

Meeting Minutes
United States Election Assistance Commission
VVSG 2.0 Requirements Public Hearing 3:
Manufacturers, Technology, and Testing Labs
Virtual Public Hearing
May 20, 2020

1335 East West Highway
Silver Spring, Maryland 20910

The following are the Minutes of the Public Meeting of the United States Election Assistance Commission (EAC) held May 20, 2020. The virtual meeting convened at 1:30 p.m. via Zoom web conference on Wednesday, May 20, 2020 and adjourned at 3:35 pm.

PUBLIC MEETING

Call to Order

Chairman Benjamin Hovland called the meeting to order at 1:30 p.m.

Roll Call

Chairman Hovland called roll and found present Vice Chair Donald Palmer, Commissioner Thomas Hicks, and Commissioner Christy McCormick.

Adoption of Minutes

Chairman Hovland submits a motion to adopt the minutes from May 6, 2020, the second Virtual Public Hearing on VVSG 2.0 Requirements. Commissioner McCormick moves to adopt the minutes as submitted. All are in favor and the minutes are adopted.

Adoption of the Agenda

Chairman Hovland called for a motion to approve the agenda, as submitted. Vice Chair Palmer moves to adopt the agenda as submitted. All are in favor and the agenda is approved.

Welcoming Remarks and Opening Statements of Commissioners

Chairman Hovland thanks the participants for this hearing and thanks the experts who have helped develop the VVSG 2.0 requirements over several years. Chairman Hovland notes that these new guidelines are focused on increasing the security and accessibility of voting systems, strengthening interoperability, and encouraging innovation. Chairman Hovland acknowledges some questions still need to be answered in regard to the new requirements, and this hearing will provide input from manufacturers and Voting Systems Test Labs (VSTLs).

Vice Chair Palmer notes that this is the third hearing, and therefore a number of EAC stakeholders have provided comment. These include Federal partners such as NIST, local and State election officials, and other experts in the field. Vice Chair Palmer thanks EAC staff for their work and notes the importance of this hearing involving manufactures and VSTLs.

Commissioner Hicks recognizes the importance of manufacturers in the VVSG process. He notes that it is important to move forward with VVSG once the current pandemic has passed, and States will be dealing with constrained budgets. Commissioner Hicks notes that, for the most part, states will choose the best value for the level of service from the manufacturers.

Commissioner McCormick welcomes the public and thanks the panelists. Commissioner McCormick highlights that it is important that the Commissioners get this right. To do that, the Commissioners have heard from a variety of stakeholders in order to balance interests in order to strengthen security, usability, and accessibility, but also encourage innovation and usher us into the future of voting technology.

Opening Testimony-Panel One

Chairman Hovland recognizes that the first panel involves perspectives from voting system manufacturers. Chairman Hovland notes that the manufacturers will be developing the new voting technology, and are therefore critical to the VVSG conversation. The panel includes Senior VP of Certification for ES&S Steve Pearson, Director of Federal Certification for Dominion Ian Piper, Director of Global Services and Certification for Smartmatic Edwin Smith, Chief Information Officer for MicroVote Bernie Hirsch, Chief Software Architect and Director of Software Development for Unisyn and member of the TGDC McDermot Coutts, Executive Director of VotingWorks Ben Adida, Chief Technology Officer for Hart InterCivic Jim Canter, and Federal Certification Program Manager for Clear Ballot Group Russ Dawson.

Steve Pearson

Mr. Pearson thanks the Commissioners for including ES&S in the conversation and notes that ES&S has a long history of building voting systems to emerging standards.

Ian Piper

Mr. Piper thanks the Commissioners. He provides three principles that he thinks will help the industry to build to VVSG 2.0 as a more dynamic and flexible format. These include agility, clarity, and stability.

Edwin Smith

Mr. Smith thanks the Commissioners. He notes that VVSG 2.0 is an improvement and provides for better security, reliability, and usability of voting systems. He appreciates that VVSG 2.0 makes very explicit the need to bake in architectural features around security, accessibility, and usability. He also appreciates that VVSG 2.0 includes an innovation class, but cautions banning certain technologies and advocates for using the Cloud.

Bernie Hirsch

Mr. Hirsch thanks the Commissioners. He notes that the systems, at a high level, are hardware, software, and documentation. Mr. Hirsch acknowledges that the prior certification process took years, and this new process could take just as long. He emphasizes that it needs to be clear how manufactures can maintain existing voting systems for the next ten years. Mr. Hirsch

concludes by saying security is a process, and they need to be able to update on a more regular basis.

McDermot Coutts

Mr. Coutts thanks the Commissioners. Mr. Coutts believes the VVSG 2.0 started with much promise, but slowly got off track. Mr. Coutts thinks that any system built to this will be very homogenous and very expensive. Mr. Coutts thinks that the standards will not be reactionary to future problems and cites the FIPS 140-2 standard of encryption. He also notes the cost increase of the UL 37-rated locks as an example of price increases. Finally, Mr. Coutts believes that it will not really be possible to retrofit existing systems into the VVSG 2.0 as it stands now.

Ben Adida

Mr. Adida thanks the Commissioners and EAC Staff. Mr. Adida believes the VVSG should encourage and enable completion amongst manufactures and provides three points on how VVSG 2.0 can to do that. He commends the interoperability section of the requirements and the addition of user-centered design, but recommends some expansion of these sections. Finally, he believes that all vendors need to be held to the same standards, as VotingWorks is currently the only vendor subject to the 2015 standards.

Jim Canter

Mr. Canter thanks the commissioners. He recommends circling back to this group once all public comments have been received in order to discuss the technical language of the requirements themselves. Mr. Canter notes that some of the current standards lacks sufficient detail and cites the language in Principle 9 on audibility.

Russ Dawson

Mr. Dawson thanks the Commissioner and notes that many of his comments have already been addressed. He notes that ClearVote is eager to embrace the revised Voluntary Voting System Guidelines that are crafted to enable more rapid and frequent enhancements to be introduced into the marketplace.

Questions and Answers for Panel One:

Chairman Hovland begins the Q&A session by asking all panelists yes or no, do they believe the VVSG 2.0 requirements are an improvement and necessary modernization from the current guidelines. All say yes, with some reservations on specifics.

Chairman Hovland then asks all panelists if there are specific requirements that they have identified as overly burdensome, difficult to implement, or unnecessarily costly.

- Mr. Pearson notes that the current requirements for voting system screen size and resolution will result in higher cost, as will the requirement for drill- and pick-proof UL locks.
- Mr. Piper says they are still reviewing, but they will need the test assertions before fully answering.
- Mr. Smith says that 10.2.2.2-F around FIPS compliance add many months to the process.
- Mr. Hirsch says that 9.1.1-A on software independence should not call out DRE as a software -dependent voting system. He also thinks 10.2.1-B, indirect voter associations should be allowed for a paper-based system. Mr. Hirsch also believes 1.2-F on continuous operation testing needs to include a DRE VVPAT combination similar to BMD or new technologies. He also thinks the 1.2-G temperature change will be more costly and take more time. Mr. Hirsch also thinks the whole environmental hardware section under 2.7 should only apply to voting devices used in the polling place. Finally, he believes that 2.7.1 on electrical testing is too restrictive.

Chairman Hovland ends the line of question due to time constraints, but encourages panelists to submit comments in writing.

Vice Chair Palmer asks all panelists if they have a timeline in mind to build and bring voting equipment up to VVSG 2.0 requirements.

- Mr. Pearson notes that that none of their fielded systems today can be upgraded as the standards are currently written. He thinks it will take 18-36 months to build to these standards. He also emphasizes a need for test assertions.
- Mr. Piper notes they have begun work on building to 2.0 requirements, but they need the test assertions to decide a timeline.

- Mr. Smith says they are continuing to evaluate.
- Mr. Hirsch says they do not have a full timeline, but estimates two to three years to develop and build the first prototype.
- Mr. Coutts says they have also begun work to meet the new requirements, but estimates it will be years before a system can be fielded.
- Mr. Adida recommends ways for the EAC to speed up the timeline. He notes that certain VVSG 1.1 standards were never met, but have been carried over which will add time. He also notes that the requirement for seven straight days of testing machines adds time and cost.
- Mr. Canter notes that Verity has already met some 2.0 requirements, but upgrading existing systems to 2.0 requirements will be challenging.
- Mr. Dawson agrees with other projected timelines and emphasizes the need for test assertions.

Vice Chair Palmer notes that the Commissioners are dedicated to developing the test assertions sooner than later in order to expedite the timeline.

Commissioner Hicks asks all panelists about principle 4 on interoperability and how it impacts manufacturers, especially in terms of who will address issues in the long-term.

- Mr. Dawson notes that Principle 4 includes four NIST standards, which will impact how rapidly they can bring a product to market.
- Mr. Canter says interoperability has a high return on investment for the local election community. He says it will take time to work through the source of truth issue and it is difficult to develop, but the benefits are very real.
- Mr. Adida thinks it is critical to include interoperability and it can be incremental. Mr. Adida says the first step in this process is to require that all existing formats that are actively used be open for everybody to observe and that they be documented.
- Mr. Coutts says it is hard to determine who will be responsible for errors under interoperability and that the EAC would need to test everyone together.

- Mr. Hirsch says interoperability reduces diversity and needs to have component-level certification.
- Mr. Smith says it has a technological piece and a marketing piece. He says from the technological side it can be done, but it will be up to the labs to assess compliance. From a marketing perspective, he cites Los Angeles's use of a prime integrator as a solution for responsibility.
- Mr. Piper says it is still unclear how interoperability will be tested and there are still concerns over security of the system.
- Mr. Pearson agrees with Mr. Piper, and says there are still a lot of questions around interoperability.

Commissioner McCormick notes that the limit on time is unfortunate and recommends the manufacturers submit written comments. Commissioner McCormick asks if the increase in cost will be prohibitive to election administrators and what the increased cost will do to the market in general. All agree that it will increase cost and could be prohibitive. Many note that state budgets will be constrained following the recent pandemic.

Chairman Hovland thanks all of the panelists. He again emphasizes the importance of written comments and expresses some discontent in not hearing from the manufacturers sooner. He turns it over to Vice Chair Palmer for panel two.

Opening Testimony: Panel Two

Vice Chair Palmer thanks the panelists for agreeing to join the conversation. He notes that VSTLs play a vital role in voting system testing and certification. Vice Chair Palmer introduces the panelists, Senior Test Manager for SLI Compliance Mike Santos and Co-founder and Laboratory Director of Pro V&V, Inc. Jack Cobb.

Mike Santos

Mr. Santos thanks the Commissioners. He notes that the new standards need to be as unambiguous as possible and cites that for VVSG 1.0 there were over 20 requests for interpretation. Clear standards reduces time and prevents inconsistencies in testing amongst VSTLs. Mr. Santos notes that he has not participated in the development of test assertions for VVSG 2.0,

which is a concern he has. He asks that the VSTLs have the opportunity to review the test assertions before they are finalized.

Jack Cobb

Mr. Cobb thanks the Commissioners. He notes that while he has not fully assessed the requirements, he believes it is a step in the right direction. Mr. Cobb notes that VVSG 2.0 takes a new approach by looking at the required functions of a computerized system to be a voting system. Mr. Cobb finds that evaluating systems that States are using to combat the pandemic are difficult to evaluate against VVSG 1.1. He believes VVSG 2.0 provides a better framework where new technologies can be evaluated more easily.

Questions and Answers for Panel Two:

Vice Chair Palmer asks both panelists how VVSG 2.0 will impact testing and if there are any obvious advantages or disadvantages. Mr. Santos highlights the clarity and layout as advantages of VVSG 2.0, but some ambiguities can be ironed out. Mr. Cobb agrees, and emphasizes the importance of new test assertions.

Chairman Hovland asks Mr. Cobb if VVSG 2.0 solves the decibel level concern he previously had with VVSG 1.0. Mr. Cobb says he had not analyzed that point.

Chairman Hovland asks if Mr. Santos has anything to add. Mr. Santos says it looks like some of the content for usability was taken from an RFI that was put out in 2013, but not all of it. He says this impacts the relevant sample size.

Chairman Hovland asks both panelists what provisions have adequate details to test to and what provisions require additional detail to build test assertions. Mr. Santos says 85% of the provisions do not need test assertions, but he does think some need more updating. Mr. Santos agrees with the previous panel that some clarification on terminology is necessary in order to avoid different interpretations. Mr. Cobb adds that as 2.0 was being written the purpose was to ensure that they could test to certain things instead of build to those things.

Commissioner Hicks ask both panelists what sort of technologies cannot conform to the old standards. Mr. Cobb points out the requirement in VVSG that the device that captures the vote has to be auditable, but a smartphone cannot be audited. Mr. Santos acknowledges the difficulty of implementing technologies like smartphones. Mr. Santos believes the requirements have still been thought of along the lines of traditional polling place devices.

Commissioner McCormick asks what is the biggest reason for lengthy testing times and if the new requirements address or exacerbate it. Mr. Cobb says the main issue causing the lengthy testing time in the past was system preparedness, which is better today. Mr. Santos adds that when the previous standards came out the EAC was just getting off the ground, so he expects this time around will be more streamlined. Mr. Santos also adds that ambiguities in prior VVSGs added time, and 2.0 is much better in that regard.

Commissioner McCormick follows up and asks both panelists from a VSTL standpoint if the new requirements will require manufacturers to start from zero in designing new systems and increase the timeline as noted in the previous panel. Mr. Cobb says he would need to evaluate a system on paper against the actual requirements to answer that question. Mr. Santos says that architecturally there are some big impacts from VVSG 2.0 so it could take time.

Chairman Hovland asks if there is enough detail for manufacturers to start designing and building when the requirements are adopted. Mr. Cobb says yes it is enough to start, but they will still need the test assertions. Mr. Santos agrees with Mr. Cobb, but says if the EAC resolves certain ambiguities and establishes best practices it will save time.

Vice Chair Palmer asks both panelists how the EAC can provide clarity on the innovation class. Mr. Cobb says the innovation class in 1.1 was not used to his knowledge and thinks this is in large part due to the prior lack of commissioners. Mr. Cobb emphasizes that innovation is inspired by the

EAC. Mr. Santos says VVSG 2.0 has locked down innovation and innovation may be slowed based on the bans of certain technologies.

Commissioner Hicks asks both panelists what their thoughts are on the labs participating the process at various points in the process but still leaving the VSTLs as the final determination of the certification process. Mr. Cobb says that things could be going on in parallel and cites that it might be easier to allow the manufacturers to do the hardware testing and bring the VSTLs a report. Mr. Santos likes it as a concept if properly implemented, but if it would have to be tightly managed. He also adds that it could create more overhead, but there are things to gain.

Commissioner McCormick asks the panelists to give some visibility on the problems in VVSG 1.1 that prevented manufacturers from submitting systems to test and if that will continue to be a problem under 2.0 standards that carry over from 1.1. Mr. Cobb says he is unsure of the specific issue, but the EAC should take manufacturer comments into consideration. Mr. Santos says he remembers two requirements giving manufacturers trouble under 1.1. The first was the cyclomatic complexity requirement, which Mr. Santos does not recall seeing in VVSG 2.0. The second was the usability/accessibility requirement for hands free voting, which he thinks is still in 2.0. Mr. Santos thinks that there are workarounds for manufacturers on this requirement, but it would be a significant effort.

Public Comment

Lauren Lochridge and Christopher Hughes of the Voting Methods Working Group recommend that VVSG 2.0 casting and tabulation standards be revised to match their work product, Voting Methods and Tabulation Methods Standards Draft NIST SP1500-107.

Adjournment

Chairman Hovland thanks the public commenters and participants. He notes that the next step in the process is to discuss the requirements of the Standards Board and Board of Advisors in June. He reminds everyone that

the public comment period is open until June 22nd and emphasizes the need for comments.

Chairman Hovland calls for a motion to adjourn the Hearing. Commissioner Hicks so moves and Commissioner McCormick seconds the motion.

The Public Meeting of the Election Assistance Commission adjourned at 3:35 p.m.