

WRITTEN TESTIMONY OF Noel H. Runyan
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Madame Chair and members of the Committee, good morning and thank you for the opportunity to speak to you on the topic of "Improving Access to Voting".

My name is Noel Runyan. I am an electrical engineer and computer scientist with over 33 years experience in design and manufacturing of access technology systems for people with disabilities. For the last four years I've been concentrating on the accessibility of voting systems.

For many of us, the passage of the Help America Vote Act of 2002 held tremendous hope and promise for secure and reliable voting; a guarantee that every voter would have access to the voting process.

However, in my own voting experiences, the poll workers were not by themselves able to get the audio access feature working in three of the five times I've attempted to vote on our county's Sequoia Edge II electronic ballot systems. These frustrating voting experiences led me to get more involved in understanding voting systems and working to improve their accessibility.

Like many others, I trusted that "federal testing" would assure security and accessibility, but we have found that we've been misled. DRE (Direct Recording Electronic) systems did not turn out to be as secure, reliable or accessible as promised. There also turned out to be no actual "federal testing" by federal labs or "independent testing authorities" (ITAs). Instead, the "federal testing" was conducted by private labs that received payments from the voting machine vendors themselves, thereby creating an inherent conflict of interest.

Currently, there is no proper testing of the accessibility of voting machines, and there is no standard for comparison of results from accessibility, usability and accuracy testing.

Clearly, the ITA labs' testing of DREs and previous federal certification do not assure that voting machines are truly accessible to those with disabilities.

Electronic ballot systems such as the DRE machines (formerly called "touch screens") now in use have proven to be neither fully accessible to all voters nor secure and accurate methods of recording, tallying, and reporting votes. While the goal of private voting has been achieved by some voters, this has often been without meaningful assurance that our votes have been counted as cast. Additionally, many other voters have been disappointed and frustrated because we have not been able to vote privately and independently as we had hoped and as voting system vendors had promised.

As my recently published "Improving Access to Voting" report details, many of the DREs in use today do not fulfill the promise of accessibility for the majority of voters with disabilities.

Our recent national experience with new election technology has also taught us that, in order to guarantee reliability and security in our elections, it is necessary for the voter to be able to truly verify the accuracy of his or her ballot—the ballot that will actually be counted. The only voting systems that

permit truly accessible verification of the paper ballot are ballot marking devices. These non-tabulating devices, either electronic or non-electronic, assist the voter in marking and verifying votes on paper ballots that can be either optically scanned or hand-counted.

A few years ago, when paper ballot systems were proposed to assure software independent verification, there were not good methods for accessibly marking and verifying paper ballots for voters with disabilities or alternative language requirements. This caused a lot of opposition from most of the community of voters with disabilities. However, times have changed and we now have ballot marking systems that are accessible for a wide spectrum of voters with disabilities.

People are discovering that a voting machine interface can provide a private voting experience for the voter, regardless of whether the votes are stored electronically or printed on paper. In fact, there are now ballot marking systems that even use touch screens and print paper ballots without storing votes electronically.

Because of this new technology, many disability voting rights advocates now accept the notion that access and security are both important and not incompatible, and this is resulting in a steady movement toward support of paper-ballot-based voting systems.

Neither accessibility for all voters nor the security of the vote can be sacrificed for the sake of the other. Fortunately, true accessibility and security can both be achieved; there is no inherent incompatibility between voting system accessibility and security. In fact, several leaders in the accessible voting field have recently signed on to a position statement reflecting this new perspective. I'd like to ask for this position statement and its list of signatories to be included in the record for this hearing.

There are several types of ballot marking systems now available. Some are truly accessible; some are not. For example, the Avante OS ballot marking system used in New York and the InkaVote used in Los Angeles would not be desirable, as they do not include any method for voters to truly access and verify their vote selection markings on the paper ballot. It is crucial that voters be able to truly verify their votes from the vote selections on the paper, rather than merely performing a pseudo-verification from electronic memory.

On the other hand, there are already two ballot marking devices available that allow the voter to accessibly verify their votes from their printed vote selections.

It is possible that some DRE voting machines that have already been purchased may be adapted to be used as ballot marking devices, assuming that their accessibility can be preserved or improved and that they would allow verification of the vote selections from the paper ballot.

Rural precincts might find it cost-effective to provide a single computerized BMD (Ballot Marking Device) to be used by any voter in the polling place to give overvote warnings, so a precinct count optical scanner would not be necessary. The BMD would, of course, also provide accessible voting for voters with disabilities or alternate language requirements.

An alternative to the current accessible and verifiable BMDs might be a stand-alone unit for scanning paper ballots and verifying their votes accessibly. Alternatives such as this stand-alone scanner/verifier and other

improved BMD systems should be encouraged, but with the reasonable expectation that they will not be ready for fielding before the 2008 elections.

There may be an opportunity to promote improvements in accessible paper ballot verification systems by earmarking some of the research funds included in HR811 to offer a prize in a competition to design an improved accessible ballot marking and verification system.

The numbers of voters needing access to voting systems with alternative languages is very large, even when compared to the number of voters with disability-related access needs. Accommodating access to voting systems in alternative languages has relatively clean and simple technical solutions and does not need to become a messy nationwide issue. It does need a major effort on the part of advocates and election officials to become well informed and press for available good solutions.

Some advocates for alternative-language voting access have the mistaken impression that DRE voting systems are the best and only way to handle alternative-language voting needs. This is simply wrong, for two main reasons. First, computerized BMDs can offer flexible alternative language interface options for voting systems just as well as those offered by DRE systems. Second, states, such as California, have already demonstrated that it is possible to provide many choices for alternative languages on optical-scan paper ballot systems.

Although the HR811 bill has many good improvements to elections law, I feel that it is very important to make sure that some of the wording be changed for assuring better accessibility. In particular, I recommend the "conversion to accessible media" section be changed to read something like:

"b) Accessibility and Ballot Verification for Individuals With Disabilities-

(1) IN GENERAL- Section 301(a)(3)(B) of such Act (42 U.S.C. 15481(a)(3)(B)) is amended to read as follows:(B)(i) satisfy the requirement of subparagraph (A) through the use of at least one voting system equipped for individuals with disabilities at each polling place; and(ii) meet the requirements of subparagraph (A) and paragraph (2)(A) by using a system that--(I) allows the voter to privately and independently verify the permanent paper ballot through the presentation, in accessible form, of the print vote selections from the same print information that would be directly used for any vote counting or auditing, and(II) ensures that the entire process of ballot verification and vote casting is equipped for individuals with disabilities, and (III) shall not preclude the use of Braille or tactile ballots."

When considering HR811 and other elections reform bills, it is important to be aware of the difference between independence and privacy in voting procedures.

Independence is not essential to guaranteeing privacy before a voter starts marking their ballot. Independence is required to assure privacy during the process of marking the ballot but is not essential for guaranteeing privacy after the ballot has been deposited into, and protected by, a privacy sleeve. Absolute independence is not required for the parts of the voting process that come before and after vote selection, ballot marking and deposition into a privacy sleeve.

If completely independent handling of paper ballots and voter ID cards is decided to be absolutely necessary for complying with access requirements,

then DRE and BMD voting system manufacturers will be forced to redesign their products to offer automated handling of ballots and cards for this special class of voters or redesign the systems to not use any physical ballots or ID cards. The impact of such changes on voting hardware costs and voting system security may be so high that it might be better to invest the same resources in improving other aspects of the accessibility of voting systems, including physical access to polling places.

Manufacturers should be encouraged to improve their voting machinery accessibility to minimize independent-handling issues for voter cards and paper ballots.

The ideas I've presented here today are described in quite a bit more detail in my recent report, entitled "Improving Access to Voting", and I'd like to ask that it also be included in the record with my testimony.

In conclusion, I want to emphasize that security and accessibility are not incompatible, if they are both included in the design from the very beginning. A properly designed system using the readily available access technology, along with software independent verification of paper ballots, would be broadly accessible, reliable, and secure.

Thank you again for allowing me to testify today.

Noel H. Runyan