From: Maurice Turner<mturner@eac.gov>

Sent on: Thursday, August 6, 2020 8:18:20 PM

To: aaron.wilson@cisecurity.org; ajoiner@eac.gov; aregenscheid@gmail.com; ben@voting.works; bhirsch@microvote.com; cortiz@unisynvoting.com; dmunoz@eac.gov; eburton@eac.gov; edwin.smith@smartmatic.com; ginnyb@microsoft.com; gwenyth.winship@clearballot.com; ian.piper@dominionvoting.com; jack.cobb@provandv.com; jbowers@eac.gov; jcanter@hartic.com; jfleming@eac.gov; jfranklin@eac.gov; john.wack@nist.gov; kathy.rogers@essvote.com; kay.stimson@dominionvoting.com; mary.brady@nist.gov; matt@voting.works; mcoutts@unisynvoting.com; mharrington@eac.gov; michael.walker@provandv.com; msantos@slicompliance.com; mturner@eac.gov; oletts@eac.gov; patricia.wilburg@nist.gov; paumayr@eac.gov; russ.dawson@clearballot.com; sderheimer@hartic.com; sharon.laskowski@nist.gov; smpearson@essvote.com; tjhallett@essvote.com; tmapps@slicompliance.com; wendy.owens@provandv.com; Jerome Lovato<jlovato@eac.gov>

Subject: Canceled: VVSG 2.0 Implementation Working Group Meeting for 8/7

Unfortunately, tomorrow's meeting is canceled. We are considering some of the issues that have been raised and re-evaluating the format of the discussion group. Thank you for your contributions thus far.

Maurice Turner
Senior Advisor
U.S. Election Assistance Commission
mturner@eac.gov | www.eac.gov

From: Benjamin Hovland<bhovland@eac.gov>
Sent on: Wednesday, August 12, 2020 10:31:59 AM
To: Kristen Muthig<kmuthig@eac.gov>
CC: linda.lamone@maryland.gov; patricia.wilburg@nist.gov; neal.kelley@rov.ocgov.com; mcoutts@unisynvoting.com; daw@berkeley.edu; sachin.pavithran@usu.edu; judd.choate@sos.state.co.us; Dan Wallach<dwallach@cs.rice.edu>; Robert.Giles@sos.nj.gov; plux@myokaloosa.com; mguthrie52@gmail.com; msaunders@ansi.org; geoffrey.hale@hq.dhs.gov; lori.augino@sos.wa.gov; john.wack@nist.gov; diane.c.golden@gmail.com; sharon.laskowski@nist.gov; gema.howell@nist.gov; walter.copan@nist.gov; benjamin.long@nist.gov; Mary C. (Fed)<mary.brady@nist.gov>; Carnahan, Lisa J. (Fed)<lisa.carnahan@nist.gov>; Mona Harrington<mharrington@eac.gov>; polaya@eac.gov; Jerome Lovato<jlovato@eac.gov>
Subject: Re: TGDC Meeting Zoom Information

Dear TGDC,

I look forward to speaking with you all later today. To help the conversation this afternoon, I wanted to mention a little more on the agenda item regarding the non-voting election technology discussion. I think our hope was to hear from members of the TGDC on how the EAC might best support or promote best practices in the non-voting technology area.

Many of our VVSG conversations ran into scope areas that related to non-voting technology, whether that was e-poll books, election night reporting, or electronic blank ballot delivery.

These systems, while critical to elections, do potentially differ technologically from the traditional scope of the VVSG and the equipment EAC tests and certifies.

This produces opportunities and challenges. As you know, e-poll books are often connected to the internet, while this creates potential risk, it also allows for "patch Tuesday" like updating.

Aaron Wilson from CIS will give a presentation on the exciting RABET-V pilot. This is one approach that we are pleased to be partnering on, but we also recognize the need for the EAC to broaden its clearinghouse work in the non-voting election technology space.

We hope the conversation can help point in the right direction or highlight particular suggestions or pitfalls to help guide the EAC's efforts in this area.

The TGDC is uniquely qualified to understand this technology and the more traditional program areas of the EAC like the VVSG and Testing and Certification Program. I look forward to the conversation. If you have any questions or I can provide any additional information, please let me know.

Thanks,
Ben

Ben Hovland | Chairman
U.S. Election Assistance Commission
bhovland@eac.gov|(202) 744-0265cell

Sent from my iPhone

On Aug 11, 2020, at 5:08 PM, Kristen Muthig <kmuthig@eac.gov> wrote:

Apologies for another email today. There is a slight change in the agenda. The minutes from the previous meeting will be taken up at a later date. The revised version isattached. Thank you.

Kristen Muthig

On Tue, Aug 11, 2020 at 12:08 PM Kristen Muthig <kmuthig@eac.gov> wrote:
> Hello everyone. The agenda for tomorrow's meeting is attached and the zoom information is included again below.
>
> Just a reminder to please do not share that information outside the TGDC group. The meeting will be live streamed on YouTube for the public. Another reminder, **when you join the call live streaming will already be started. Please treat your mic like it is hot and anyone on YouTube can hear you**. If you have any issues getting into the meeting please call or text me at 202-897-9285.
>
> If you have any questions in the meantime please let me know. Thank you.
>
>
> TGDC Meeting
> Time: Aug 12, 2020 02:00 PM Eastern Time (US and Canada)
>
> https://eac-gov.zoom.us/j/84991960675
>
> Meeting ID: 849 9196 0675
>
> Passcode: 709052
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>
> One tap mobile
> +13017158592,,84991960675# US (Germantown)
>
> +19292056099,,84991960675# US (New York)
>
>
>
> Kristen Muthig
>
>
> --
>
> U.S. Election Assistance Commission
>
> kmuthig@eac.gov | www.eac.gov
>
>
>
>
>> On Tue, Aug 4, 2020 at 4:54 PM Kristen Muthig <kmuthig@eac.gov> wrote:
>> Hello TGDC.
>>
>> Below my signature is the Zoom information for the TGDC meeting scheduled for August 12 from 2-4 p.m. ET. To keep the Zoom meeting as secure as possible the Zoom

information is intended for TGDC members and meeting participants,so please do not share it. If others are interested in watching the meeting, it will be live streaming for the public on the EAC's YouTube page.

As a general note, live streaming will be in progress when you sign into the meeting. Please be aware if you unmute yourself, your mic is hot and anything you say will be available on YouTube.

If you have any questions about meeting logisticsplease let me know. The agenda should be available later this week. Thank you.

Kristen Muthig
--

U.S. Election Assistance Commission

kmuthig@eac.gov│www.eac.gov

TGDC Meeting
Time: Aug 12, 2020 02:00 PM Eastern Time (US and Canada)

Join Zoom Meeting

https://eac-gov.zoom.us/j/84991960675

Meeting ID: 849 9196 0675

Passcode: 709052

One tap mobile
+13017158592,,84991960675# US (Germantown)

+19292056099,,84991960675# US (New York)

Dial by your location

    +1 301 715 8592 US (Germantown)

    +1 929 205 6099 US (New York)

    +1 312 626 6799 US (Chicago)

    +1 669 900 6833 US (San Jose)

    +1 253 215 8782 US (Tacoma)

    +1 346 248 7799 US (Houston)

    888 788 0099 US Toll-free

    877 853 5247 US Toll-free

Meeting ID: 849 9196 0675

Find your local number:https://eac-gov.zoom.us/u/kcZmyWh1kO

--

U.S. Election Assistance Commission

kmuthig@eac.gov│www.eac.gov

<TGDC Meeting Agenda 8.12.2020 (003).docx>

<u>**U.S. Election Assistance Commission Technical Guidelines Development Committee**</u>
Wednesday, August 12, 2020
2-4 p.m. ET
Livestreamed on YouTube
AGENDA

Call to Order and Opening Remarks
- Dr. Walter Copan, TGDC Chairman, Under Secretary of Commerce for Standards and Technology and Director, National Institute for Standards and Technology

Welcoming Remarks
- Ben Hovland, Chairman, U.S. Election Assistance Commission and TGDC DFO

NIST Transition
- Mary Brady, Voting Program Manager, National Institute of Standards and Technology

Summary of VVSG 2.0 Public Comments and Updates
- Mona Harrington, Executive Director, U.S. Election Assistance Commission
- NIST and EAC staff available for questions

RABET-V and Non-Voting Technology
- Aaron Wilson, Senior Director of Election Security, Center for Internet Security

Open Discussion on Non-Voting Technology Approaches
- Dr. Walter Copan, TGDC Chairman

Closing Remarks and Adjournment
- Dr. Walter Copan, TGDC Chairman

From:	Kristen Muthig<kmuthig@eac.gov>
Sent on:	Tuesday, August 11, 2020 4:08:24 PM
To:	Benjamin Hovland<bhovland@eac.gov>; linda.lamone@maryland.gov; patricia.wilburg@nist.gov; neal.kelley@rov.ocgov.com; mcoutts@unisynvoting.com; daw@berkeley.edu; sachin.pavithran@usu.edu; judd.choate@sos.state.co.us; Dan Wallach<dwallach@cs.rice.edu>; Robert.Giles@sos.nj.gov; plux@myokaloosa.com; mguthrie52@gmail.com; msaunders@ansi.org; geoffrey.hale@hq.dhs.gov; lori.augino@sos.wa.gov; john.wack@nist.gov; diane.c.golden@gmail.com; sharon.laskowski@nist.gov; gema.howell@nist.gov; walter.copan@nist.gov; benjamin.long@nist.gov; Mary C. (Fed)<mary.brady@nist.gov>; Carnahan, Lisa J. (Fed)<lisa.carnahan@nist.gov>
CC:	Mona Harrington<mharrington@eac.gov>; polaya@eac.gov; Jerome Lovato<jlovato@eac.gov>
Subject:	Re: TGDC Meeting Zoom Information
Attachments:	TGDC Meeting Agenda 8.12.2020 (003).docx (74.08 KB)

Hello everyone. The agenda for tomorrow's meeting is attached and the zoom information is included again below.

Just a reminder to please do not share that information outside the TGDC group. The meeting will be live streamed on YouTube for the public. Another reminder, **when you join the call live streaming will already be started. Please treat your mic like it is hot and anyone on YouTube can hear you**. If you have any issues getting into the meeting please call or text me at 202-897-9285.

If you have any questions in the meantime please let me know. Thank you.

TGDC Meeting
Time: Aug 12, 2020 02:00 PM Eastern Time (US and Canada)

https://eac-gov.zoom.us/j/84991960675

Meeting ID: 849 9196 0675

Passcode: 709052

One tap mobile
+13017158592,,84991960675# US (Germantown)

+19292056099,,84991960675# US (New York)

Kristen Muthig

--

On Tue, Aug 4, 2020 at 4:54 PM Kristen Muthig <kmuthig@eac.gov> wrote:

Hello TGDC.

Below my signature is the Zoom information for the TGDC meeting scheduled for August 12 from 2-4 p.m. ET. To keep the Zoom meeting as secure as possible the Zoom information is intended for TGDC members and meeting participants,so please do not share it. If others are interested in watching the meeting, it will be live streaming for the public on the EAC's YouTube page.

As a general note, live streaming will be in progress when you sign into the meeting. Please be aware if you unmute yourself, your mic is hot and anything you say will be available on YouTube.

If you have any questions about meeting logisticsplease let me know. The agenda should be available later this week. Thank you.

Kristen Muthig

--

U.S. Election Assistance Commission

kmuthig@eac.gov|www.eac.gov

TGDC Meeting
Time: Aug 12, 2020 02:00 PM Eastern Time (US and Canada)

Join Zoom Meeting

https://eac-gov.zoom.us/j/84991960675

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    +1 253 215 8782 US (Tacoma)

    +1 346 248 7799 US (Houston)

888 788 0099 US Toll-free

877 853 5247 US Toll-free

Meeting ID: 849 9196 0675

Find your local number:https://eac-gov.zoom.us/u/kcZmyWh1kO

U.S. Election Assistance Commission Technical Guidelines Development Committee

Wednesday, August 12, 2020

2-4 p.m. ET

Livestreamed on YouTube

AGENDA

Call to Order and Opening Remarks

- Dr. Walter Copan, TGDC Chairman, Under Secretary of Commerce for Standards and Technology and Director, National Institute for Standards and Technology

Welcoming Remarks

- Ben Hovland, Chairman, U.S. Election Assistance Commission and TGDC DFO

Approval of the February 7, 2020 Meeting Minutes

NIST Transition

- Mary Brady, Voting Program Manager, National Institute of Standards and Technology

Summary of VVSG 2.0 Public Comments and Updates

- Mona Harrington, Executive Director, U.S. Election Assistance Commission
- NIST and EAC staff available for questions

RABET-V and Non-Voting Technology

- Aaron Wilson, Senior Director of Election Security, Center for Internet Security

Open Discussion on Non-Voting Technology Approaches

- Dr. Walter Copan, TGDC Chairman

Closing Remarks and Adjournment

- Dr. Walter Copan, TGDC Chairman

From: Maurice Turner<mturner@eac.gov>
Sent on: Thursday, August 13, 2020 8:29:15 PM
To: aaron.wilson@cisecurity.org; ajoiner@eac.gov; aregenscheid@gmail.com; ben@voting.works; bhirsch@microvote.com; cortiz@unisynvoting.com; dmunoz@eac.gov; eburton@eac.gov; edwin.smith@smartmatic.com; ginnyb@microsoft.com; gwenyth.winship@clearballot.com; ian.piper@dominionvoting.com; jack.cobb@provandv.com; jbowers@eac.gov; jcanter@hartic.com; jfleming@eac.gov; jfranklin@eac.gov; john.wack@nist.gov; kathy.rogers@essvote.com; kay.stimson@dominionvoting.com; mary.brady@nist.gov; matt@voting.works; mcoutts@unisynvoting.com; mharrington@eac.gov; michael.walker@provandv.com; msantos@slicompliance.com; mturner@eac.gov; oletts@eac.gov; patricia.wilburg@nist.gov; paumayr@eac.gov; russ.dawson@clearballot.com; sderheimer@hartic.com; sharon.laskowski@nist.gov; smpearson@essvote.com; tjhallett@essvote.com; tmapps@slicompliance.com; wendy.owens@provandv.com; Jerome Lovato<jlovato@eac.gov>
Subject: Canceled: VVSG 2.0 Implementation Working Group Meetings

We are moving forward with a different format to achieve the same goal of evaluating, developing, and refining the requirements, test assertions and program manuals in order to bring the complete VVSG 2.0 to the Commissioners by the end of the year. Future collaborative sessions will be announced at a later time. Please continue to send your feedback and ideas directly to Jerome. Thank you for your commitment to the VVSG 2.0 process.

Maurice Turner
Senior Advisor
U.S. Election Assistance Commission
mturner@eac.gov | www.eac.gov

From: Ben Adida<ben@voting.works>
Sent on: Tuesday, August 18, 2020 10:26:11 PM
To: Maurice Turner<mturner@eac.gov>
Subject: Re: Canceled: VVSG 2.0 Implementation Working Group Meetings

Will do. If there's any topic on which you think feedback would be particularly timely, don't hesitate to reach out.

On Tue, Aug 18, 2020 at 2:48 PM Maurice Turner <mturner@eac.gov> wrote:

> Keep up the good work and pass along good ideas. The agency is working toward a process that allows VVSG to get incremental updates more frequently. We want the channels of communication to the agency to remain open.
>
>
> -- Maurice
>
>
> **From:** Ben Adida <ben@voting.works>
> **Sent:** Thursday, August 13, 2020 4:30 PM
> **To:** Maurice Turner <mturner@eac.gov>
> **Subject:** Re: Canceled: VVSG 2.0 Implementation Working Group Meetings
>
>
> Hi Maurice,
>
>
> What's the best way that we at VotingWorks can help?
>
>
> -Ben
>
>
> On Thu, Aug 13, 2020 at 1:29 PM Maurice Turner <mturner@eac.gov> wrote:
>
>> We are moving forward with a different format to achieve the same goal ofevaluating,developing,and refining therequirements,test assertions and program manuals in order to bring the completeVVSG 2.0 to the Commissioners by the end of the year.Future collaborative sessions will be announced at a later time.Please continue to send your feedback and ideasdirectlyto Jerome.Thank you for your commitment to the VVSG 2.0 process.
>>
>> **Maurice Turner**
>> Senior Advisor
>>
>> U.S. Election Assistance Commission
>>
>> mturner@eac.gov | www.eac.gov

From: Jerome Lovato<jlovato@eac.gov>
Sent on: Friday, September 4, 2020 9:23:42 PM
To: Russ Dawson<russ.dawson@clearballot.com>
CC: Mona Harrington<mharrington@eac.gov>; Paul Aumayr<paumayr@eac.gov>; Jessica Bowers<jbowers@eac.gov>
Subject: Re: Draft VVSG 2.0 Principle 2 pondering

Hi Russ,

Thank you for bringing this to our attention and we will discuss it internally.

Have a nice weekend!

Jerome

On Fri, Sep 4, 2020 at 4:08 PM Russ Dawson <russ.dawson@clearballot.com> wrote:

Hi there Jerome.

We have a specific concern that arose recently, and I've been requested to send it your way. Especially because the manufacturer's community and the EAC were on the precipice of evaluating comments offered to the EAC w/ regard to Principle 2, the timing of my inquiry is in step with hoped-for progress in the near term.

In the course of evaluating draft VVSG 2.0 requirements, Clear Ballot Group's senior product management staff began discussing Principle 2's Section 2.2 *("The manufacturer must submit a report providing documentation that the system was developed following best practices for a user-centered design process.")*

In a certain sense, ClearVote measurably incorporates bestpractices user-centered design methodology. Notable examples include but are not limited to:

1. Familiar browser-based navigationof ClearVote software's user interface
2. ClearDesign's san serif font selection for creation and output of ballot faces
3. 3rd party usabilitytesting and corresponding mandatory reports
4. Section 508 compliance features
5. Inclusion of CCD's "Anywhere Ballot" interfaceon our accessible voting solution
6. and so on....

Acknowledging Principle 2.2 does not specify the exact user-centered design methods to be used, it does mandate a user-centered design of the voting system. And draft VVSG 2.0's (page 329) definitionof "voting system" is both wide and deep in scope.

I have worked in the electiontech space for almost 30 years, including almost 15 for a CBG competitor. It is common practice in this industry (and most others) that successive versions of hardware and software are both

- built and continuously refined on foundations laid years ago,and oftentimes
- bring forward current and specific features and functionality initially created in systemiterations that are no longer marketed or sold.

Jerome, Clear Ballot staff of course cannot speak definitively for other manufacturersin this space. That

said, we do have enough legacy and recent competitive experience to offer an informed assertion that current VVSG 1.0 compliant systems that the manufacturer's community hope to bring up to draft VVSG 2.0 standards would not pass muster under draft VVSG 2.2 mandates in current form and asCBG interprets the same.

Put another way....Clear Ballot is wondering if ANY manufacturer can meet this draft requirement without non-trivial (bordering on total) and expensive redesign and reengineering of legacy hardware and software.

Clear Ballot is not seeking an EAC opinion per se that addresses concerns contained in this email message. It does, however, continue to carefully evaluate successor standards line-by-line, and in that light wanted to express its Principle 2 concerns as draft VVSG 2.0 requirements evolve.

Regrets for the length of this message, and as always thank you in advance for your consideration of Clear Ballot's ideas and concerns.

Best, rpd

Russ Dawson
Federal Certification Program Manager
512.350.5720
www.clearballot.com

From: Ben Adida<ben@voting.works>
Sent on: Friday, September 18, 2020 12:24:55 AM
To: Maurice Turner<MTurner@eac.gov>
Subject: Re: question about precinct scanners

Thanks Maurice! Hope you are well.

-Ben

On Thu, Sep 17, 2020 at 6:27 AM Maurice Turner <mturner@eac.gov> wrote:

> Hi Ben,
>
> Thanks for your patience. It took me a little bit of time to learn about our internal processes for questions like this. The best thing to do is to email Jerome directly or proceed to seek a formal interpretation via an "Request for Interpretation" (RFI). RFIs can be found here: https://www.eac.gov/voting-equipment/requests-for-interpretation
>
> -- Maurice
>
> **From:** Ben Adida <ben@voting.works>
> **Sent:** Monday, September 14, 2020 4:36 PM
> **To:** Maurice Turner <mturner@eac.gov>
> **Subject:** question about precinct scanners
>
> Maurice,
>
> I hope you are well.
>
> As we plan out our precinct scanner strategy at VotingWorks, one thing we believe the VVSG is saying is that it's okay to *not* precinct-scan, you could central-count hand-marked paper ballots, but if you *do* precinct-scan, then you must perform overvote/undervote protection.
>
> While I understandthe value of overvote/undervote protection, I can also see value from a precinctscanner that *just* tabulates for the sake of protecting the chain of custody from later tampering.
>
> Do you interpret the VVSG the same way? Is a precinct scanner that only tabulates and does not reject ballots a no-no? It feels inconsistent, but that's the way I read it.
>
> -Ben

EAC-0017

Thanks very much Jerome.

- rpd

Russ Dawson
Federal Certification Program Manager
512.350.5720
www.clearballot.com

On Wed, Sep 30, 2020 at 9:38 AM Jerome Lovato <jlovato@eac.gov> wrote:
> Thank you, Russ.
>
> EAC and NIST are continuing to review the public comments. In place of the weekly meetings, we have decided to contact individuals if a comment isn't clear and we need more context around the comment. We have not had to contact any of the manufacturers thus far.
>
> Jerome
>
>
> On Wed, Sep 30, 2020 at 9:54 AM Russ Dawson <russ.dawson@clearballot.com> wrote:
>> Hello to each of you from Clear Ballot.
>>
>> Attached is an updated Clear Ballot clientroster consistent withEAC Voting System Testing and Certification Program Manual, Version 2.0.
>>
>> Jerome, when you have a moment can you please update Clear Ballot on EAC/NIST plans regarding restart of VVSG 2.0 draft requirements discussions with the manufacturer community?
>>
>> Thanks and best regards.
>>
>> - rpd
>>
>> Russ Dawson
>> Federal Certification Program Manager
>> 512.350.5720
>> www.clearballot.com
>>

Mr. Jerome Lovato

Election Assistance Commission

1335 East West Highway, Suite 4300

Silver Spring, MD 20910

sent via email

Re: Report to the Program Director (EAC Voting System Testing and Certification Program Manual 2.3.2.8)

Dear Jerome:

Included in this correspondence is information consistent with the manual reference listed above. Of note:

- Clear Ballot's Ohio community has upgraded to EAC-certified ClearVote 2.0; and
- Clear Ballot clients designated as "N/A" have migrated to a ClearVote release that does not require an EAC Certificate of Conformance.

As always please feel free to reach out to me with any clarification needs.

Best regards,

Russ Dawson

Russ Dawson

Federal Certification Program Manager

russ.dawson@clearballot.com

512.350.5720

State	Jurisdiction	EAC Certified System Installed
Colorado	Douglas County	N/A
	Garfield County	N/A
Washington	Benton County	ClearVote 1.5
	Clallum County	ClearVote 1.5
	Cowlitz County	ClearVote 1.5
	Ferry County	N/A
	Grant County	ClearVote 1.5
	Grays Harbor County	ClearVote 1.5
	King County	ClearVote 1.5
	Lewis County	ClearVote 1.5
	Mason County	ClearVote 1.5
	Pacific County	ClearVote 1.5
	Pend Oreille County	N/A
	Pierce County	N/A
	Skamania County	ClearVote 1.5
	Snohomish County	ClearVote 1.5
	Spokane County	N/A
	Wahkiakum County	N/A
	Whatcom County	ClearVote 1.5
Wisconsin	Sheboygan County	ClearVote 2.0
	Chippewa County	ClearVote 2.0
Oregon	Coos County	ClearVote 1.4
	Crook County	N/A

State	Jurisdiction	EAC Certified System Installed
Oregon	Curry County	N/A
	Deschutes County	N/A
	Douglas County	N/A
	Harney County	N/A
	Hood River County	N/A
	Jackson County	N/A
	Josephine County	N/A
	Klamath County	N/A
	Lane County	N/A
	Linn County	N/A
	Multnomah County	N/A
	Wasco County	N/A
	Washington County	N/A
Ohio	Carroll County	ClearVote 2.0
	Champaign County	ClearVote 2.0
	Clark County	ClearVote 2.0
	Clinton County	ClearVote 2.0
	Gallia County	ClearVote 2.0
	Highland County	ClearVote 2.0
	Hocking County	ClearVote 2.0
	Jackson County	ClearVote 2.0
	Jefferson County	ClearVote 2.0
	Miami County	ClearVote 2.0
	Pike County	ClearVote 2.0
	Warren County	ClearVote 2.0

State	Jurisdiction	EAC Certified System Installed
Pennsylvania	Bucks County	ClearVote 2.0
	Dauphin County	ClearVote 2.0
	Lycoming County	ClearVote 2.0
	Monroe County	ClearVote 2.0
	Perry County	ClearVote 2.0
	Sullivan County	ClearVote 2.0
	Wyoming County	ClearVote 2.0
	Wayne County	ClearVote 2.0

From: Jerome Lovato<jlovato@eac.gov> on behalf of Jerome Lovato
Sent on: Thursday, October 15, 2020 9:32:35 PM
To: Jim Canter<jcanter@hartic.com>; undefined<sderheimer@hartic.com>; Wack, John (Fed)<john.wack@nist.gov>; danny.casias@sos.state.co.us; edwin.smith@smartmatic.com; Michael Santos<MSantos@slicompliance.com>; Paul Aumayr<paumayr@eac.gov>; Jessica Fleming<JFleming@eac.gov>; Joshua Franklin<JFranklin@eac.gov>; Jessica Bowers<jbowers@eac.gov>; Eugene Burton<EBurton@eac.gov>
Subject: VVSG 2.0 Requirements Discussion

Topic: VVSG 2.0 Requirements Discussion
Time: Oct 19, 2020 04:00 PM Eastern Time (US and Canada)

Join Zoom Meeting
https://eac-gov.zoom.us/j/87947193000?pwd=UFlhRXo2bC8wcVUwcHczem9vOElzQT09

Meeting ID: 879 4719 3000
Passcode: 547654
One tap mobile
+12532158782,,87947193000# US (Tacoma)
+13462487799,,87947193000# US (Houston)

Dial by your location
+1 253 215 8782 US (Tacoma)
+1 346 248 7799 US (Houston)
+1 669 900 6833 US (San Jose)
+1 301 715 8592 US (Germantown)
+1 312 626 6799 US (Chicago)
+1 929 205 6099 US (New York)
877 853 5247 US Toll-free
888 788 0099 US Toll-free
Meeting ID: 879 4719 3000
Find your local number: https://eac-gov.zoom.us/u/kGOcm0J2X

From: Jim Canter<jcanter@hartic.com>

Sent on: Thursday, October 15, 2020 8:26:01 PM

To: Jerome Lovato<jlovato@eac.gov>; Sam Derheimer<sderheimer@hartic.com>; danny.casias@sos.state.co.us; Michael Santos<MSantos@slicompliance.com>; edwin.smith@smartmatic.com

CC: Wack, John (Fed)<john.wack@nist.gov>

Subject: RE: comments on VVSG 2.0 requirements

Jerome – any time after 2:30pm CST works for me.

Jim

Jim Canter
Chief Technology Officer
Hart InterCivic
15500 Wells Port Drive | Austin, TX | 78728
512.252.6410 (direct) | 512.497.0093 (mobile) | 512.252.6466 (fax) | 800.223.HART
jcanter@hartic.com | www.hartintercivic.com

From: Jerome Lovato <jlovato@eac.gov>
Sent: Thursday, October 15, 2020 3:20 PM
To: Sam Derheimer <sderheimer@hartic.com>; Jim Canter <jcanter@hartic.com>; danny.casias@sos.state.co.us; Michael Santos <MSantos@slicompliance.com>; edwin.smith@smartmatic.com
Cc: Wack, John (Fed) <john.wack@nist.gov>
Subject: comments on VVSG 2.0 requirements

Hi All,

We would like to set up a call to discuss your comments on VVSG 2.0 requirements under sections 1.1.5 and 1.1.9. Does Monday, October 19th, in the afternoon work for you? If not, please let me know if a different date(s)/time frame works better next week.

Thank you,

Jerome

From: Brian Hancock<bhancock@unisynvoting.com>
Sent on: Wednesday, January 20, 2021 2:56:18 PM
To: Donald Palmer<dpalmer@eac.gov>
Subject: RE: EI-SCC Meeting

Thanks Don. Agree that these are important issues and at least all tabulation vendors will be very interested. Will get back to you after our Friday ExCom call.

From: Donald Palmer <dpalmer@eac.gov>
Sent: Wednesday, January 20, 2021 9:53 AM
To: Brian Hancock <bhancock@unisynvoting.com>
Subject: Re: EI-SCC Meeting

Hi Brian,

I thought it would be beneficial for Jessica or Jerome to discuss the new security provisions adopted with 2.0 and new pen testing in manual. I'm am happy to do it but would guess they would better understood what should he highlighted with the group. We actually may adopt on the 10th.

I'd like to spend a few minutes with the group talking about a vulnerability disclosure program sponsored by EAC and get some feedback from the group as a whole to get their thinking on the subject. There seems to be strong opinions on the issue.

I had talked with Chris and a few other manufacturer representatives over the past year and there may be bandwidth and framework to establish something. I am guessing 15 minutes max if there is availability in the agenda. Let me know if either will work.

Don

Get Outlook for iOS

From: Brian Hancock <bhancock@unisynvoting.com>
Sent: Wednesday, January 20, 2021 9:30:37 AM
To: Donald Palmer <dpalmer@eac.gov>
Subject: EI-SCC Meeting

Good morning Don. Hope this email finds you and yours well.

Spoke with Chris yesterday and he mentioned that you might be interested in addressing the upcoming full SCC meeting regarding VVSG 2.0 and security testing. That meeting will be held virtually on Wednesday, February 10th from 1-4 pm. We already have a very full agenda, but I would be happy to suggest you be included during our ExCom call this Friday when we will finalize the agenda.

Alternatively, if that date and whatever time we have does not work for you, I can also suggest that you be given 15 minutes on the agenda during our next IT-ISAC meeting call, which would be next Friday, January 29th at 10 am. Not quite as large a group, but all tabulation manufacturers are members of the IT-ISAC, and we are beginning to send invites to e-pollbook manufacturers as well.

Let me know which one of those options work best for you, and I'll try to make it happen.

Best,

Brian

Brian Hancock

Director, Infrastructure Policy & Product Development
Unisyn Voting Solutions
2310 Cousteau Court
Vista, CA 92081
bhancock@unisynvoting.com
Tel: 703-628-2035

From: Donald Palmer<dpalmer@eac.gov> on behalf of Donald Palmer
Sent on: Monday, January 25, 2021 2:08:10 PM
To: Wlaschin, Chris<chris.wlaschin@essvote.com>
Subject: Re: Thoughts on a security testing program

Thank you

Get Outlook for iOS
From: Wlaschin, Chris <chris.wlaschin@essvote.com>
Sent: Friday, January 22, 2021 9:51:28 AM
To: Donald Palmer <dpalmer@eac.gov>
Subject: Thoughts on a security testing program
Don, as requested.
Chris

Chris Wlaschin, CISSP|Vice President Systems Security and CISO | Election Systems & Software
11208 John Galt Blvd. Omaha, NE 68137 | O:402.938-1450
chris.wlaschin@essvote.com | www.essvote.com

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Broad strokes of an EAC-led security testing program for election technology

Introduction – In the United States on Election Day, there are approximately 10,000 jurisdictions that manage nearly 117,000 polling locations and utilized more than 560,000 voting machines (manufactured by multiple voting system vendors). That's what you call a highly distributed and differentiated infrastructure, which is great for security because it's virtually impossible for a bad actor, or even a group of bad actors, to perpetuate an attack on such a large scale due to the complex differences of voting system configurations across the nation.

Voting systems undergo extensive testing before such systems are used in an election to mark, tabulate and report election results. Registered voting system manufacturers submit their systems to the Election Assistance Commission (EAC) under the EAC's voluntary voting system testing program in order for such voting systems to be certified for use by the EAC. The EAC through its accredited voting system test labs (VSTL) conduct complete end to end system testing which includes hardware and software testing as well as comprehensive operational, reliability, and accuracy testing to confirm that such voting systems meet the applicable voluntary voting system guidelines. Upon review and approval by the EAC that the voting system meets the applicable voluntary voting system guidelines, the EAC grants certification to the voting systems.

In order to continue to enhance the voting system testing process both at the federal and state level, additional security testing should be incorporated into the existing testing process which currently focuses primarily on functional and environmental testing. One example of such additional security testing is a voting system penetration test. Voting system penetration testing simulates attacks on election equipment by people who gain physical access to the voting machines or their components. Although elections suppliers and jurisdictions alike go to great lengths to physically secure election equipment, human beings still interact with these machines before, during and after Election Day. That means the machines must be secure enough to resist attacks at any point in the election process and robust enough to detect and report nefarious use.

It is worth noting that most voting system manufacturers already voluntarily perform their own security testing or hire independent firms to conduct such testing on its voting systems. Some manufacturers submitted equipment to the Idaho National Lab, which is utilized by the United States Department of Defense, for extensive penetration testing. However, given the different testing standards and protocols used by voting system manufacturers, there is a clear need for the establishment of uniform, programmatic standards for voting system security testing. Such uniform standards for voting security testing are necessary to ensure all voting system manufacturers are held to the same testing standards as well as ensure that all voting system manufacturer's voting systems meet the applicable testing requirements. This paper describes at a high level what an EAC managed security testing program might look like.

Scope – The EAC, as the government entity that oversees election technology testing at the federal level, in partnership with the Department of Homeland Security (DHS)/Cybersecurity and Infrastructure Security Agency (CISA), EAC accredited VSTLs, election security experts, election technology

manufacturers, and an advisory committee of election officials, will establish a comprehensive end-to-end security testing program of election technology, for all elements of the election technology ecosystem including voter registration, electronic poll books, ballot marking devices, ballot tabulators, election management systems, electronic ballot delivery systems and election night results reporting. This security testing program will apply equally and programmatically to all manufacturers and providers of election hardware, software and services who submit their technology to the EAC for testing under the EAC's voluntary voting system testing program and for use across the states.

Note: For initial scope, it is highly recommended that the process begin with a "pilot" project using volunteers which can then be expanded using knowledge gained to create an exact program with governing rules.

Note: There is a need to make sure this security testing process is not overly burdensome which increases costs and timeframes in which it takes to certify systems.

Requirements – In alignment with the proposed Voluntary Voting System Guidelines version 2.0 security requirements, all manufacturers of election technology related systems and software should be subject to comprehensive, programmatic, recurring security testing, performed at a VSTL or other vetted and authorized facility. The security testing should include an evaluation of systems and software against a national standards-based common vulnerability register including severity score. The security testing should include penetration testing of the hardware and software. Any findings of vulnerabilities or weaknesses should be reported to the voting system manufacturer for mitigation prior to submission of the hardware or software for final certification.

Note: It is critical to note that a security testing program (under the current federal certification process) **will** elongate certification timelines which can have the unintended consequence of delaying fielded software enhancements. The impact of this should be studied as part of a pilot project and addressed prior to the implementation of a fully established governing program.

Process – Prior to the submission of hardware or software to the EAC for final certification, voting system manufacturers will submit the hardware and software to an independent security testing authority accredited and managed by the EAC, conducted at a VSTL or other vetted and authorized facility designated by the EAC to conduct security testing. Security testing personnel should be government employees or contractors, vetted and hired by the EAC, VSTL or CISA, and follow all the privacy and security rules and regulations that currently exist for the testing of critical infrastructure and election technology. This security testing, and any mitigation efforts taken to correct validated findings, should become part of the federal certification process and required before final certification is submitted.

Summary – Given the thousands of election jurisdictions across the United States and the variety (or absence) of meaningful and sometimes adhoc security testing requirements being considered by these jurisdictions, we strongly advocate for an EAC led, mandatory, programmatic security testing and evaluation program to be developed and approved by DHS/CISA, EAC accredited VSTLs, election security experts, election technology manufacturers, and an advisory committee of election officials. This

security testing and evaluation program shall apply to all election related technology in a manner that supports federal certification of said technology.

From: Jerome Lovato<jlovato@eac.gov> on behalf of Jerome Lovato
Sent on: Monday, January 25, 2021 9:02:44 PM
To: Ian Piper<ian.piper@dominionvoting.com>
Subject: RE: [EXTERNAL] RE: VVSG 2.0

I don't know yet.

From: Ian Piper <ian.piper@dominionvoting.com>
Sent: Monday, January 25, 2021 3:50 PM
To: Jerome Lovato <jlovato@eac.gov>
Subject: RE: [EXTERNAL] RE: VVSG 2.0

Jerome:
When will they be posted?
Sincerely:
IAN S. PIPER | CERTIFICATION DIRECTOR
DOMINION VOTING SYSTEMS, INC.
1201 18th Street, Suite 210, DENVER, CO 80202
866-654-VOTE (8683)| DOMINIONVOTING.COM
720-257-5209OFFICE (x9221)
703-244-3180MOBILE

From: Jerome Lovato <jlovato@eac.gov>
Sent: Monday, January 25, 2021 3:47 PM
To: Ian Piper <ian.piper@dominionvoting.com>
Subject: [EXTERNAL] RE: VVSG 2.0
Hi Ian,
We have not posted the revised requirements yet.
Thank you,
Jerome

From: Ian Piper <ian.piper@dominionvoting.com>
Sent: Monday, January 25, 2021 3:11 PM
To: Jerome Lovato <jlovato@eac.gov>
Subject: VVSG 2.0
Jerome:
As the EAC will be having a meeting on Feb. 10th to determine adoption of VVSG 2.0 Requirements, I'm assuming that the document that will be reviewed is now complete. Where can I find a copy of that revised VVSG 2.0 Requirements? Is it posted on the EAC website yet?
Sincerely:
IAN S. PIPER | CERTIFICATION DIRECTOR
DOMINION VOTING SYSTEMS, INC.
1201 18th Street, Suite 210, DENVER, CO 80202
866-654-VOTE (8683)| DOMINIONVOTING.COM
720-257-5209OFFICE (x9221)
703-244-3180MOBILE

From: Brian Hancock<bhancock@unisynvoting.com>
Sent on: Monday, January 25, 2021 4:25:55 PM
To: Donald Palmer<dpalmer@eac.gov>
Subject: RE: VVSG 2.0/Security Update

Don,

Agreed! Let's make it happen. FYI, The tab vendors have been working over the past year and a half with IT-ISAC to develop Vulnerability Reporting Programs. Unisyn, ES&S, Hart and Dominion currently have some form of vulnerability program in place. ES&S is currently working with Synack on their program, and we at Unisyn are also in discussions with Synack.

Happy to discuss more on that if you would like.

Best,

Brian

From: Donald Palmer <dpalmer@eac.gov>
Sent: Monday, January 25, 2021 11:17 AM
To: Brian Hancock <bhancock@unisynvoting.com>
Subject: Re: VVSG 2.0/Security Update

Brian,

Thanks for getting back to me - hope you had a relaxing weekend. February 10 is actually the target date to approve 2.0!!! So we should have many opportunities to discuss the finalized version over the coming months. Also at some point down the road, I'd like to discuss the ideas of the group on a vulnerability disclosure program. I've received some feedback from individual members on this topic and it is worth a wider discussion on the way forward. Thanks again.

Regards,

Don Palmer

From: Brian Hancock <bhancock@unisynvoting.com>
Sent: Monday, January 25, 2021 9:40 AM
To: Donald Palmer <dpalmer@eac.gov>
Subject: VVSG 2.0/Security Update

Good morning Don. Hope you had a great weekend!

During our SCC ExCom call last Friday, the group determined that, because our agenda was essentially already finalized and that the discussion would be most informative for tabulation vendors and less so for the others who are a majority of our membership, we would not be able to accommodate you request on February 10th. That said, the tabulation vendors on the ExCom (Unisyn, Hart and ES&S) understand the absolute importance of listening to the EAC regarding VVSG 2.0 and any additional testing scenarios that might be in the works. As I mentioned in my previous email, we would be happy to work with IT-ISAC staff to get you on the agenda for one of our Friday telecon meetings to be held this Friday January 29th and every other Friday thereafter at 10 am eastern. In addition, we are also happy to work with you and the other tabulation vendors to set up a separate virtual meeting to discuss this important topic at a time in the future convenient for you.

Best,

Brian

Brian Hancock

Director, Infrastructure Policy & Product Development
Unisyn Voting Solutions
2310 Cousteau Court
Vista, CA 92081
bhancock@unisynvoting.com
Tel: 703-628-2035

From:	Kristen Muthig<KMuthig@eac.gov> on behalf of Kristen Muthig
Sent on:	Friday, February 5, 2021 11:03:43 PM
To:	linda.lamone@maryland.gov; patricia.wilburg@nist.gov; Neal.kelley@rov.ocgov.com; McDermot Coutts<mcoutts@unisynvoting.com>; daw@berkeley.edu; sachin.pavithran@usu.edu; Judd Choate<judd.choate@sos.state.co.us>; Dan Wallach<dwallach@cs.rice.edu>; Robert Giles<Robert.Giles@sos.nj.gov>; Paul Lux<plux@myokaloosa.com>; mguthrie52@gmail.com; msaunders@ansi.org; Geoffrey.Hale@hq.dhs.gov; Lori Augino<lori.augino@sos.wa.gov>; john.wack@nist.gov; diane.c.golden@gmail.com; sharon.laskowski@nist.gov; gema.howell@nist.gov; Copan, Walter G. (Fed)<walter.copan@nist.gov>; benjamin.long@nist.gov; lisa.carnahan@nist.gov; Mona Harrington<mharrington@eac.gov>; Phillip Olaya<POlaya@eac.gov>; Jerome Lovato<jlovato@eac.gov>; Benjamin Hovland<bhovland@eac.gov>
Subject:	New EAC Document on VVSG 2.0
Attachments:	VVSG 2.0 Dispelling Misinformation Final.pdf (565.17 KB)

Good evening TGDC Members.

Today, the EACpublished the attached document about the VVSG 2.0 process and on the VVSG 2.0 Wireless Sections 14.2-C and 15.4-C.

Thank you.

Kristen Muthig
--
Director of Communications
U.S. Election Assistance Commission
kmuthig@eac.gov | eac.gov

United States Election Assistance Commission

Dispelling Misinformation about VVSG 2.0

The VVSG 2.0 is a much-needed strengthened set of enhanced security requirements for voting machines.

- The EAC worked closely with National Institute of Standards and Technology (NIST), (two-hour meetings twice weekly) to clean up the VVSG 2.0 language to remove redundancies and improve clarity.
- The EAC hosted regular internal meetings throughout the year with commissioners, staff, and EAC contractors to work through the VVSG 2.0 in preparation of the long-awaited scheduled February 10th vote by the Commissioners.
- The EAC worked diligently with NIST along with an internal EAC working group composed of EAC staff to conduct conversations with numerous stakeholders during the comment resolution period to clarify comments that various parties made (manufacturers, laboratories, election officials, etc.). The EAC engaged with manufacturers a few times during that period. This was a normal part of the comment resolution process and necessary for the EAC and NIST to complete their work. Manufacturers did not have veto power over any requirements, nor were the limited meetings, for the purpose of clarification, seeking consensus from manufacturers and no one was permitted to provide additional comments outside of the public comment period. It was critical that the EAC request clarification from manufacturers since they testified, they had feasibility concerns regarding building machines to

VVSG 2.0 in an EAC public meeting and it was not clear what the precise technical issues were.
- The EAC hosted 3 public meetings on the VVSG 2.0, (see timeline below).
- The EAC reviewed and resolved all VVSG comments.
- The EAC did not dramatically alter the requirements including the Wireless section 14.2-C, as seen in the comparison chart below, the intent all along was disabling the wireless, (see section 15-.4-C) in the version posted from March 24, 2020.
- The EAC followed the required process in accordance with HAVA including but not limited to Section 222 of the Help America Vote Act (HAVA), 52 U.S.C. § 20962.
- The EAC allowed an opportunity for public input via publication of **notice of the proposed guidelines** in the Federal Register, an opportunity for public comment on the proposed guidelines, an opportunity for a public hearing on the record.
- The EAC intends to publish **the final requirements** and guidelines once the Commissioners vote on the VVSG 2.0. Until this vote, the VVSG 2.0 is a draft.
- The EAC Commissioners are voting on February 10th on the Guidelines and Requirements that were developed and approved by the Technical Guidelines Development Committee (TGDC), subject to numerous public hearings, approved by the Standards Board and modified based on public comment.

Timeline- The EAC followed the process in HAVA
- ✓ Sept. 19-20, 2019 TGDC Meeting on the VVSG 2.0
- ✓ Dec. 18, 2019 TGDC call to address accessibility and security issues, NIST presented on the VVSG 2.0 and specifically presented on disabling of the wireless, without any objections on the record.

United States Election Assistance Commission

- ✓ Feb. 7, 2020 Recommendation of the VVSG 2.0 Requirements are passed unanimously by the TGDC.
- ✓ March 9, 2020 The recommended requirements developed with the support of the NIST were submitted to the EAC's Acting Executive Director.
- ✓ Mar. 11, 2020 The EAC submitted the proposed VVSG 2.0 Requirements to the Standards Board and Board of Advisors executive committees for review.
- ✓ Mar. 24, 2020 VVSG 2.0 Requirements submitted for public comment.
- ✓ Mar. 27, 2020 Public hearing on the Introduction and Foundation of Voluntary Voting System Guidelines 2.0 Requirements.
- ✓ May 6, 2020 Public hearing on the VVSG 2.0 Requirements Hearing 2: Implementation of the VVSG at the State and Local Level.
- ✓ May 20, 2020 Public hearing on the VVSG 2.0 Requirements Hearing 3: Manufacturers & Voting System Test Labs
- ✓ June 16, 2020 Board of Advisors annual meeting discussed the VVSG 2.0.
- ✓ June 22, 2020 Public comment period closes.
- ✓ July 31, 2020 Standards Board meeting voted to approve the draft VVSG 2.0 with Requirements.
- ✓ Jan. 26, 2021 EAC notices in the Federal Register a vote on the VVSG 2.0 Principles and Guidelines and Requirements for February 10, 2021.
- ✓ Jan. 29, 2021 The EAC published the proposed VVSG 2.0 Requirements on eac.gov.

Wireless Section Explanation

- ● The wording in the VVSG 2.0 draft that was published on Friday, January 29th, does not diverge dramatically from the recommended wording forwarded to the EAC from our boards.
  - o This work was based on feedback received during the public comment period.
  - o The draft we received from our boards did not mention a ban on wireless hardware that the EAC subsequently removed.
  - o We worked with NIST to clarify the language to the discussion section on ways that wireless may be disabled and prevented from operating within a voting system. The language in the discussion section was provided by NIST after discussions with EAC staff.
    - ▪ The sentence within the discussion area that states: "This requirement does not prohibit wireless hardware within the voting system…" was added for clarity given the original intent was not to ban wireless as instructions of how to disable wireless were in the requirements approved by the TGDC and Standards board and posted for public comment.
    - ▪ It also recognizes the increasing difficulty in obtaining commercial off-the-shelf (COTS) components that do not contain this functionality in an attempt to not "paint ourselves into a corner" where voting system costs may rise substantially in the future if they require custom COTS configurations that are no longer widely available.
  - o The added language goes beyond "airplane mode" and requires that wireless functionality not exist, whether

February 5, 2020 VVSG 2.0 Dispelling Misinformation

EAC-0034

United States Election Assistance Commission

through not including the necessary hardware and/or removing any drivers or other software that could be used to enable it.

- o Wireless is effectively banned as any voting machine seeking to install the drivers, configure the hardware, and enable the functionality will not be certified by the EAC, and subsequently any jurisdiction or manufacturer enabling the functionality will be subject to a revoked certification.
- o If the EAC added language specifically prohibiting wireless hardware, our laboratories would be obligated to confirm this during certification testing. That may require them to view internal components of a COTS device, to confirm the absence of the hardware. We did not see a practical way to achieve this without relying solely on COTS manufacturer documentation of a component's features. Sometimes there are instances of undocumented hardware within COTS devices that are not advertised or enabled in certain models but may nonetheless still exist.

- In the public comments received, most comments supported leaving the requirement as-is, which we did.
  - o There was a single comment from a manufacturer (Smartmatic, who only has machines deployed in LA County) mentioning that this restriction might cause issues for counties who rely on transmission of unofficial results due to geographic limitations. The VVSG 2.0 expressly prohibits this in EAC-certified systems.
    - ▪ We encourage manufacturers to develop novel ways to provide this functionality to their customers that does not introduce unacceptable vulnerabilities to certified systems.

- The VVSG 2.0 draft was developed with a "defense-in-depth" approach that does not rely on a single type of requirement (such as banning wireless) to achieve its security goals.
  - o A major feature of VVSG 2.0 is the concept of "software independence". This requires voting systems to produce independently voter verifiable records (typically paper) that cannot be changed through an alteration to the system without providing warning/evidence that this has occurred.
  - o Other compensating controls include requiring strong encryption or digital signing of data in transit and at rest within the system, source code quality control and review, user access control and the use of multi-factor authentication for critical operations, and mechanisms to prevent unauthorized software from executing.
  - o Additionally, our updated Testing and Certification manual adds penetration testing as part of the process employed by our labs during certification testing as an additional layer to ensure that unknown vulnerabilities do not exist.
  - o The program manual requires that manufacturers must "submit the final TDP of the voting system submitted for testing including all product bills of material, assembly drawings and schematics for the version being certified." The Testing Assertions which align with the Requirements, require documentation from the manufacturer to verify disabling of the wireless chipset through subsystem power control.
  - o We have implemented a blend of mitigation controls to manage risk when complete elimination of wireless hardware is unattainable. Specifically, the combination of mechanisms (where the wireless subsystem uses a physical switch to control power and no drivers are present on systems that are in an active voting

configuration), minimizes the effect of both unintentional and intentional failures. This configuration coupled with a robust Verification program enforces a persistent 'defense- in- depth' approach through the lifecycle of a voting system. We have verified this assessment through an independent expert cyber security firm. We believe we have dramatically enhanced security with the safeguards we mention above. The specific wireless attack vector with these safeguards is mitigated.

o Wireless was intended to be disabled in the VVSG 2.0 as seen in the Dec. 18, 2019 presentation from NIST to the TGDC, as well as can be seen in the VVSG 2.0 requirements document that was posted in March, (see screenshot below).

o Removing the hardware was not a requirement in the requirements posted on March 24, 2020, see screenshot below of 15-4.C requirements **on how to disable wireless, if the intent was for a complete ban requiring no hardware present, information on disabling wireless would not have been included in the requirements draft placed out for public comment.**

o During discussions with election officials and the Boards, concerns were raised regarding a complete ban on wireless due to accessibility concerns, and other election administration practices.

o We hope to see manufacturers build machines without the wireless hardware, as we have seen in the VVSG 1.0. These requirements are based on the possibility that the elimination of the wireless hardware is unattainable in some circumstances.

TGDC Meeting – December 18, 2019
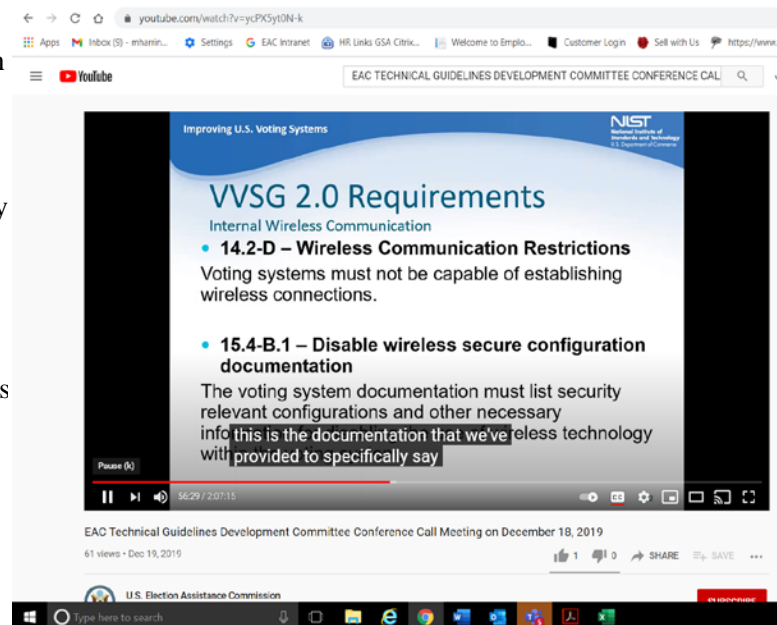
- https://www.eac.gov/videos/eac-tgdc-conference-call-meeting-december-18-2019
- Network connections discussion 16:00 – 01:54:00
- Specific to wireless requirements: 51:00 – 57:00
- Wireless posted in March for public comment, approved by the TGDC

Left document (Wireless Section- posted March 2020):

14.2-D – Wireless Communication Restrictions

Voting systems must not be capable of establishing wireless connections.

Discussion

Wireless connections can expand the attack surface of the voting system by opening it up to over-

254

Requirements for VVSG 2.0   February 29, 2020

the-air attacks. Over-the-air access can allow for adversaries to attack remotely without physical access to the voting system. By disallowing wireless capabilities in the voting system, this limits the attack surface and restricts any network connections to be hardwired.

This requirement does not impact or restrict the use of assistive technology (AT) within the polling place. Voters with wireless AT may have to use an adapter that leverages the 3.5 mm headphone jack.

Related requirements: 15.4-C – Documentation for disabled wireless
                           8.1-E – Standard audio connectors

Applies to: Voting System

14.2-E – Wireless network status indicator

If a voting system has network functionality, the voting system application must visually show an indicator within the management interface when wireless networking functionality is enabled and disabled.

Discussion

Note that this is in addition to the networking identifier.

Wireless is a significant avenue for system compromise. This indicator ensures that wireless functionality is not enabled by accident.

Wireless Section- posted March 2020

Right document (Wireless Section Jan 2021):

14.2-C – Wireless communication restrictions

Voting systems must not be capable of establishing wireless connections as provided in this section.

Discussion

Wireless connections can expand the attack surface of the voting system by opening it up to over-the-air attacks. Over-the-air access can allow for adversaries to attack remotely without physical access to the voting system. By disallowing wireless capabilities in the voting system, this limits the attack surface and restricts any network connections to be hardwired. Examples of how wireless can be disabled may include the following:

- a system configuration process that disables wireless networking devices,
- disconnecting/unplugging wireless device antennas, or
- removing wireless hardware within the voting system.

This requirement does not prohibit wireless hardware within the voting system so long as the hardware cannot be used e.g. no wireless drivers present.

Requirements for VVSG 2.0   February 10, 2021

This requirement applies solely to voting systems that are within the scope of the VVSG. It is not a prohibition on wireless technology within election systems overall. This requirement does not impact or restrict the use of assistive technology (AT) within the polling place. Voters with wireless AT may have to use an adapter that leverages the 3.5 mm headphone jack.

Related requirements: 15.4-C – Documentation for disal
                           8.1-E – Standard audio connectors

14.2-D – Wireless network status indicator

If a voting system has network functionality, the voting system application must visually show an indicator within the management interface to confirm that wireless networking functionality is disabled.

Discussion

Note that this is in addition to the networking identifier.

Wireless is a significant avenue for system compromise. This indicator ensures that wireless functionality is not enabled by accident.

Wireless Section Jan 2021

Annotations (right side):

This is not a new requirement however for clarity and convenience was copied from the section below

No wireless drivers present

Intent all along just providing clarity here

February 5, 2020 VVSG 2.0 Dispelling Misinformation

EAC-0037

United States Election Assistance Commission

15.4-C – Documentation for disabled wireless

The voting system documentation must include information about how wireless is disabled within the voting system.

Discussion

Documentation for how the voting system is configured to disable wireless networking is important to meet requirement 14.2-D, which disallows the use of any wireless connections. Example information for how wireless can be disabled may include the following:

- A system configuration process that disables wireless networking devices
- Disconnecting/unplugging wireless device antennas
- Removing wireless hardware within the voting system

A variety of documentation providing secure configurations for network devices is publicly available from the US government.

If outside manufacturers provide guidance and best practices exist, these need to be documented and used to the extent practical.

Related requirements:	14.2-D Wireless Communication Restrictions

274

Requirements for VVSG 2.0   February 29, 2020

15.,4-C Posted in March 2020

15.4-C – Documentation for disabled wireless

The voting system documentation must include information about how wireless is disabled within the voting system.

Discussion

Documentation for how the voting system is configured to disable wireless networking is important to meet requirement *14.2-D – Wireless network status indicator*, which disallows the use of any wireless connections. Example information for how wireless can be disabled may include the following:

- a system configuration process that disables wireless networking devices,
- disconnecting/unplugging wireless device antennas, and
- removing wireless hardware within the voting system.

A variety of documentation providing secure configurations for network devices is publicly available from the US government.

If outside manufacturers provide guidance and best practices exist, these need to be documented and used to the extent practical.

Applies to:	Voting systems with networking capabilities
Related requirements:	14.2-C – Wireless communication restrictions

15.,4-C Posted in January 2021

February 5, 2020 VVSG 2.0 Dispelling Misinformation

EAC-0038

From: Mona Harrington<mharrington@eac.gov> on behalf of Mona Harrington
Sent on: Monday, December 7, 2020 10:58:40 PM
To: Mona Harrington<mharrington@eac.gov>; Ben Adida<ben@voting.works>
Subject: VVSG discussion

Please call
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