

Interdisciplinary Roundtable

**Monday, May 5, 2008
EAC Offices
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Discussion Questions

Voting systems manufacturers today must design their products to fulfill a broad and ever-expanding list of requirements to meet the needs of an increasingly diverse voting public, while at the same time attempting to provide an efficient and cost effective product for election officials. Election administrators place additional value on other attributes of a voting system including ease of system setup, operation, and maintenance; configuration simplicity; reliability of operation; processing accuracy; ability to audit entire process; and high polling place throughput. The demographic makeup of the voting public itself also influences voting system design to a great extent. These demographic factors include age, educational level, language proficiency, manual dexterity, physical mobility, sensory functioning, and commuting distance from polling place. Finally, and perhaps most importantly, voting system design must also mitigate a variety of potential threats to the voting process.

The voting system design process needs to take all these factors into consideration and strive to strike an optimum balance. This is a difficult task because many of these factors conflict with each other. As the scope of requirements increases, satisfactory solutions become harder to define. This is an environment where the design process must be open to innovative approaches and unbound by technological constraints so the very best solutions can be implemented in a timely manner.

The next iteration of the VVSG will dictate the direction of voting system design for the next generation of voting systems. The challenge for this next iteration of guidelines is how to properly balance the need for improved security, audit ability and accessibility while also creating guidelines that are not so prescriptive that they stand in the way of innovation. Technology in and of itself has a neutral value scale and can only be evaluated in the context of its application. A voting system is an information processing system. The historical trend in information systems technology has been to supply ever greater capabilities with simpler configurations at lower cost. Information processing has moved from paper and electro-mechanical devices to fully electronic processing and from a host of special purpose devices to general purpose devices.

As the issuer of these guidelines the EAC has a duty to examine these proposed guidelines and decide what the next generation of voting systems must be capable of. Two of the driving forces behind the suggested security requirements in the TGDC draft VVSG are concerns about the integrity and trustworthiness of electronic voting systems and the difficulty of verifying that software only does what it is intended to do and does not harbor malicious code.

The 2007 VVSG recommendations introduce a number of design requirements and validation concepts for the purpose of improving the security of voting systems. These recommendations constitute a radical change from previous voting system standards. These concepts include Software Independence (SI), Independent Voter-Verifiable Records (IVVR), Open Ended Vulnerability Testing (OEVT), and usability benchmarks. Each of these will introduce additional complexity to system design and development and therefore increase the cost and risk for vendors. And all except OEVT will impact voters through changes in the voting process itself. The concepts of Software Independence and IVVR offer additional security but also lead to concerns as to the accessibility and usability of the voting systems.

Before imposing these changes on the election community, it is the EAC's responsibility to determine the best means for providing a sufficient level of voting system security without requiring disproportionate tradeoffs against other highly desirable voting system features. To this end the EAC is convening roundtable discussions for the purpose of carefully considering the VVSG recommendations.

The purpose of this interdisciplinary roundtable is bring representatives from all major stakeholder groups together in the same room to have a dialogue regarding the future of voting systems. The intent of this is to move towards synthesis of view points and create a plan of action of what to do with this next iteration of the Voluntary Voting System Guidelines and how best to evolve the testing processes. The overarching question to be addressed at this roundtable is, "what do you as an (election official, voter, manufacturer, test laboratory...) need or want from the next set of voting system standards and from the federal testing process?"

This discussion will be conducted in seven segments:

1. What specifically can be done with the proposed VVSG standards and with the certification testing procedures and infrastructure, to reduce the cost of the voting systems, without compromising core functions of the voting system?
2. What specifically can be done with the proposed VVSG standards and certification testing procedures and infrastructure to reduce time-in-process of a candidate systems?
3. What specifically can be done to increase the efficiency and economy of efforts within the testing process at the federal, state, and local levels?
4. How important is the timing of the passage and implementation of the next iteration of the VVSG?
 - a. In an ideal world when would you choose to have the next iteration of the VVSG become effective?
5. How necessary is innovation in voting technology?

- a. How can the EAC's program and the VVSG address the desired level of innovation?
 - b. What are the possible sources of capital to reach the desired level of innovation i.e. from the vendor? From Congress? From private enterprise? From academia?
6. Every voting systems stakeholder shares risks with other stakeholders and experience risks unique to their constituents.
 - a. What risks do you view as being shared?
 - b. What risks do you view as being unique to your sector?
 - c. Has there been an adequate assessment of those risks?
 - d. In the absence of an adequate assessment of those risks, how can those risks be prioritized and mitigated?
7. How do you prioritize the features (i.e. security, accessibility, usability, reliability) of a voting system?
 - a. What are the best ways to strike a balance between these sometimes competing features?