

Meet a Member of Our Staff



Mr. Rick Melton came to VA Section 508 after serving 21 years with the Department of Defense (DoD). His expertise is in Section 508, software testing and analysis, quality assurance, and programming. While with DoD, he was the senior member of the software Test Team at one of the largest

commands in the Army, and he initiated technical approaches to 508 compliance there concurrent to the effective date of the Section 508 standards in 2001. In the VA, his experience in programming and the technical aspects of 508 allows him to coordinate with Project Managers (PMs) on identifying, isolating and remediating Section 508 defects. Rick’s work with VA Section 508 entails a broad scope of responsibilities, including but not limited to tracking projects’ compliance progress and status through Milestone Reviews and PM Weekly Calls; assisting development teams in resolving software accessibility issues; conducting independent assessments of 508 issues and impacts across the enterprise; supporting management directives related to Section 508; and regularly participating in the “Ask the 508 Office” monthly call-in forum for PMs and other development staff. In addition to the public sector, Rick has also held positions and responsibilities in Information Technology in the corporate world, and early in his career worked in non-profit organizations, where he gained focused project management experience. His background includes positions in the technical arena as well as in team leadership. Rick holds a Master’s degree in Education, and he has done postgraduate study in computer science. He has held a number of positions in Tennessee and Alabama as well as Texas, where he currently resides with his family.

INSIDE THIS ISSUE

Meet a Member of Our Staff	1
All In One Place	2
Avoiding Section 508 Violations	3
We’ve Got A New Web Home!	5
Efficient Strategies for Non-Visual Mobile Navigation	6
Section 508 Receives 5-Star Award	7
Get Onboard!	7

How does your involvement with 508 change whether you’re executing technical assignments or performing in a governance role?

I am listening constantly for 508 issues. Whether it’s in a milestone brief or a review with a project, people may speak about something that impacts 508 without realizing they have identified a 508 impact. Frequently we are finding those issues are concerning Commercial Off-The-Shelf (COTS) products that may be non-conformant to the Section 508 standards. As a result, we are seeing that not only do we have a need for handling Section 508 from the technical design and development aspects, but now we need to turn to the Technology Acquisition Center (TAC) and our partners in acquisition to reinforce the contractual demands and requirements that can affect 508 compliance. In both cases – whether analyzing 508 compliance from a technical or business perspective – the focus is on the issues that emerge based on what outcomes are desired from the technology that the agency is developing, procuring, and integrating.

I love that idea of 508 issues emerging. Can you give me an example of a project where you thought you had your 508 bases covered, but unexpected impact emerged when you thought more about your requirements?

One of the huge issues we hear from our PMs is on the 508 Exceptions. By and large, our PMs are willing and able to meet Section 508, but there is confusion around the 508 Exceptions. Frequently the 508 discussions begin and end with the thought, “Oh, I don’t have to worry, I have an Exception.” But in reality, the 508 Exceptions are rare! They are very highly defined (in Section 508, subpart A, §1194.3). People ask us about them often, but they almost never apply in civilian agencies! 508 compliance is about meeting the technical and functional standards made clear in the law.

I can’t imagine a scenario where a PM might say, “We don’t have to meet FISMA, we have a waiver,” or “We don’t have to meet the NIST standards for Core Configuration, we got an exception.” Why is 508 thought of differently?

You’re right. Organizationally, 508 doesn’t have the same level of urgency. The difference is culture. I came from DoD, where development teams I worked with there have coded to the Section 508 standards for a number of years. They understand that it’s not hard to do. Our task, then, is to facilitate the same culture shift within the VA.

Section 508 is especially relevant to the VA mission. It is imperative that VA systems offer comparable access to all members of the public who seek our services

How do we enable the culture shift?

It’s an education issue. By education, I mean something different than training. Training is a process. Education is an understanding. And the big education gap in 508 is understanding that 508 is a technical requirement; many people are simply unaware that 508 is not about accommodation, but about coding to a certain set of standards. I worked on a project recently where VA managers asked a vendor for an estimate of how long it would take to bring his COTS product into compliance. The initial estimate was almost two years. Once the government explained this would not be acceptable and explained several factors involved in the need for a compliant product, the estimate was revised down from two years to a matter of months.

What changed in the conversation to make that happen?

I mentioned before that 508 is achievable, and that it is not difficult. As an agency, we’ve seen the results from projects to validate those conclusions. It takes concentrated effort, no doubt, but Section 508 conformance can definitely be achieved when you dedicate the necessary time and resources, and focus on the effort at hand.

All In One Place

Earlier this summer the testing of all e-learning content was assigned to a single team within the VA Section 508 office. This consolidation should benefit e-learning and mobile app developers as you now have a single submission form when requesting 508 certification of your content. We have updated our submission form as well. Since the same team also tests mobile apps, the first question on the form asks if you are submitting e-learning content or mobile app/mobile web content. Depending on your answer to this first question, the fields on the form will be dynamically populated.

We’ve also taken this opportunity to update the information about the submission form and our testing procedures on the portion of our Intranet site detailing

[what to expect when you submit content*](#) for the e-learning team to test.

If you have never submitted content to us before, you’ll learn what to expect from our testing procedures, beginning with the revised information on our submission form. We’ll tell you where to find the form, after which, depending on what kind of content you’re submitting, you can activate a link for details on how to complete and submit the form.

We look forward to working with you to ensure that your content is accessible to your entire audience. Should you have any questions or if you’d like to correspond with us, please feel free to contact us.

**Links designated with an asterisk are available to internal VA users only.*



Avoiding Section 508 Violations

Below are the top Section 508 violations for each of five media types – Web/HTML, Adobe PDF, Multimedia, Adobe Flash and Microsoft Word. These violations were recorded by VA Section 508 testing teams during the past three months. Additional information to help you avoid these and other Section 508 violations can be found at <http://vaww.section508.va.gov/training.asp>*

WEB/HTML

Ensure that the reading order of content is logical

In order to be presented correctly to users of assistive technology, content needs to appear in a logical order in the document object model (DOM) of a webpage. For example, when a page includes heading elements, the reading order of the headings and the corresponding page content needs to make sense to assistive technology users. If CSS or similar methods are used to place content on screen in ways that make sense visually, the order of the content must also be clearly conveyed when presented by assistive technology.

Generally, content should appear in code in the order that you want it to be read by screen readers, and structural markup elements should immediately precede the content the elements are meant to describe.

MULTIMEDIA

Ensure visual content is sufficiently described in the audio portion of multimedia

Section 508 requires that for “all training and informational video and multimedia productions that support the agency’s mission,” synchronized audio description must be provided for information that is conveyed visually. Without audio description, visual information in multimedia presentations will not be accessible to people who can’t see the video.

To decide whether your audio descriptions meet the requirements, play the multimedia. Make sure all relevant visual information from the multimedia is complete, verbally described accurately, and synchronized with the video.

ADOBE PDF

Ensure list items are structured properly

It is important that related list items be structured as a list to allow AT users to efficiently navigate the content. List structures help assistive technology users to identify and understand the relationship items have to each other.

In Adobe Acrobat, each list structure must consist of a parent <L> tag and subsequent list item tags for each item in the list. If there are a total of 8 items listed, then there must be eight tags in the structure. Each list item tag must contain a label <lbl> tag that includes the number or bullet and a list item body <LBody> tag that contains the text of the item.

MICROSOFT WORD

Ensure alternative text for images is meaningful

Alternative text should provide users of assistive technology with information about the purpose and function of an image. For example, “VA Medical Center” would be more meaningful alternative text for an image of a facility on a Department of Veterans Affairs website than “hospital building”.

To apply alternative text using Word 2007:

1. Select the image and choose Size from the context menu (right-click).
2. Activate the Alt Text tab.
3. In the “Alternative text” field include text that accurately describes the image purpose and function.

FLASH

Ensure objects provide accessible name, role, state and value

Without the information provided by an accessible name, role, state and value, people using assistive technology may not be able to identify the purpose, function, and current status of a control.

Set an accessible name

1. Check to be sure that accessibility has been properly enabled for the Flash movie and for the component type or the individual button, MovieClip, TextField or TextArea.
2. Set the accessible name through the Accessibility Panel by setting the Name property. Or set it in ActionScript through the accessibilityProperties.name property (either ActionScript approach below will work).

```
if (!txtAddress.accessibilityProperties)
    txtAddress.accessibilityProperties =
        new AccessibilityProperties();
txtAddress.accessibilityProperties.name =
    "Address:";
Accessibility.updateProperties();
// OR
if (!txtAddress.accessibilityProperties)
{
    var accProps:AccessibilityProperties =
        new AccessibilityProperties();
    accProps.name = "Address:";
    txtAddress.accessibilityProperties =
        accProps;
}
Accessibility.updateProperties();
```

3. Include all required information for understanding the component: name, operation and state. Standard controls and components will automatically reveal their operation and state. Include these only for simulated controls. For custom controls, check that these are conveyed through the control's accessibility implementation.
4. For TextInput, TextArea and Label, a workaround is required to assign the accessible name to the actual text field. If the workaround is not used, or if the Accessibility Panel is used, the accessible name

will appear as a graphic and the actual input field or text field will appear without an accessible name. This can be observed through Object Inspector or with a screen reader. The solution requires that the accessible name be set on the inner TextField and no accessible name be set on the component itself. This issue does not occur in ActionScript 2 and was introduced in ActionScript 3 with changes in controls that use text fields. Developers should also be sure to set the tabIndex on the inner text field of label, TextInput and TextArea components to the next or same tab index as the component itself so the object with the correct accessible properties will appear in the correct reading order — otherwise it will be placed in the reading order automatically by the Flash Player based on its x and y location.

```
if (!txtInputAddress.TextField.
    accessibilityProperties)
    txtInputAddress.TextField.
    accessibilityProperties =
        new AccessibilityProperties();
txtInputAddress.TextField.name = "Address:";
// set the tab index
txtAddress.tabIndex = 3;
// set the same tabIndex on the actual text
field
// as is on the TextInput
txtInputAddress.TextField.tabIndex =
    txtAddressField.tabIndex;
// tell assistive technology the name has
been updated
Accessibility.updateProperties();
```

Update the accessible name

You may need to update an Accessible Name to convey a change in state for a simulated control.

1. Update the Accessible Name after each state change. This must be done through the ActionScript accessibilityProperties.name property, followed by Accessibility.updateProperties().
2. Include all required information for understanding the component: name, operation (role), value and state.

Set the Description

Use the description to convey additional details of non-standard operation.

1. Set the Accessible Description through the Accessibility Panel by setting the Description property. Or set it in ActionScript through the accessibilityProperties.description property followed by a call to Accessibility.updateProperties().
2. Include only supplementary information; the Accessible Name must provide all required information whether or not the Accessible Description is read by a screen reader.
3. The description property is a good place to put information such as special instructions on how to interact with the component or control or an extended description that may be useful in understanding the component or control the first time it is used.

Set the Value, Role or State

- It is not possible to directly change the default value, role or state of accessible objects through the Accessibility Panel or through ActionScript. To directly set these values, create a custom accessibility implementation and associate it with the object or class from which the object was created. Otherwise, a screen reader will announce the role of the base component class such as buttons instead of “slider” in the case of a custom slider control based on the button component. The topic of creating accessibility implementations is not covered by this article.
- For simple simulated controls that contain custom values or roles, it may be possible to add text equivalent information for these items into the accessible name of the object. For example, a custom CheckBox that has a role of button may have an accessible name of “Do you want emails: checkbox checked.” In this example, the role and state of checked is appended to the Accessible Name of the object. This is not the preferred approach, but you can use it in limited situations to provide some level of accessibility.

VA Section 508 Announces A New Website



VA Section 508 has a new web home! To support the consolidation of the 508 offices, we have consolidated the great content from the previous websites under one umbrella at www.section508.va.gov (Internet) and vaww.section508.va.gov* (Intranet).

Just as with any move, we took the opportunity to do some house cleaning and re-arrange the furniture.

We've updated some of our resources and have moved a few things around to make them easier to find.

A few changes you may notice: updated conformance documents and standards checklists, mobile testing procedures and checklist, a utilities section for assistive technology users to assist in the interaction with some existing legacy VA applications – all on the intranet site. We are currently revamping our training pages so that it will be easier for you to take full advantage of the variety of training that we offer, definitely stay tuned for that. On the internet site, we have a new support area where the online tutorials, revised developer resource lists, and the 508 XPress newsletter now reside.

We encourage you to take a moment to visit our new home, update any links you might have saved or bookmarked, and take a look around.



**Links designated with an asterisk are available to internal VA users only.*

Efficient Strategies For Non-Visual Mobile Navigation

In the Spring 2014 issue of Section 508 Xpress, we discussed different modes of input utilized by non-visual users of mobile assistive technologies. This article shed some light on the various methods people with vision impairments use to input text into edit fields within mobile Apps. Before interacting with the edit controls of an App, a user must be able to independently and efficiently navigate through its contents. People with vision impairments may use external wireless keyboards, wireless Braille displays, or a series of gestures executed by 1, 2, 3, or 4 fingers to navigate to a specific App, navigate and interact with its content, and exit it. This article focuses on using finger gestures to accomplish these tasks.

Both Talkback for Android and VoiceOver (VO) for iOS screenreaders provide a method for users to navigate to a specific mobile App, open it, navigate its contents, and exit the App. Users may swipe one finger to the right or left to move forward and backward to locate a specific App; once the App is located, the user double taps the screen of the mobile device with one finger to open it. They may proceed through specific chunks of information present within an App by using the same single finger gesture they used to locate the App. These chunks of information can be a line or section of text or specific elements or objects that the user may interact with by double tapping one finger anywhere on the screen. Throughout the entire process, the screen reader either reads the text or announces the given attribute of the text before reading it. For instance, if a link or button is encountered, its state is spoken thus giving the user the ability to double tap the screen to select and activate it.

But when dealing with a complex App or mobile webpage with a variety of content organized by various screen elements, the task of finger flicking countless times to reach a desired portion of text, form control, or region of the screen becomes cumbersome. Apple's VoiceOver screen reader includes a "rotor" utility that can make navigation easier. The rotor utility is activated when a VO user places their thumb and forefinger adjacent to one another on the touch screen device and turns these two

fingers either to the right or the left, much like turning a knob. With each single twist of the fingers, VoiceOver announces and visually displays the unit by which a person may navigate by flicking a single finger down to move forward, or up to move backward by the selected unit.

The rotor makes it possible to move the device's cursor forward and backward by character, word, and line, and it also is used to toggle between various virtual keyboard methods of input and a host of other VO functions. But for enhanced App and webpage navigation, the rotor also allows for navigation by:

- "Containers" for quick access to controls and content organized within different, defined regions of the screen within an Apps window.
- Headings used to organize content on a webpage.
- Hyperlinks
- Form controls to quickly locate edit fields, radio buttons, checkboxes, and buttons, and
- Tables

When any of these items are selected with the rotor, the user may open the App or the mobile website, turn the rotor to the desired element, and VO will announce the element followed by how many instances of that particular element are on the screen. For example, a user who wishes to navigate by headings to quickly locate



specific information under the fifth heading of a website can select the headings option with the rotor and VO will announce how many headings are present. The user can flick down with one finger five times until the desired heading is announced and then review the contents within this heading by flicking to the right to read chunks at a time or by swiping down with two fingers to read the information continuously without interruption.

One last note about the rotor: it will only allow users to navigate by elements that are present on the screen of the device. For instance, if an App is open and doesn't contain any headings or containers, they will not be presented as an option within the rotor.

While utilities like the rotor and other alternative screen reading gestures are exceptional tools for users of mobile technologies, they only work as well as their intended environments allow them to. If you are the project manager for a team working on a mobile App or website, or a developer responsible for ensuring that your content meets Section 508 regulations, it is essential that you visit the Accessibility - Developer - Apple Support as well as the Accessibility | Android Developers webpages to take advantage of the appropriate guidance when scoping your project.

If you have a license to access the VA's Instance of the Accessibility Management Platform (AMP), you can review information on our best practice of "ensuring that element role and state are implemented in an accessible manner for iOS and Android operating systems". Both links provide specific information on this essential best practice while providing non-compliant and compliant examples for your review.

VA Section 508 Receives Five-Star Distance Learning Award

The VA Section 508 Office has been selected to receive the Federal Government Distance Learning Association (FGDLA) Five-Star Award for 2014. The Five-Star Award is presented in recognition of an organization for demonstrating excellence in providing enterprise-wide distance learning solutions for the Federal Government.

FGDLA is a nonprofit, professional association formed to promote the development and application of distance



learning in the Federal Government. Additionally, the Association actively fosters collaboration and understanding among those involved in leveraging technology and instructional media in support of the education and training needs of the Federal Government.

The award was given in recognition of self-paced courses developed by the VA Section 508 Office which are now available on the VA's Talent Management System (TMS):

- What Is Section 508 And Why Is IT Important To You
- Developing Section 508 Compliant HTML
- Testing HTML Content for Section 508 Compliance
- Testing Software for Section 508 Compliance

VA employees can find more information about these courses and other training offered by VA Section 508 by visiting the [Training Options section](#) of the VA Section 508 Intranet.

Get Onboard!

It is now possible to be alerted when a new edition of the 508 XPress becomes available. Just visit www.section508.va.gov/support/newsletter and activate the link to subscribe to our list.

Visit the VA Section 508 website to review Section 508 checklists; training materials for developing accessible content in Flash, HTML, Word, PDF and PowerPoint; register for courses and to locate additional resources.

Internet: www.section508.va.gov

Intranet: vawww.section508.va.gov*

*Links designated with an asterisk are available to VA internal users only.