



VAAC Meeting 8/13

MEETING NOTES



1. Meeting Specifics

Meeting Name:	VAAC Meeting
Date/Time:	Tuesday, 8/13 at 1:30pm
Location	SF County Back Office
Facilitator & Meeting Notes:	Facilitator- John Arntz, Rylan Smirlies
Date/Time of Next Meeting:	September 19, 2019 at 2pm

2. Participants

Meeting Participants
San Francisco County Elections
Dominion Voting Systems
Voting Accessibility Advisory Committee

3. Notes by Section

No.	TOPIC
1	Previous Recommendations Review (DVS)
2	New Questions from VAAC
3	Recommendations from 8/13 VAAC Meeting

4. Meeting Notes

Previous Recommendations Review (DVS)

1. Platform

a. The ICX is not universally accessible for independent use during voting a scanning ballot

- i. Some voters with disabilities using the ICX will require assistance from a poll worker or an election official to initiate the voting
 - 1. **DVS:** There is currently research and development work being done to allow for all software interactions to be completely independent. This include Language Selection, Accessible Device Selection, Privacy Mask enabling, and ballot instruction readout.
 - a. Delivery timeline - TBD, post 5.10
 - 2. **DVS:** The ballot style identification will still require the insertion of a card; however, we are exploring methods to make this easier for voters with disabilities including braille labelling and easy to insert card slots. Because some of this would require hardware changes it is more difficult to implement.
 - a. Delivery timeline - TBD, post 5.10
- ii. After finishing voting, some voters with disabilities, especially those who are blind, will require assistance from a poll worker or an elections official to print out the paper ballot, move the record



VAAC Meeting 8/13

MEETING NOTES



ballot to a separate piece of voting equipment, and then insert the ballot into this second unit for scanning and tabulation.

1. **DVS:** There is currently research work being done on how we can provide clear instructions on how to retrieve the ballot and insert it into the ballot scanner.
 - a. Delivery timeline - TBD, post 5.10

Proposed Solution in Review:

Allow for universal independence for voters who use the ICX. Add features to the ICX and other voting equipment that allows blind voters and/or people with low vision to independently select to print the paper on the ICX and then independently insert their ballot into the ballot-scanning equipment. Such features will reduce the need for poll workers or elections officials to assist voters to cast their ballots.

2. Audio

- a. **Voters cannot independently access the audio instructions when using the ICX.**
 - i. A blind voter cannot start the audio function independently
 - ii. Before the audio function starts; the audio function must be selected on the touchscreen, something that blind voters cannot do because they cannot see the touchscreen
 1. **DVS:** See Above.
- b. **The speech output is a synthesized voice rather than a human voice.**
 - i. The synthesized "voice" of instructions is not clear, and the sound is outdated.
 1. **DVS:** Our system has various sources for audio. Some is managed by Google Text-to-Speech, some by our EMS Text-to-Speech, and some is pre-recorded audio.
 - a. Under review - no delivery timeline
 - ii. If a person were to not use this synthesizer, it would take a while to get used to it.
 1. **DVS:** We are currently exploring options that would increase the clarity of the speech synthesizer. Ensuring that volume is consistent across all audio forms is our current priority.
 - a. Delivery timeline - TBD, post 5.10
- c. **There were technical difficulties with the speech output.**
 - i. The machine for scanning the ballot did not provide audio feedback on whether ballots were correctly marked.
 - ii. The Dominion personnel were unable to determine the reason that the audio feedback function was not operating.
 1. **DVS:** This is an available feature, so Dominion is unsure of the issue referenced. Dominion will review our current documentation and ensure instructions on enabling this feature are clear.
 - a. Feature available - no delivery timeline

Proposed Solution in Review:

Enable the ICX to provide audio instructions as the default setting so that blind voters are not required to initiate the feature. Additionally, the audio instructions in all voting equipment should be fully tested to ensure that voters will encounter functional audio, allowing them to vote independently. All instructions ought to use human voice recordings, and in all required languages, to remove the need for using the synthesized voice function so that instructions are more clear and easier to understand.

3. Text

- a. **The zoom feature should allow for a greater range of enlargement beyond the one option to increase the magnification to one "large" setting.**
 - i. Currently there are only two size options to enlarge text on the zoom feature.
 1. **DVS:** We are currently looking into the development effort required to include four font sizes. This should help accommodate voters who need larger text as well as those who require smaller text.



VAAC Meeting 8/13

MEETING NOTES



a. Delivery timeline - TBD, post 5.10

b. The customized features for text should be broader.

- i. The customization is limited to enlarging the text size and does not include other text properties
 - 1. **DVS:** We are currently exploring various color/contrast options for the interface, however adding customizable features also increases the complexity of the system making it more difficult to learn. This will require more research to properly understand the cost-benefit.
 - a. Delivery timeline - TBD, post 5.10

Proposed Solutions in Review:

Upgrade the zoom feature to provide a greater range of enlargement so that voters with varying degrees of low vision can utilize this feature. At the minimum, the lowest zoom setting should start at 18+ Sans Serif Fonts. Any magnification setting below 18+ Sans Serif is not considered large print.

The customization for text should include options to change the text display such as its spacing, font, and color. This will enhance the accessibility for people with dyslexia and other cognitive and learning disabilities. It will also allow the content to be more adaptable to smaller and larger screen displays and be more user friendly when text is translated into different languages since sentences are different lengths in various languages.

4. Color Contrast

a. The contrast feature is limited

- i. The ICX currently provides voters with only two settings contrast content on the screen.
 - 1. **DVS:** We are currently exploring various color/contrast options for the interface. We currently offer full color (WCAG compliant Contrast), Black on White (20:1 contrast), and White on Black (20:1 contrast). Next step will involve a low contrast setting.
 - a. Delivery timeline – TBD, post 5.10

Proposed Solutions in Review:

Modify the contrast feature so there are more than two contrast options. Allowing for additional contrast capability will enhance the accessibility for low vision users, like people with low contrast sensitivity. Additional contrast functionality will also display ballot content that is easier to read for all voters, especially in consideration of the different lighting conditions such as sunlight and the effects of glare occurring at polling places.

5. Voting Machine Usability

a. The ICX is difficult to use for some voters

- i. The tilt angle of the ICX is not easily adjustable for ease of use, especially for voters with disabilities
 - 1. **DVS:** We are always looking into opportunities to improve our product, however hardware changes are much more difficult to implement than software changes.
 - a. Under review - no delivery timeline
- ii. The presentation of ballot content on the ICX does not allow for voters to view one contest per screen. Having multiple contests appear on one screen can be difficult and confusing for voters with disabilities to navigate the ballot content.
 - 1. **DVS:** This is a configurable option at the project level.
 - a. Feature available - no delivery timeline
- iii. Some users express a lack of confidence in the process and comfort using the machine
 - 1. **DVS:** We are always looking into opportunities to streamline our system and increase confidence. This is a part of our regular usability testing.
 - a. Under review - no delivery timeline
- iv. Some users also expressed that the voting process and machine are difficult to understand
 - 1. **DVS:** We are constantly working on improving the workflow of our voting interface to make it easier for everyone to vote confidently and independently.
 - a. Under review - no delivery timeline



VAAC Meeting 8/13

MEETING NOTES



Proposed Solutions in Review:

The base of the ICX needs to be more easily adjustable for people with disabilities so that people with different heights and reach ranges can modify the tilt angle to better access the screen's features and ballot content. Additionally, the ICX needs to include a feature allowing for one contest per screen so that voters wanting to use this function can more easily understand the information on the screen and will also allow blind and low vision voters to vote privately and independently. The ICX would ideally present one contest per screen as the default view and also allow people to adjust this setting to their preference. For instance, Los Angeles' new voting system, the Voting System for All People, only provides one contest per screen to allow immediate access for people who are blind or low vision. The system has been extensively user tested.

Current High-Priority Features Being Planned Beyond 5.10

- Independent Activation
- Improved write-in interface for AVS voters
 - Includes separate interfaces for different controllers
- Streamlined AVS Navigation
 - Auditing our ATI and Binary switch sessions to make navigating the ballot simpler
- Language and Instruction improvements
 - Auditing all the audio cues and working to make them as clear and simple as possible

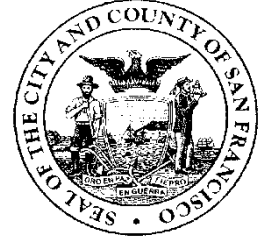
Meeting Questions from VAAC

- Will poll workers be responsible for activating the ICX every time?
 - Answered by SF – Yes, they will
- Will the colors & button shape descriptions for speech output appear for every contest?
 - Answered by DVS – Not at this time since the information is provided at the beginning of the process, but input was taken and added to suggestions
- In case a voter accidentally presses a button, is there a confirmation message before official selections are made?
 - Answered by DVS – clarified how this can be tough since it can create a very long voting process, but also useful input so this is an item that is currently being brainstormed internally
- How does an individual that needs the accessibility features know exactly what they need to do when they arrive to vote?
 - Answered by SF – Summarized the importance of outreach efforts and poll worker training
 - Poll workers are provided this information, and any voter can use these if they want
 - Provided more information on voting location signage
- Has the audio ballot activation process been fixed? Is it still difficult/cumbersome?
 - Answered by SF - Provided clarification on the process including the steps to set up and provided further clarification on the mandatory training and preparation
- Is the ATI off the shelf?
 - Answered by DVS – DVSs works directly with the company that makes them so they fit our needs
- Is the table that was being demonstrated going to be used onsite?
 - Answered by SF - confirmed that it will be as it is ADA compliant
- What is the write-in interface like?
 - Answered by DVS - Rylan demonstrated the write-in process on the ICX machine for both touch and ATI
- Can you use the touch screen instead of the ATI for write-ins?
 - Answered by DVS - Rylan demonstrated the touch screen write-in process on the ICX machine
- Could there be an "all-in-one" machine for marking choices and then submitting without a need to print?



VAAC Meeting 8/13

MEETING NOTES

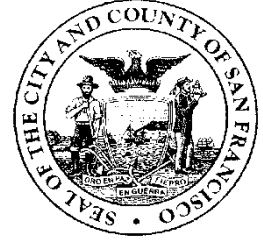


- Answered by SF/DVS - There is currently no all-in-one, explaining the reasoning behind this such as certification and current state election regulations
 - ***The ICE Accomplishes this, but still requires the voter to handle the ballot when inserting it into the tabulator
- Is there a timeline update for the blind accessibility options? (*relating to previous recommendation 2a*)
 - Answered by DVS - Rylan confirmed this is still being looked at and is high priority
- Is there an update on human voices instead of synthesized voices? (*relating to previous recommendation 2b*)
 - Answered by SF/DVS - Highlighted the ways DVS is looking to improve this while also summarizing the challenges, such as the time and resource commitment required from the county to make this a reality
- What is the timeline for getting the extra zoom options feature live? (*relating to previous recommendation 3a*)
 - Answered by DVS - Rylan confirmed that it's in development but also takes time due to certification rules, but it's still a high priority item
 - The development timeline is not constrained by certification. At this point we are exploring the development effort required to make this change. Until this is complete, we cannot provide an accurate estimate
- What are the current zoom options? (*relating to previous recommendation 3a*)
 - Answered by DVS - Rylan confirmed that we are moving from the current zoom selection to include four font sizes
 - At this point we are exploring the development effort required to add more zoom settings. Until this is complete, we cannot provide an accurate estimate
- Is there a way to dim the screen if needed?
 - Answered by DVS – Yes but it can currently only be done by the poll worker
 - Some versions of ICX allow users with Technician credentials to access the brightness settings. Poll workers will not usually have these. It should be investigated as to whether or not 5.10 has this capability.
- Are there plans to improve the ATI?
 - Answered by DVS - Rylan confirmed that ATI improvement are constantly being evaluated
- Are there tables that could be used that could go up/down depending on the voter?
 - Answered by SF - This has been investigated by SF before and John explained the reasoning for the current tables that are being used (standard 3ft x 3ft)
- Has DVS considered ways to use different equipment for ATI's, such as off the shelf alternatives?
 - Answered by DVS - Rylan clarified the difficulties that come with this since an ICX is very different than a standard computer which many off the shelf products are intended for
- Have there been more intuitive tools that have been considered for ATI's?
 - Answered by DVS - Rylan confirmed this is always being considered.
- Would it be possible to consider a scanning poll station open method?
 - Answered by SF/DVS – Explained how the current system is in place do to election regulations, but could always change in the future
- How does Dominion prioritize recommendations and improvements for its products?
 - Answered by DVS - Rylan explained how he and his team work to look at priorities over the course of a set and realistic roadmap; Rylan provides the recommendations and the prioritization and then works on the front-end for design while testing throughout
- How do the changes get tested?
 - Answered by DVS - Rylan explained the nuances of development and how new features get regularly tested throughout production
- What are the general timeframes for new features?
 - Answered by DVS – Rylan confirmed that it varies by the specific features as some features are easier to implement and test while others take more vigorous time and resources



VAAC Meeting 8/13

MEETING NOTES



- What are you referring to when we reference "certification"? What are the timelines for certification?
 - Answered by SF/DVS - Explained the moving parts and the intensity of certification through testing and feedback, timeline can be six months to a year depending on the state
- Do you need to be certified every time a new feature needs to be implemented?
Answered by DVS - yes, this is needed for all features and noted how it can create a roadblock for new features being implemented

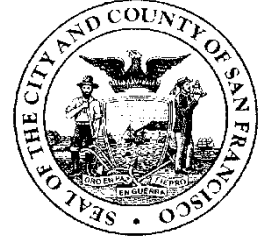
Recommendations from 8/13 VAAC Meeting

****All new recommendations & suggestions are currently being assessed for beyond 5.10 certification*

- 1. Recommendation to have the ATI color/shape description mentioned for every contest, or at least, an optional button reminder**
 - There are concerns that only mentioning it at the beginning of the process will make it difficult for some voters to navigate the ballot.
 - Could there be an option on each screen to remind the voter of what buttons do along with descriptions?
 - Audio Scripts are currently being evaluated
- 2. Recommendation to alter the audio wording in ranked contests for ballot review**
 - Could wording for the ranked contests be less confusing?
 - Example: stating "4-10 left unselected/unranked" vs. an individual "unranked" for each left blank
 - DVS will explore this possibility and the development effort required to implement
- 3. Recommendation to implement an option to lower the on-screen touch keyboard from the top of the screen to the middle or bottom**
 - Lowering the keyboard could substantially increase accessibility
 - This was cited in the previous recommendations as well, as the current position may be prohibitive for some
 - DVS will explore this possibility and the development effort required to implement
- 4. Recommendation to include another contrast option meant to work against screen glare**
 - In addition to other contrast options currently being considered, an anti-glare option could also be extremely beneficial
 - DVS will explore this possibility and the development effort required to implement
 - Glare will be more impacted by the hardware than screen colors
- 5. Recommendation to be able to dim the screen without the help of a poll worker**
 - Requiring a poll worker do something so simple can seem a bit restrictive and needlessly complex
 - After a ballot is printed, could the screen brightness just return to default?
 - DVS will explore this possibility and the development effort required to implement
- 6. Recommendation to have an option to display all contests on one screen (and scroll) instead of having one contest per screen for accessible voting**
 - This could be voter preference
 - Having one per screen can slow down the process and create confusion for some
 - This feature is not likely to be developed as it may conflict with VVSG regulations



VAAC Meeting 8/13
MEETING NOTES



- 7. Recommendation to allow optional physical keyboard instead of using an ATI or the touch screen for write-ins**
 - It may be easier for someone to enter candidate information that way as opposed to the other two methods
 - DVS will explore this possibility; however, this would represent an increased cost as the keyboard would have to be provided and certified by Dominion to ensure security

- 8. Recommendation for SF to evaluate ICX positioning on the table**
 - The default ICX table positioning may be prohibitive for some
 - Will it be possible to move it towards the center, or somewhere else as needed?
 - Can the table itself be adjusted as needed for increased accessibility?