NATIONAL
DISABILITY RIGHTS
NETWORK
Protection & Advocacy for Individuals with Disabilities

September 28, 2009

The Honorable Gineen Bresso Beach
Chair, U.S. Election Assistance Commission
1225 New York Avenue, NW, Suite 1100
Washington, DC 20005

Dear Madam Chairwoman:

Re: Disability Access Comments for the VVSG 1.1

The National Disability Rights Network (NDRN) is the voluntary membership organization for the nationwide system of Protection and Advocacy (P&A) agencies. Located in all 50 states, the District of Columbia, Puerto Rico, and the federal territories, the P&As are mandated under various federal statutes to provide legal representation and related advocacy services on behalf of all persons with disabilities in a variety of settings. The P&A network is the nation's largest provider of free legally-based advocacy services for individuals with disabilities. NDRN provides legally-based training and technical assistance to the P&A network, and also serves as a national clearinghouse.

The Help America Vote Act acknowledges the unique obstacles faced by individuals with disabilities in the electoral process, and authorizes funding for the Protection & Advocacy for Voting Accessibility (PAVA) program, 42 U.S.C. 15461. Since the 2005 Voluntary Voting Systems Guidelines went into effect in December 2007, NDRN and PAVA advocates have been tasked with helping states and communities understand and prepare to comply with the accessibility provisions.

Accordingly, NDRN provides the following comments on the proposed revisions to the 2005 VVSG.

3.1 Overview

The current organization is extremely complex and difficult to follow when trying to determine which standards make up the minimum access requirements for the one required "accessible" voting machine per polling place. The Chapter 3, Section 3 access standards do not include all the required access features for a HAVA mandated "accessible" voting system.

Some access features are required by usability standards and other requirements

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are part of the overall typology structure. Specifically, the typology structure indicates that the accessible voting system (Acc-VS) must have an electronic interface or be a VEBD in the schema used by the VVSG. However, that fact is only implied via the typology system, never explicitly stated in Chapter 3.

If an election official, advocacy group or any other reader just looked at the Chapter 3 access standards, it would be difficult to impossible to understand comprehensively what is required of an "accessible" voting system.

The VVSG should be organized either in a way that provides a central location for the "access standards" or a way of readily identifying all the "access" features that must be available on the one legally mandated "accessible" system. If one location is not feasible, the organization should at least provide a way to identify and pull out the required access features so that election officials and others can use the standards as the benchmark for determining what meets the legal requirement for "accessible".

3.1.3. Interaction of Usability and Accessibility Requirements

This section should make it clear that an accessible voting system as mandated by HAVA must have a voter editable interface. Simply saying an Acc-VS is classified as a Voter –Editable Ballot Device does not make it clear that manually-marked paper ballot systems will not conform to the requirements for the legally mandated accessible voting system.

3.2.2 Functional Capabilities

This section should include a statement that an accessible voting system, as mandated by HAVA, must have a voter editable interface.

3.2.5-E Available Font Sizes

The wording of this standard is confusing and can lead readers to the erroneous conclusion that a voting system claiming to be "accessible" that does not have an "electronic image display" does not need to provide two text sizes to meet the needs of individuals with low vision. The words "that uses an electronic image display" should be deleted as the application notation to VEBD-V covers this issue. This would be consistent with the wording of 3.2.5-I A for High Contrast as that standard does not include application restriction wording in the standard. A note should also be added that clarifies that ALL accessible voting systems must have an electronic image display and must conform to this provision.

3.3 Accessibility Requirements

This section should also add a statement that the Acc-VS must be a VEBD, both VEBD-A and VEBD-V. A statement should also be added to this section clarifying that access must be provided for ALL forms of official ballots (any ballot of record) -- both paper and electronic. Access features must also provide for access across all voting processes including generating, verifying and casting an official ballot. It is

not acceptable to have a lesser level of accessibility available for paper ballots as compared to electronic ballots or to have a lesser level of accessibility for ballot verification or ballot casting than for ballot generation.

3.3.1-E Accessibility of Paper-Based Vote Verification

This standard must be reworded to ensure that accessible vote verification is available for ALL paper ballots that are or can be a determinative ballot of record. The standard cannot be restricted in application to only DREs with Voter Verified Paper Audit Trails (VVPAT).

The current standard requires an accessibility feature be provided only when the purpose of the paper ballot is for "allowing voters to verify their votes". Some will interpret this to mean that ballot marking devices and other paper based voting systems that use paper as the core countable ballot (whose primary purpose is not for verification) do not have to provide access to that paper record even though it is the ballot of record.

The wording of this standard should be revised to read follows to make it clear that paper ballot based systems designated as the accessible system are covered by the provision, regardless of the main purpose the paper serves.

3.3.1-E Accessibility of Paper-based Vote Verification

If the Acc-VS uses or generates a voter verifiable paper record that can be the official ballot or determinative vote record, then the system shall provide a means to ensure that the paper verification record is accessible to all voters with disabilities, as identified in [XREF 3.3].

The wording of the discussion section should be revised to align with the revised standard wording and the reference to 3.2.5-G "Legibility of Paper Ballots and Verification Records" should be deleted as those standards do NOT provide an acceptable level of access for individuals with low vision.

The wording of 3.2.5-G expressly sanctions a significantly lesser level of access for vote verification for the Acc-VS than is required for vote generation for individuals with low vision. The standard only requires the voting system "provide features that assist in reading a paper ballot" instead of requiring delivery of a specific access feature designed to ensure access. Further, this deficient standard then allows for "optical devices for magnification." This wording authorizes an individual accommodation approach to enlarging print text, rather than requiring such access to be built into the voting system, which is simply unacceptable.

It is impractical, and perhaps impossible, to have on hand at all polling place the variety of individual magnification devices necessary to accommodate differing types and degrees of vision loss exhibited by voters. It is also impracticable to expect poll workers to appropriately match magnifying devices to individual visual limitations and have expertise in the use of such devices to support voters who need them.

Voters with low vision, just like those who are blind, should have the same access features available to support both generation and verification a paper ballot. As a result, the discussion section should be revised as follows:

3.3.1-E.1. Audio Read Back for Paper-Based Vote Verification

This standard needs two significant revisions. First, it should be revised to clarify that the read-back or re-display of ALL ballot content, including write-in text, is required for verification purposes. Many current ballot-marking devices do not provide access to write-in text. The system simply notifies the voter that a write-in has been done (e.g. says "write-in"). This leaves voters with disabilities unable to verify their write-in votes. The standard should be revised to read as follows:

If the Acc-VS uses or generates a voter-verified paper record that can be the official ballot or determinative vote record, then the system shall provide a mechanism that can read that record and generate an audio representation of its entire vote contents, including write-in votes.

Second, this standard only provides for audio read back for blind individuals. It does not provide individuals with low vision an equal level of accessibility. Individuals who are blind are ensured the same level of access for both vote generation and verification of a paper ballot through a required audio-tactile interface.

A comparable standard is not in place that ensures that individuals who are visually impaired can generate and verify their paper ballots through enhanced visual display, i.e., large text size. While two text sizes ARE required for individuals with low vision to generate their vote (3.2.5-E), that same level of access is NOT required for verification of a paper ballot and should be added.

It is perplexing to understand why the standards would require manufacturers to deliver two text sizes for vote generation (per 3.2.5-E), but then not require the same two text sizes for vote verification. Requiring two sizes of text output merely ensures the Acc-VS provides an equal level of access for both vote generation and verification for individuals with low vision – it does not prescribe how that output be delivered by the Acc-VS. To ensure individuals with low vision have equal access to vote generation and verification, an additional standard should be added as follows:

3.3.1-E.2 Enhanced Visual Display for Paper-Based Vote Verification

If the Acc-VS uses or generates a voter verified paper record (or some other durable, human-readable record) that can be the official ballot or determinative vote record, then the system shall provide a mechanism that can read that record and generate a visual display or other output representation of its entire vote contents, including write-in votes, in at least two font sizes (a) 3.0-4.0 mm and (b) 6.3-9.0 mm.

3.3.2.- e. Buttons and Controls Distinguishable by Shape and Color

This standard has been significantly compromised with the addition of a major exception to the requirement for buttons and controls to be distinguishable by both

shape and color. It now reads –

> *"Buttons and controls on accessible voting stations shall be distinguishable by both shape and color. This applies to buttons and controls implemented either "on-screen" or in hardware. This requirement does not apply to sizeable groups of keys, such as a conventional 4x3 telephone keypad or a full alphabetic keyboard."*

A footnote indicates that the exception is based on EAC Decision on Request for Interpretation 2007-01. However, that decision addressed the issue of two separate input systems, i.e., one hardware and one screen display, intended for two separate disability groups. It did not address the use of sizeable groups of keys and whether or not by simply adding more keys an accessible system would no longer be subject to this requirement.

Allowing an exception for "sizable groups of keys" makes this standard meaningless. What is a sizable group of keys – if 12 keys in a telephone keypad is exempt, what about 9 keys, 6 keys, 5 keys? Adding this vague exception will merely encourage vendors to add enough keys to avoid complying and will discourage use of a simple key arrangement with distinguishable shape/color. This will create significant access barriers for individuals with cognitive disabilities and/or vision disabilities.

In addition, the logic of the 2007-01 interpretation is flawed. It interprets the organization of the VVSG standards under specific disability headings to mean that those standards apply only to individuals with that functional limitation. As a result, if the buttons/controls of an Acc-VS are intended to be used to navigate with audio output that is designed for blind individuals and the requirement for buttons/controls to be distinguishable by shape/color does not apply since that standard is in the Partial Vision section.

However, there is no "clean" differentiation between individuals who are "blind" and those who have "partial vision". Many individuals who use audio output will have residual vision and will rely on the color/shape distinctions of hardware buttons for tactile navigation. Other individuals who use the large visual display interface with use "on-screen" controls for navigation will also rely on those buttons/controls to be distinguishable by color/shape.

The last sentence exception language should be eliminated in this standard. If the intent is to provide an exception for keypads commonly used on familiar information technology (e.g. a standard telephone phone keypad or standard computer keyboard) then language should be drafted to exempt those products rather than exempting a "sizable group of keys".

The language would need to clearly describe the kinds of commercial-off-the-shelf products that have standard keypad arrangements that are widely used to the degree they would be familiar to and readily usable by a broad range of individuals with disabilities.

3.3.3-E Ballot Submission and Vote Verification

This standard must be clarified to ensure private and independent ballot submission and vote verification is provided by the Acc-VS for individuals who are visually impaired (not just those who are blind) and those with dexterity disabilities. HAVA requires that all voters, including individuals with disabilities, be able to privately and independently verify and cast their ballots.

However, this standard begins with the caveat: "[i]f the voting station supports ballot submission or vote verification for non-blind or non-disabled voters . . ." To conform with HAVA, an accessible voting station must offer a voter with a disability the opportunity to verify their ballot--whether it is paper or electronic—and the ability to cast that ballot privately and independently.

3.3.3-E- Ballot Submission and Vote Verification

The Acc-VS shall provide features that enable voters who have vision impairments to verify and submit their ballots privately and independently.

3.3.4-B Support for Non-Manual Input

This requirement is unclear. The discussion section of the standard indicates that use of a mouth stick satisfies the requirement. A mouthstick, headstick, hand splint, and other similar personal use pointing devices are all personal use assistive technology devices.

To be used and fit properly, an individual would need to bring these kinds of devices with them which are prohibited by another standard. It is NOT appropriate for a voting system and/or polling place to provide this type of assistive technology as serious liability issues could result.

In addition, while a few individuals might be able to use assistive technology pointing devices to operate a voting system with the normal touch screen interface, this input option would not at all meet the needs of most individuals with motor limitations. To meet the needs of a reasonable range of individuals with motor disabilities, switch input is necessary and should be clearly required.

In addition, specific minimum standards should be developed to ensure the usability of that switch input. The audio-tactile interface has many specific requirements designed to ensure the voting process is efficient and effective for voters who are blind. Similarly, using switch input with auditory or visual scanning that has adjustable features is necessary to make the voting process efficient and effective. Those ATI features that are appropriate for switch input scanning should be referenced in this standard.

For example, the 3.3.3-C features for audio output are appropriate for auditory scanning. New standards should be developed that apply to both auditory or visual scanning based on the 3.3.3-B features for the ATI.

For example, the requirement that the ATI allow the voter to skip to next contest or return to previous contests is an excellent requirement for switch input scanning. If a voting system only allows for forward navigation -- the only way to return to a contest is to scan through the entire ballot again. Adjustable scanning speed is another critical requirement.

3.3.4-C Ballot Submission and Vote Verification

This standard must be clarified to ensure private and independent ballot submission and vote verification is provided by the Acc-VS for individuals who have dexterity disabilities. HAVA requires that all voters, including individuals with disabilities, be able to privately and independently verify and cast their ballots.

However, this standard begins with the caveat: "[i]f the voting station supports ballot submission or vote verification for non-blind or non-disabled voters . . ." To conform with HAVA, an accessible voting station must offer a voter with a disability the opportunity to verify their ballot--whether it is paper or electronic—and the ability to cast that ballot privately and independently.

Accessible ballot verification and ballot casting should not be contingent on what the voting station supports for other voters. The wording of this standard should be revised to read:

> ***3.3.4-C Ballot Submission and Vote Verification***
>
> *The Acc-VS shall provide features that enable voters who lack fine motor control or the use of their hands to verify and submit their ballots privately and independently.*

3.4 Functionality Testing for Accessibility

It is unclear why the disabilities of "blind and visually impaired" and "lacking fine motor control" are the only ones required to be a part of functionality testing? Without substantive definitions and descriptions of the functional limitations that should be included in such testing just the terms "blind and visually impaired" and "lacking fine motor control" do not at all ensure a wide range of individuals with vision loss nor a wide range of individuals with motor limitations will be included in functionality testing (which is highly desirable for the testing to be useful.)

The wording of this standard should be revised to read:

> *Volume I, Section 3 prescribes the requirements for voting system accessibility to satisfy the provisions of HAVA 301(a)(4) and 241(b)(5). To demonstrate conformance to these requirements, manufacturers shall conduct summative usability tests of accessible voting equipment with a wide range of individuals with diverse disabilities, including but not limited to individuals with vision loss who require an audio-tactile ballot and those who require a large visual display and clearly distinguishable input controls; individuals with motor limitations who require switch input, those who cannot handle a paper ballot, and those who use a wheelchair to access the voting station; and individuals with cognitive, vision or a combination of disabilities who require synchronized audio output and visual display.*
>
> *A description of the testing performed, the population of test subjects participating, and the results shall be documented using the Common Industry Format (CIF) by the manufacturer and submitted as part of the Technical Data Package. The test labs shall review this information during the system certification documentation review.*

7.9.6 VVPAT Usability

The wording of this standard needs to be changed from "should" to "shall" to align with accessibility requirements.

> b. The voting equipment shall be capable of showing the information on the paper in
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> a font size of at least 3.0 mm and should be capable of showing the information in at least two font ranges; 3.0–4.0 mm, and 6.3–9.0 mm, under control of the voter or poll worker.

7.9.7 VVPAT Accessibility

Subsection b of this standard needs to be revised to align with subsection a, which requires conformance to accessibility standards for verification of a VVPAT.

> a. All accessibility requirements from Subsection 3.2 shall apply to voting machines with VVPAT.
>
> b. If the normal voting procedure includes VVPAT, the accessible voting equipment shall provide features that enable voters who are visually impaired and voters with an unwritten language to perform this verification. If state statute designates the paper record produced by the VVPAT to be the official ballot or the determinative record on a recount, the accessible voting equipment shall provide features that enable visually impaired voters and voters with an unwritten language to review the paper record.

In closing, thank you for soliciting input from the public on the VVSG 1.1. The VVSG are critical in ensuring accessibility in future elections for voters with disabilities, providing the blueprint for accessible voting systems.

I encourage the EAC to consult with NDRN and our P&A network when certifying new voting systems technology; thereby, helping to ensure that all individuals with disabilities can cast a private, independent and verifiable ballot.

Sincerely,

Delores Scott
Senior Staff Attorney