

United States Election Assistance Commission

Technical Guidelines Development Committee

Held on

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at

9:00 a.m.

at

1335 East West Highway
First Floor Conference Room
Silver Spring, Maryland 20910

VERBATIM TRANSCRIPT

The following is the verbatim transcript of the United States Election Assistance Commission (EAC) Technical Guidelines Development Committee (TGDC) Public Meeting that was held on Tuesday, September 12, 2017. The meeting convened at 9:03 a.m. EDT and was adjourned at 12:32 p.m. EDT.

CHAIRMAN MASTERSON:

All right. Good morning. We'll go ahead and start day two of the Technical Guidelines Development Committee meeting. Thank you, all. We have a packed room, again. I want to remind everyone, again, please silence your phones, whatever else may ding or ring here today. And we'll go ahead and get started. I want to thank the folks both here and watching it at home. Especially, the Committee, we grinded through an extra hour yesterday. Hopefully, we'll be rewarded this morning by a little less of the grind work we have. Two outstanding issues, last night distributed to you was an updated version with line edits that Ryan had provided. There's also hard copies of that in front you, as well as a clean version. So, you should have everything you need as we work on this. There were two outstanding issues after yesterday's discussion. We're going to start, I think, with the easier one to kind of get the ball moving here, get progress moving forward. So, if we go to 15.2 -- and you'll see in your marked up copy, Diane had correctly pointed out -- right? I think, that or Lori, that there was a need for a grammatical or edit on 15.2 such that it would read -- currently it reads; the voting system generates, stores, and reports

to the user or Election Official all error messages as they occur; the proposed edit is to remove, to the user or Election Official. So, that it would read; the voting system generates, stores, and reports all error messages as they occur. Any objection or comments on that?

MS. AUGINO:

There's an extra space -- can you hear me? There's an extra space between all and error.

CHAIR MASTERSON:

Got it. Okay?

MR. COUTTS:

Can we assume -- report as they occur includes just writing it to the log file? I have sudden visions of the real time audit printed audit log that we had in Texas for many years.

CHAIR MASTERSON:

Yeah, right. Does someone -- I mean, do you have any thoughts? Obviously, I don't think that's the intent, but either Josh or Ryan can weigh in.

MR. MACIAS:

Yeah, from my perspective, I do not see that as -- I don't read it as that way, and I don't think that's the intention. I think that is solely the system would create, store somewhere, either within the system or produce a record of some sort, which can be generated to a report.

MR. COUTTS:

Duly noted and recorded. Thank you.

MR. FRANKLIN:

Josh Franklin, here. The only thing I would really be worried about is just frivolous error messages or just, you know, system level error messages that aren't pertinent to the unit voting process.

That was possibly an issue with it beforehand.

CHAIR MASTERSON:

Okay. Any objections to that change? Okay. Two quick typos on Principle 4 and Principle 9, we have misspellings on the headings.

MS. BRADY:

I think its B-L-E instead of B-I-L-E.

MR. MACIAS:

While I'm at it, I'm going through I see that there's an extra space here after the comma in verify.

CHAIR MASTERSON:

Yeah, good. Thank you. Okay. So, that brings us back -- or we could just be done. But that brings us back to 10.2. 10.2 was a discussion we were having yesterday on the connection back between voter record or a record in the voter. And the conversation we were having, we kind of left it up in the air. There was a recognition that some states require this, some states don't. The understanding that even in states that don't have a law, perhaps

provisional balloting and other issues may arise. So, further discussion, currently it reads, the voting system does not produce records, notifications, information about the voter, or other election artifacts that can be used to associate the voters identity with the voter's intent, choices, or selections. I believe there is a conversation or proposal to add the voting system does not produce -- what was that addition?

MR. WAGNER:

Contain nor produce.

CHAIR MASTERSON:

Yeah, contain nor produce records. So, the proposed added language would say the voting system does not contain nor produce records, notifications, information about the voter, so on. So, I entertain discussion on that to resolve that. Or acceptance?

MR. COUTTS:

Do we have to put the caveat in, you know, unless required by state law. I mean, we never -- we haven't included the states requirements anywhere else in this, which is, I think, that would not be a good thing to add. But there will be situations where that is required.

CHAIR MASTERSON:

Thoughts?

MS. AUGINO:

We have not done that anywhere else in the document. I think that it's that everything we do is subject to state law. I just think that that's a bad idea, particularly in that case, too. And remember they're voluntary guidelines. So, if a state didn't want to comply they would have a choice. Oh, sorry.

MR. COUTTS:

Right. The question that we have to come back to is in testing. And perhaps this is in the requirements that we simply have to make sure that in the requirements that this ability, if it exists, must be able to be turned off. And we handle it in requirements.

MR. GILES:

Yeah, I think the concern there is, you couldn't get a system through EAC Certification if it has that ability to actually record that, because the state may require that. How do you address that issue? If you're taking the hardline to say, can't do that, to your point --

MR. COUTTS:

Exactly.

MR. GILES:

-- I agree. There's got to be something in there.

Yeah, I don't know if we have to use the language, state specific, but how do you get around that for a system that needs to do that for a specific state?

MS. BRADY:

So, Josh or David, maybe you can correct me if I'm -- if this is wrong, but an argument that I heard was, there was an understanding that this needs to be done particularly in some states, but the question is does it need to be done inside the voting system, or can that connection be handled outside the voting system.

MR. COUTTS:

It can be handled in a manual process. The states do not like doing it that way. It has been required as part of the RFP process in several states that we are in; that basically you cannot certify in the state without this electronic ability. So --

MS. BRADY:

Okay, then I would ask David, what is the risk in continuing to -- oh, I thought I did. David, is there a risk that we should be concerned about with the continuing to keep this mapping inside the voting system, as opposed to outside the voting system.

MR. WAGNER:

David Wagner. The risk that I think we're concerned about in the discussion in the working group is with keeping this tie, this association between the voter selections and the voter identity in the voting system. And one media digital records is that opens up a risk of hacking, which could happen at a large scale if this is

routinely kept in the electronic records. And I think one of our values in elections here is the secret ballot. And many states have laws or constitutional requirements that support the secret ballot. And so, I think the concern is if there were to be a security breach that released -- here's a mass of voters and here's how they voted. Then the -- you know, the consequences to the public of seeing that, that's been released, you know. The same way that my Social Security number and my Credit Card and my personal details have been released in other data breaches would be not a desirable outcome. So, I think the concern maybe is especially heightened when we're talking about digital records, and when we're talking about this linkage being kept within the voting system on one type of media.

CHAIR MASTERSON:

That was going to my question. Again, for clarification, not having been part of the discussion. My understanding is this was mostly raised in the context of online ballot marking system that would store the voter's selections in coordination with whatever their sign in or -- like, however they logged in as the voter. Is that correct? So, that there was a server that was storing the voter selections. It might be able to be connected back to the voter. And so, my question is, with the -- to associate the voters identity, if in the case of, and please correct me if I'm laying the scenario out wrong, but in

the case of provisional ballots where the only thing in the voting system is that identity number, not a voters name, not a voters, you know, whatever. And that identity numbers only correspond on a separate system, not contained within the voting system. Is that scenario less concerning, or is that the scenario you were talking about in the working group? So, the voter reg system, because you're processing a provisional has the identity and the voting system, so that, you know, if you need to, you're not going to process that provisional on electronic system versus the storage in a server of both the vote selections and the voters identity all in one place. Is that what we're talking about?

MR. WAGNER:

Yeah, those are excellent questions. And I think in the working group you'll see a range of opinions that range from saying, look, it's a concern even if they're on two different systems, because realistically are those two systems really two different systems or could a single breach compromise both; to others saying, you know, if it was there was a compensating control where -- what was linked in there was some anonymous ID number that was not tied to the voters identity except through some separate medium that, that might be a reasonable way to handle the risks. So, you know, I don't think you're going to see unanimous view in the cyber security group on this, no surprise.

CHAIR MASTERSON:

I'm mostly interested in your view.

[LAUGHTER]

But fair enough. Other thoughts or discussion on that?

MR. GILES:

So for me, I mean, in New Jersey we do require the secret ballot. So, I would want that language in there, obviously, for that. But I see the bigger picture for those jurisdictions that go the other way and need that, so. I guess the question is, is there a way to put some kind of language in these high level principles, or not. Or like, I guess, I'm not looking to get into the weeds with David on the issue, but can -- is there a way to address it in this language, or not. I guess, that's the question.

MS. GOLDEN:

And I'm back to, you know, not my thing, but I mean, listening to the discussion I'm not sure why this can't stay if everybody agrees with the acknowledgement that systems for particular states are going to have to have a deactivated feature when they go through certification. It's going to have to be activated for this state, because they do it this way. And I mean, I think that's going to be the case with many of these provisions quite frankly. I think states have all sorts of crazy unique requirements that are going to require something to be toggled on that is not toggled on when it goes

through certification. That comes from my world of assistive tech where everything has to be toggled on and off depending on your needs. So, it's just seems logical to me that that's the way it would work. It would just be an extra something that's available for a state that has to. And I'm thinking states, like, that have really large, you know, UOCAVA voter basis that has to do things differently because of all sorts of reasons, I'm sure. You know, they have another feature that would be activated, so.

CHAIR MASTERSON:

Neal.

MR. KELLEY:

I just have a question for David. Was there discussion among the group that this might spur some sort of technology that would solve some of these problems because, you know, I've had this discussion with some vendors that said, well, there are other ways to do this. Right? So, that discussion is did occur.

CHAIR MASTERSON:

McDermot or David. I'm sorry. Go ahead, David.

MR. WAGNER:

Dave Wagner. Yes, there was discussion. And I'd say the form that took was arguing that these are the establishing the best practices we want for systems going forward, which don't have to be limited to the way that it's been done so far. The challenge

there is because we're talking only about guidelines and we haven't yet gotten to the specific requirements. I think that's where the rubber's going to hit the road, and so as, as Robert said, we're going to have to talk through it more when we get to the requirement.

CHAIR MASTERSON:

McDermot.

MR. COUTTS:

I -- again, the real concern here is there are two parts to a test campaign. The first part is, do you meet the VVSG. The second part is, here's what you say you do in your documents. Do you do that? Okay, well now we've got conflict. I mean, as long as we all, in the requirements level, we say, yes we understand that as long as it can't, it must be able to be turned off, then we're good. And so, we just have to make a note of that for our -- when we put together the requirements. That the capability can exist, it just needs to be disabled; able to be disabled.

CHAIR MASTERSON:

Mary.

MS. BRADY:

Mary Brady. I, you know, that concerns me. You know, even, if it can be turned off, is it turned off. And it just leaves open an attack surface that maybe we don't want to leave open, potentially.

MR. COUTTS:

I have gone through the process of attempting to change a state law. I bear the scars of it. And wake up screaming at night. So, I would prefer not to go through that again.

CHAIR MASTERSON:

I mean, in the end, the challenge here -- if we don't put any language in, we leave this as it is, and there's not anything here or in the requirement recognizing whether or not you can turn it off or not. If it's in the state law that the systems going to have to -- so that, that's the hard part here, right? I mean, I don't disagree with you, but if a state requires that a system be able to do this, a manufacturer's going to build a system that can do this, because they want to be able to sell it. So, that's a tough one. Bob.

MR. GILES:

I have a concern of just having the ability to turn it off. I'd almost want it as a different version. I'm purchasing the version that has it versus the version that can turn it off, because if it's accidentally turned off, or somebody does something wrong; all of a sudden it's a year later and they're like, well, I didn't realize it was turned off. So, I have a concern of just making it as simple as throwing a switch on and off.

MR. COUTTS:

I appreciate your concern. I also have a concern of bifurcated development paths, multiple certifications, and the cost of that is significant. So, I mean --

MR. GILES:

I mean, I agree. It's not an easy answer. I'm with you on not having -- or having the ability to not be certified with that requirement, but I also I'm not in agreement with just making an on/off switch. I think that can be --

MR. COUTTS:

And it's never turned on for everyone. It's never a universal. I mean, at least in our particular system it is under certain specific session types and certain specific situations, and so on, and so forth. So, it is never a default setting by any stretch of the imagination. But we do have to do it.

CHAIR MASTERSON:

Is there any -- and the answer likely or could be no, is there any way to spilt, alter this guideline to capture what needs to be captured, but I don't know, change it, or I don't -- is there a way to edit it to recognize this without adding; I agree, I tend to agree, but it's your all's call that adding something like unless states require it, does it -- we don't have that anywhere else, and it doesn't really fit. But are there any suggestions on possible wording, or otherwise?

MS. GOLDEN:

The only thing I can -- Diane Golden. The only thing I can come up with is routinely. The voting system does not routinely contain or produce, is what I'm hearing people say is that it's a one off. It's a extenuating circumstance. Certain voters, certain situations, provisional ballots. There certain -- under certain conditions this doesn't apply. Now that puts a lot of pressure on the requirements, then to flesh out all of those what's routine and what's not through the certification process. And I don't know if that's even doable, but --

CHAIR MASTERSON:

Josh?

MR. FRANKLIN:

Yes, so we had a proposal here that basically split it into two separate guidelines. The first guideline says the voting system does not directly associate the voters identity with the voters intent, choices, or selections, which seems pretty reasonable. And then, the second guideline says the voting system does not retain after the final counting of an election any records notifications, information about the voter, or other election artifacts that can be used to associate the voter's identity with the voter's selections. Basically, saying this is, you know, possible up to a point.

MS. GOLDEN:

I thought McDermot said there were situations where even after it had been cast, you had to keep that association and pull it back the person passed away, an early vote. So, I'm not sure even that's going -- wording is going to get it. I don't know.

CHAIR MASTERSON:

David.

MR. WAGNER:

Diane, does the use of the phrase final counting address that concern.

MS. GOLDEN:

As McDermot's going to know more of the situations about -- that's what I said, trying to craft something that addresses every one-off situation. Whatever you think.

MR. COUTTS:

Final canvas, as opposed to file counting.

CHAIR MASTERSON:

So, there's at least a proposal to add a 10.3, essentially. So, 10.2 would now read, the voting system does not directly associate the voter's identity with the voter's intent, choices, or selections. And then, 10.3 would read, the system does not retain after the final canvas of an election, any records, notifications, information about the voter or other election artifacts that can be used to associate the voters identity with the voters choices. Neal?

MR. KELLEY:

I would just add, McDermot, I think that you touched on it with certification because the canvas sometimes can stay a little bit open. I mean, if you really want that finality it's going to be the certification.

MR. COUTTS:

All right; certification.

CHAIR MASTERSON:

I do have a question on 10.3 that I'm sure there are many ways to handle, but does that mean the voting system itself knows when final certification is taking place and removes those records, that otherwise it was keeping because it need to? I mean, at what kind of functionality would that -- are we asking there? And maybe the requirements would have to handle that --

MR. COUTTS:

What you're asking is for it to change the voter cast -- the cast vote record. Which is probably not what you want to do.

CHAIR MASTERSON:

David?

MR. WAGNER:

David Wagner. What I would -- I do think that this would have to be fleshed out in requirements and what we're writing here is the high level goals that we have for a voting system. But what I would

envision is it provides multiple paths to meet this. One path to meet it is -- forgive me, may I call it the New Jersey model, never retain this information in the first place. And the second path is retain it for a limited time, but know the time at which the linkage has to be destroyed. I don't think that would have to require changing cast vote records, but destroying the linkage that would allow them to be tied to a particular identity. So, if you want a voting system that simply never retains this information in the first place, then the voting system doesn't need to know when the final certification is. But if you do want to do this option of retaining something then at least it must be destroyed. I think that would be how I would interpret this.

CHAIR MASTERSON:

Other comments or thoughts?

MR. COUTTS:

And what David's produced -- suggesting is a reasonable implementation. You just have a separate vote file and that gets destroyed basically after a certain period of time.

CHAIR MASTERSON:

Okay. Other comments? Is there any other objections? David, I guess, and McDermot, are you both comfortable with this proposed language? Do you see something in there that concern you? Do others? Judd?

MR. CHOATE:

I think you still need an or between notifications and information.

CHAIR MASTERSON:

Take the -- it's okay. Everyone take a minute to read. Part of my concern here is just that we're writing a new guideline on the fly.

That may be fine, but I want to make sure you all get a thorough chance to review and take a look before making any decisions.

MS. LAMONE:

Can you read it again?

CHAIR MASTERSON:

Yeah.

MS. LAMONE:

I can't see it from here.

CHAIR MASTERSON:

Yep, I'll read it again. So, 10.2 would now read, the voting system does not directly associate the voter's identity with the voter's intent, choices, or selections. And then, new 10.3 would read, the voting system does not retain after the final certification of an election any records, notifications, or information about the voter or other election artifacts that can be used to associate the voter's identity with the voter's choices.

MR. GILES:

And are they contradicting themselves, though? You know, in two years saying one thing, and three allowing what you just said you can't do in two.

MS. GOLDEN:

The way I'm reading it -- maybe I'll put this in dumb down terms, because security is not my thing. The first one I'm reading, it's that word directly. What that's forcing is basically the concept of linked files. So, there's a cast vote record, but it does not contain anything associated with the voter's identity and there's something else over here that contains that other stuff, and they're associated. They're not in the same file. The second one says, if you do that -- so you can have a system that doesn't have the second file. It just has the cast vote record with no, you know, associated file, but if you do have this associated file after the certification of the election, it has to go away. Am I close?

MR. GILES:

I mean, I'm just pointing that out, again, when we leave here and somebody else reads this in a month, are they going to read it the way we are intending it to be read?

CHAIR MASTERSON:

No.

MR. GILES:

And that's my concern. It's great that we all agree, but when you start writing requirements, somebody's going to say -- I mean, these are indirect conflict the way I read them.

CHAIR MASTERSON:

It's a good point. I think the use of the word directly, like Diane says, important. And also, to the extent it matters, NIST, EAC, those of us who will be working with the working groups and you all and others on the requirements are present for this discussion and know the intent behind this discussion, right? But it's a fair point that John Q. Public commenting, for instance, may not read it that way and we'll have to understand that as we receive public comments.

MS. GOLDEN:

I think what you're saying is this makes more sense if it was one, whatever, guideline that says, if the voting system retains any voter identity information it has to be in a separate file, you know, and then, has to be destroyed after the election has certified. So, it's an all in one thing. It's not two separate things.

MR. COUTTS:

I would hesitate to put --

MS. GOLDEN:

I know.

MR. COUTTS:

-- direct implementation language in the principle.

MS. GOLDEN:

I know, but that's what's he's getting to by separating it into two, then, yeah, it's that -- because if you're building a system that doesn't do anything with, you know, voter identity stuff, then they're kind of both irrelevant. But it sounds as if -- anyway.

MS. BRADY:

So, if we, instead of the alternate wording with the two guidelines, does it change the meaning if we replace routinely with directly?

CHAIR MASTERSON:

Thoughts on that? So, it would now read, the voting system does not -- so, we're going back to the original language in 10.2. The voting system does not directly contain, nor produce records, notifications, information about the vote or other election artifacts that can be used to associate the voter's identity with the voter's intent, choices, or selections. Greg?

MR. REDDLEMOSER:

I think she's -- Mary -- not to speak for you, but you were inserting the word directly right in front of associate, right? That's what I thought I heard you were saying.

MS. BRADY:

No, I wasn't, but that's, you know, we can certainly consider that.
Because I do think, as the association that we're concerned about.
So, that's --

CHAIR MASTERSON:

Okay. So now it would read, the voting system does not contain, nor produce records, notifications, information about the voter or other election artifacts that can be used to directly associate the voter's identity with the voter's intent, choices, or selections.

David?

MR. WAGNER:

I'm not sure about how that would be interpreted. Is the idea it's okay to keep an indirect association and store it forever, and if so, what kinds of indirect associations would be allowed? Perhaps that's a matter for when we write requirements and that could be an answer that could work.

CHAIR MASTERSON:

So, I think it's a fair question. I think part of the challenge here that we're all struggling with, or at least I am. I'll speak for me. And thankfully I don't have to make this decision, you all do. But is the idea that we're talking about the voting system. And so, directly would be within the voting system. Right? Whatever those 17 functions, as we've defined the voting system, where that wouldn't be direct is within a separate election system, whatever that

separate election may be, because we don't test or certify that. So, that would be an indirect link, in my opinion, because we don't test or see that. If it's not one of fulfilling one of the 17 functions and therefore part of that voting system, but the voting system contains voting information in another indirect system that we don't test and certify contains information to allow for this. I think that would be an indirect link. And part of the challenge here is we don't test or certify those systems, right?

MR. MARCIAS:

Just as an example, two examples in use today. Now I know we are looking forward to new technologies, but right now you have an envelope. We do not test or certify the envelope that is the indirect association with the ballot and the individual's ID. The second piece would be an electronic poll book. We do not certify or test electronic poll books. And there may be a linkage whereby the electronic poll book creates an ID and then that ID is then carried forward into the voting system. So, there is an indirect association in two different systems. One, in which, we the EAC, test and certify, and one, that is outside the scope.

CHAIR MASTERSON:

Other thoughts or comments? Any strong objections to it as it is currently written?

MR. GILES:

I'm going to -- Bob Giles. I'm gonna kind of defer to David to see what he thinks on this, because I'm better with this language than breaking it into the two. But do you think this gets us to where McDermot and those jurisdictions that do require that, and then we can deal with this in the requirements? I mean, like I said, this is a tough thing for us, because we're trying to make something for everybody. And that's such a unique -- and my concern is that they can't get a system certified for their state if we don't have some flexibility.

MR. WAGNER:

Yeah. I'm trying to think through this on the fly, too. Like, we all are. Perhaps one way to think of this, is that that this business about retaining after the final certification could be something that could be handled in requirements. So, this would give us single language that applies to everything in the guidelines. And then, in the requirements we have the language about if there is an indirect linkage then that's not retained after final certification makes its way into the requirements.

CHAIR MASTERSON:

Thoughts on that? Certainly with the requirements going through the various working groups that could be captured here and through you all, that could be captured here and through the working groups to ensure that that remains.

MR. GILES:

I just have more of procedural question. So, like, whether it's the minutes of these minutes, is our intent brought out, like you know, when they pass legislation. You have legislative intent. I mean, does that become part of when we start writing the requirements, can you know, if we say well this is what we intend, is that somehow brought forward to -- I know, we're part of the process but I'm just curious if there's a way to do that. Because there's going to be other areas where we definitely have a certain intent that we believe the guideline means.

CHAIR MASTERSON:

Sure. And Ryan and Josh and Mary can certainly weigh in as the people working on the requirements with the working groups. But one is, there is a record of this meeting. We're all present for it. And we're all participating, including you all, both through the working groups and through this group, this committee, in the requirements development. And so, to the extent that your intent needs to be captured, there's a variety of inputs. For instance, David, as one of the leads on the Cyber Security working group in the requirements review can remind all of us, hey, remember we talked about final certification in this indirect link, right? And so, there's a variety ways to ensure that. Plus, you know, those who will be working on the requirements, Josh, specifically, is sitting

here hearing this discussion, we can capture it that way. So, I mean, I think so. but it's also important to remember that it's -- you have to stay engaged in the requirements development to ensure the capture of your intent. You know, if it's important to you. Judd.

MR. CHOATE:

I think what he's saying is that we are the founding parents of the founding fathers parents, mothers, fathers. So, I think Lori and I were talking over here, I think we're both uncomfortable with the idea that we would be creating a provision that where you could potentially get to the identity of a voter, and link intent -- or link their choices to that voter. And these are the new rules, so. I would propose that we just take out the word directly. And that the producers produce to that standard and states that have laws that are different from that have to change their laws.

CHAIR MASTERSON:

Whoa. Okay. Says the state election director rep. Lori, do you want to weigh in?

MS. AUGINO:

How many states are we talking about? Anybody know?

CHAIR MASTERSON:

Use the mic, please.

MR. COUTTS:

McDermot Coutts. I do not actually have a complete list. I know that this is required in at least three.

MS. AUGINO:

I guess I'm just fundamentally having a challenge with creating a standard that says that that's okay.

CHAIR MASTERSON:

Okay. So the proposal on the table, and there's at least -- did you want to add something? I'm sorry --

MR. MACIAS:

I was just going to say, I am aware of three, as well, with the direct association, and indirect, everyone of them through provisional voting and vote by mail envelopes, and the like.

MR. GILES:

And I agree with Judd and Lori. I fundamentally, I obviously have a concern about that. But I'm looking at these three jurisdictions that -- how do we address that in the bigger picture? Or do we just leave it and deal with it in the requirements and say, you know, we have three states that do that and how do we address those three if we're trying to create a standard for the entire country is I guess where I'm getting some -- I'm getting hung up a little bit on.

CHAIR MASTERSON:

Yeah, so the question on the table, which, I think Bob just summarized nicely, is that this body, this committee, has a decision

to make on knowing that some states could be directly impacted, or they could find ways working with manufacturers around it. Does this body essentially want to say, via the VVSG, that this guideline is setting out an expectation that is valued in this community or at least by this committee in the form of ballot secrecy. Is that a statement, you all as a committee want to make, via the voting systems and the VVSG. So that's the discussion at this point and time.

MR. CHOATE:

That would be where I would put my lot.

CHAIR MASTERSON:

Other thoughts on that? Go ahead, Neal.

MR. KELLEY:

You know, I, actually, in rethinking this, I agree with Lori and Bob and Judd. As an election official, I don't think that's a good thing to allow that at all. And I want to ask these three states, is this just because of those states that allow you to pull your vote back at a certain point. Is that the issue?

MR. MACIAS:

That is my understanding, yes.

MS. AUGINO:

Do those three states require federal EAC certification?

MR. MACIAS:

I know two of them do. I'm not sure about the third.

MR. KELLEY:

Yeah, I know McDermot's not going to like this answer, but I agree.

Make them change the law. I mean, that's --

CHAIR MASTERSON:

We can't -- I mean, to be clear, we can't make them change the law, right? That's -- nor can you. Diane.

MS. GOLDEN:

And I think I understand this, but basically, if we take the direct back out and we go with the standard, then the VVSG certification requires the system to do X, and if those three states wanted to do something else then they're going to have to negotiate that with the vendors. And it's going to be something in addition to beyond separate from the VVSG certified system. Is that correct?

CHAIR MASTERSON:

That is, which happens, by the way. That's not uncommon, not in favor or against but we do have situations where that takes place.

MR. GILES:

So, if two of them require EAC certification, how -- that and I guess that's what I'm grappling with, how do they come before you to get EAC -- an EAC certified system that directly is in conflict with this guideline. And you guys are going to say, sorry we can't -- we

cannot certify that system for your state, so therefore you're not going to be able to get a new system.

CHAIR MASTERSON:

So, I'll answer the last part of your statement, which is, a vendor's not going to bring a system in front of us that knowingly violates this, and then, Ryan can speak to how other states have handled this in other areas. Not this one specifically.

MR. MACIAS:

So, there's usually one of two paths. Either, the first is they go directly to the state. If the state needs EAC certification, then they bring forward their base line system to the EAC. They create a modification that would go directly to that state, and that state has to make the interpretation. Because the base line system was certified, this one off change is sufficient to be a modification that it can agree to.

CHAIR MASTERSON:

And several states allow for either emergency modifications or for the program -- and that happened in a number states and a variety of areas where, essentially, they take the base line EAC certified system and allow for a certain functionality that wasn't -- either wasn't tested as part of the EAC certified system, or couldn't be because, you know, violate a standard, but it's part of state law.

This scenario has played out in our system before, just not that I know of this specifically.

MR. GILES:

Okay. So, they wouldn't have to change state law, they would just modify their acceptance procedure. They would take the base line EAC certification and go back in and say, for this one component, and I don't know if you dealt with this or not, McDermot, for this one component, we will test it ourselves, or we will, you know, just allow that to not be part of the certification. And if that is currently, then I'm fine with --

CHAIR MASTERSON:

Again, that may or may not be available to these states. It's going to depend on the state and it's going to cost McDermot or someone else some amount of money. So, I mean that's the conversation. And sometimes they'll have a test that even though it's in with the EAC, while it's in with the lab, they'll have the lab test that functionality separately, so not as part of the EAC test campaign. But it's just going to depend. Other comments or thoughts? Currently, as written, it would contain nor produce records, is there any other objections on that? Okay. And let's remember, too, that this will go through the EAC Board of Advisors and Standards Board. Where I'm sure those states and others will speak up vociferously, if they feel strongly about this, right? This is why we

have process that goes through the states. And so, certainly will be part of the public comment period. McDermot.

MR. COUTTS:

For the record, I do agree with this statement as it is currently written. I was basically handed this as a requirement and had to put in things to address that requirement. So, it's hard to take something away that you've given.

CHAIR MASTERSON:

For the record, McDermot agrees with keeping voter's votes private. Noted for the record. Okay.

MR. GILES:

And I agree, as well, that -- I was trying to be sympathetic to those three states, and it just appears we cannot do that in this general guideline. And I agree with Judd and Lori, that is just a very important principle and guideline that secrecy be there. So, we attempted and it's just not going to play out.

CHAIR MASTERSON:

Also noted for the record, Bob is capable of empathy.

[Laughter]

JOSH:

So, yesterday we made a change to add in voter anonymity to 10.1, instead of ballot secrecy, thinking about it and sort of discussing this with other members and, you know, folks in this community, I'm

a little bit worried about that change. I think it might need to go back to ballot secrecy. There are parts in the overall voting process that, you know, voter anonymity is not necessarily maintained. Especially, when a voter checks in, for instance, initially.

CHAIR MASTERSON:

Just as a thought. And so, the proposal on the table is to change voter anonymity back to ballot secrecy, just as perspective, the overarching principle references the voting system protects the secrecy of the voter ballot selections, right? We're not testing the entire voting process. But conversation around changing voter anonymity back to ballot secrecy. Any thoughts on that? David?

MR. WAGNER:

I too have had second thoughts about that. I don't think it's really voter anonymity, that's not the right word. Voters aren't anonymous. You know, I go to vote and say my name, then I check in. It's really not voters anonymous. It's the secret ballot, which is -- I know we're trying to avoid jargon and making sure this is understandable, but I think the notion of the secret ballot is one that's pretty fundamental and well understood. So, I think ballot secrecy is probably the right word to get at what we're going for here.

CHAIR MASTERSON:

So, Ryan if you can make the change. The proposal is to change ballot secrecy so it would read, ballot secrecy is maintained throughout the voting process which is how it originally read, yesterday. So, now we're changing our changes, which is okay. Thoughts on that? McDermot, I know you were the one that raised that. Do you feel strongly on that?

MR. COUTTS:

No.

CHAIR MASTERSON:

Okay.

MR. GILES:

There was one additional typographical error that Bob brought to my attention this morning on 1.2. There was just a space between the word operating and the period, which was deleted. And then, Marc brought up a question regarding 3.2.

CHAIR MASTERSON:

Okay. Marc? All right. Hold on, 1.2 operating -- we're missing a word. So it should -- 1.2 should read the voting system is designed to function correctly under real world operating conditions.

Everyone good? Okay, Marc?

MR. GUTHRIE:

Now, Mr. Chairman -- Marc Guthrie. The -- and maybe I just misunderstand this, but the under 3.3 regarding transparency, it

refers to pre-election set up and post-election audits, and it doesn't refer to the election itself. Is that -- what am I missing there? Is that the way it should be worded? Should we be including the election itself?

CHAIR MASTERSON:

So the question on the table is, is there a need to include -- and please tell me if I'm wording this wrong, is there a need to include a reference, not just to pre-election set up and post-election audits, but a reference to the election process itself. So, conversation or thoughts on that, was this Ben's section? John's section. So, John, I don't know if you have any thoughts on that, but the opportunity to comment.

MR. WACK:

When I came up with the wording, I intended it to be ballot -- ballot secrecy -- pre-election through post-election is what I intended. As opposed to, only before and only after.

CHAIR MASTERSON:

So, we would change -- the proposed change then, according to John, I think, is to change pre-election set up through post-election audits.

MR. WACK:

Right.

CHAIR MASTERSON:

So the 3.3 now currently reads, the public can understand and verify the operations the voting systems during pre-election set up through post-election audits. Comments or thoughts? Does that address your concern?

MR. GUTHRIE:

Yeah. Thank you.

CHAIR MASTERSON:

Any objections or thoughts on that?

MR. CHOATE:

So, just to note that post-election audits isn't the end of the election.

So, do you want to go to certification or are you only worried about the equipment? In which case, you would only go to the audits.

CHAIR MASTERSON:

So, Judd's, I don't know that you're proposing, but asking is there a need to, instead of just referencing post-election audits to reference instead through final certification. Is that correct?

MR. CHOATE:

Yeah.

CHAIR MASTERSON:

So it captures the whole. Any thoughts on that? I see some head nodding. Bob?

MR. GILES:

Should be from, not during, from pre-election.

CHAIR MASTERSON:

Okay. So, with Judd's proposal, 3.3 would read, the public can understand and verify the operations of the voting system from pre-election set up through certification.

MR. RIDDLEMOSER:

Mr. Chairman, Greg Riddlemoser. I appreciate what Judd just said, in a lot of states audits actually take place well after that final certification.

CHAIR MASTERSON:

So, Greg's raised a valid point, that in some places the post-election audit is the final step that you certify, and then audit. So, thoughts on that?

MR. CHOATE:

I withdraw my motion.

CHAIR MASTERSON:

Okay. Judd is withdrawing. I mean, I'm sorry to do this, I'll apologize now. Some states don't even have a post-election audit.

I don't know if that matters. The idea is --

MR. CHOATE:

What's the point of a post-election audit that happens after certification?

CHAIR MASTERSON:

The idea is --

MR. CHOATE:

He said whimsically.

CHAIR MASTERSON:

Yeah. That's a thought of -- bubble thought. The idea of course is we're trying to capture that you can understand the full voting process. Right? I mean, that's the purpose John Wack, is that correct, that the idea is that the entire process of the operations of the voting system is understandable throughout, correct?

MR. WACK:

[nodding affirmatively].

CHAIR MASTERSON:

So, I mean, you could say, in theory, the public can understand and verify the operations of the voting system throughout the entirety of the election process. Any thoughts on that? John Wack, does that capture? I got a thumbs up. Which I always take from John. Less jargon. I'll take that, too. So, the proposed 3.3 express any concerns, the public can understand, especially since I made this suggestion, the public can understand and verify the operations of the voting systems throughout the entirety of the election process.

MR. CHOATE:

Can you just drop the word process? Throughout the entirety of the election.

CHAIR MASTERSON:

The entirety of the election? Sure. My wife would appreciate that edit. I'm wordy. Any objection to this as written? No? Okay. So, that concludes a full review. We literally marched through every single one of the principles and guidelines. I will note as a credit to NIST and the EAC and the working groups, that had we written the VVSG as it had been written before we would have another month and a half to be reviewing hundreds of requirements, and so, it's kind of nice to go one by one through a five page principle and guidelines document in this way. What I would propose now, is we are going to take a extended break. So, we're going to -- 20 minutes, or so. So, we'll say 10:20 to reconvene, have any final discussion that is necessary. A proposal on the proposed guidelines. So, a possible vote. Up to you all. As well as a discussion and possible vote on Diane's proposed resolution. That was sent out to you all in advance. We'll make sure copies are distributed, as well. But a conversation around that. So, we'll take up both consideration of the guidelines, as now drafted, as well as, Diane's proposed resolution corresponding to that. And then, possible votes on both, depending on where the Committee is at. So, we'll adjourn until 10:20.

CHAIR MASTERSON:

Okay. We will re – what, re-adjourn, re-open the meeting.

MS. GOLDEN:

Reconvene.

CHAIR MASTERSON:

Reconvene. Thank you.

UNKNOWN:

Re-adjourn?

CHAIR MASTERSON:

I don't know. It's day two. It's day two. Although, I messed that up on day one, too.

[Laughter]

All right. So, we have two tasks ahead of us. We also have some presentations coming up later this morning, too. So, the first, I guess, task, in front of us is the process by which to consider and possibly vote on, the draft principles and guidelines. Again, to review, Brian Handcock's presentation, should you all approve the principles and guidelines as written. The next step would be they're sent on to the EAC Director, who sends them to the Board of Advisors and Standards Board for consideration. After they consider it, there's a public comment period, and then, an EAC vote. So, that's the process after you all make your recommendations. So, at this point, I would be open, first, to a motion to approve the Principles and Guidelines, as drafted. They are in front of you with all the changes we've discussed over the

last day and a half. And then, after I receive a motion and a second, we can have discussion.

MR. WAGNER:

So moved.

CHAIR MASTERSON:

David Wagner moves to adopt the Principles and Guidelines, as drafted. Is there a second?

MS. LAMONE:

I'll second it.

CHAIR MASTERSON:

Linda Lamone seconds. Discussion? On any aspect.

MR. COUTTS:

McDermot Coutts. Just wanted to -- we -- I've had this discussion on several times, I just wanted to make sure that we're not dealing with anywhere in here that we have to tie the electronic cast vote record back to the paper ballot.

CHAIR MASTERSON:

So, the question that McDermot is raising, do you -- is that back to 10.2 again?

MR. COUTTS:

Yes.

CHAIR MASTERSON:

Okay. David, do you want to answer that question, or do you have thoughts on the conversation? And Josh -- if Josh is still in the room, he can weigh in, too.

MR. WAGNER:

David Wagner. I think, we're probably referring to Principle 9, Auditable.

CHAIR MASTERSON:

Excuse me.

MR. WAGNER:

Yes, that is my view of this, as well, that this is not requiring that the paper ballot be tied back to the electronic record. That might be one way of complying, but they're might be many other ways of complying, as well, including paper systems that don't tie the paper record to the electronic, or non-paper system.

CHAIR MASTERSON:

Okay. Any other discussion? Okay. So, we have a motion and second on approval of the draft Principle and Guidelines, VVSG, 2.0 from the TGDC. At this point, I'd call a vote. So, all those in favor?

[Unanimous affirmative vote]

Opposed? Awesome. Awesome. So, the draft VVSG 2.0 Principles and Guidelines are approved. Congrats to all of you. Job well done.

[Applause]

What's that? So now, Diane, if you'd like to speak with the -- Cliff?

MR. TATUM:

I would like to add, Mr. Chair, that barring any technical edits that need to be made to the document.

CHAIR MASTERSON:

Sure. Understood. Hopefully we just did that, but, yes, I hear you. Now Diane, has provided for members of the audience, there's copies in the back for you to review. Diane, had submitted to all of you via the EAC, a proposed resolution for consideration to the TDGC -- or proposed consideration of the TDGC on assuring accessibility and security. So, I turn the floor over to Diane to speak to her resolution and then make a motion.

MR. RIDDLEMOSER:

Mr. Chairman, Greg Riddlemoser. Perhaps legal question for Cliff, if I might. Does FACA allow for non-agenda items to be discussed when there's not a point on the agenda, that specifically addresses them, nor is there an item on the agenda that's for the Good of the Order, or New Business, or anything like that?

MR. TATUM:

So, there's a number of different questions in there, but FACA does allow for a body, an Advisory committee, to take up a resolution as set forth within the charter of the TDGC. The objectives and scope

provide that the committee may, by simple majority vote, throughout the resolutions, make motions, or make recommendations to the Commission for consideration. As I understand, the resolution that is being proposed is part and parcel of the discussion that was taking place, and while the agenda doesn't specifically set forth an agenda item for resolutions, I believe that the member is in proper order to ask the body to consider a resolution.

CHAIR MASTERSON:

Okay. Diane?

MS. GOLDEN:

Get this on again. I -- hopefully everybody's had a chance to look at the resolution and this came out of the extra meeting with security and accessibility that we had over the summer and the discussions, etcetera. And it -- I think it's a pretty straight forward resolution. I don't think it says anything earth shattering. I think the primary issue is with an option of the software independence, I'll use the buzz word, but that guideline -- which implies to a lot of folks, paper ballot, that obviously raises, increases the accessibility challenges, and that's captured in that second whereas, the first two whereas are basically repeating what HAVA requires. The second one indicates that if you're going to use a paper vote record, that does create some accessibility challenges, particularly

with verifying and casting, paper ballot as the determinative vote record. And if that is the case, all this says is that we're really serious this time about it being accessible. We've had it in the standards for years. And we just have gotten there. So, this is just trying to say, yet again, on paper, in a formal resolution, adopted by this body that, indeed, we really mean it this time, you know. Kind of feel like the parent that's threatened three or four times, I'm really going to follow through this time, trust me. Yeah. And the big concern from our perspective is that people are going to see the new Guideline for Software Independence, and they're going to advocate even more strongly for paper based voting systems, and at the end of the day what that will translate into the disability community is more hand marked paper ballots, and one segregated, isolated ballot marking device in a corner, that has not great accessibility on top of that, because it's been certified and is old, and has not been improved. We can't do anything like mandate upgrades, you know, that's outside the scope of the VVSG. So, this was basically, you know, just an attempt to very publicly say to everybody, we're really serious this time. When new things come through for certification, you aren't going to make it through this time if there isn't accessible verification and casting of that paper, if the system is using a paper vote record. So, in general --

MR. GUTHRIE:

Mr. Chairman --

MR. GOLDERN:

-- that's what it says.

MR. GUTHRIE:

I just want a second.

CHAIR MASTERSON:

Quickly, hold on one second. Would you -- first, is it okay if I read it to the group --

MS. GOLDEN:

Sure.

CHAIR MASTERSON:

-- so we can have it. And then you can make a motion to propose it. So, it reads, the title is Ensuring Accessibility and Security: Whereas, HAVA Section 301 requires that a voting system be accessible for individuals with disabilities and provide the same opportunity for access and participation; including privacy and independence as for the others; and whereas, HAVA also requires that voters be able to verify privately and independently the votes selected by the voter on the ballot before the ballot is cast and counted; and whereas, the voting systems that utilize paper to capture, verify, and cast printed voter selections as the determinative record of the vote face significant technological

challenges in providing accessibility features necessary to enable voter's with disabilities to verify and cast a ballot privately and independently; and whereas, the VVSG 2.0 development process was committed to ensuring that both accessibility and security were at the forefront of each principle and guideline drafted and were addressed equitably. Be it resolved that, if a voting system utilizes a paper record to satisfy auditability principles, and associated guidelines, the voting system must also provide mechanisms that enable voters with disabilities to mark their ballot and to verify and cast their printed vote selections privately and independently.

MS. GOLDEN:

I would move for adoption.

MR. WAGNER:

Second.

CHAIR MASTERSON:

Okay. I have David Wagner on a second. Marc, I note your desire, as well, but David Wagner on the second. Discussion? Neal Kelley?

MR. KELLEY:

Thank you. This is more of procedural question maybe for Cliff, but -- so, on the Board of Advisors when we pass resolutions they're generally resolutions that are broad and go before the Commission for considerations; you accept them or you don't. As a new

member of the TDGC, I'm just trying to figure out, where do these resolutions go. And what's the meat behind it?

MR. TATUM:

Very good question. The resolution from this body is simply advisory to the EAC. So, just as it would be with the Board of Advisors, you all determine whether you all want to pass a resolution collectively, and if so, the EAC accepts the resolution, we would publish the resolution as being passed by the TDGC and we then take the resolution under advisement.

MR. KELLEY:

Great, thank you. And Dan, I just really appreciate your advocacy on this, and I hope this has some legs, and it continues to be. Cold heartedly supported.

CHAIR MASTERSON:

Further discussion?

MR. COUTTS:

Just a -- basically what we're trying to do here is inform the requirements under the accessibility.

CHAIR MASTERSON:

I would say that's correct, and I don't want to speak for Diane, but also inform the testing process, right?

MS. GOLDEN:

Yes.

CHAIR MASTERSON:

And the EAC, on it, as an Advisory Committee. David?

MR. WAGNER:

David Wagner. This resolution has my full support and I want encourage the TDGC to adopt it.

MR. GILES:

Bob Giles. I just want to -- thank you, Diane, for all your hard work and really keeping us focused on that important issue.

CHAIR MASTERSON:

Other conversation or comment?

MR. COUTTS:

David, I do get it, but I would like to know your reasons why you support it so strongly.

MR. WAGNER:

Dave Wagner. Well obviously, accessibility is crucially important both as a value and as required by law. And so, I think it's very important to write down in writing the intent and our goals to help inform as the process goes forward.

CHAIR MASTERSON:

Linda Lamone.

MS. LAMONE:

Yes, I want to echo everyone's comments. Diane, and thank you for being such an advocate and hopefully this time we'll be successful. And I urge everyone to vote for the resolution.

CHAIR MASTERSON:

Any other comments? Okay we have a motion by Diane, and a second by David. All those in favor say, aye. Opposed?

[Unanimous affirmative vote]

CHAIR MASTERSON:

The resolution passes. And Diane, I will thank you for your advocacy for pushing forward with this and ensuring, through the working group that these were captured in VVSG 2.0, I appreciate it. Okay. Theoretically, this was when we should all just go get a drink, but I'm told, via the agenda, that we're going to do some -- although, I got thumbs up from the audience, too.

[LAUGHTER]

We can all take a deep breath. Greg?

MR. RIDDLEMOSER:

Mr. Chairman, since you shot me down in spectacularly glorious flames yesterday for suggesting that we have a motion. And I so move that we adopt the timeline as presented earlier.

CHAIR MASTERSON:

So we have a motion to adopt the timeline -- I appreciate you re-raising that, thank you. Is there a second?

MR. GILES:

I'm a little concerned seconding. He threw me under the bus by seconding last time, so. But I'll make the attempt, and I'll second.

CHAIR MASTERSON:

Okay. We have a motion by Greg to adopt the timeline as outlined in the EAC presentation, which Ryan will pull up, and a second by Bob Giles. We'll get the timeline pulled up. Again, Greg, if you'd like to speak to the purpose of the resolution -- or motion, that would be helpful.

MR. RIDDLEMOSER:

Mr. Chairman, Greg Riddlemoser. Thanks for that. I have been more than pleased with this whole process being a two-year member, now, of the TDGC, that although we're bureaucrats, we're not in love with the bureaucracy, and one of the things I want to thank Chairman Masterson for doing, as the skipper of this tight ship, is making sure that we actually did things in a timely fashion. So, with the public working groups and the way that was done, and the subcommittee Chairs, and all the different things that have happened in the before, during, and after election working groups, and the usability, accessibility, security, and whatever the fourth one was -- sorry I've forgotten. But all that work that's been done, has been done because of one Bill Bennetts old adages, that the leading cause for performance is expectation. And I just, again,

Matt, want to thank you for your leadership in this, because you expected good things from the hundreds of people that have weighed in on this. And they've delivered. And you've now laid out a fairly aggressive milestone calendar that gets us to the end, if you will, and I'm just pleased to be part of a process in the Federal Government that's actually working. So, thanks for that.

CHAIR MASTERSON:

Thank you. Any other commentary on the proposed motion?

Okay, we'll call the question. All those in favor, aye. Opposed?

[Unanimous affirmative vote]

CHAIR MASTERSON:

None. So, Ryan get to work, I guess is the message on that.

RYAN:

See you guys. Have a good one.

CHAIR MASTERSON:

Yeah, right.

[LAUGHTER]

No, I appreciate that. I appreciate your kind words, as I think I said, at the very first meeting of this body. The reconstituted body in 2015. Time was of the essence. There was an urgency of now. And I think you all, and the public working groups, have absolutely met that challenge and produced. And so, I appreciate all the work you all, and the public working groups, and the EAC and the staff

have done. We remained committed to this time frame, into getting it done in a timely fashion. So, I appreciate that. Any other business before we call up John Ziurlaj and John Wack to talk about the other working group, which is Interoperability and the common data format work. So, at this point, I welcome John and John. The John and John show to speak to the work of common data format, both, what's happening, John, talked a little bit about it yesterday, but then John Ziurlai will talk about some of the work he's doing in this area. So, you both are welcome. While they're coming up, also I've been remiss to do this, and my sincere apologies, but I do want to recognize the Vice-Chair of the EAC, Tom Hicks has been here in participating, and I appreciate him being here, as part of this, thank you. This feels a little bit like the last week of school now. Like, sure, we'll pay attention to what you got, let's do this. Now, that we've done this. It's a movie. We're going to watch a movie now. Awesome. It's good. I've seen the ending. John and John, the floor is yours.

MR. WACK:

Thank you. I was actually hoping that you'd say, let's skip this presentation and we'll go have martini's. So, I think in the interest of time you'd probably wants us to make this more brief. So, I will go through the slides, but I'm going to be kind of terse. The one thing I do want to say right up front, is that while I would like to think

that I'm so smart I could do this all myself, there are a number of other people who, you know, have contributed in huge ways to make this project work. If I mention names, I will leave somebody out. So, I'll just say that there have been kind of a core of people who have been from the election community, from other organizations, other large companies, outstanding, outstanding, outstanding support from several of the manufacturers, organizations, Verified Voting, Google, I could on, Associated Press, who have helped tremendously, and so, without these people, you know, we just wouldn't get any work done. The work could go faster, but the fact of the matter is we have to rely on people in the elections community and manufacturers, and in some cases auditing people, and they all have day jobs, and they don't love this sort of work to the extent that I do. And sometimes it's hard to, you know, get everybody on the same page and get everybody together. But I just want to start out by thanking these people, and they know who they are. So, I think my job here is to just briefly go over what we've been doing. And then, you know, leave some time for questions. So, the slide before you is everything all at once, and a someone, I may or may not work for in this room has advised I ought to use more pictures in my presentations. I'm just going to -

-

CHAIR MASTERSON:

It's the only way Bob understands it, so.

[LAUGHTER]

MR. WACK:

So, I wanted to do two slides on just what has been going on. This is the ideal process. It isn't followed this way all the time, but ideally there ought to be models of election processes. You can just say a thorough understanding of how these processes work, and the boundaries between those two processes. So, I've got some processes up there, and some of them overlap in the data they deal with. And devices oftentimes map directly to those processes, sometimes not, election management systems can be involved and tabulation and results reporting and election set-up and management, whereas, scanners and DRE's and other devices are pretty squarely in the voter involvement areas. And so, these are right now the devices more or less that we have been targeting with common data formats. Although, there are others, some of these formats, at least the one for election results reporting is fairly broad and could apply to others. So, I'm going through a very brief timeline, so in 2015, we started working on the election results reporting spec, thinking that would be pretty easy, but it encompassed pre-election, you know, election, post-election, it ended up being very, very broad, so that was kind of complicated, but it did end up getting used in 2016. In 2016, we started working

on an election event logging specification, which addresses, you know, election event logs for, you know, ideally all the devices here. I should mention, that it's not up to NIST or, you know, the interoperability working group to say which devices must use these formats. Those are decisions that were made along the way, but where I have logging here, you know, the assumption is that all these devices will, you know, incorporate logging. So, in 2017, we – well, in actually 2016, 2017 we will finish two specifications. One, for cast vote records, which was a lot more complicated than expected. And voter record interchanges, mainly transactions between an online voter registration portal, or registration portal could be the DMV, and a voter registration authority. So, two registered voters to perform maintenance. And there are two more specifications to work on in 2018, there could undoubtedly be others. And so, John here will talk a lot more about process models, but essentially you kind of begin this process with a process model, ideally, where again, you have people who have spent a lot of time figuring out, how does this really work, and how does it work across the country more or less, you know, not just in one state. And from there we developed a UML model, which defines all the data and the relationships between the data. Sort of rigorously defines it, and so we, you know, stick to that definition. From the UML modeling tools, we can generate schema. We can

generate an XML schema. We can generate a json schema. And then, documentation needs to be written, and that actually can take longer than almost everything. I think, anyway. At least somebody who enjoys doing that work. It's painstaking to come with good documentation and examples, validation tools, things of that sort. So, the process eventually is a circular process where once something gets used, there should be lessons learned, new items that come up, and that's actually happening right now, with the election results reporting specifications. So, that one you've been familiar with, that was kind of put to bed. It ended up being used in a couple of states and jurisdictions. Google and PEW have used it for VIP, VIP 5.0. And through their experience, they came up with a number of minor updates and issues and moved that into what they call VIP 5.1. So, we're upgrading, or augmenting, the current version to a version two, which will incorporate some of those changes. The biggest one, really, being more than we can generate, a json schema, a json ultimately being -- producing much smaller files, which is important for election night reporting. And it would do a better job for rank choice voting. The election event logging CDF is in our NIST internal review process, which is a fairly rigorous process to make sure a document gets out that meets NIST standards. I do not anticipate any changes to any of the technical material. I want thank Josh Franklin in the audience, as

well as, Ben, who have contributed to the document, and made a number of very good comments. Voter records interchange we're close to the end. It's -- this is something that could be extended into a broader series of voter registration transactions, but we are stopping pretty much right now for this first version with NVRA and FPCA style forms and data. The one thing I do want to say, is that most of these interchanges involve voter addresses. And we have decided to use a Federal Geographic Data Commission, I believe, FGDC, thoroughfare standard that is managed by the US Census and is kind of a super set of the USPS specification for -- because it's not only voter addresses, it's not only they're postal addresses, but it's also where they live, could be two different places. And overseas addresses. So, this bears more discussion because what we are kind of saying is voter registration authorities, election management systems, we want you to use -- or at least be able to export and import this particular XML specifications, so.

CHAIR MASTERSON:

Sure. Neal has a question. Go for it.

MR. KELLEY:

Sorry, John, can you go back to the -- oh, you are at that slide, I'm sorry. So, you note there that Ohio is implementing this and discussions are now with other states, vendors, etcetera. How

does this organic process work so that there is momentum? I mean how much influence does NIST have in this regarding?

MR. WACK:

I'll get to that in a little more detail, because we're getting assistance from another organization that can help with that. I have to say being more of a technical person, I'm not great at that. And it's a job in itself. But thus far we've been fortunate to have people such as John, who decided to try it out in their state. So, that's how it's kind of worked thus far, and I believe we need to do a better job of presenting this in ways, to kind of say this is essentially, this is how much money you're going to save, you know, by doing it this way. But that's a good question.

CHAIR MASTERSON:

And if that doesn't get it -- that's a super important question. I know it's something that John and Katie are focused on, it's something we're focused on, because this is wonky, right? But as, I said, I said it yesterday, I believe it's the most important work we've done. I think it has so much possibility. And so, going out and selling it and educating on it is going to be critically important for all of us. And so, if you don't get your answer, let's make sure you get your answer, and then follow up on that.

MR. WACK:

Cast vote record CDF, I believe also, that we'll be done with this by the end of the calendar year. More documentation to write. This was a lot more difficult than I expected. I went into it thinking, you know, we've already got this mainly done, but that's not true. It actually is a format that not only has to capture kind of the raw output of a scanner, but also has to potentially link to any ballot images that a scanner may produce, write-ins, has to include any election programming decisions that the scanner makes, you know, overruling one mark or another, things of that sort. And has to include room for adjudication. So, in other words, it's a cast vote record that could have a history associated with it, of changes made as a result of election programming or as a result of adjudication. Two more, that again, I don't think will be very difficult, but I bet they will be. Ballot definition is simply a number of states in their VR data bases, store, you know, contests, candidate information. This could be transmitted to EMS's and also just ballot definition, kind of like a ballot style without the formatting, but you know, the contest and candidates in the order which they're supposed to be. Electronic poll books, I realized this is out of scope, or has been declared out of scope. I think when we began this we we're thinking it would be in scope, but a number of states have said we still find this very useful. And electronic poll books are newer, a wider range of vendors involved in creating them. So,

we believe this shouldn't be too difficult, because it uses a lot of the information that we're already dealing with in voter registration. States can use these today. You could put, you know, information in your RFP's. Some states have done that already. Certainly, kind of getting back to Neal's question, people can join in, in the interoperability working group. Democracy Fund, and I'll quickly be turning it over to John, has helped out this situation in two big ways. One, I'll kind of leave it up to John to discuss more when he talks about election business process modeling, but the other is in the area of spreading the word and being able to make it a success. So, without that effort, it just won't go very far as Matt was saying, as well, and Kate Allen Hubler (ph) is leading that effort. Getting back to my earlier statement about it's not up to us to say exactly where these will be required. We, you know, we can have our opinions, but it will come out in the process ahead of us. But we believe that, in general, these will be required in the VVSG. Because a format, like a piece of equipment has to be used across all states. There's going to be a lot of optional fields in there. But if, you know, we envision if something isn't used in a particular state, then you know, they certainly don't need to include this particular data in the format, but if they do, even if it's optional, it has to be in that format. Yeah, my last thing is, you know, for example, should the cast vote record format be required by

scanners, EMS's, and both those are decisions that will be made down the road. Okay, I'll just leave this in your slides just for more information, a couple of URL's. But mainly if you go to vote.NIST.gov that should lead you down to any of the other places. I'm going to skip this slide and just go to the last one. So, as kind of a review we're starting out with a business process model, generating a UNL model, generating a specification. So, the person who's working on the, kind of a root foundation of this, is to my left. One other note of thanks, so Matt when he was working for the State of Ohio pushed this project, and John was working for him. And made John available. And it was, you know, a God send, so it, you know, their involvement in this really helped tremendously. And the fact that Ohio used this election results reporting specification for the 2016 elections, you know, was really big. So, we're very grateful for that, that helped tremendously. And I guess, how about maybe if you have questions, but could I hold off until John's done.

CHAIR MASTERSON:

Yeah, let's have John go, and then we'll entertain questions. So, next up is John Ziurlaj, who John Wack just referenced, used to work with me in the State of Ohio. I'd love to take credit for pushing him into this common data format work, but as a young IT employee working with me in Ohio, John wanted to do it. He

actually just started getting on the phone calls, and participating. So, for whatever twisted reason, John loves talking about this stuff and working on it. And so John is now contractor with the Democracy Fund, specifically tasked to work on this. And so John is going to talk a little about what he's been tasked to do, perhaps most importantly, the timelines he's been tasked to do it under. And sort of what the purpose of the work is. And so, John, thanks for being here. It's good to see you again. And go ahead, and share with the us the work you're doing.

MR. ZIURLAJ:

Thank you.

CHAIR MASTERSON:

I forgot to mention he also has dulcet radio voice, so we'll all be soothed during this presentation.

MR. ZIURLAJ:

Well, hopefully I won't put you to sleep. So, I am today going to go over what I've been working on for the last several months, since joining Democracy Funding as a contractor. And that is working on the fundamental building blocks that are going to make up the common data formats. And modeling is a way to understand things at a holistic level to make sure that we're thinking about things -- not looking at the trees instead of the forest, so. The modeling work was originally proposed by Kenneth Bennet under the IEEE

process. And he was really kind of working in the toiling in darkness for several years. And I remember several times being on phone calls where it was just me and a few other people, but, you know, we had belief in this work and, you know, certainly a great deal of credit goes out to him. So, like I said, modeling creates a common basis of understanding. We're talking about concepts, we're talking about processes, we're talking about organizations that conduct those processes and timelines for them, and how all those things fit together. The modeling, hopefully, if it's done correctly, should allow us to provide to people outside the field a good understanding of how elections work. So, I'll show a little bit later that we've actually publicized this work in an interactive portal that anybody can go to and look at processes and how they fit in with data formats and organizations, and so on. So, like I said, this work is at a higher level than actually the common data format. So, how does it aid in the common data format work. And it's really by understanding areas where common data formats are needed. So, it answers questions like is there a CDF for this interchange. Are there certain data inputs and outputs required for a process? And what are those inputs and outputs. And that's an the area of potential interoperability. It's also possible to use this to trace requirements. So, we've scoped the work and we said these are the processes that A, election authority extensively does, and

are there requirements for these items in something like a VVSG, but even like an RFP. And conversely, do requirements trace to a particular task? So, you know, a coffee maker, algorithm is probably outside the scope of an election system, for example. So, help scope the work. And this just briefly shows how rules, policy, and procedures, and norms flow into the processes that we have scoped to model, and those are automated by information systems built according to requirements that being the VVSG, or common data formats or jurisdiction specific standards. Probably going to gloss over this slide, but this was the original project authorization under the IEEE, and I've highlighted several of the terms here, kind of going over what the purpose of the work is, and you know, identifying how things relate. So, Matt told me to leave this slide in.

CHAIR MASTERSON:

I do. I love this slide. I love it.

MR. CHOATE:

I think you're going to need to go over that in detail for us.

MR. ZIURLAJ:

Do you have an hour or two? All this is saying, so at the top level is the executive perspective or a high level of representation of how elections work. And as you go down you start to see things more and more defined. So, at the lowest levels you have an actual operating system. And it kind of shows how election modeling is

that fundamental work that's talking about things like, process definitions, scoping it to elections in the United States according to an election calendar, according to law. So, that's the things we're modeling. And then as it trickles down it helps identify the types of entities and classes and processes that require interoperability work. And I thought I'd just briefly mention that there's a lot of empty cells and that's because that's the task of vendors and election systems, that actually implement some of these items such as, actual source code as configuration of equipment, organization structure at state and local level. So, those things are out of scope. So, we've been having calls about once a week, sometimes a little bit more, and trying to interview subject matter experts. So, it'd be election experts, people who do this day to day. And make sure we have broad base of understanding across jurisdictions, across regions, on how elections are conducted. And now that we have pretty much finished the actual process modeling we're moving into a more of a validation phase, where we're understanding -- we're making sure the work is broadly applicable, that we haven't missed anything that we're not modeling things inconsistently, and getting the work ready for publication. So, hopefully this will play. If you go to [pages.NIST.gov](https://pages.nist.gov), blah, blah, blah, but if you go to [pages.NIST.gov](https://pages.nist.gov), there is a link to the election modeling portal and this is just a video demonstration of that portal. Basically, you can

click on and click through and drill into any of the processes you're interested in. So, this brought up send ballot electronically, and there's a narrative description of each of the boxes in there and then there's what looks to be a flowchart that describes how that process is modeled. So, next steps, the catalog or list of processes is pretty much complete. We took a look at the election cycle working groups and their good work mapping out processes and found some gaps and reincorporated that into our work, which we have started elaborating. The process model itself is very close to completion. Like I said, we're in that validation stage making sure everything fits in nicely. The motivation model is just a way of tying laws and policies to processes. So, we understand why we do things in the election space. Another area of interest is a glossary, a lot of these calls involve people across jurisdictions, they have their own lexicons and it's very difficult to talk about things if you have different meanings for the same terms. So, we're looking to establish glossary for the work we've already done, but also, perhaps scoping out a larger glossary that would cover the process models the data models, common data formats, so when we use particular words, we mean the same things. So, one thing we didn't do with the common data format work, is we didn't establish a high-level model that would encompass all of election data. And it would have been a lot of work on the front end. So, because we skipped

that step we've been able to get out good standards of people that are using like the 1,500-100 election night reporting standard. But at the same time, we need to make sure that the way we model things again is consistent and that we mean the same thing when we use the same terms and that the work is coherent as a whole. So, we're looking to build a data model that would constitute a catalog that if you needed a voter class, say you can pull down a voter class if you needed, something to do with early voting you could pull that down and then common data formats would just be a set of those data classes put together. So, this is an aggressive timeline, like I said, we're almost done with the process modeling. We're looking to start work on a glossary soon. And also, work on the semantic data model. We're also looking to build some new common data formats likely in the area of voter registration or electronic poll books that would be based on these high-level models. Questions?

CHAIR MASTERSON:

Thank you, both to John and John, for the presentation. And talking with it; it's like John Z and John W, the John show. So, I open the floor for question or comments on either portion of the presentation. Lori.

MS. AUGINO:

I'll say John squared.

CHAIR MASTERSON:

That's even better.

MS. AUGINO:

Super, just happy with the work that you were doing and continue to promote. We're in the process of issuing an RFP and we're tying to as many common data for -- pieces that you've already completed, and then looking at future compliance too. So, it's work that we're going to be adopting and we're going to benefit from in Washington State, and I know other states and locals are looking to include those kind of requirements in their future RFP's, too. So, thank you and please keep it up. It's important to us.

MR. ZIURLAJ:

Great.

CHAIR MASTERSON:

And I would just quickly turn that around on you all, too. And I know Washington's been doing this, but to this extent states are wanting to incorporate this into RFP's and use it. It's also incumbent on the states to be involved in the development process, right? Because it's going to directly impact you. So, I know Washington, but John and John are desperate for more election folks, but that the state, but particularly the local level to participate. They will do anything. They will beg for it, so. I highlight that need.

MR. WACK:

John will sing for you.

MR. ZIURLAJ:

No, no, please.

CHAIR MASTERSON:

Diane.

MS. GOLDEN:

I'm also very excited, but for a different reason. And I've brought this up before. Interoperability, just the concept to me, I understand it when you guys say it to me, it means something complete different in my world, which is interoperability with the specialized technology people use to access general IT stuff. And so, when I -- and I understand common data formats for other purposes for behind -- back in data management etcetera, etcetera. But when I start looking at some of things that came, like send ballot electronically in common data format issue, that can be used to drive accessibility user direction, and so I would beg, plead, and you're on the right track anyway when you're talking about XML and HTML and standardized that's what interoperability in my world means. And there's just probably just a few tweaks and issues. Anything that has to do with -- I was jotting notes, ballot definition, you know, if those things include the right structure and tags to drive accessibility toward the user when it comes to sending a ballot electronically when my users got assistive tech at home, you

know, rather than sending a static PDF that's useless, you know. You get what I'm driving at, so I don't know, I'm not asking for more work, but I can certainly connect you with people. I mean, any of the companies that are -- the screen writer companies, or any of those folks would be dynamite resources for you in terms of anything within that common data format that would -- you're not fixing it after the fact. You know, you've got 90 percent of it there, but then it's missing the 10 percent of the Q's and hooks that makes the AT work. And I'll put another plug in that's another place where eight of the assistive technology industry association if we could get them involved, you know, those people are members of that trade association. And those are the folks that are going to be able to very quickly tell you, you know, what's missing and what needs to be added to those common data formats.

CHAIR MASTERSON:

Thank you, Diane. Other comments? McDermot.

MR. COUTTS:

McDermot Coutts. So, again, I've always been a big fan of your work. And in fact, I'm actually waiting a certification on a system natively exports the logging and the ENR, though I, granted, the slightly earlier version, at this point. Couple of comments, well one comment and one concern and one question. One of the things does wind up being an issue is that the files do get a little bloated.

And so, I think that's something we should very much keep in mind as we move through trying to get as much data into these as possible. They get very big and very unwieldy very fast. And then what conversations have you had around securing and validating the exchange of these files and data?

MR. WACK:

When you say securing and validating, you mean, you know, such as digitally signing. So, we have -- this is a question sort of before the Cyber Security working group on the best way to do this. I don't know, eventually, what those recommendations are going to be. But we have included, I think it's a W3C XML Desig package, and just assumed a capability should be there for digitally signing and export, or validating it and also so with Json. So, that's what we've done thus far. We used the packages. We verified that it works. Whether that will ultimately be the way the VVSG wants manufacturers to do it, I don't know, but it's what we've done in the meantime, and we're open to any further guidance that there may be from the Cyber Security working group on that, or manufacturers, you know.

CHAIR MASTERSON:

Other questions or comments? David. Thank you.

MR. WAGNER:

David Wagner. Thank you for doing this work. I think it's going to be very helpful to improving elections. I'm curious about -- I'm trying to think through the implications of the elements you presented there. Would the direction lead to common data formats and standards that would, for instance, enable using a vote capture device from one manufacturer with a system from another manufacturer? I'm trying to think through what this would enable.

MR. WACK:

It could. You know, going into it, I thought, sure. You know, not a problem. But it gets a lot more complicated. I mean, you know, for cast vote records, let's say if cast vote records are exported by a scanner, I'm sorry cast vote records in a common data format, then there is a more interoperability between the scanner and the EMS, but there's so much other information involved in ensuring that, you know, that scanner has the right programing and it's the right EMS, and you know, other things that the common data formats have not addressed. So, I think that in the area of electronic poll books, that's where I think true interoperability might be easiest to achieve but when you go inside the voting system it gets more complicated more quickly, but I think the -- in conversations with the EAC, they would like to eventually end up with a component certification program. Or you know, an ability to do that. And the example that people bring up to me and to others often times is the desire for a

jurisdiction to be able to use the latest and greatest accessible voting device, and that ought to be easier to plug that in than currently. So, that is the ultimate direction, and I think it leads to it, but there's you know, as you know, there's so much more involved.

MR. COUTTS:

One addition to that is, the common data format does actually greatly improve the testability of a system when you can have at the labs a standard in and out, that means that they don't have to spend a lot of time putting together a million different test cases. There's a certain amount of that that can off load. It's the same for everybody. Put this in, you get that out. And so, this is sort of a side benefit that really is going to help the manufacturers in order to speed up their testing, make it less expensive, and therefore less expensive for everybody to get. Did it again.

CHAIR MASTERSON:

That's our sign. That is our sign. That's usually when Homeland Security entrance music usually comes on. David, to answer your question a little bit, I'll get in John Ziurlaj, I'm actually going to put you on the spot when I finish this. I mean, long, long term as McDermot mentioned, I think there's a desire we've heard from election officials, particularly at the most recent Board of Advisors meeting for instance, where the election officials would love to see that kind of component interaction. We recognize at least from a

certification stand point that is much harder than it seems, even with the common data format, but it's something we've heard from the community, they desire. Before that though, I mean the -- I wouldn't say the dragon force but one of the major motivations in any election official that bought voting systems around HAVA, and also registration data bases around HAVA knows this, they would buy from the same vendor and not the fault of the vendor, by the way, and that registration system and voting system aren't even in the same data format within the same vendor for reasons historically and what not. And so, we're trying to solve just the simple challenges on this, to be able to exchange data seamlessly amongst the systems as McDermot said, improve the efficiency of testing, be able to export out EAC EAVS data in an efficient manor instead of the painful collection process that we have now. And so those are just simple common data format goals that we have right now with the more complex sort of component interoperability looming large out there, but we'd like to solve some of the simpler problems now, I think now -- I was going to ask you John for a state perspective as you working a state IT shop, why did you feel the need, other than me talking to you about it, which is nothing, why did you think this was important? Why were you so keen on working on this? What benefits did you see?

MR. ZIURLAJ:

So, I think one of the benefits was that when you work with a group of people that are all very passionate about this work, you end up with a better work product than you would have if you had developed it yourself. So, I thought this was a good opportunity to have a sounding board with my peers across jurisdictions to, you know, see if some of these ideas were going to work or not. So, you know, it is a deliberative process and it takes time, but I feel that the work product is much better than if you were building something as a one off, so. Additionally, I would say that it would allow us to purchase COTS equipment down the road. For example, voter registration, it would simplify things for a certification at the state level, Ohio is a bottom up state, so by defining these transactions between a state entity and a local entity it's solved a lot of problems for us potentially. And that's just a couple of examples.

CHAIR MASTERSON:

No, it's -- and the other example that'd I use that John Wack alluded to but it is important. I mean, the Associated Press has been involved in this directly and highly. I mean Don Rahill (ph) has been in this for a while, because they see value in this exchange in data in that way, and so, it reaches even beyond just the election official and their systems, but in fact, you know, Google and AP's involvement both has helped improve the data format, I

think, but also, they see value in this seamless exchange of data and in fact, in Ohio in 2014, right? We're able to feed the AP and other media organizations directly using the election night reporting feed, which is pretty awesome. Other comments or questions on this?

MS. AUGIONO:

I'll just add that from our perspective we see reduced risks. So, there's less times my local election officials and my team have to sit down and key the same data. You know, enter it once and then have it transferred across platforms. It can provide us a better opportunity to be in compliance. Compliance with being able to respond to EAVS data, any kind of data requests. We see it as an opportunity to save money. Again, anytime we're having to enter this information fewer times, then we're going to see a benefit to -- cost benefit. I think it would also provide more redundancy in the ability to recover an emergency. And I think it's also going to provide us an opportunity to comply with state -- changes in state law, because we're not having to monitor those so many different layers of codes, if you will. So, there's just -- and that's just like the tip of the iceberg. I think they're going to be so many benefits and I'm looking forward to being able to reap those benefits in the next couple of years.

CHAIR MASTERSON:

John, if I were you, I'd clip that and just go ahead and put that up on a website and start selling it to election officials. Neal?

MR KELLEY:

I just want to add, just going back to my earlier question, you know I've been involved with CSG on this work for section b EAVS data in getting that common data format and just in California alone, 18 million voters -- or 18 million voter records can be affected very quickly by two manufacturers. So, if we can get this low hanging fruit on some of these issues, particularly what I'm talking about is the EAVS data and get maybe automated extracts are coming out, as opposed to even like Lori's point keying that data. We could start knocking this off pretty quickly, so. It's a pitch for California.

CHAIR MASTERSON:

Yeah, no. Absolutely. You know, I think the potential here for both short term and long term benefits is large. Thank you, both, for presenting. Thank you, both, for the work you're doing on this. I appreciate it. The other thing I'd note, so you all ask what happens to resolutions, or whatever that we do. I'd note that the Board of Advisors at their recent meeting passed a resolution encouraging the EAC, and I guess, tangentially, NIST, to have a common data format in place in 12 months from the time of the meeting, an aggressive schedule, but what I appreciated about what the message they were sending is there's an urgency and a desire in

the community to have this. So, John's work, John Zirulaj's work and John's continued, John Wack's continued to work on this as an effort to meet that urgency, I would say. And so, we here at the Board of Advisors on that and share that urgency, I think, so. Next up, what is Josh Franklin, come up young man. I don't know if you want to T up. So, Josh was asked to talk about kind of the whew that it is a bad joke on that first slide. Wow.

MR. FRANKLIN:

Inside baseball.

CHAIR MASTERSON:

Marginal remarks on voting systems security. That is painful. Whew. So, Josh was asked to come and talk about sort of the current stated security, as he worked on the VVSG requirements as well as other work that Josh does. And in particular, both Mary and Josh and so, I'll give you a chance to introduce Josh's remarks, attended DEFCON recently and spoke to some of the folks there and had a similar conversation with them, and so we wanted to offer the TDGC that opportunity to hear that same conversation. So, I'll turn it over to Mary to kind of introduce.

MS. BRADY:

I do think that Josh has may be some of the slides that were left over from DEFCON, but I think, you know, what we're trying to do here is to provide you some information on the changing threat

model in voting systems over the years. And leave you with some ideas about, you know, how we might be able to move forward.

CHAIR MASTERSON:

Josh, it's all yours.

MR. FRANKIL:

Definitely. Thank you, everyone. Yes, this is definitely part of the conversation that we had at DEFCON. That slide had a lot of intro material that really wouldn't work here. So, you know, I had some additional thoughts and opinions. So, basically, we're going to talk about overall election infrastructures, security, voting system security, some you know priorities that, you know, I see in this area and some, you know, possible ways forward. I really enjoy this slide. It highlights, you know, practical election security issues from 1934. This was work done by Joseph Harris, when he was studying election administration issues back then. And what you'll see is that we are still concerned about many of these issues. In fact, we have, you know, with the advent of electronic voting systems sort of made modern electronic analogs to many of these without necessarily solving some of the older ones. And it sort of just interesting to look at the, you know, types of things that they were really worried about back then. But today we have a much larger and more diverse election system. We have local and online voter registration systems, some you know, states even have

counties with dedicated terminals to interact the voter registration system. We have electronic and paper poll books, candidate filing systems. And that's just some of the back-end infrastructure campaigns, you know, themselves, also have some you know pretty complex tech. You know, especially campaign voter information databases. On the right side of this slide, you see things that are more vote capture and tabulation systems things that this body is more generally concerned about.

MR. CHOATE:

Though, I'm just curious, Josh, did you draw that? Where did that come from?

CHAIR MASTERSON:

You did.

MR. FRANKLIN:

I ain't gonna say nuttin'.

CHAIR MASTERSON:

He drew it.

MR. CHOATE:

That is pretty impressive. I like that.

MR. FRANKLIN:

You guys are welcome to steal it.

CHAIR MASTERSON:

If I were you, just drop the mic and go.

MR. CHOATE:

That's right. You're done.

MR. FRANKLIN:

Well this, everybody can buy me lunch. No, it's a -- I mean, you guys are welcome to take it. It's definitely a rehashing of Merle King's famous slide. He had a lot more information in there that I sort of --

MR. CHOATE:

But's he's not an artist. So, there's a difference.

MR. FRANKIL:

Yeah, so. So, we have to start thinking about, you know, what practical attacks are we having on these systems. There were lots of press on election attacks that we saw in the 2016 election. What are we actually seeing? Now a days, we are, you know, we have seen you know attacks on voter registration systems, data exfiltration from voter registration systems. We've seen phishing attempts of both election officials and voting system vendors. We've seen doxing of political campaigns where you know, private campaign information is made public, and then attacks on back end non-tabulation systems. And I do think that we need to take step back and say are we doing what we need to, you know, protect the overall election infrastructure of the US. And you know what, this office of the Director of National Intelligence report is actually

saying here is that, they think that, you know, these attackers will be back. So, you know, we need to start planning now about how to, you know, make our overall systems more secure. And I think we've been all taking steps toward that. So, now a days I do think we have an expanding threat model. Traditionally, I think folks were really worried about physically approximate attackers, folks who had physical access for a long period to, you know voting systems. Accidental events, and natural disasters were generally the most common issues, you know, leading to incorrect election outcomes. You know, we haven't necessarily seen a lot of, you know, attacks on vote capture and tabulation systems. And just, you know, general events affecting public, you know, confidence and trust in the overall voting system. But know lately what we've seen is that if a nation state threats, you know phishing of work and personal accounts. Attacks on supporting election infrastructure. So, I think what we need to think about now a days for our more modern threat model is all these traditional attacks and then all these new recent attacks as well. And it definitely makes our jobs a lot harder. So, what does a modern voting system look like. You know, the actual systems that are deployed in most states right now. Most of them right now are running some sort of legacy Linux, you know, OS they typically are using an older or, you know, priority physical media. Many of them -- most of them have a

working TCP IP stack. Wireless and public telecom is, you know, fairly common in some areas. These systems are basically mandated to last for 10 to 15 years and software updates come to these voting systems, sometimes. But, you know, this is slowly changing. Hope I'm not making McDermot a little unhappy over there, right. You know, and folks who have actually taken a real serious look at these systems have noticed some issues. NIST has done some internal research that will get published at some point in the near future. Basically, looking at all the academic and other literature available for when people actually got their, you know, hands on voting systems, and actually got to look at the source code and these systems work. And what they saw is that it was fairly often to have large cryptographic flaws, large issues with authentication, large issues with input validation, and these are pretty common security categories of issues that many industries are having to, you know, to deal with. But what's been changing, since, you know, the 2007 recommendations to the EAC, there's been a lot of changes in both industry and voting system tech. In terms of security capabilities that are in industry. We have, you know, newer things like secure boot strong process isolation. Many of the phones that you all have in your pockets have some really nice security capabilities that we would love to have on modern voting systems. Exploit mitigation technologies, new and fancy

network protocols. We have, you know, larger more practical cyber security frameworks, things that can help out with, you know the actual operations and administration of large IT systems. All right; in terms of innovations and voting systems security, we have the concept of software and independence, risk limiting audits, EDE verifiable cryptographic protocols and just generally recognition usable as a security issue. It would be absolutely wonderful to, you know, incorporate both of these industry practices and newer things into some of the security conversation that we're having. And I think that we definitely are, of course, with software independence in some of these other areas. But paper itself is not a panacea. Paper ballots provide tamper detection and enable audibility, but paper can be modified, swapped, as we saw thinking back to that 1934 slide, lost, stolen, definitely, seals and chain of custody actually need to be verified or maybe it's not -- you know, Maybe they are not serving their, you know, intended purpose. Same thing with software independence or you know just any system that's actually using paper ballots. If we're not, you know, checking the election outcome that's potentially a big problem. I think we all recognize that administrative controls are extremely important, have a huge impact on the election process. And just cyber hygiene issues, as well, exist. And all these things are, you know, problems even if you have a paper based or software

independence voting system. And so, that sort of leads me to this next concept. What can we lean on? What's out there? What do we have standards and best practices for? Standards and best practices are definitely different concepts. Something like a standard might be HTTPS, you know, what that actually means to a developer that's going to make up a cryptographic library for that standard. But best practice would be to actually use HTTPS for instance. The VVSG is a voluntary voting system standard. And its sort of a bit the only game in town sort of here, that we have. And we have tons of best practices available from, you know, multiple different areas including EAC, DHS, NIST, EVN's top 10, these are excellent resources. But I think we might need some, you know, additional work in these areas. In terms of voluntary security standards, again we, you know, essentially have DRE's, op scans, ballot marking devices back in election management systems. We are, you know, lacking voluntary security standards with many of these systems. And maybe that's okay. This is just something to point out, food for thought. In terms of best practices, we are starting to get some great work in the voter registration realm, especially with DHS and EAC helping out. Same thing with election night reporting, NIST has done some work with some UOVCAVA systems. And then, of course DRE's op scans and ballot marking devices, we do have some work in that area. But there are best

practices missing for some election IT supporting systems. But I think we can take a look at. In fact, many of these areas that we do have best practices for, maybe we need a more full treatment of that topic. These are definitely complex information systems that have a large, you know, impact on our nation.

So, these are sort of my big important election security issues. We need both accessible and auditable systems. We need external scrutiny of voting systems. It's a nice check against the EAC, NIST, voting system test labs, certification process. Generally, when third parties get their hands on these systems, we learn something new. And so, I think external scrutiny of these systems is actually fairly critical. Software updates for voting system, Mr. Kelley brought this up yesterday, making sure that we don't have voting systems with 10-year-old critical books is pretty important. And I know that the EAC is working to address that issue. And just generally, this security posture of some of these porting infrastructures systems is just unknown. A lot of people haven't been able to take a look at them. That's on the technology side. On the election management side, we need meaningful post-election audits, and start incorporating new cyber hygiene procedures into the election management process. I'm not saying that, you know, no one does that, it's just an important aspect, that I think we need to focus on. You generally can't just put up problems

without solutions. I'm pretty sure Matt would yell at me, and then Mary would have her say too. So, solving these issues, I think these are some pretty reasonable steps, threat modeling and risk assessments for all parts of the election process and for all these systems involved, I think it's definitely worthwhile taking a look the systems that were actively attacked in the 2016 general. I think we need best practices for procedural election security. When I go and visit counties and jurisdictions, people are definitely doing things differently, but it's sometimes hard to understand if something actually has a tangible security benefit, or if it's just sort of something that people have been doing for a long time. I think it might be worthwhile for someone to go in do that, do that research, see what's necessary, see if we can trim some fat and make the physical security process itself a little bit cheaper, meaner. Same thing with post-election audits, there's tons of different post-election audits. And everyone's implementing them differently. I think it might be worthwhile to, you know, take a look at some of these and you know, figure out some best practices and procedures for doing that. And my thought on many of these is that, you know, this best practices and guidance are going to be coming from many of the folks here who are actually doing some -- many of these things. I do think that we need to be looking at usable security controls for voting systems, making sure that we're increasing security without

affecting access, you know, without making the systems harder to use. Secure patching, that could be something that could be implemented inside the EAC's certification process or maybe it's something that we can put into the VVSG, maybe it's something that's just the community comes together on to make this happen. And I think we need better information sharing, between all levels of government, local, state, federal, industries, just the general security community. Another big solution, I think is just more enhanced cyber security awareness. All industries, I would say, are generally dealing with this. You know, we could be talking about a big hack that affected some big US companies last week. But then you might not think that I'm talking about the same company, because it's hitting every other, you know, it's just hitting so many different sectors at the same time. You know, elections is no different, we need to have increased cyber security awareness. We need to do, you know, we need to help folks understand, especially election officials how modern computers are really attacked, a things like an air gap is extremely valuable but it does not stop everything. You know, DHS has been doing some awesome work in this area with online education materials, so has the EAC. But I think election officials need cyber security information and best practices in a language that they understand. I don't think we should just be handing large technical documents to

election officials, without putting that information in the context of elections, which is going to be hard. Right? That's going to be a difficult thing, it's going to take time, unfortunately. But, you know, when we start doing that, I think things like, incident response would be a great starting point, physical and operations security, you know decommissioning older systems and sanitizing the media before these older voting systems are given away. Authentication issues, password and cryptographic key management, I think would all be excellent topic areas. So, who's going to actually do this work, right? NIST, DHS, CAC, can't do this alone. Local election officials can't be expected to defend themselves against nation state attackers, but many of these issues are broader than just the tech -- that we're just sitting here talking about. We have policy law procedures, people it's -- this is a very complicated space. And it's going to take a lot of work. But I think it's going to basically take government industry, academia, greater, broader elections community. I think this is a conversation worth having. I know it's outside of our scope a little bit, but I just wanted to bring some thoughts up. Any questions? Tons of references, if anyone's interested.

CHAIR MASTERSON:

Yeah, no one's interested. Questions or comments for Josh? Neal.

MR. KELLEY:

Josh, thank you, by the way, for this. You had a couple slides ago had mentioned the desire to have external scrutiny on voting systems. And I'm not asking you to solve the world's problems today, I'm just curious how do you envision? What does that look like?

MR. FRANKLIN:

That's a great, great question. And that's a really hard issue. I think that the DEFCON voting hacking village was fairly successful in that area with having a realistic and meaningful conversation about what the current systems look like, what can we do -- I'm sorry what can be done to secure them. I think that might be one avenue. I could definitely see having some universities provide regular access to these systems. Maybe this is something that if there was, for instance, like an open source voting system, that would be something that would encourage open scrutiny there. That is a difficult challenge there that I think is going to take a long time before we start getting there.

CHAIR MASTERSON:

Other questions or comments for Josh.

MR. COUTTS:

Technically, we do have external scrutiny on the voting systems. It's the EAC.

MR. FRANKLIN:

Yeah, I mean, the EAC's process is critical there. It's just sometimes when, you know, folks who think a little bit differently. You know, get their hands on voting systems. They tend to be coming at this security model sideways. In ways that were not really intended from the outset. And we always tend to learn something new there. And so I think, you know, a little more external, might I say.

MR. COUTTS:

Understood.

CHAIR MASTERSON:

Bob?

MR. GILES:

I just want to thank you, Josh, and Mary, and NIST, and EAC, and I know DHS coming up, but it's been a crazy year for election officials in this room and you guys have really done a great job keeping us informed and I think we're probably going to talk about it in the next session, but we're really in the cusp of kind of taking that next step, so we're pretty excited about that. But I wanted to recognize the work you guys have done at NIST and EAC, and DHS.

MR. FRANKLIN:

Thanks.

CHAIR MASTERSON:

Diane.

MS. GOLDEN:

And I just wanted to acknowledge I'm so happy to see a security session that actually doesn't ignore accessibility and acknowledges that we're not going to go down this -- I know, Josh. And I know.

CHAIR MASTERSON:

Don't spike the football, Josh.

MS. GOLDEN:

I'm complementing you. And what's so interesting is, many of your side by sides we have standards for this, we don't for e-poll books, we don't have accessibility standards for e-poll books. We don't have -- every place you said we don't have security specific we don't have access ability specificity requirements either, so. We're in this ship together, guys. You know, everything that we're trying to balance it over here on the standards, we got the same issues. And trust me, the disability community would love access to voting systems to do external reviews on them. It's the same exact issue you can't get your hands on them, you can't buy them unless you're an election official. So, you can't train people how to use the electronic interface because nobody will sell one to you, they won't even sell you one that doesn't tabulate votes. We have the same issue about that external access too. They are not publicly available and transparent. And it's a big issue, a really big issue.

So, I'll make that plug, it's not just a security issue. It's an accessibility issue also.

MR. FRANKLIN:

I didn't think about that; makes complete sense.

CHAIR MASTERSON:

McDermot?

MR. COUTTS:

There's also a big training issue here, because -- for all the best laid plans of the vendors in trying to put security in place. If the, much like a driver going down the streets of New Jersey, if they choice not to use the turn signals, there's nothing we can do about it.

CHAIR MASTERSON:

Linda Lamone.

MS. LAMONE:

In reaction to what you just said, Diane, it's my understanding and that, at least, recently for the last six, seven years, a lot of the vendors have been giving their voting systems to like the National Federation of the Blind for training and outreach. No? They're not doing that anymore?

MS. GOLDEN:

As far as I know, NFB has that national contract that's under HAVA 261, or something, anyway, section. But the equipment they got

was original equipment, I don't think they ever gotten anything current, or new or. And we've just tried it locally, again doing -- when we had the EAC grant and we were doing structure demonstrations to see how long it took people to get comfortable using access features, and I mean, we had to beg, borrow, -- we had to, in one state, where we did the demonstrations we had to pay to rent the equipment directly from the manufacturer because we couldn't get it any other way. And you can't just buy it if you're not an election official. So, anyway.

CHAIR MASTERSON:

So, the experience was similar -- I mean, it is kind of crazy to both - - DEFCON's experience was the same thing where they bought it off e-bay but it was -- you can tell me if I'm wrong, original equipment with original HAVA funds, not any of the newer pieces of equipment, so it is similar conversation and several of the systems DEFCON had already been de-certified in a number of states. I have a question. Go ahead, Marc.

MR. GUTHRIE:

You know, Matt, I was just going to point out that I know that the Ohio Secretary of State works -- I know with the American Counsel of the Blind of Ohio, but you know, with all of their voting equipment.

CHAIR MASTERSON:

I think several states do, do some of that, but I think the challenge that Diane has routinely pointed out to me over the years, which isn't wrong, is that the best time to get in with the manufacturers and do this is while they're designing and building, right? Once the states gets a hold of it, there's less that the state can do, either to improve the security or accessibility of the system. The question I have for you is kind of a general and may even pull into one of your other areas, and that is there after this year some of the activities and conversations and what not, there's a hesitance amongst some in the elections community to engage the security community because there's a sense of fear of embarrassment or a desire to not engage in collaborative fashion, fair or unfair. What suggestions do you have, if any, to improve that engagement, to have a more collaborative engagement where there's a recognition by the election officials, these folks have something to value to bring in this conversation and there's a recognition from the security folks that election officials haven't been ignoring security. In fact, giving the limited resources they have, they've been really engaged on this. They may not know what to do or as you said, may not come from it at the same angle, but they want to -- I don't know an election official that doesn't want to improve the security, it may be just be an understanding. So, what suggestions do you have on a

collaborative working together front and tangible steps perhaps, that could be done either by us or election officials to do that?

MR. FRANKLIN:

Yeah, I mean, for -- so I've definitely seen many security researches come into this area and thinking that they know everything there is to know about security and then find, you know, they're left wanting a bit, because you know, elections is a very deep field. And so I think that as folks learn more about elections, they start having a more responsible conversation with their election official. And so to that end, I definitely say that any security researcher wanting to get into this area, you know, needs to talk with their local election official. Elections are a hyper local activity and so getting involved in that, you know, process and actually learning how elections are run is how we start having a good conversation there. I think another issue there is responsible vulnerability disclosure. You can't just, you know, 10 days before an election tell everyone that there is a critical vulnerability in some election system. You know, without offering time to fix it. It's -- yeah. People don't need to be dropping to zero days on election day. I would say that we sort of saw some cyber security firms in 2016 trying to do things like that. And I think that really hurts this conversation, and at least, I've been working in this area since 2004 when I first came in I saw a lot of animosity on both sides

between the technical community, I would say, and then between election officials, but as I've been here for you know, the past 10 plus years, gosh I'm getting old, is that these communities, you know, learn to work together. And at least they're really starting to have meaningful conversations that are making all of us more secure.

CHAIR MASTERSON:

Thank you, that's a really good answer. Any other questions or comments for Josh? Okay. Josh, thank you, and it leads nicely into our next presentation. So, I'd invite -- unless, did he just leave? On the phone. Phone down, Juan, phone down. Next to present is Juan Figeroa, from the Department of Homeland Security. Juan, I'll leave it to give your exact title, because the DHS titles are always hard for me. I think, I, and those of us who have been engaged with DHS know Juan as the lead in working on the election infrastructure subsector. I've enjoyed getting to know Juan and working with Juan, I think folks at the table have, too. So, I appreciate, Juan, you being here engaging with the TDGC and look forward to your remarks.

MR. FIGEROA:

Well thanks. Thanks for this invite. Actually I just left Under-Secretary Krebs and Secretary Kolasky briefing on a couple of events that are coming up this week, and they send regards and

they also appreciate the invite for us to be able to present. Couple quick slides on what we've been up to in the subsector from here. Again, Juan Figeroa, I am the Election Infrastructure Subsector, Subsector Specific Agency Team Lead.

CHAIR MASTERSON:

I told you I'm not getting that right.

MR. FIGEROA:

We'll get to that. And I need to have it tattooed up here somewhere, because even I get it wrong sometimes. But either way, we're going -- I'm going to take you through some high-level slides. We can go as deep as you want, but the idea was to give you a quick overview. I believe there's an ISAC -- anyone else presenting in conjunction with me? Okay, great. Am I slide master here? Great. Okay. So, starting at the top, in the beginning, the designation, which many of you are more directly involved with than I was, but a key part of the formation of this subsector Secretary Jay Johnson back in January 2017. I bring it up because between the designation and follow on memos the election infrastructure subsector was more or less defined. And so, initially when we talked about storage facility and polling places and things along those lines. The designation as the second bullet gets to -- enables DHS to prioritize assistance to the state election officials. One of the big benefits that we think, but the more we know about the

election community, the better we can prioritize and determine and tailor things you may need, your requirements on a voluntary basis. It's a subsector of the Government Facility Sector and I wasn't going to get into this too deeply, but I usually like to talk about where the SSA fits. The National Protections and Programs Director, which is headed up by Secretary Perez at this point, serves as the Sector Specific Agency for this subsector. So, let's see if I can take you through two obligatory or charts that might be of interest, may not, but bottom line is NPPD, where the SSA resides is located there. As you look at the top part of this chart, this is a typical staff for any of the departments or agencies in the government. If you look along the bottom, you'll see the big seven, Customs and Border Protection, Immigration, Coast Guard, FEMA, and down the line. At some point in time, we discussed NPPD, because of its ability to reach to the field to the operational tactical levels. We've tried to be the eighth block in that row of blocks, but that's legislation, that's discussions for another day. But bottom line, this is where the subsector resides, right next to policy we have close relationships and starting to work with S&T, on down the line. So, it's good positioning and NPPD happens to be a catch hall, and that's where we currently reside. As you drill into that block, this is NPPD and one of the reasons why it makes so much sense to have it here, is the middle blocks there, the office of cyber and

infrastructure analysis OCIA who have provided state assessments, for some of the folks maybe not here in the room, but certainly for New Jersey and Virginia the office of cyber security and communications, I usually don't go anywhere without Rob Gatlan [ph] many of you have meet him, but he's our cyber security lead on that side, and really a key part of where we're going with this, you've all worked in the past with Neal Jenkins and Jeff Haile, they're still in the loop, but they're not directly involved with elections anymore. It's moved into the partnership part of CSNC and that's why Rob Gatlan is the key part of that. And then over to the right of that, as office infrastructure protection where I live, and that's where the SSA resides. We have six other sectors specific agencies ranging from dams to nuclear, on down the line. So, we're modeling ourselves in this subsector, which is more like a sector. We're modeling ourselves along those other SSA's. Essentially manning four to six folks in the long term and providing the type of -- everything from Secretary to Coordinated support that this type of sector or subsector would need. So, that's the R-Chart drill, we'll get off of that, and move onto the basic reason why it was considered critical infrastructure. I don't want to dwell on this, but you can see what we think it qualifies and that's where the designation was made. 16 sectors are defined in the NIP and this is the subsector that we're discussing today. Among other things,

among other presidential directives and things like that, the NIP is our “bible”, it’s not the lightest of reads, but it does provide a lot of information, not necessarily about formation, but about governments and how we work within the NIP partnership framework. You’ll hear a lot of information sharing, a lot of threat risk management. A lot of the things that I think are important to any community that collaborates together. It talks about how it relates to the other 16 sectors, and then again, as Josh, nicely touched on integrating all levels of government profit and non-profit sectors, pretty important. And usually very successful. All 16 with their subsectors and some cases like commercial facilities or transportation, which has gotten very modal and has sub-councils and things. Seems to very affective in these partnerships have been in place for eight to ten years. This is an I-Chart but it was just show you some of the other sectors that are already currently operating and in place. And we’re going to leverage some of their things and introduce them to our Government Coordinating Council and potential coordinating council going down the line. Though each sector has the GCC/SCC for the most part, not in every case, we are very close to getting to a Government Coordinating Council than the election infrastructures subsector. We have a meeting on Thursday with the elections critical infrastructure working group, which is kind of the precursor to the GCC and I think we’re going to

talk about a lot of topics, to include whether we really want to start that formation meeting in October, or not. So, this is just for your reference for future purposes. You can see how some of the other sectors are organized. We talk a lot about partnership to those who are wary, it might seem a little hokey but the partnership -- the word partnership, the stakeholder and the partners are really key parts of making this work. Adding value, trust, getting to know people in the community and sharing information. Not necessarily easy to do at the state level, not necessarily is easy to do at the federal level, so when you put the federal and the state together in a situation like this, it's going to be even a bigger challenge, but I think we're making good inroads and moving together and getting to know each other's nuances, and what we can do to assist each other going forward. There's some of the benefits there, and again, voluntary participation is harped on a lot. If you don't want to play, you don't play. But the idea is that we provide enough information, sharing enough benefits, whether it's cyber assistance on down the line, that makes sense for folks. The key model that I touched on and many are familiar with in the room here, but I just bring it in here again for reference, Government Coordinating Council, we've already talked about. Enabling this across jurisdictional, and we have very unique arrangement. We've talked about when the GCC, we've talked about our chartered, we've talked about

enumerating the exact number of members from various Secretary of State levels, states senior election levels, organizations to include NIST, to include CSNC and NPPD, so very delineated charter. How we vote seems to been a big discussion along the way, understandably so. I mean, we haven't talked about as much in other sectors but this one particularly keen on voting rights within that Government Coordinating Council. And I think we're close to getting there. So, if anybody starts throwing food at this point, I'll understand, but I think we're getting very close. Sector Coordinating Council, we were fortunate in Orange County at the NASED meetings to have what was an information system with voting manufacturers set up by EAC. We appreciate the assistance they've been giving us along the way, because we don't know the election committee, election community as well as we could. And I think in the last three to six months, we really had a good relationship going on how we balance meetings, agendas, and getting people together. So, to get that first meeting off the ground with the voter manufacturers was important. We talked about being more inclusive obviously, because just like the GCC you want to broadly represented council that can in a sense balance the SCC and share information in a joint level if things mature properly, or if they even mature at all. And we think there's good hope for that and we'll look for an SCC meeting somewhere later down the line.

Self organized, self-run self government, we try to stay out of that from the federal side, but we do provide that guidance that we did in Orange County and we often -- obviously would like them to form as broad a representation of owners and operators, so that the counsel they give is representative of what they think the private sector election subsector should be providing the government. Our updates, and some of these may have been touched on, apologize for being late, but pretty much you can see who the participants are that are listed here, the charter is a much more detailed listing of those. We've been meaning to develop those things, as I've touched on. We're looking at mid October and potential initiatives and we're not trying to preordain anything from the federal side of it. I think we've talked in conjunction with our state and local partners about one of the early things you do, obviously after approving your charters, let's have a strategic plan. What are our objectives for '17, for '18, and I say for 10 years from now. What do we want to do? What do we think we can potentially do collectively knowing our resources are constrained, we're voluntary, but that's strategic planning is probably an important part of getting off the ground. Information sharing protocols are very important. We've had some, obviously, historically in 2016. There was some notification issues that continue to this day. And we're still working to better those and going forward we've obviously are

going to work very hard to improve our information sharing procedures with state and locals and how that's done. Tabletop exercises have been discussed, and I think we're going to touch on that on Thursday. So, there's just some of the things that the council can do. Taking yourselves as a state and local representative out of your state and area, and taking the feds up to a higher level. That's look nationally. What can we do that's going to provide guidance or provide assistance to the whole community. And then the SCC I've touched on, we had a good meeting in California. That's it. That's kind of the quick overview on those things. Knowing that I'm between lunch probably.

CHAIR MASTERSON:

No. Thank you, Juan. Appreciate that. That's the world's most intimidated slide that you ended on there. So, questions for Juan and Homeland Security. McDermot you're thinking about it, I see that.

MR. FIGEROA:

I'll turn the recorder off.

MR. COUTTS:

No, no. I've got the full report from the Orange County meeting.

CHAIR MASTERSON:

So, I don't know, and maybe some of the folks at the table can share, but if you could talk a little bit, I know we've obviously talked

with you all in some of the state and local officials about timelines, and you mentioned October as possible standing up the coordinating council. There's conversations, I don't know if you want to touch a little bit on the possible role of MS ISAC, and information sharing, but just a general update on timelines and the urgency, I've think we talked a lot, right? Urgency, that 2018 doesn't mean November 2018, it means now. So, can you touch a little bit on that?

MR. FIGEROA:

Yeah, I think the timeline, and again, we're trying to be as sensitive, we've already talked us folks about the blackout timeframe for elections that are coming up here in the fall. I think, you know, the week before, week after, was mentioned, maybe two weeks before, a week after. So, we want to be sensitive to having that next and maybe the first GCC meeting in the October timeframe, because we're bumping up against elections, especially for Jersey and Virginia, but that's the target timeframe. Sometime in the mid late October and I'll think we'll pin that date down as we get together, if we do that at all. I believe we could probably get there for the GCC. The SCC we we're probably going to wait until the late November timeframe to bring the next grouping together, and working in conjunction with the EAC and try and bring together the right representative folks depending on how we message that and

bring them together. So, those two councils could potentially -- one could be in place, the second one could be in place in early January if we get to the sector council folks -- the private sector folks. And they find enough interest to self charter and self form. MS ISAC, I'm glad to take questions on it. I think most of -- many of our sectors align with an information sharing and analysis center some type. It just so happens that the MS ISAC because of its outreach to 50 states already in place, because of its cyber security capabilities, it's off center establishment, things like that, it potentially lends itself nicely to this sector. But I think when we get to that council meeting, either this Thursday, or in October, I think we'll probably have to have a final and deep in depth discussion about, is this the way we want to go? Certainly, a key resource for all states, but again, we're not going to -- we don't preordain, we do it as a group, as a council, and I think that's going to be the meat of the discussion coming up.

CHAIR MASTERSON:

Bob?

MR. GILES:

And if you could just explain what the MS ISAC does? Because I know early on we had no idea -- I mean, there was a lot of education for us election folks. Just as far as like what actually the MS ISAC would do for election?

MR. FIGEROA:

And that's a good question. A question would also be if they would tailor themselves to this election community which I think is useful to have an analyst or so that would provide products that are specifically election specific -- a lot of -- what happens is state subscribe, states and counties subscribe to the MS ISAC to receive they're notifications on Malware. Whether it's ransom ware and other cyber threats phishing events, things like that. So, 98 percent of these thing are not necessarily election specific, but what you do when you enter this non-disclosure agreement, is you have this back and forth relationship with the MS ISAC where they're pushing you information on potential threats that your IT folks, not to mention, some of your staff members across the state would want to have. At the same time, if you do have intrusions, you could potentially work with them to determine what the extent of the intrusion is. And have it analyzed and potentially share it with other parts of the community, as necessary. So, there's a lot of information sharing, as in, here's the threats we saw today across the board and other states, or in other parts of the country that might be of interest of you. And then there's an analysis piece, and for those of you who heard Ben Spear and others give their talk on how they analyze data and specifically tailored for your state or for your subsector. It could be in the new state they might have a

different way of projecting this information. It's a nice capability to have that type of organization aligned with you. Most of -- initially is free, but there is some pay for service to include additional monitoring things called Einstein that may or may not enter into the picture, depending on where we're going with this one.

CHAIR MASTERSON:

Anyone else? I can tell you from working with DHS and others, including and talking to some private industry folks, from the EAC perspective our focus is one on distributing whatever information we can including working with folks who create new information on cyber hygiene and so I know DHS has training videos that any state or local government official, election official, can sign up and use. We've tried to push those out there. There's a link on our website for it and it's something that state office or counties could use, and they're good. Two is focusing on data security and providing best practices on that. Josh mentioned our checklist, but I think there's a lot more to be done there working with the states and locals about the practices they use. And then, pushing this information sharing. And so, that's been a huge effort for us, is we heard loud and clear from the states and locals the frustration about learning about things in the news media instead of receiving information in a timely fashion. So, our focus in working with DHS is to provide timely actionable data. So, not just information but something you can

actually take and use, and limit the surprises. So, that for the EAC, and working with DHS and others we've really focused on trying to do those things and moving this forward, so that folks are getting information in a timely fashion. And I appreciate the work you all have done with us on that, because I think we've both heard loud and clear the frustration. With some of that, and we're trying to fix that, so I appreciate that.

MR. FIGEROA:

Really it's a two way street, obviously, because we've started a clearance process, as many know, senior state election officials have received notifications to start their process to get to obtain an interim secret, or a secret clearance eventually. And as we get a little farther into that, we're going to look to additional folks receiving those clearances because a lot of times we can't provide our own classified material line. We have to do something in a some type of classified BTC or direct visit of some type. Again, these things take time. Partnerships take time to form. Those who have been in place for eight to ten years have these routines, we're going to get there. We just have to make sure we're all comfortable with the way we move forward, and we're not pressing to far -- too fast, too far. But elections are upon so we're trying to balance that.

CHAIR MASTERSON:

Lori?

MS. AUGINO:

Juan, I want to thank you. Since you've come on board and helped working with -- helped work with election officials, you've done an amazing job to get up to speed very quickly. And I know that Commissioner Masterson has done a lot of work to kind of bring us together. The two of you bringing us together state and local election officials working collaboratively with DHS and the EAC to kind of learn the biz. And understand some of the complexities and some of our concerns and so I really just appreciate the work that you've done and the work that Commissioner Masterson has done. And I've got some peeps up here of our state and local election officials represented here today that have worked really hard just identifying what are the concerns, getting them out on the table, and kind of working together to create a path forward, and I appreciate you. So, thank you.

MR. FIGEROA:

A lot of people working on it from all sides. In fact it's funny, I think once a week I have someone come in my office and say I'd like to work for you and -- they feel like this is a really good mission and there's a lot to do and they know it's busy work, but we'll get there.

CHAIR MASTERSON:

Do submit them to a breathalyzer upon arrival?

MR. GILES:

I'm just going to follow up on Lori's comments. We definitely appreciate the effort you guys have put in. About six months ago when we asked you when we would have the GCC up and running the answer was June of 2018, so we said that does not work for us. And you guys got the message, and here we are potentially having our first meeting in October this year. So, that's a huge turn around for you guys. And we just want to thank you for understanding the election timeline is not a normal timeline.

CHAIR MASTERSON:

Judd.

MR. CHOATE:

I'll go even one step further than my two colleagues, and say that there was I think a perception largely in the media that we didn't work very well together last year. And I think that's a misperception, because we didn't work together. It wasn't the fact that we weren't working well together. We we're two ships in the night at that point. And but now, we're under critical infrastructure and we're developing relationships and we're figuring out the charter, and we're creating the coordinating council. All this stuff that you need to do to actually become real and have the interchange of the information necessary to make it work. And it's almost as if there was this perception, that as soon as DHS kind of became interested in elections, then there should be this robust

data sharing, and everybody should be on the same page, and we should all be getting this information. That just is unrealistic and for the various reasons you've already mentioned including security protocols. You know, that we needed to actually be able to have access and digest information, so. But we're doing great now. And I feel like we're making tremendous progress. And we're on a very aggressive timeline to be at a position where we can be in that situation where we can share data, well so, and a lot of that's you, and your colleagues so we appreciate that.

MR. JUAN:

Looking forward to Thursday, too, to continuing the dialog.

CHAIR MASTERSON:

Greg.

MR. RIDDLEMOSER:

I'll follow on -- are you planning on with the security clearance stuff that you were talking about, with also going into America's 150 largest cities in addition to the state headquarters guys?

MR. FIGEROA:

Well, we haven't -- our near term plan is to talk to those senior state election officials, and ask them to designate the next two to five.

So, -- but I'm not as familiar with that concept but I'd be glad to explore it there's others that are familiar with it, and maybe talk, and I'd be interested in seeing how broad we get. Of course, there's

resource constraints. There's timeline constraints. You want to get as many of the key people up to speed as quickly as possible, but if there's another option to continue this work, glad to listen to that one.

CHAIR MASTERSON:

Anyone else? I will say, Lori, I appreciate your kind comments to me, but the EAC staff lead by the Executive Director Newby and Brian Hancock have really done yeomans work, and Mark Listes, as well on it. For those who don't know, as we talk about the designation and critical infrastructure information, the EAC has a whole webpage dedicated to information for election officials. What is this? What are the terms? Juan knows we throw around a lot of acronyms right? So, it's got the alphabet soup of the acronyms that are thrown around. So, that election officials can begin to understand what are these things mean, as we're working through some of these issues. So, a whole section on the EAC on the EAC.gov about that. Anyone else? Okay. Juan, thank you for being here. Thanks for your time and your work. Okay. Last item agenda, is possible future TDGC meeting. So, you all have made your recommendations for the next version of the VVSG, but as we discussed yesterday into today, there's still a lot of work to be done including the requirements, and review and comment n the requirements. And so, the question to you all is, is there a desire,

what is the desire to have another meeting, we intend to continue engage you all in this work, and if so, what you are thinking on timing, we don't have to reach an actual date today, although we can try, but even just general timeframe or sense of timeframe would be helpful as the EAC tries to plan. Keeping in mind that the Board of Advisors and Standards Board meeting is late January, fourth week in January. So, that's just something to keep in eye fourth week in January. So, I entertain any thoughts on possible timing, whatnot, and David's volunteering to host, I think out there in California.

MR. WAGNER:

Absolutely. David Wagner. Yes, I think it would be useful to have another TDGC meeting. I think we have now made -- established some great momentum and we need to keep that up as we're working on the requirements and I think the TDGC meeting helps drive that forward, and so, I think it'd be useful to have another one where the goal is to present and discuss the work we've been doing on requirements and you can suggest what the timeline, but this kind of every six month pace seems to be working well, so that would be one plausible candidate for me.

CHAIR MASTERSON:

Okay. So, David, I think we all echo the need for the meeting and throws out six months. Any other thoughts? So, six months would

put us, lets see here, March/April timeframe. Any thoughts, keeping in mind next year, is, of course, a federal election year, not that this year isn't an election year, just, in general, especially for folks like Bob. Thoughts on timing, March/April?

MS. ANGINO:

We have met previously in conjunction, either before or after NASED, and you've got half of the membership here that will be in this area. During that period of time in February -- I've got to find the exact dates. I think it's around the secon to third week of February -- it's right, Valentines Day, I know. So, February 15, 16, 17, that's an option.

CHAIR MASTERSON:

Okay.

MS. AUGINO:

To consider it.

CHAIR MASTERSON:

It's a good suggestion.

MR. GILES:

Yeah, I think it's good because then we can bring it to our membership right away. We meet right before the NASED, so it always benefits us and having NASED right after that to kind of talk about and give them an update, historically, it's worked very well.

CHAIR MASTERSON:

Okay. Anyone else? Okay. Greg say's let's do that. So, there's an openness to that.

MR. GILES:

I'll second.

CHAIR MASTERSON:

Okay. So, what I'll do, EAC and NIST staff will take back, we have to take a look at the availability of the Chairman, the NIST Director, and look at those dates as well as possible dates in the March timeframe, too, just to explore it. And then we will solicit from you availability from that point in order to do that. So, we'll take a look sort of in that same four to six-month timeframe that we've been meeting. In the meantime, Mary and I briefly chatted, I think you look for us to package up the requirements into digestible chunks to be sent to you all to begin to look at, to review. It's obvious that the next TDGC meeting we won't be able to walk one by one through like we did here, but we'll develop a strategy based on some feedback we get from you all and initial read on areas of contention, areas of concern, I should say, and what not, to able to look at that. So, you should be looking to receive the requirements with some information around that in the near future. Does that sound alright? Okay. Closing thoughts from you?

MS. BRADY:

Just want to take this opportunity to thank everyone who's been involved in this two year process, two plus year process, the certainly, the NIST and EAC staff, Mr. Masterson, all of you at the table, all of the folks who have contributed to the public working group. I think the response has been fantastic. We had a lot of experts weigh in with their opinions on which way we should go. And I think we have a product that we could all be proud of. So, once again, I just thank you for everybody's continued commitment.

CHAIR MASTERSON:

Thank you, Mary. I'll make it as brief as I am.

MS. GOLDEN:

Yeah, this is sort of unrelated, but I'm just going to offer again, and I have this conversation with Matt and others, the Assistive Technology Industry Association meets in late January, early February, and I don't know when your Board of Advisors, or whatever meeting is, but ATIA is in Orlando every year. And the discussion on trying to connect that industry with the voting industry, whether it's election officials, it's NIST staff, it's EAC staff, it's actual vendors. I don't care I'd take any or all of them and I can certainly help facilitate, they have space, I mean, we could arrange for any kind of meeting and what would really be nice is if some folks could take a day and walk through the exhibit hall and see what the market actually provides for people with disabilities in

terms of access that, you know, there's no reason for it not to be part and parcel of the discussion when you're talking about voting. So, anyway just an offer.

CHAIR MASTERSON:

So, Juan thank you, too. You can at least have a commitment for me to be there to check that out, and then we can talk about other ways to create some sort of partnership or conversation, I know it's something that we've talked about for a while, but putting the various vendors from your area and our area in the same room. So, we can talk about a way to do that. But for sure I would be interested to engage in that, and see it. Anything else for the good of the order before I close out? Okay. I'll try to brief as I said, first thank you. First to the NIST staff, you all in the two years of this effort have worked diligently, incredibly hard, and engaging a public working group process that we never done before. And you embraced the challenge in the new approach and the NIST staff really did a great job leading those groups and getting us where we are. Thank you to the EAC staff. Specifically, to Brian and Ryan. And Brian probably remembers this, but I remember when I worked for Brian back in the day envisioning a new VVSG. One that wasn't technologically specific and design specific. And our frustrations with some of that. And we took a huge step. We took a huge step today towards bringing about that new approach. And it's your

vision in creating the program and engaging this that has helped get us there. And so I appreciate that. And Ryan, the 17 principles and the driving force behind that working with the NIST staff helped to scope out and establish this. Thank you to all of you. I remember sitting here with all of you, well not here, here, and I think at the access port actually. Telling you all that I truly believed that not only did we have the right people, but we had the right temperaments in the room to tackle really tough issues and move the ball forward. And you all not only bore out that prediction but rose to the occasion. It was your leadership. It was your willingness to work together, as your willingness to engage in the tough issues, to dig in, to work in the public working group setting. To take time away from class schedules and work schedules. And Diane's multiple hats that she wears in order to engage this process to bring about meaningful change and the establishment of voting system standards. So, I can't not thank you all enough for that. This is just a step. We're not done yet, obviously. But this is a huge step. And it's your leadership that brought that about. And so I'm grateful to you all. I'm grateful for the work you did. And I'm grateful to the folks in the elections community. For the folks at NASED. For the folks that engaged in the EAC VVSG working group when it looked like there may not be anymore EAC anymore, right. You all did that, because you wanted to tackle this problem,

recognizing the need for good guidelines and standards in this space, whether there was an EAC or not. And your leadership brought this about, you set the tone. We had sitting on our chair from the PCA and NASED, clear guidance on where this had to go. And we got there. And more importantly, and Greg, I appreciate you highlighting this, we got there in a timely fashion. When there was urgency, when there was need to move forward and address this. And we didn't even know. Remember, in 2015, we didn't even know what we were about to walk into in 2016, right? And we still saw the urgency and it's never been more important. And it's never been more needed. And today we took a significant step towards having more accessible, more accurate, more auditable, more secure systems, and that is huge and a credit to all of you and the folks that participate in the public working group, and I am truly thankful. So, thank you for that. Our work's not done, but all of us, I'm a big believer that everyone should take time to enjoy a success. Typically, we move on to quickly, so all of you should take a deep breath and appreciate what we did through the last two years and here today. And I hope you all take the time to do that. I hope the EAC and NIST staff take the time to do that. Because it really is a great accomplishment and it's something to be very proud of. So, with that, unless there's anything else. I will adjourn the meeting. Thank you, all.

[The public meeting of the United States Election Assistance Commission (EAC)/
Technical Guidelines Development Committee (TGDC) adjourned at 12:52 p.m.
EST.]