10-13-17

Revised Section 508 Standards-Summary of Major Changes and Issues

»» Can everyone hear me in the back? We're going the start in about five minute, we'll let a few more people come in.

»» Okay.

HELEN CHAMBERLAIN: We have a few more people coming in. As soon as we get people situated and seated we will go ahead and start. There are seats up here in the front. Just keep coming up front. Those need to be reserved. Is that your folder there? Okay. There's seats in that row, there's seats in that row, there's seats in that row. Okay. We're going to go ahead and get started. Good morning. I think probably all of you were at the opening presentations. I loved David Capozzi joke. That's one I have to remember to tell people. This morning -- my name is hell Chamberlain, in case you don't know who I am. (Laughter).

So, we're going to start this is the Policy Track we're going to be talking about the Revised Section 508 standards. We're doing a summary of major changes and issues. And the presenters are Tim Creagan and Bruce Bailey from the Access Board. It's going to be a crammed session because they have a lot of slides. So, with that, I am going to turn it over to who's going first. Them is going first.

TIM CREAGAN: Thank you, Helen. And Good morning everyone. And welcome to this session on the Revised Section 508 Standards. Not to be immodest or anything, but we are the most important session today. (Laughter) I mean you figure, if standards didn't exist, and if they hadn't been revised wouldn't be having this meeting today.

So welcome. Good morning, there's a few seats down here in the front for people who are looking for seats. So as Helen said, we have a number of slides today. However, we are willing to, and want to answer your questions. But the focus is we're going to try to get through all the slides and as many of your questions as we can today. We do have our contact information. So if we haven't been able to answer your questions today, let us know and we will respond. Okay. So today we're talking about what we're calling the Revised Section 508 Standards. Just to let you know, we've been calling all of this by a lot of different names. We've been calling it original 508, we've been calling it new 508, revised 508, revised ICT rule, ICT rule. For today's purposes, going forth we're going to refer to the revised Section 508 Standards. What that means, that means these are the standards that were published this January, January of 2017 and they're going to go into effect for federal agencies on January 18, 2018. Those 508 standards, which were published in 2000 and became effective June 21st of 2001 which are currently in effect, we will refer to those as the original 508 standards. Just so we're clear on the nomenclature here. Let's move onto our next slide. Okay. So today's agenda we're going to talk about the Final Rule infrastructure and organization and I want you to know that this rule is going to be focusing on the 508 aspect of the rule. We're going to talk about key changes and issues from the original 508 standards. And then we're going to talk about WCAG 2.0. You've heard David Capozzi this morning, that stands for the Web Content Accessibility Guidelines, otherwise known as WCAG, 2.0. We're going to include examples of gaps addressed by the revised standards and talk about some of the other differences from the original 508 standards.

And we'll have questions and answers, and we'll have resources. So let's set the stage. There have been many changes in ICT, information and communication technology and the 17 years since the original 508 standards were passed.

If you think about it, there's new and convergent technologies, so content that used to only be received across one platform can now be shared across many platforms. Remember back in the day when you had the same change to your desk that had a area piece and a push-button or rote dial. That was call add telephone and the way you do your two-way communication. Now you're mobile you go anywhere and go across any platform. That's just one example. Computing you were tied down in one space, there with a keyboard, a standard alone computer. Now you can use your laptop, you can use iPads, you can use smart phone, you can use a lot of things.

So technology has now changed also. So instead of focusing on what something is called, we now focus on what it does. We want to make sure that what it does is accessible to everyone. And finally the market has changed. Industry and governments want harmonized standards. David mentioned in his remarks he was talking about a number of countries that are developing accessibility standards and they have a lot of points of commonality. So there's the United States, there's the European Union, there's Canada, there's Australia just to name a few. The point is, if you're industry and you're manufacturing products, you want to manufacture one product for the global marketplace. You don't want to have to fragment your resources by making a bunch of different products for a bunch of different markets. You want to be as similar as possible, hence, the emphasis on having standardized requirements across the world.

Moving on. So now we're going to talk briefly of Section 508. Remember this is sort of shorthand. There is Section 508, the law, remember David mentioned that there was the update to the Workforce Investment Act. He talked about the Section 508 law was updated. So there's the law, and then there's what are called the Implementing Regulations. Now, those are also known as the Standards or the Requirements. So what most of us are going to be dealing with on our day to day lives are going to be the standards, the requirements. That's what we're going to be focusing on in detail for today.

Just to give you some background on what the law requires, because what the law requires explains some of the practices under Section 508. So first of all it's formerly known as Section 508 of the Rehabilitation Act of 1973 as he amended, 28 U.S. Code, Section 7949(d), electronic and information technology. It has three main areas of responsibility. First of all the Access Board, which is the agency that the executive director -- David is the Executive Director, Bruce Bailey I, and Helen all of us today are staff members of has the authority to develop and promulgate the standards. So that means we develop the technical criteria and functional performance criteria we publish them, they become the law. Those are the requirements.

General Services Administration, which Helen is a member of, and representative of, General Services works closely with the Access Board and it is required by statute to provide technical assistance and training on the Section 508 standards.

They also have a key role in government procurement as many of you know of which the 508 standards are an important parent. Finally agencies, which is all of you in this room, you're all responsible for enforcing 508 within your own agencies.

So that's what the law requires. Then we talk about the standards. The standards are codified in 36 CFR part 1194. And they're technical standards and functional performance criteria, shorthand of FPC we develop and promulgate those and the agencies implement them. That's our background. Dates for the Revised 508 Standards. We published them in the Federal Register January 18, 2017. They became effective, meaning, they can be officially recognized March 21st of this year, 2017. And then the compliance date is January 18, 2018. So the compliance date is the date by which agencies "must" begin following the revised standards. You can be following them now if you choose to. But the absolute requirement is January 18th.

BRUCE BAILEY: I work with Tim at the Access Board working for David Capozzi the keynote speaker and is in the back of the room. Everybody tell David what a great job Tim and I did after the session. So we worked alongside hard with Tim on developing these refresh standards, the revised standards. I want to talk now briefly about what you see when you go to the Federal Register and look up the revised standards. Because it's a little bit odd or peculiar, maybe. So the final rule we're being responsive to two different charging authorizing statutes. So the Rehabilitation Act which we've all mentioned here in the Section 508, the 29 U.S.C. 7949(d) as Tim said. We're also being responsive to another charging statute, the communications act, Section 255, 47 U.S.C. 255(e). So this ends up being the codifying standards are in two different parts, 36 CFR, 1193, and 36 CFR 1194. Then these requirements end up appearing as appendices to 36 CFR 1194. Because one of the things you'll notice if you look at -- you all should have looked at our standards by now, they don't really look like other people's or other federal agency's language and phrasing and the outline view that most people use for most agencies use for federal rules for standards, for regulations. They don't look like the previous version of the 255 standards and the -- or the 255 guidelines and the 508 standards. That's because we're using formatting that's very similar to what industry consensus standards use. So it's a little bit -- quite a bit more readable. But it does have this little bit of arbitrariness for how things end up being posted in the Code of Federal Regulation, and on regulations.gov and in the CFR. Next slide, please.

So technically, as these things appear, these information communication technologies standards and guidelines are formerly appendices. So appendix A is 508 Chapter 1 application administration. 508 chapter 2 scoping. Appendix B is 255 Chapter 1 application administration, and 255 chapter 2 scoping. And then next slide -- the largest piece if you will, almost I want to say the most important, but you know, it is the one people will reference the most is actually the appendix c, this is -- five different chapters within appendix three, chapter 3 functional performance criteria, chapter 4, hardware. Chapter 5 software, chapter 6 support documentation and services, chapter. Referenced standards. There's an appendix D which isn't in the Federal Register, but it will be up here in the Code of Federal Regulations once the Code of Federal Regulations is updated, that has the original 508 standards as published on December 21st of 2000. I have a little visual of how all that work. So we've got my two overlapping Venn diagrams with appendices a, the 508 is the leftmost circle with appendix a, applications scopings and chapters E1 and E 2 in this appendix D thing. So, since we have two chapters 1 and 2 we're using the E preface for EIT, for 508, and for telecommunications, are chapters is and 2 will be refaced with letter C. So the right hand circle is this appendix b, the 255 application scopings, chapter C1 C2. Then this middle overlapping part is the common area that they have in common, that they have the shared, two different statutes, the two different standards these two different statutes have a shared set of technical requirements that's appendix c, the functional performance requirements the technical chapter, chapter, 3, 4, 5, 6, and 7, 7 just being the reference standards. As you pull them all out and look at them as we have them formatted on our site, it's much more straightforward. You the 508 standards chapter 1 application scope and administration. Chapter 3 the functional performance criteria. Chapter 4 hardware. Chapter 5 software, chapter 6 support documentation and service, and chapter 7 referenced standards. Again, the reason for -- it's all good sensible reasons for doing this, it does seem a little bit complicated. But we're responding to two different charging statutes, the 255 of the Telecommunications Act, 508 of the rehabilitation about. The good news from our perspective is, hey, the Access Board we've done this before. We've had to do the same exercise for our Accessibility Guidelines And Standards under the Americans with Disabilities Act and Architectural Barriers Act. If you look at our ABA Guide standards and our ADA Guideline, it was the same difficult position we were in where we have to have one set of technical requirements for what makes a building accessible, transportation facilities, accessible, buses accessible, and have -- but be re responsible for two different authorizing statutes, the Americans with Disabilities Act, and Architectural Barriers Act. So a little bit of inside the ballpark stuff. But when you look at just the chapters that are applicable to 508 it makes a lot more sense.

TIM CREAGAN: Thank you, Bruce. Okay. So we've had a introduction. We've given you the big picture of what has come before. Now we'll talk about key changes and issues from original 508. Remember, original 508 is those standards that were published and became effective in June 21, 2001.

So big picture. So first of all we have the broad application of WCAG 2.0. And we delineate what we mean by covered electronic content. David mentioned this in his opening remark. Bruce just mentioned it. I'll go into it in a little more depth here. What we're doing is under original 508 you're only looking at what that which is under 1194 here under the revised rule, the new rule what you're doing is looking at not only the text what that rule say, but it's also referring you to external material, which are incorporated by reference into that text. So one of those is WCAG 2.0. Secondly, we have a new exception which is the "Safe Harbor" provision for legacy ICT we'll get to that in a minute. If you had content that conformed to the 508 standards from 2000 on January 18, 2018, as long as it conformed to the old standards, and you don't alter it or amend it, you don't have to change it. You leave it alone until such time as you alter or amend it.

Then you have to make it conformant with the Revised 508 Standards. We're talking about the functional performance criteria and some of the changes. And we'll talk about the concept of ICT with closed functionality, and what about mobile. Stay tuned. Broad application of WCAG 2. 0. WCAG 2.0 has what are called "success criteria." There are actually three levels. Their referred to as level A, which is the ground floor, the easiest, simplest, most straightforward. Level AA, a little more difficult by quite doable. Level AAA for the purposes of incorporation by reference we have chose on the require conformance with level A and AA only. We don't require conformance with level AAA. But you can always do more. With level AAA. The minimum for level A and AA, if you want to do AAA good for you, gold star. But those are the requirements for our rule. These are applied to web content. The examples we're giving are online instructional material, that's just an example. Web content, covered non--web documents, something that's not on your website, but can be electronic, non--web material, again instructional materials and software user interfaces such as learning management systems.

Moving on, we have another graphic. This is a series of circles that are interlocking, so the big circle is what we call the 508/255 rule. Remember Bruce talked about the revised rule combines two rules actually. There's a Chapter 1 and 2 for 508. So Chapter 1 is the definitions and the application. Chapter 2 is the scoping. The scoping questions are the, where and how much. And then Chapters 3-7 are the technical requirements and the incorporated technical standards.

So there's a Chapter 1 and 2 for 508. And that has a prefix which is "E", so it's E-100. So you have to get that many provisions that says E-100 is a 508 application provision. Similarly, if it says B-200 you know that's a 508 scoping provision. There's also the 255 rule, Chapter 1 and Chapter 2. And the 255 Chapter 1 is designated as C, for communication. And that is C application 100 series, and C 200, which is scoping for telecommunications. The only thing I'm going to say about the 255 rule today is that it applies to telecommunications manufactures. So it applies to private sector. It does not apply to the federal government. So that is all I'm going to say about 255 at the moment.

The two laws as we see, intersect. In Bruce's Earlier diagram you saw that it had different Chapters 1 and 2 but they had similar technical provision chapters. They shared it. Which is the same model that we use for the ADA Act. In this example we're talking about those rules where all of them are using WCAG 2.0, they're using WCAG 2. 0 level A, and level AA. You'll notice that WCAG AAA is not included. Again this is just a graphic depiction of what's in, what's out.

So that concept is called WCAG 2.0 Incorporation By Reference. That means anything that WCAG has including it's requirements and it's technical assistance you can look to when thinking to conform to the standard.

Next slide. The WCAG 2.0 Incorporation By Reference I'm now going to give you specific examples in the text of the revised standards where it references WCAG 2.0. A word for how to use the revisions. First of all, let me just ask, all of you the room, how many of you currently use or have used or are familiar with the 2000 508 standards? Okay. Okay. So the 2000 508 standards really comes down to a memorization exercise, right. (Laughter) Like you to look for a name of something that you think conform to what you're talking about. You just kind of go cherry picking through provision looking for something that apply to telecommunications or software, or web or hardware. Okay. In the new rule, 508 standards, I'm just holding it up just for illustrating the point. They're a bit denser. Most of this explanation called the preAmble but these rules, they're intended to be read from start to finish. So there's no skipping ahead to desert. You staff off reading your Chapter 1 to see first of all whether this apply to you. Are r you a federal agency? Or are you a federal grantee. If you're a federal grantee you discuss whether or not your agency wants you to apply 508 to your ICT. Assuming you're a federal agency, then you look at the definitions of the terms. Then you go to chapter 2 for scoping. Chapter 2 for scoping tells you what provisions apply and where you go for further information. Then chapters 3 and then 4, 5, 6 talk about your technical requirements. Then finally chapter 7 is a listing of all the referenced external reference standards that apply to the different provisions in the rule. So big picture. All right. So, in 508 chapter 2 which is the scoping chapter, remember, provision E 205.4 says it's the accessibility standard for electronic content. It cites the WCAG will be that standard. Remember, this slide is talking about where WCAG is cited in the new rule, where is the authority saying I have to apply WCAG here, the provision number is E205.4. Particularly under software the general parent is E207, the sub provision, E207.2 says that software has to conform to WCAG. So you have the parent provision which is the 3 digit number, then the sub parent which is the dot with a dismal point. So that's Chapter 2 that's your general scoping chapters. From there you would go to software. So chapter 5 software you look at 504 authoring tools. That's where WCAG applies. And in chapter 6 for support documentation and services, this is the information you get about ICT. This is the information that talks about the accessibility features of the products. That's what this means. And then you look to 602. 3 the provision for electronic support documentation. Now, WCAG not only applies to software and support documentation. It also apply to electronic content. This is the thing that most of us do. This is every time we write a memo, we create a Power Point. We do a spreadsheet some sort of presentation, we do something, a document, this is the thing that we're most concerned with. Because this is what will effect most of our day to day. And this is why it's so important that these materials be created accessibly. So the provision E205; it is tells you WCAG should be the accessibility standard. The exact text says "electronic content shall conform to level A and level AA success criteria and conformance requirements in WCAG. Then it says incorporated by reference, E702.10.1. The text is a provision that tells you use WCAG, use WCAG success criteria level A and AA. If you have any questions go to Chapter 1, look at chapter 10 provision sub 10 sub 1 that will give you this citation to WCAG, including the website where you can find it.

There's an exception for non-web documents. The reason is because WCAG was originally written as a web-specific standard. And there was a WCAG to ICT Task Force that sat there and compared the WCAG provisions to general accessibility concepts, and they realized well you know, these accessibility requirements can apply to documents, in other words it doesn't have to be web content. It suspect just web that this can apply to.

It isn't just when this could apply to. There were four success criteria that apply to web sets of web page, there's an exception for those four provisions unless the rest applies. Otherwise E205.4.4 details the word substitutions when needed to apply WCAG to non-web documents. Okay. Software we talked earlier. You went to chapter 2 the scoping provision for E207.2 WCAG conformance. Text says "user interface components as well as the content of platforms and applications shall conform to level A and level AA success criteria and conformance in requirements of WCAG, see, 702.10.1, there's a formula to the way these are written. That's intentional, the prior 508 standards were not written in what's -- in a usual conformance requirement language. This new set of provisions is. And this is one of the reasons why we worked so hard on them because this is something that will be the language -- the language is similar and will be more likely to understood across a wide variety of forums. You have exceptions, word substitutions and rewrites same approach for 205.4 but you're using it for another set of documents. There's an exception for software for assistive technology. Covered electronic content, Revised 508 Standards only. So again the scoping chapter, covered electronic content is found if two occurrences. Public-facing, which is exactly the same as it was under the 2000 standards. Any public facing electronic content has to be accessible. That hasn't changed. That's not new. That's no different than it was before. So that means that anything on your website, anything on your Twitter feeds, anything on social media, anything that's public has to be accessible. And the provision that addresses that is E 205.2 public facing. Electronic content that. Is public facing, shall conform. The rest of it talks about the WCAG accessibility standards. Now, there is a new provision, E205. 3 called agency official communication. David mentioned it this morning in his remarks. One of the things that was so important with this refresh or renewal of the standards was clarifying exactly what's covered and what's not covered. Because what we wanted to do is we wanted to make the standards usable and make recognize how people do the work.

So we're talking at content that's not public facing an agency official communication and in one of nine category, there's an exemption for what are called NARA regards, if you work for national archive, they receive material in a lot of formats, this does not require NARA to try to remediate and Make Accessible everything they do.

Again, it's a change from the original rule. Here's the nine examples of agency official communication, they're listed in E205.3. A is a emergency notification, B is a initial or final decision adjudicating an administrative claim or proceeding. C is internal or external program or policy announcement. D notice of benefits program eligibility, employment opportunity or personnel action. E is a formal acknowledgment of receipt. F is a survey or questionnaire. Note that is a very specific term of art, that's referring to the types of surveys that you would do were you get registration numbers from OPM, it's for time-indictment duration and a limited set of questions. It does not, it does not -- let me say that, it does not apply to litigation, it does not apply to interrogatories, it does not apply to anything like that. When we were going through the internal review process, Department of Justice was very -- concern that we make that abundantly clear. So I'm making it abundantly clear. This does not apply to litigation!

G, a template or form. H educational or training material. And I intranet content designed as a web page. Now talking about the exceptions, again we're in chapter 2, still. The exception provision E202.2 this is the new "Safe Harbor" provision I was talking about. The language says any component or portion of existing ICT that complies with an earlier standard issued pursuant to Section 508 of the Rehabilitation Act of 1973 as amended, and that has not been altered on or after January 18, 2018 shall not be required to be modified or conform to the Revised 508 Standards.

Plain language, if it was accessible under the 2000 standards, and you don't do anything to it on January 18, 2018, you don't have to change it. The definition of existing ICT and alteration or r defined in E103.4. Every time you use these new rules you'll be constantly checking back to chapter one and chapter two. Where is this definition? And where does this apply? Functional performance criteria. Okay. Functional performance criteria in the old 508 1194.31 there were six provisions. And they had the option for direct accessibility, or to support assistive technology used by people with disabilities in five of the six FPC provisions. Meaning that either you could provide access directly or you can provide access to assistive, we work with assistive technology to provide the access. Now the functional performance criteria found in chapter 3, 302 functional performance criteria those nine subsections, and this time we're saying that you can just support assistive technology for everything. You want to look at E203.1 general under E203 access for functionality. What that is a provision laying out the agency's general requirement that you must provide access to all functionality. And also the FPC phrase is used consistently. We've added functional performance to address cognitive accessibilities 302.9. Look at the original 508 standards it did exist in the original guideline, unless you were a telecommunications manufacture, you weren't going to know that.

So as federal government agencies, you now have to be aware that this exists. And this harmonizes with the European standard which is known as EN 301549. Also the functional performance criteria for limited hearing, 302.5, and limited vision, 302.2 have been modified in response to comment, and more closely harmonize with the European standards.

So like here's a big picture slide comparing the old versus the new. So 119431 functional performance criteria requiring the usability of provisions A-f, corresponding provisions 302.1 to 302.9. And the difference I want to show is a, without vision, that's people who are blind, correspond to 301.1 which is without vision. B with limited vision cores are to 302.2 with limited vision. C, without hearing conforms to that sorry that should be 302.4 without hearing. And d, with limited hearing, correspond to 302.5 with limited hearing. Okay so the question is why are you making a distinction between without hearing and limited hearing will well, without hearing, someone would use American Sign Language as a way to get information. I have limited hearing, so I'm using assistive technology, namely hearing aids, and I'm also using captioning. So how I get the information is different from how someone who's deaf would get the information, which is why there's different provision. Similarly, for people who are blind, as compared to people who have limited vision. There's a difference.

There's a difference in the technologies that are used. Where are we now? We're now e, without speech, correspond to 302.6 without speech. And F without mine motor or limited reach and strength, that provision was split into two provisions it was split into 302.7 with limited manipulation, and 302.8 with limited reach and strength.

The other provisions that were new are 2302--302.2 without perception of color, and 302.9 with limited language cognitive and learning acts. We've broadened and added provisions.

Having said all of that. What do you do with FPC. After a lot of become and forth and a lot of proposals and listening to a lot of people, and hearing a lot of comments back and forth, this is how the FPC are to be used in the new rule. They're only used when the technical requirements in chapter 4, hardware or chapter 5 do not address the ICT function, or you use them to assess a claim of equivalent facilitation. So that's it. So the usage is much more focused than it was before. Okay. Moving on. ICT with closed functionality; closed functional has five subsections, some say it's lengthy, it's one of the longest provisions in the rule. It has an explicit requirement for speech output. Again, going back to David's opening remark, you remember he was talking about ATMs with speech output. Well, an ATM and this is really a form of a kiosk, so depending on what jurisdiction you're talking about, so if it's in a place of public accommodation, there's the ADA. You're looking at the ADA requirements. If you're looking at a kiosk in a Post Office for example, then you would be talking or a federal facility you would be looking at 508. So the point is we now have an explicit requirement for speech output, and the specific provision for 2.2 speech output enabled ICT with a display screen shall be speech output enabled for full and independent use by individuals with vision impairments. Then there's a number of exceptions in there, and there's five subsections in there which are 402.2.1 through 402.2.5. David mentioned we have a webinar series that is correct. There's a webinar we did on hardware earlier this year. It was May, I believe. So what you want to do, if you want to hear much more detail about these specific provisions, that's what you should do, go to the Access Board website look for the linking on, we, follow to it the link for the archives, look for the webinar on chapter 4, hardware. Next slide. What about mobile? Finally. So, when we talk about moral, we're just talking about the fact that something is portable. We're also talking about shorthand for mobile communications, mobile phone, smart phone, it's a fuzzy term, we all know what we mean most of the time. There's no separate chapter for mobile.

Because we took mobile technology into account throughout the rulemaking process. I unlike the Americans with Disabilities Act for example, 508 says nothing about placement, or anything like that. We're not a building. It's not a facility, it's ICT, which would be any shape or size. It could be portable. We don't really address that. So we talked about the functions, remember what it does. So the phone will covered under hardware. Controls and key, the touch screen, the button, all of that is in chapter four. Then the applications are covered separate because there are still applications. If they're mobile, but it's still a application. So you see the chapter 2 citation to WCAG 2.0 for software, E207.2 that's our original scoping provision. Then you go to chapter 5 for software. So remember, when you're looking at these new rules you start at the beginning, and you work your way through.

Do phones have to be speech-output enabled. Yes, under the revised 508 Rule all of 402 closed functionality applies, including 402.2 need to be speech output enabled but there are some exceptions for personal devices and devices for personal output capabilities. When carefully configured conforming models of desktop and mobile phones are already commercially available. The webinar I referenced earlier has all of this and a lot more detail. I'm giving you the highlights of the changes. 402 closed functionality apply to ICT such as phones and kiosks. Provisions have exceptions for personalized ICT, there's a provision, 402.2.5 for braille instructions, devices for personal use shall not be required to conform to 402.2.5. If it's a smart phone for your personal use, it does not have to be to have braille exceptions. Closest parallels, telecommunications requirements, there are eleven technical requirements. Here you have chapter 4, provisions 412 ICT with two-way voice communications. Again it's talking at the function. And other requirements from chapter 5 which will be software are also applicable. There is a sub provision 412.5 which addresses real-time text functionality that, has been reserved pending work by the Federal Communications Commission. Federal Communications Commission has joint jurisdiction in some of these areas, so we deference to their ongoing rulemaking, we have reserved any technical requirements until such time as they complete their work. Then we'll review what they've done, and as necessary, we may revise our standards.

New requirements for operable parts closest parallel, 119323 k, you remember K has to be tactically discernable, you can feel it without turning it on. It can be be used with limited manipulation, any key repeat can be slowed down. Logging and toggle controls can be discernable through touch or sound.

There are parallel provisions in the hardware chapter, 407.3 input control, and 407.3.1 tactically discernable. 402.6 operation, 407.4 key repeat and 409 status indicators. You won't remember every single provision, the point is to get a degree of comfort to say oh, they really didn't change a lot of this material, it's all there from before, it's just that there's a few things that were changed and added. So again, my advice to you, when you leave here, after you're hyperventilating, take a breath. Go to the Access Board website, download the text of the new provision. Just sit there and read through them. And I think you'll find that it's much more user friendly than maybe you anticipated. Also you have access to the technical assistance outline so you can contact us at anytime. With that I'll turn to Bruce.

BRUCE: Bruce Tim took us through the core, the key changes from the original to the revised 508. I get to do some of the fun part now where I talk about why are we using WCAG 2.0 in the final standards? Just to give a little bit of a advertisement for, I'm doing the next session at -- let me make sure I double read the times right, at 11:30 I'll be in one of the rooms next door, 1153 talking about the WCAG standard itself, mechanically, features linked to it. But I'm not going to be really talking about why to use WCAG, I'm just talking about why we use WCAG here. So this is actually more fun than what I'm going to be doing. Well, more fun? Yeah, I guess this is the more fun part of this. So next slide, please. So, WCAG 2.0 been around since 2008. It has been cited by a number of other government organizations. Some states as well. And it was finalized as in ISO standard in 2012 that was an important parent for many other international governments in picking it up. And as we've mentioned twice now, that we've extended the original intent from WCAG from applies it just to web content, but we're also covering non-web documents that are agency official communication, and we're applying it to software user interfaces as well. Again one of the other big motivations for doing this is the robust technical assistance. Come back to see me at 11:30 where I'll be talking about some that robust technical assistance in more detail. So, refreshing where I want to give some examples here of where we've made those -- just some fun examples of what are some examples of things that are important to accessibility that are not well addressed by the original 508 standards but are addressed well by WCAG level AA. Contrast text, meaning will sequence, size text, navigation and help with users making address. A low contrast text is really one of the biggest difficulties for people with low vision is poor contrast quality. The original Section 508 standards for software and only for software has a requirement to provide a variety of color selections capable of producing a range of contrast levels.

But none of that specifies what the range of contrast levels is going to be. And as I mentioned, it's only in software, not on web content, and it's not on documents. It's not really testable enough. And it's even possible for a bad actor to provide a range and they're all bad. So you know, then the other problem with it is the easiest way to get around it, it's got some scoping built into it, it's only required if a product permits a user to -- don't let the user adjust things, and then you've met the requirement, right. So that's not very good. Next slide, please. So WCAG 2.045 a very specific numerical value. That lets you really come up with a formula, it's subjective, it's easy, it answers questions like my example here that fades from black to light gray, does this text contrast with the white background. Where do you draw the line? WCAG 2.0 has a specific metric for doing that. It's the 4 to 5 contrast ratio for large text. And the nice thing is that it gets common low vision issues. So, there's nothing in WCAG 2.30 about avoiding red, green, colors that are confusable because if you've got the good contrast, you don't need to worry about the different types of colorblindness. Bright red on white is a difficult color for many people. And it fails the contrast requirement. You do things like maroon or purple or a bright blue, and those will have pass the metric and still allow people visually to have different colors for providing the emphasis.

Next slide, please. So another pretty basic thing is about meaningful sequence. The original 508 standards don't have anything about logical reading order. There's a WCAG success criteria 1.3.2 meaningful sequence when the sequence in which the content is presented affects its meaning a correct reading consequence can be programmatically determined. It's written using as plain language as possible. But, they were very concerned to not let some of the language ends up being a little stilted because it's still important that it's as simple as possible but no simpler. So this phrasing is a little awkward but I've got a nice example of that. Here I have two column text which is not the most common problem can logical reading order. But here I've got a newspaper style next, four score and seven years ago our fathers brought forth on this content a new nation, conceived in liberty and dedicated to the proposition that all men are created equal, I won't go ahead and repeat that. But if my two column newspaper style text, it does not have the column breaks in a way that's programmatically determinable, if I've done that with tabs or maybe white space, or just if I've arranged text blocks on the screen, I can have some interesting things that happen that are huge barriers for people using assistive technology, I've got an example of that. So now my columns have slid together, and I have "four score and seven years ago so dedicated can long endure our fathering brought forth on this we are met on a great pat will field, nation conceived at war..." It almost makes sense, it's such a well written piece that it's not as terrible as maybe it should be. But you can see that that just does not work. But that kind of problem doesn't strictly speaking violate any of the provisions of the original 508 standards. So it's a problem to have known barriers to accessibility that aren't caught by the accessibility requirements.

So next slide, please. Another thing that people really wanted was for web content and well now document content to be flexible, that if you go to a website and it doesn't respect the browser's zoom ability, or your ability to set your font, that's a problem. The revised 2017 standards by making the citation to WCAG 2.0 there's a requirement for 1.4.4 revised text, that text can be revised without assistive technology up to 200% without loss of content or functionality, that 200%, this wasn't true in 2008. Now days all the major browsers include a zoom feature so that that's pretty good. It's still important to have this it is possible for pages to be written in ways that break the zoom feature of the web browser. You bring something up on your mobile phone, it doesn't format right, you zoom in, text boxes overlay on top of each other, then I have an example here, W3C.organization, WAI, they've done a good job making sure whatever you is the as you're defaulted font that page will reflow. NCD.gov is an example. A lot of the agencies that want to demonstrate that they're being proactive about accessibility, they will include a widget for choosing your font size of the page, WCAG 2.0 doesn't strictly require that. But that's one of the way to satisfy the WCAG success criteria. Then finally Google.com/advance, they don't have a widget it it doesn't change the default font size but it works fine when you use the browser zoom capability. It's important to have the requirement in, even though it's pretty easy for content author to do it now days. Next slide I want to talk about one of the requirements for clarity and consistency, 3.2.3, consistent navigation, navigational mechanisms that are repeated on multiple pages within a set of webpages occur in the same relative order each time they're repeated unless a change is initiated by the user. That's a really common kind of sense kind of thing. If you've got a menu on your webpage, you want the menus to stay consistent from page to page as you move through the site. But this is a good example of something that's a problem for everyone. It's annoying for everyone to have the menus change. But if you're relying upon screen reading technology or screen magnification technology, it's a huge barrier for people using that type of assistive technology. Also this is one good example of where we start to bring in some requirements the supporting cognitive language and learning. Again, somebody who does have some processing or reading difficulties is going to be very disproportionately affected by having the navigation mechanism change in subtle or in large ways as they move through a site. So we're elevating a usability requirement to an accessibility requirement. Next slide, please. Focus order, finding way to help users navigate, find content and determine where they are the webpage can be navigated sequentially and the navigation sequence affects meaning or operation, focusable components preserve meaning and operability. It not in current 508 if you tab through a page just to highlight, figure out what are the active regions of the page, a very nice way to do first-pass testing. But there's this requirement that that focus order be sensible. Again a pretty key important feature. Next slide, please. Headings and labels provide way to help users navigate, find content and number where they are headings and labels describe a topic or purpose. Another thing from usability, rising to the level of an accessibility barrier, if you have headings in there, they need -- they don't have to be long. But they do need to describe topic or purpose. And notice this is not a requirement to use, to provide the headings and label, it's just that if they're there, they have to describe the topic or purpose, why else are you putting those headings in there any way.

My last example here, new requirement to help users prevent and correct mistakes. There's actually two of these, but I'm only going to you the one here, 3.3.3 error suggestion, if the error is automatically detected and the suggestions are known, then the suggestions are provided to the user unless it would jeopardize the security or purpose of the content. Related to cognitive and people using assistive technology, a very sensitive thing that we can race from usability to a basic accessibility requirement.

TIM CREAGAN: Thank you, Bruce. So we've taken a deep dive into WCAG. So now for the last portion, we're going to talk about some differences from the original standards. We're making again, we're making a comparison between the two sets of rules, this is a visual where we're just comparing the actual text in and the organization. So remember the original standards the existing standards are what we call them "original" for today's purpose, they were published December 21, 2000. The revised standards were established January 18, 2017. The original were organized by subparts, A, D, C and D. The existing Revised 508 Standards are organized by chapters, seven chapters. So, A general roughly corresponds to application administration which is Chapter 1 as well as scoping requirements to the extent that there were any scoping requirements in the original standards subpart B, the technical standards, remember I said a lot of them are found in the he advised standards, it's just different numbers again the best way to get a sense of what this is just to sit down and read through the Revised 508 Standards. I think those of you who are familiar with the original standards, you'll start to see a lot of familiar concepts as you've been hearing this morning. For those of you for whom this is all new, good. (Laughter) Good for you. Welcome to the party. But this is how we have organized the material. We've made it as straightforward as we can and as we said, we have a lot of technical assistance that's available. So these are the provisions, the performance criteria in part C correspond to chapter 3. D which is information documentation and support correspond to chapter 46 is support documentation of services. Hardware and software correspond to the technical requirement in part D. Remember 1194.1, 2, and 3 in the revised standards is chapters 1 and 2 with the prefixes for e, there's E101, sub provisions are dismal points, E1 0 is.1E, purpose. Talk about significance of the numbering system. The reason you care about the numbering system is because, if something is a child of a sub provision, for example, let's say it's in, E202 general exceptions, then we have a provision E -- let's just take the example, E203, I'm dipping into the copy of the standards, which I carry with me. The reason I'm doing this because one of the things I want to talk about the numbers on this. In 508 when you looked at any specific provision, any of the software provisions, or web provisions, you know they were all sub numbered with letter, ABCDD et cetera, the question were they were all different. The question you would have well, do they always apply or do they sometimes apply or what if there seems to be a conflict? There it wasn't clear how to address that. In the Revised 508 Standards, one of the things we're trying to make clear, this is something that standards typically make clear is that, all parent provisions are treated the same. They have equal weight some if something is a 3-digit number, or 101 or 102, or 103 those provisions all have separate weight. One doesn't trump the other. But a sub provision is subservient to the parent provision. So something that's a -- in this slide we have E201 which talks about the application. We you're a sub provision, E201.1 scope, the E-201 applies to everything in that section. Then the scoping applies as defined. You'll get a better sense of this when you read through the text of the provisions themselves. Let's talk a look at some more specific things undue burden, there's a concept we should be familiar with. It's found in 1194.29(a), you have -- if something is an undue burden a significant difficulty or expense, you to consider the agency resources. You do have a requirement to provide an alternative means of access, and you have to provide supporting documentation to justify an assertion of undue burden.

In Chapter 2 scoping requirements, you find the provisions for undue burden and again you have the same requirement for alternative means and required documentation just the number's different. That's all. So it's E202.6.3 alternative mean, and E202.6.2 the required documentation. So the concept, remember again the point is the concepts are the same from original 508. We just renumbered and it's put in order so that it makes more sense, I think it's easier to follow.

And you do have to consider agency resources. You have to look at at the definition of undue burden in the 1194.4 definitions. In the revised 508 standards you talk about the basis for determining the undue burden. So it's all put together in one place.

So that's one we believe more useful approach. Best meets, the concept of best meets, 1194.2 B. Commercially products that meet some but not all the standards. The agency must procure the product that best meets the standard. Well this time around, the most important thing there is about the quest meet" it's much easier to find, it's under E202.7, it's one of the exception, where ICT conform to one or more requirements in the Revised 508 Standards is not commercially available, the agency shall procure the ICT that best meets the Revised 508 Standards consistent with the agency's business needs. That means if you need to buy for example an application that isn't completely accessible, but it's required for your business needs you can procure it. You just have to state that that is what you're doing. As Helen has spoke on the you about procurement, you can still do the procurement you just have to do the 508 analysis. Again, it's a requirement for required documentation and for alternative means.

Again, the point is, these are not new. This is the same information you've seen before, it's just in a different format, it's arranged in a slightly different order. Again with the general exceptions, the existing 508 1194.3 general exceptions, we'll take a look at three of Them, A, B, E and F. National security that's unchanged, E 202.3 national security, same exception. Incidental to a contract, E202.4 federal contracts. E202.6 undue burden or fundamental alteration. And then, this the one that drives me crazy, maintenance space, that for years has been mischaracterized as a back office. It makes it a bad way to think of it because you start going, well if it's office, you're telling me there's a office where half the staff can get to it, it can be inaccessible, that's okay? No,it's not a back office. Think of it more like a cubby hole, a broom closet, it's place that no one ever goes. So what we talked about is the ICT functions that are located in maintenance or monitoring spaces. So think about it conceptually. It's a space. So you need to talk about the ICT functions. Two exceptions were not retained, ICT that's not required wherever, that's kind of stating the obvious. D, extra locations are not required. Where members of the public don't go, you don't have to provide them access. Well, it's kind of obvious. Any way. So we cleaned it up.

New general exception for legacy ICT, we talked about this earlier. Essentially this is that legacy ICT which can be content, it can be apps, it can be a lot of things, which it's conformance, today, and a conformance could include that it conforms with an exception, it's still conformant. That means if you don't change anything on January 18th, steady as she goes. Next slide. Requirements for phones, 1194.23 telecommunications products, A-K. Chapter 4 hardware. Requirements Chapter 5. Requirements for operable part, parallel, this is the input controls. Okay now we're at the questions. So, questions?

»» We have about 15 minutes.

TIM CREAGAN: We were so brilliant that you understand everything, and you're just dazzled right?

HELEN CHAMBERLAIN: Does anybody have any questions? Okay. Could you stand up. Because we only have one microphone, you can either come up here or you can stand up and they'll repeat your question.

Question: I was just going to ask few if you could talk about a specific definition of an intranet, the intranet was one of those examples of official communication.

»» Intranet?

»» Yes, intranet. Intranet. What is defined as an intranet site versus -- at my agency there's an official internet, then there's teams that have Microsoft SharePoint that they collaborate, is that also a intranet?

BRUCE: That's a great question. Tim can you bring up the slide that has those -- the question is, one of the oh official public facing, sure we've got that. Then there's one of the big areas official communication is intranet content designed as a web page. Whereas the original 508 -- intranet content designed as a web page. Original 508 just had one category for everything because it was just web based intranet and internet information and appliances. So, you know, really we've ended up trying to reduce the scope down a little bit because we didn't want to be covering all documents or we didn't think it was fair to cover all documents all the time everywhere. But we knew we needed to cover more documents like anything that goes out in the widely distributed email message from the Secretary or anything that's widely distributed generally that's probably going to be in one of these categories. But this intranet content is stuff that you've -- that's not new. People have been paying pretty good attention to that since 2000. So that is your agency homepage, and then the example that comes up there is, SharePoint -- what about SharePoint sites? Well the core SharePoint interface is covered by this as well. What we're not covering is necessarily every single document that you're distributing through SharePoint. Because SharePoint's basically replacing network file storage kind of things. And again, if those -- you're probably sharing those with a pretty large group, even if they're only used by a small team, but unless those documents are in one of these other category the emergency notification, final decision adjudicating an administrative claim or proceeding, internal or external program or policy announcement, that one is probably pretty big, but unless your SharePoint files are in one of these category, they're not covered. Because those are not typically, they're not intranet content designed as a web page. Sure they're intranet content, you're sharing out files over your intranet; but they're not designed as a web page. It does get a little bit more complicated because Microsoft and Adobe are trying to get your Word documents and your pdf document to open right up inside of your web browser. And your web browsers are now happy to the that. But they're still not really intranet content designed as a webpage, but you know, you've got the companies that are trying to blur that distinction, and you have -- it's not always obvious to the end user if they're using Word or if they're using Internet Explorer with something that's designed really really hard and tore look like Word. For someone using assistive technology they know, because, Word even if visually you're getting things that are presented exactly the same, the way you interface with that without using the mouse, with using the assistive technology, with using only the keyboard, it's quite different. Even if both are accessible, the navigating, the experience navigating those two experiences is much, much different for somebody who's using assistive technology as compared to something who's just operating visually. So most examples that I've seen are pretty bright lines even with this difficulty of Word trying to be a browser plug-in versus being a software application. So we've actually made thing as little bit easier. The original 508 again it just covered intranet applications and appliances. So it was covering everything. It was covering web mail. We went with the revised standard, we didn't want to be knitting up all of your web mail attachments, we want to net up thing we mail applications but not the attachments. That's a long answer to a pretty short question.

TIM CREAGAN: While we're on it, what we'd like to do is take a few minutes just to clarify some of the resources we've been talking about since this will probably help. So we just passed this question slide, resource. Which will take a minute because Helen told us our time is coming close to an end.

»» She didn't hold up those signs. I didn't pay any attention. (Laughter).

TIM CREAGAN: So, Bruce was telling us about WCAG 2.0. I just wanted to toot his horn for a second. Bruce was on the committee that developed the sic 2.0 accessibility standard, he was an invited expert. So he really knows them. So Bruce why don't you tell us about the robust technical assistance and what they can do with I.

»» Come to my session at 11:30. (Laughter).

TIM CREAGAN: Okay. Nothing else to add?

BRUCE: No, no. (Laughter).

TIM CREAGAN: All right, let's take a look at the second set, there's WCAG Quick Reference he's not going to help us, we'll talk about the resources specific to this provision, the Access Board, our website, www. ACC-board.gov. We have Section 508 standards, the 255 Guideline, including technical assistance. We have the ICT Final Rule, we have the regulatory impact analysis. Why do I care about the regulatory Impact Analysis had and what is it? The Regulatory Impact Analysis is the economic review that is done. Anytime you a rule which has significant cost, so the reason you care about the Regulatory Impact Analysis is because it has all kinds of really useful really cool charts that compare the original 508 standards with WCAG and with revised 508 provisions. So it's good resources to look at. If you have any questions you contact us, we'll be glad to walk you through it. Finally there's overviews and press releases. This is helpful because let's say you're talking to management and you need like a 30 second elevator speech to explain why this is important. Feel free to crib from us. You can put your own tweak on it. That's what the material is there for. It's there to be used and there to be disseminated. We talked about the webinar series, it's www. ADA.conferences.organization/CIOC/archives. This is sponsored by the Access Board and the Chief Information Officer's Council, they're focusing on the Revised 508 Standards. The webinars in the private years are the government version of my ICT and how I solved it. So I think you'll find it useful. It's all agencies talking about issues they've dealt with, whether it's getting at accessible content, gets at testing, how they use social media. I invite you to go look at the archive, there's a lot of good material in there. Finally, for today, www.section508.gov, this is a website that's hosted by GSA, it's terrific. A lot of the material is being posted because of today. We talked about there's going to be a lot of technical assistance and information material. We've talked about the 508 implementation team, you've heard the name Robert Baker, and all of news this room who have worked on this. This is where that material lives. It's found at www. Section508.gov.

HELEN CHAMBERLAIN: 2 o'clock this afternoon in this room.

TIM CREAGAN: There's going to be a session on that in this room 2:00 this afternoon. It has FAQs, there's best practices, how to make documents accessible and 508 standards Refresh Tool Kit including transition guidance, which literally is hot off the press, because they've just loaded it this week. Includes such things as program management and training and some information about the standards. So that's what we wanted to cover for today. We're down to the end of our time. I just will leave you with our contact information At The Access Board.

»» We have five minutes. We have five minute, so I'm just saying. Any questions before we head out yes, I see a hand in the back.

»» Could you stand up, please.

Question: How does this affect the DHS 508 trusted tester certification exam?

BRUCE: So there was a question ability how does this affect the 508 trusted tester, and I'm going to extend this what about all of the accessibility tester that's built into Word and all of those wonderful documents that the community of practice has been put out about accessible documents? And I'm happy to be able to tell you, well, first Allen Hauffman will be giving you the real answer at 2:00, he'll be talking about the updates to the trusted tester. Even as trusted tester was getting started, they knew that WCAG 2.0 was going to be a big impact on that. So things like the low contrast text and it meaningful sequence -- if you go through the Trusted Tester Program they've got kind of backdoor way to get at these accessibility issues that aren't very well covered by the 508 standards. So it's in the process of being revamped quite significantly. But a lot of the accessibility issues are already in there. And that's the same answer that happens to be with Word and Adobe Acrobat and with any of the best guidance products that you've had. All of those developed from within government and also by the Microsoft and Adobe, they've worked on trying -- what are the things that they can do in their program to make their documents as accessible as possible, not what meets 508. So they've already known about WCAG 2.0. You go to the references of WCAG 2. 0 they've already included pdfs for years. So all of these, everyone working on accessibility has already been using stuff from the WCAG 2.0 level A and level AA success criteria, earn if they haven't been shouting about that. So that's great.

»» Another question.

Question: Good morning my name is Donna Williams the U.S. Small Business Administration. My question is for pdf 508 compliance, we did a test on WAG c, is that right? WCAG c, 2.0 and then the Adobe and the WCAG test revealed a lot of failures. Then the Adobe had passed. What would you say about that?

BRUCE: So the built-ers and Wizards within -- built-in checkers or Wizards within Word or Adobe they automatically test for all the things they can automatically test for. But as a subject matter expert if you go and review the experts you can find other thing to fail against that maybe they didn't pick up from. So for example I'm not -- there's a lot of testing tools for say low contrast, but I haven't seen a built-in low contrast checker for Word Or Acrobat that's a pretty concrete example, that's something that you as a subject matter expert, you see some light purple text you say that doesn't look for readable to me. You break out your droplet tool, you test it and it's failing the 1.4.4 why didn't the wizard pick up on that, you can ask Adobe or Microsoft that question. But that's a harder thing for the automated tools to pick up. Also things like missing alt text is very easy for the automated tool to text on. But alternative text that is sensible is something a human being has to do for now. That would be another example to review. That's the best I'm going to be able to do.

»» But if I was a employee, this is something that I have to come up with an answer for, which one would you go by?

»» Well, which one would I go by? I would go by the standards, so I want to go -- the standard, I want to go by the WCAG 2.0. But I want to know I can use the built-in wizard to help test for that and do as many of the things I can. But be aware that any automated tool is not going to do as good a job as a human person.

»» Thank you.

HELEN CHAMBERLAIN: Okay, thank you Bruce and Tim. Round of applause. (Applause)Okay. So now you have a refreshment break for from now until 11:30. Please go out to the exhibit floor, we have a lot of exhibitors with lots of candy and the lunch form should have already been turned in. You stop by Greenberry's and see if they've take I. it's right out the door here.