he views the paper as a valid back-up for computers and as a check against tampering. He recommended more stringent and independent testing for DRE and other voting

equipment including any product that produces a paper record. There should be "penetration" and full "simulation" testing so that the equipment is tested against possible failures and hackers. There is a culture problem that relies on manufacturers and routine testing. Any cost analysis should take into account the costs of machine failure and new elections required as a result of failures. He cautioned against both internet voting and transfers of machine vote totals by internet. At this point he would recommend precinct based optical scan equipment.

Justin Moore, sixth-year Ph.D. student, Duke University, and member of Duke Internet Systems and Storage Group, addressed three issues. First, on costs, in North Carolina a voter group reported that the cost per voter for optical scan equipment is $3.50 and for DRE equipment is $5.50. Second, the standards now in place for voting equipment are too lax in permitting failures of certifiable equipment and we should be more stringent in testing equipment software. Third, we need to audit elections and a paper trail to facilitate audits. There is a need to detect failures. He recommended that Virginia use optical scan equipment with the AutoMark touch screen and paper ballot for accessibility.

Paco Hope, senior software security consultant, Cigital, Inc. described the security issues and procedures involved in the gaming industry as a point of comparison for computer-driven voting equipment. Casino slot machines are touch screens that print a verifiable paper receipt and are designed to be easily used. Casino regulators in the states have the source codes for the machine software and conduct simulation tests to assure that the machines pay off at the stated percentage. The gaming equipment is subject to continuous physical protection and observation. This is not possible for voting equipment that must be operated to guarantee voter privacy. Gambling is a billion dollar business that can afford extensive testing and verification of computer software, but this is not the case for election equipment.

Hugh Gallagher, managing director, Election Systems Acquisition & Management Services, questioned assertions that current systems can be tampered with and cited lack of proof of any incidents of tampering. He described Virginia's security policies that have been updated and are being applied at the local level. There is no internet connection to the voting equipment that would permit hacking into the voting process. Regarding the transmission of voting data, current encryption procedures are adequate. If a VVPAT is considered, go slowly to assure that it is workable and cost effective. He stressed the need for adequate training for elections officials to prevent human errors and reinforce security procedures.

NIST REPRESENTATIVE

Dr. Hratch Semerjian, Deputy Director of the National Institute for Standards and Technology, described NIST's role in the development of the Voluntary Voting System Guidelines (VVSG) with the Technical Guidelines Development Committee (TGDC) to assist the Election Assistance Commission (EAC) meet its responsibilities under HAVA. The TGDC submitted its draft VVSG to the EAC which has reviewed and modified them

and published them for public comment on June 29. The public comment period ends September 30, 2005, and then the EAC will review and revise the VVSG and release them later in the fall. This first phase addresses the most pressing issues, but the NIST and TGDC work continues. They have another committee meeting at the end of September to begin the next phase. They will be looking at other issues such as security and dual verification and will set priorities at their September meeting. Their initial effort was designed to make critically needed changes to the existing 2002 federal standards, and the next phase will take a look the standards as a whole.

DRAFT RECOMMENDATIONS

Members were given a staff outline for the subcommittee's report and a proposal for consideration provided by Cameron Quinn. The Chairman asked members and the public to send proposals for review to staff for circulation to the subcommittee as a means to prepare for the subcommittee's next meeting on November 21, 2005, at 1:00 p.m. in House Room C of the General Assembly Building. The Chairman thanked the panel participants and Dr. Semerjian for their time and contributions, and the meeting adjourned.

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