TO: TGDC
FROM: Diane Golden, Ph.D, Missouri Assistive Technology
RE: May 15 version of VVSG

The following are concerns regarding accessibility provisions of the May 15
Version of the VVSG. Hope these comments are helpful.

1) Large Print or Large Visual Display Access
The current version has general font size requirements applicable to all voting systems (3.2.5-D
and E). Unfortunately, the one that requires a large visual display of 6.3-9.0 mm, only applies to
"a voting station that uses an electronic image display." So if a jurisdiction is not using voting
stations with electronic image displays - there is no requirement for large print as there is not
requirement for the Acc-VS to have large visual display. This is how tactile ballot systems,
phone voting and other similar systems without an electronic visual display are claiming to meet
the HAVA requirement for an accessible voting system -- yet they provide no access for
individuals who need large print because they have no electronic visual display so there is no
VVSG requirement that applies. The easiest fix is probably to leave 3.2.5.D and E and add a
specific standard under 3.3.2 to require the Acc-VS to deliver large visual display as follows:

The voting station shall be capable of showing all information in at least two font sizes, (a) 3.0-
4.0 mm and (b) 6.3-9.0 mm, under control of the voter. The system shall allow the voter to
adjust font size throughout the voting session while preserving the current ballot choices.

2) High Contrast for Electronic Displays
The standard for high contrast (which was originally for accessibility) has been moved into the
general usability requirements (3.2.5-1), but the title and standard are not in sync. The title
suggests that the standard only applies to voting systems with electronic displays; but the
standard does not have that limitation. If the intent is for 3.2.5-1 to apply only to systems with
electronic image displays, then it needs to be revised to say that and a second standard needs to
be added under Accessibility to require the Acc-VS to provide high contrast. If a standard
requiring high contrast (regardless of electronic visual display or not) is not added, a
jurisdication using only paper ballots would be under no obligation to provide high contrast. So
3.2.5-1 would read:

> A voting station that uses an electronic image display shall be capable of
> showing all information in high contrast either . . .

> And a new standard under accessibility would require the high contrast of
> the Acc-VS -

> The Acc-VS voting station shall be capable of showing all information in
> high contrast either . . .

3) Synchronized Audio and Video
The synchronized audio/video standard needs to clarify how alternative input connects with
alternative output. If you activate audio only output, then you have shifted into all the 3.3.3-B
through G requirements for the audio-tactile interface that provides non-visual navigation and

control. I would hope the expectation is that synchronized audio and large visual display would be available with visually based navigation and control active. It would also be great to have the non-visual (scanning audio) input available along with switch input. Currently the standards are unclear on what combinations of alternative input and output must be available together. Perhaps adding to the last sentence of 3.3.2-D as follows –

> The system shall allow the voter to switch among the three modes (synchronized audio/video, video-only, or audio-only) throughout the voting session while preserving the current ballot choices and shall allow the voter to utilize any input options required of an Acc-VS including non-visual, visual, enhanced visual, and non-manual (switch input.)

It would probably be best to move this revised standard under general accessibility section (3.3.1) as the ability to use a variety of input and out adaptations applies to all types of functional limitations, not just partial vision.

4) Accessibility of Vote Verification and Casting
I took another look at the current draft of 3.3.1-E as placed in the intro to the accessibility section and would like to suggest it be broadened even further to cover both verification and casting of any official ballot as both verification and casting of paper ballots are significant access problems.

Accessibility of Paper-based Vote Verification and Casting
If the Acc-VS generates or uses a paper record (or some other durable, human-readable record) that is or can be a determinative vote record, then the system shall provide a means to ensure that the paper record can be privately and independently verified and cast by all voters with disabilities, as identified in section 3.3 XREF.

Then as sub-standards to this overall requirement, the issue of what is verified must be addressed. If the paper ballot must have human-readable content (which seems to be a requirement of 6.2-A), that content will need to be made accessible assuming that is what non-disabled voters are verifying. Voters with disabilities should not be verifying a bar code when voters without disabilities are verifying human-readable print.

  It also needs to be made clear in a sub-standard that the alternative format used to generate the ballot should be the format available to verify the ballot. So if a voter used large print visual display with touch-screen input to generate their ballot - that is what should be available for them to verify the official paper ballot. A low vision voter (many of whom will be elderly with hearing loss also) cannot be expected to verify a paper ballot via audio output with tactile input.

  There will also need to be a sub-standard that "over-rides" the current requirement of 6.3.4.1.3.4-B that requires voters to be able to compare paper and electronic vote records. For someone using alternative output, the verification should be simply a "re-display" of the vote selections on the paper ballot in the alternative format used to generate the electronic vote record. There should be no requirement for a comparison when alternative output is used as it is not terribly helpful nor efficient to compare audio to audio or large print to large print.

A sub-standard should also be developed to clarify the requirement that individuals with disabilities must be able to verify and cast a paper ballot without the need for motor skills when voter handled paper ballots are used. Someone who used switch input to generate a paper ballot cannot be expected to physically handle that paper ballot to be able to verify and cast it.

And last, this would probably be the place for a sub-standard to clarify that it is acceptable for the same alternative output hardware (e.g. headset for audio or large visual display) and alternative input mechanisms (e.g. dual switch or tactile keys) to be used to generate and verify a ballot. I couldn't find the section in this draft that addressed software independence, but I'm guessing there is a potential access conflict there. It is really critical to clarify that separate output devices are not required as that will make delivery of accessible verification almost impossible and will add lots of complication to the problem of manual paper handling.