

Testimony for EAC Public Hearing Oct. 26, 2006
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I want to sincerely thank the Election Assistance Commission for inviting me to address the important issue of voting system testing and certification.

The Declaration of Independence boldly asserts that “Governments derive there Just powers from the Consent of the Governed”.ⁱⁱ The one and only mechanism by which the ‘Consent of the Governed’ is transferred from the People to those in power is the ballot box. Election administration is the most public of public commonsⁱⁱⁱ in a representative democracy. Transparency is fundamental to democratic governance and a transparent election process demands public oversight.

The 2000 election was a wake-up call and caused many Americans to pay attention to the administration of elections. Ironically the public’s increasing scrutiny of the election process comes at a time when that process is becoming increasingly hidden from view. The mechanisms of the electoral process have become progressively more opaque to the individual voter and even to election officials. Nowhere is the historical trend towards an ‘enclosure of transparency’^{iv} in the elections process more evident than in the process through which voting systems are tested and certified.

This Commission was born out the wounds of the 2000 and was charged by Congress to clean, dress and heal those wounds and restore confidence in the electoral process by ensuring that the voting machines used in America be accurate, secure and useable. To accomplish this goal, the Commission was tasked with the development of updated voting systems standards and the establishment of a new regime of testing and certification to those standards. The current system of testing and certification is unacceptable in principle and has proven inadequate in practice.

Speaking before Congress in 2004, my colleague on this panel said, “the system we have for testing and certifying voting equipment in this country is not only broken, it is virtually nonexistent.” He recommended that “It must be re-created from scratch or we will never restore public confidence in elections.”^v

Among Dr. Shamos’ first recommendations was that the manufacturers should not pay the laboratories that test their equipment, a situation that makes the manufacturers, in effect, the laboratories’ clients and subject to conflicts of interest that raise questions about their ability to effectively safeguard the public interest.

The credibility of the current process has been further damaged by the severe reliability, security, and accuracy problems revealed in a steady stream of academic and governmental studies and in hundreds of cases of malfunctions in fielded machinery.

While we recognize some significant movement toward effectiveness and transparency, it is with considerable disappointment that we see the proposed testing and certification

program as substantially a perpetuation of the same unacceptable system with new acronyms.

The philosophy expressed in the proposed testing and certification program is too deferential to the interests of voting equipment manufacturers while inadequately reflecting the interests of the primary stakeholders in the election process – the voters.

Nearly all distrust of election machinery rests on the lack of transparency of the software used to administer elections. How does this software convert screen touches or marks on paper to voter intent and thus votes intended for a particular candidate? How does this software record votes and tally those recorded votes to various candidates? How does an election official know or determine the actual behavior of the software is the correct behavior?

The answers to these questions and many more like them are hidden by non-disclosure contracts and the manufacturers' assertion that details of how their machinery administers elections are 'trade secrets'. However, that trade secret construct is breaking down. Public disclosure of voting system software is already mandated by state law in North Carolina and Wisconsin. Three of the four major vendors have stated publicly that they would meet software disclosure requirements in legislation proposed in California and a bill that would require voting system software disclosure nationwide enjoys the co-sponsorship of a majority of the U.S. House.

But the EAC does not have to wait for legislative action, Section 231 and 241 of HAVA grant that authority to the Commission. The EAC should simply change the application in Appendix A to require as a condition of registration that manufacturers agree to disclose all evidence supporting the merchantability or fitness of use for systems to administer election and information needed to identify a system.^{vi}

The imperative of transparency extends to the Voting Systems Testing Laboratories (VSTL). The EAC has delegated its certification authority under HAVA to the testing labs without requiring, or even allowing for, public oversight of those labs. However, democracy requires that those who are tasked with the responsibilities of government be accountable to the public. As a condition of registration, Appendix B should require that the testing labs agree to make their methods, work and results transparent through public disclosure to the EAC.

The requirement for National Voluntary Laboratory Accreditation Program (NVLAP) accreditation of the VSTL is to be applauded. However, under the proposed system the VSTL are under no minimum performance or methodology requirements. The National Institute of Standards and Technology (NIST) includes in its Voting System Testing Handbook, HB-150-22, that performance and recommended practices specific to election machinery are beyond the scope of NIST and to be defined by the EAC. It was expected by test professionals who reviewed HB-150-22, that the placeholders in the handbook for additional EAC definitions and requirements would be documented in the voting system and certification manual. Of particular concern is the absence of any requirement for

expert usability/accessibility testing, nor volume testing to ensure that voting systems meet the federal mandates of HAVA Section 301 for accessibility and maximum acceptable error rate of one in 500,000 ballot positions. It is hoped that the EAC will soon communicate to the NIST what these additional testing requirements are and what are the specific testing practices to be performed.

In addition to demanding transparency and public oversight of the Vendor-Lab arrangement, the EAC should open the testing effort to other modalities by other interested parties. While we will never know what defects have been uncovered by the current ITA, we know that the ITA did not uncover the vulnerability caused by the presence of interpreted code on AccuVote OS memory cards,^{vii} the “upgrade” feature of AccuVote TSx revealed in Emery County, Utah^{viii} and the viral propagation properties of this feature exploited in the recent Princeton study^{ix}; the report by Paul Craft that the firmware version on ES&S optical scanners is not verifiable^x, nor the revelation in an audit in Pinellas County, Florida that an SQL compiler is routinely installed on the Sequoia WinEDS system.^{xi} This indicates that the EAC needs to expand the examination and testing of voting machinery beyond the narrow functional testing delegated to the VSTL and sponsor examination and testing by academics and other interested parties, under authority granted in Paragraph 241(b)(19) of HAVA. Rather than merely the testing required for certification, additional voting system testing could serve to improve and refine the subsequent versions of the VVSG.

Finally, the draft manual is lacking any exercise of the authority granted to the EAC under HAVA, Section 231. Nowhere is there a penalty clause for any violation of the phrases such as “the manufacture shall” or “the manufacturer shall not”. What is the penalty if a manufacture represents a system as certified when it is not? What happens when a system certified under the emergency rules is not later submitted for proper certification? The EAC should define penalties when a manufacturer fails to obey the EAC. The EAC should tie all penalty statements for manufacturers to the registration of the manufacture and decertify all systems from suspended manufacturers. The EAC should tie all penalty statements for the test labs to revocation of accreditation.

We recognize that our petitions are bold, but the current crisis of confidence in the electoral process demands bold actions from the EAC - bold actions that Congress mandated the EAC to take. VoteTrustUSA, the national organizations with whom we work in coalition, and the state and local election integrity groups that we serve, are eager to work together to support the EAC in establishing a transparent, effective election process that deserves the full confidence of American voters.

ⁱ I want to acknowledge the significant contributions of John Washburn in my preparation of this testimony.

ⁱⁱ <http://www.archives.gov/national-archives-experience/charters/declaration.html>

ⁱⁱⁱ Understood as a resource or institution held in joint (or common) tenancy by the whole of the public at large. An example of ‘public common’ in modern American society is the Electromagnetic Spectrum. The EAC is to the public commons of election administration as the FCC is to the public commons, which is the EM spectrum. For more see <http://bostonreview.net/BR27.3/bollier.html>

^{iv} Hall, Joseph Lorenzo, “Transparency and Access to Source Code in Electronic Voting”, www.usenix.org/events/evt06/tech/full_papers/hall/hall_html/

^v www.house.gov/science/hearings/ets04/jun24/shamos.pdf

^{vi} i.e. test protocols and all results, test lab reports, defect reports, system configuration information, cryptographic hash values of software components, etc.

^{vii} <http://www.blackboxvoting.org/BBVreport.pdf>

^{viii} <http://www.blackboxvoting.org/BBVtsxstudy.pdf>

^{ix} <http://itpolicy.princeton.edu/voting/ts-paper.pdf>

^x <http://www.washburnresearch.org/archive/ESSFirmware/ESS-Firmware-001.pdf>

^{xi} citation to be added