Election Assistance Commission
Technical Guidelines Development Committee

September 22, 2004 Hearing

Statement for the Record
Diane Cordry Golden, Ph.D.
Director, Missouri Assistive Technology
Representing the Association of Assistive Technology Act Programs (ATAP)

Early in the aftermath of HAVA passage, it appeared that state and local election officials would have a wide range of electronic voting systems available to meet the requirements for one accessible machine per polling place and might also have other options available such as paper-based systems with add-on access features. That would have been ideal as it would have allowed for selection of equipment from a number of options, provided choices to meet unique needs, and created a competitive market.

Unfortunately the landscape has changed from the initial positive outlook. Specifically, two major issues have emerged as barriers to the availability of multiple choices in accessible voting systems:

1) the need for verifiable access standards and voting machines that conform to those standards, and

2) the need for consensus on how to make a voter verified paper audit record accessible if one is to be used with a voting machine.

Need for Verifiable Access Standards and Machines that Conform

Voting equipment standards, including those specific to accessibility, need to be **measurable** and conformance needs to be **verifiable**. Many states require by law or rule that voting systems be certified as conforming to a set of standards before the system can be used in election. Many use the certification provided by Independent Testing Authorities (ITA's), (see www.nased.org/certification.htm for more information.) In addition, the one "accessible" machine per polling place is a legal requirement of HAVA. As a result, access standards and the associated certification process must be able to verify a product's conformance with accepted access standards. This is absolutely critical to document that a system meets the legal requirements of HAVA.

Voting accessibility standards serve a different purpose and are not directly comparable to application of other information technology access standards such as those found in Section 508 of the Rehabilitation Act and Section 255 of the

Telecommunications Act. The Section 255 standards were developed as design guidelines for product developers and are not well suited to the objective measurement needs of voting system standards. The Section 508 standards are used to guide federal procurement and allow federal agencies to purchase commercially available products that **best meet the access standards**. The 508 standards are not applied in review process where "can buy" is limited to only those products that meet all of the standards and not meeting any one of the standards means, "cannot buy". The Section 508 review process allows for degrees of conformance to standards with the desired outcome of moving the information technology industry toward greater accessibility of commercially produced products in incremental steps over time. For voting equipment accessibility certification, the review process is, by necessity, one that verifies/certifies that the voting system meets **ALL** the access standards. If the product does not meet the set of access requirements, the system will not satisfy the legal requirement for one accessible machine per polling place.

The only access standards currently available for voting equipment are the Federal Election Commission Voting System Standards from 2002 (FEC 2002, www.fec.gov/pages/vssfinal/v1/v1s2.doc). These standards are somewhat similar to those adopted for Section 508 and verification of conformance as required for voting systems has proven challenging. The Independent Testing Authorities (ITA's) historically used by states to certify voting equipment have not been able to readily develop and apply an agreed upon testing protocol to verify conformance with these access standards. In addition, the standards were written specifically to apply only to direct recording electronic (DRE) voting systems, which leaves open to question what standards could or should be used to verify accessibility of non-DRE systems.

It is unclear if there are any voting systems currently available on the market that have been certified as conforming to the FEC 2002 access standards for DRE's. Vendors report products in all phases of the certification review process, but to date no definitive data has been released regarding product certification status relative to the FEC 2002 access standards.

Need for Consensus on Accessibility Requirements for VVPAR

With widespread press coverage, it is likely that most Americans are now aware of the concerns of critics regarding reliability and security of DRE's. One group of critics is strongly advocating for a voter verified paper audit record (VVPAR) or voter verified paper ballot (VVPB) that creates a separate hard copy vote from the electronic vote record. (For purposes of this paper we will use the term VVPAR.)

Elected officials are aligning on both sides of this issue without regard for political party. Both Republicans and Democrats have filed legislation in states to require all electronic voting systems have a VVPAR. Individual civil rights groups have taken positions on both sides, some in favor of VVPAR and others opposed. In March 2004, the original sponsors of HAVA, Representatives Ney (R) and Hoyer (D) along with Senators McConnell (R) and Dodd (D), issued a dear colleague letter to all of Congress

asking that the push for VVPAR be stopped and time be allowed for the Election Assistance Commission to address the issue of voting security. That same month Senators Clinton (D) and Graham (D) introduced legislation to require a VVPAR and similar legislation had already been introduced in the House.

At the same time, litigation is underway on the issue. California was one of the first states to officially require VVPAR through policy direction from the Secretary of State's office. The requirement becomes effective for all voting systems purchased after July 1, 2005 and as of July 2006 all electronic systems, regardless of when purchased, must have a VVPAR. Litigation has been filed to "decertify" and prevent the use of electronic systems without VVPAR currently used by California voting jurisdictions and counter litigation has been filed to require use of the electronic systems (with or without VVPAR) to provide access for individuals with disabilities. At the time of writing of this article these cases were still active or are under appeal.

In recent months, a number of entities and individuals have attempted to address the accessibility questions surrounding use of a VVPAR. The Department of Justice (DOJ) was asked by the state of California if using a VVPAR violated the anti-discrimination requirements of the Americans with Disabilities Act (ADA). The DOJ issued an opinion letter that first indicates there is little reason to differentiate between paper ballot systems since paper ballots generally present the same accessibility problems for voters with disabilities – specifically paper is inaccessible. However, the opinion then states that DRE's that produce a VVPAR do not violate the ADA so long as the voter has access to audio output verification as part of the original vote process -- audio output verification of the VVPAR itself is not required. They note that using a VVPAR in this structure will provide non-disabled voters with more than one method by which they may verify their ballot before casting it, but view the multiple methods of verification as redundant rather than of unique importance. DOJ concludes that a DRE that delivers only audio verification of the electronic vote for disabled voters, with no independent verification of the printed ballot, is non-discriminatory under the ADA.

The California Attorney General came to a different conclusion. In their analysis, if a VVPAR is to be used, the printed ballot does need to be made accessible for individuals with disabilities to provide equal access as required by the ADA. This opinion was at least partially based on the understanding that the paper ballot is in fact a "real vote" thus the print ballot itself needs to be accessible to voters with disabilities so they can verify that vote not just the electronic vote summary. To make the print ballot "accessible", it is assumed that one or more alternative outputs to the print ballot information would need to be made available.

Thus a basic legal question remains, does the VVPAR itself have to be accessible to meet the requirements of HAVA and the ADA? If the paper audit trail is merely used for administrative audit purposes and is not directly verified by any voter (only indirectly verified via the electronic vote summary), it seems clear such paper ballot would not need to be made accessible. However as soon as the "voter verified"

process is added, the question of accessibility looms large.

Unfortunately, at the present time there are no national standards that delineate what alternative outputs would provide a reasonable level of access to VVPAR for voters with disabilities. To avoid legal challenges, voting system designers and election officials need to know which alternative outputs are required and what options for delivering the required alternatives need to be commercially available. Major questions need to be answered such as:

> Is audio output (synthesized, text-to-speech) sufficient as the sole alternative output for the VVPAT content?
>
> Is reliance on synthesized speech adequate for intelligibility?
>
> Is large print required as an alternative output for the VVPAT content since it is required for the screen display of a DRE system?
>
> If large print is required, what are the technical specifications for that output? Can it be delivered via paper or screen display?
>
> How can the print on the VVPAT be most efficiently converted into the required alternative outputs?

If VVPAR's are to be implemented effectively, it is critical for national standards to be developed to address these accessibility issues. Such standards should include technical specifications for alternative outputs for VVPAR votes that are similar to those required for electronic votes.

In June of 2004, the California Secretary of State released standards, including accessibility requirements, for that state's required VVPAR, see http://www.ss.ca.gov/elections/ks_dre_papers/avvpat_standards_6_15a_04.doc. These new standards require the VVPAR to comply with federal and state accessibility requirements. Interestingly, the only federal access requirements are the FEC 2002 standards that only apply to electronic voting systems, not a paper ballot. As a result, the California VVPAR standards do not address the difficult questions identified previously regarding specific alternative outputs required for the print ballot. Absent addressing these issues, there is no assurance that a reasonable range of voters with disabilities will have equal access to the VVPAR and the likelihood of additional litigation is great.

Clearly, specific technical standards are needed for alternative outputs and manipulations related to the VVPAR. Technical specifications are critical to ensure the product delivers what is expected and that the state and election officials know what is required.

Current Initiatives

Initiatives are underway to address both of these barriers. The Institute of Electrical and Electronics Engineers (IEEE) Voting Equipment Standards Committee is drafting new standards for election voting equipment, including technical specifications for electronic, mechanical, and human factors that can be used by manufacturers of voting machines, those purchasing such machines and those certifying such machines. The standards include accessibility requirements for individuals with a wide range of functional limitations and current draft efforts include suggested testing protocols to be used for conformance verification.

This group is also discussing VVPAR's and options for delivering an accessible paper audit record/ballot. Unfortunately, to date many of the difficult questions remain unanswered regarding this issue. More details and updated information about the work of the IEEE group can be found at http://grouper.ieee.org/groups/scc38/1583/.

In June of 2004, the Election Assistance Commission officially formed the Technical Guidelines and Development Committee (TGDC), which is charged with drafting voting standards as specified by HAVA. A number of individuals active in the work of the IEEE group are part of this Committee. It is anticipated that the two initiatives will compliment each other and will produce a final set of access standards within the targeted timeline set. Additional information about the TGDC, its members and charter can be found at www.eac.gov/sa_boards.asp?format=none and updates on TGDC meetings, hearings, and work products is available at http://vote.nist.gov.

Summary

In general, election officials and disability advocates alike whole-heartedly support independent and secret voting for individuals with disabilities and want to implement the HAVA requirement of one accessible voting machine per polling place as quickly as possible. Ideally, multiple voting systems certified as meeting a nationally accepted access standard, would be commercially available to achieve this desired outcome. As described previously, the only access standards currently available are the FEC 2002 standards and those are limited to DRE's, do not address VVPAR accessibility, and are not readily certifiable. Efforts are underway to develop and implement comprehensive, measurable access standards that apply to all voting systems, address VVPAR accessibility, and are certifiable. However, the adoption of these standards, and subsequent availability of products that meet the standards, will not be accomplished overnight.

Clearly states are faced with challenging decisions that must be made regarding accessible voting equipment.

Should a state proceed with the purchase of systems currently on the market

that have some accessibility features, but aren't certified as conforming to all the FEC 2002 access standards? Will such equipment satisfy HAVA requirements through some sort of grandfathering process? Should a state consider waiting for a product that is certified as meeting all the FEC 2002 access standards to ensure HAVA compliance?

What are the access standards for a VVPAR if the state adopts such a requirement? When will equipment be available commercially that provides an accessible VVPAR?

Should a state consider "mix and match" voting equipment with a different type used for the one accessible machine per polling place? Can secrecy actually be insured with this approach or is it just too likely that the accessible machine will become defacto segregation by being "separate and unequal"?

Can a state afford to wait to purchase any accessible machines until a product is available that meets new access standards established by the Election Assistance Commission? Or will delaying do irreparable harm by disenfranchising the disabled community?

The reality is that many states will only have one shot at equipment purchase with HAVA dollars and the devices purchased may be in use for decades to come. The EAC and others in a position of providing clarification and supportive information related to the above questions should do so with as much expediency as is possible.

While there will be no simple solution to many questions, decisions regarding the purchase and deployment of accessible voting systems should involve all affected stakeholders, especially voters with disabilities, and should be based on careful deliberation using the best available information. It is hoped this paper provides useful background to support such discussions.