

## Questions on Section 508 Compliance

### 1. What does it mean for an application (defined as web-based intranet and internet information and applications) to be 508 compliant?

Section 508 applies to any information being distributed electronically. It includes, but it not limited to:

- Web Pages
- Desktop Software (e.g. SciFinder Pro, LMS systems)
- Documents (e.g. .doc files, .pdf files)
- Presentations (e.g. .ppt files)
- Spreadsheets (e.g., .xls files)

Section 508 applies to everything from desktop software being used by a few employees within a lab to a web page accessible to anyone in the world – if it's been bought with government funds, it must be 508 compliant.

For IPCA which is a web-based application, the portion of Section 508 which specifically relates to websites and web-based application is under Sub-Part B, 1194.22. With regards to websites and other web-based application, Section 508 provides sixteen provisions that must be met for an application to be accessible to disabled peoples. These sixteen provisions are laid out in Sub-Part B, 1194.22 of Section 508 and are widely detailed below. The ultimate goal of the sixteen provisions - and the following best practices - is to ensure accessibility for visually impaired persons using assistive technologies such as screen readers by providing contextual text labels and descriptions for graphics, navigation, and other web page elements. The only way to ensure 100% compliance with Section 508 of the Rehabilitation Act of 1973 is to explicitly adhere to the sixteen provisions listed below:

#### **1194.22 Web-based intranet and internet information and applications.**

1. (a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).
2. (b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.
3. (c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.
4. (d) Documents shall be organized so they are readable without requiring an associated style sheet.
5. (e) Redundant text links shall be provided for each active region of a server-side image map.
6. (f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.
7. (g) Row and column headers shall be identified for data tables.
8. (h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.
9. (i) Frames shall be titled with text that facilitates frame identification and navigation.
10. (j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.
11. (k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.

- 12. (l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by assistive technology.
- 13. (m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).
- 14. (n) When electronic forms are designed to be completed on-line, the form shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.
- 15. (o) A method shall be provided that permits users to skip repetitive navigation links.
- 16. (p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.

**Note to 1194.22:**

1. The Board interprets paragraphs (a) through (k) of this section as consistent with the following priority 1 Checkpoints of the Web Content Accessibility Guidelines 1.0 (WCAG 1.0) (May 5, 1999) published by the Web Accessibility Initiative of the World Wide Web Consortium:

Section 1194.22 Paragraph	WCAG 1.0 Checkpoint
(a)	1.1
(b)	1.4
(c)	2.1
(d)	6.1
(e)	1.2
(f)	9.1
(g)	5.1
(h)	5.2
(i)	12.1
(j)	7.1
(k)	11.4

2. Paragraphs (l), (m), (n), (o), and (p) of this section are different from WCAG 1.0. Web pages that conform to WCAG 1.0, level A (i.e., all priority 1 checkpoints) must also meet paragraphs (l), (m), (n), (o), and (p) of this section to comply with this section.

**2. What is the official government language regarding 508 compliance? (I.e. what does the letter of the law say regarding 508 Compliance?)**

Section 508 was enacted to eliminate barriers in information technology, to make available new opportunities for people with disabilities, and to encourage development of technologies that will help achieve these goals. Most companies and organizations that wish to make their web-based application be accessible for the visually impaired or disabled follow the technical standards defined by Section 508 of the Rehabilitation Act of 1973. Section 508 codifies those technical requirements and all Federal agencies (as well as private institutions that receive funding from or under contract with a government agency) must meet during the development, procurement, use and maintenance of information technology solutions. The standards defined in Section 508 are intended to give disabled users - whether they are government employees or the public - comparable access to the information available to all other users

which is why so many websites and web-based applications are designed to meet the standards regardless of legal obligation.

### **The federal mandate: Section 508 standards**

Section 508 of the U.S. Rehabilitation Act prohibits federal agencies from buying, developing, maintaining, or using electronic and information technology that is inaccessible to people with disabilities. Although Section 508 was enacted more than 14 years ago, little progress was made until 1998, when Congress passed the Workforce Investment Act, amending the law to give members of the public and government employees with disabilities the right to sue agencies in federal court and file administrative complaints for noncompliance.

### **The amended Section 508 requires that:**

"...electronic and information technology allows Federal employees with disabilities to have access to and use of information and data that is comparable to the access to and use of information and data by Federal employees who are not individuals with disabilities, unless an undue burden would be imposed on the agency."

### **Section 508 also requires that:**

"...individuals with disabilities who are members of the public seeking information or services from a Federal agency have access to and use of information and data that is comparable to that provided to the public who are not individuals with disabilities, unless an undue burden would be imposed on the agency."

While applying legal leverage to agencies, Section 508 also uses government buying power to pressure companies to produce accessible products. **Section 508 standards will become part of the Federal Acquisition Regulation and other federal laws that govern agency buying. Simply put, companies will no longer be able to sell federal agencies any software or hardware that fails to meet accessibility standards.**

For more than two years, federal agencies have been working together to realize the goal of fully accessible federal websites. To coordinate training and offer technical assistance regarding Section 508, the Federal Access Board and the General Services Administration created the Federal Information Technology Accessibility Initiative. FITAI's website is a gateway for information regarding this topic. Noted below are FITIA's interpretations of the portions of Section 508 that relate to web accessibility.

### **Web-based intranet and Internet information and applications (1194.22)**

The criteria for web-based technology and information are based on access guidelines developed by the Web Accessibility Initiative of the W3C. Many of these provisions ensure access for people with vision impairments who rely on various assistive products (such as screen readers, which translate the contents of a computer screen into automated audible output and refreshable Braille displays) to access computer-based information. Certain conventions, such as verbal tags or graphic identification and format devices like frames, are necessary so that these devices can "read" them for the user in a sensible way.

The standards do not prohibit the use of website graphics or animation. Instead, they aim to ensure that such information is also available in an accessible format. Generally, this means the use of text labels or descriptors for graphics and certain format elements (HTML code already provides an Alt text tag for graphics that can serve as a verbal descriptor for graphics.) This section also addresses the usability of multimedia presentations, image maps, style sheets, scripting languages, applets, plug-ins, and electronic forms.

Section 508 mandates that Federal agencies that develop, procure, use and maintain electronic and information technology do so in a way that will assure comparable access to that technology to the groups

indicated above, unless an undue burden would be imposed on the agency. Thus it aims to make software and other technology more accessible to people with certain disabilities, assuring that a greater number of people are fully able to participate in the Federal workforce and a greater number of citizens are able to access and use government electronic information. While Section 508 only governs procurement for the Federal Government, its standards are widely expected to influence most software that is produced and sold in the coming years.

### 3. How do agencies of the Federal Government make their websites 508 compliant?



#### Design For Usability, Achieve Accessibility

Section 508 of the Rehabilitation Act of 1973 is in place to guarantee that disabled users of a given website can access the same information as all other users. There's no guarantee that disabled users will be able to actually *use* the website efficiently and effectively.

Below are a few simple tips to remember when designing for usability will also help accessibility include:

- **Don't rely on color as a differentiating factor**

At this point, many users are familiar with color coded alerts and stoplights. It's intuitive to many that red means "danger" or "stop" and green means "safe" or "go". Unfortunately, for a disabled user of your website - for example, someone with color blindness - differentiating red, yellow, and green icons might not be possible. For example, in Figure 1, the availability of Apple's iPhone is indicated on a per store basis solely by the color of the stop light.

Pennsylvania Stores	Friday, June 29
Ardmore, Suburban Square	
King of Prussia, King of Prussia	
Pittsburgh, Shadyside	
Pittsburgh, South Hills Village	

**Figure 1: Using Color As The Sole Indicator**

While the availability indicated in this image *may* have been intuitive many, it's not even necessarily readable to an individual with color blindness. Rather than just relying on green vs. red, Figure 2 shows a more accessible and useable representation of the same information from another website.

PA	8 GB Black	16 GB White	16 GB Black
<a href="#">King of Prussia - King of Prussia</a>			
<a href="#">Pittsburgh - Shadyside</a>			
<a href="#">Pittsburgh - South Hills Village</a>			
<a href="#">Ardmore - Suburban Square</a>			
<a href="#">Whitehall - Lehigh Valley</a>			

**Figure 2: Using Color and Other Indicators**

Figure 2 is a much better usability and accessibility decision; There is no mistaking that there are two states - in stock vs. out of stock - because the icons are not only two different colors, they are two different shapes.

- **Use contextual and descriptive text for links and buttons**

By using descriptive text for links and buttons, as described in the simple example above, your website moves closer to being Section 508 compliant. For example, a disabled user who is visiting the website with a text reader is not going to have the visual clue that the “Read More” link is directly below a huge block of text about XYZ’s Solution. What happens if there are multiple “Read More” links on the same page? Changing the links to say “Read More About XYZ’s Solution” and “Read More About Working For XYZ Corporation” is inherently more usable and accessible for all users. Not only does using contextual and descriptive text for links and buttons make your site more usable, it will likely help with your search engine ranking.

- **Use text, not images, in page titles and navigational elements**

In order to provide compelling page titles and navigational cues to the user, these elements were often stored as images, with different images being presented on mouse roll-over, or when the node was active. With the advent of CSS, background images, and other more advanced styling techniques for web pages, using images for page titles and navigational elements is now all but obsolete, and when employed it presents usability and accessibility issues. Not only will a text reader not be able to read and interpret the images for disabled users, maintaining and updating these images becomes a potential nightmare for your website administrators.

A robust content management system will allow business users to create and maintain the navigational hierarchy without IT department support. Figure 3 shows an example of a page title, breadcrumbing, and menus that don’t use images.



**Figure 3: Text Based Page Elements**

Instead of using images for these page elements, simply rendering text over backgrounds looks just as great as using images and makes updates relatively painless for content authors. In this example, the business user is able to perform changes without having to call up the resident Photoshop expert to get a new image ready to go.

- **Use Templated Authoring To Your Advantage**

When you use a content management system with templated authoring - such as EMC Documentum’s Web Publisher - to administer your WCM solution, you inherently gain the power to change one template and apply those changes to all the relevant instances of content. While designing the clients’ Web Publisher based solutions, a few common patterns repeatedly appear in the website markup that can be easily applied to all pages thanks to templated authoring. These little tweaks to your markup will not only result in a more usable site for all visitors, but will help your solution achieve Section 508 compliance.

- **Include a link to skip the navigation**

Imagine your favorite e-commerce site with 10 tabs across the top of the website and an additional 5 or more submenu options that appear every time you mouse over one of those tabs.

Each one of those 10 tabs and 5 dropdown options is HTML that will be read by the text reader on every single page load; If you're not visually impaired, it's hard to fathom listening to a site reader read back 50 or more navigational elements *before* you even find out that the product page you're viewing isn't the right product. While it's easy enough for most sighted users to focus immediately on the body of the page and skip the global navigation, the same is not true of disabled persons using a site reader. By including a link to the meat of the page at the very top of every page, a visually impaired user can quickly jump over the navigation. It's just common courtesy and good practice to give every visitor to your website a quick path to the heart of every page.

- **Include descriptions for all site assets**

One of the most important provisions of Section 508 of the Rehabilitation Act of 1973 is that all images must have alternate text descriptions. While it may be obvious that regular content images need these descriptions, it's easy to overlook all those site assets - like spacer images and logos - but they too must have descriptions. During construction of your presentation files, set the alt attribute for the img tag appropriately. For blank images used as spacers, an alt="" is perfectly acceptable for Section 508 compliance.

- **Design for device independence**

It's easy to forget that not every user is visiting your website with a mouse. Quickly check all your markup files for device specific references (such as onMouseOver) and change them to device independent instances (such as onFocus).

- **Design for CSS and JavaScript independence**

Cascading Style Sheets (CSS) and JavaScript are a wonderful way to make your website look great. Unfortunately, looking great doesn't help visually impaired visitors using a text reader or users on browsers with limited functionality (Wireless devices, console gaming systems, etc).

It is important to design your presentation files to render content in a readable usable manner without CSS and JavaScript. By creating your solution so the markup and content renders in a readable format before the application of CSS and JavaScript, you can ensure accessibility for all users.

- **Use Web Publisher to Ensure Compliance For Images and Tables**

In addition to the aforementioned design decisions than can be easily incorporated into your XSL presentation files, there are a few tips and tricks that can help ensure your Web Publisher based WCM solution is Section 508 compliant.

- **Ensuring Section 508 compliance for author selected images**

A prime directive of Section 508 is to ensure all images include descriptive alternative text for the visually impaired. While it's straight forward enough to hard code alt attributes in the XSL presentation files for site assets, what about images added or selected by content authors via the Web Publisher content editor?

There are two ways that content authors can add images to an instance of content in Web Publisher:

1. Via the Graphic widget
2. Via the Rich Content Area widget

When a content author selects an image using the Graphic Widget (Figure 4), Web Publisher does not allow the author to enter any descriptive text to be use as the alt attribute for the published rendition.



**Figure 4:** Image selection widget

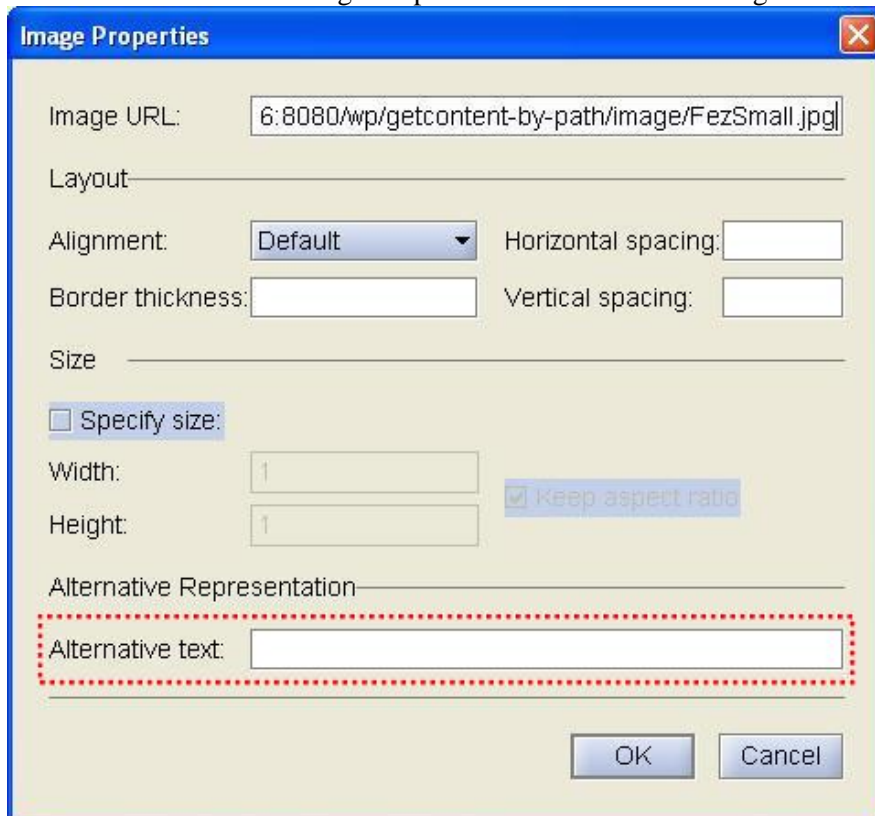
A simple straight forward solution is to include another field in your template that allows a content author to enter a description (Figure 5).



**Figure 5:** Alternate text description entry

Now the XSL presentation file can render the img tag with both the src attribute from the graphic widget and an alt attribute using the descriptive text. If this description field is optional, Section 508 compliance can still be ensured by generating an alt attribute text from the image name in the XSL processing, but this will only ensure compliance with the letter of the law, not the spirit. To make your site truly accessible, every image should have a descriptive alt attribute.

If a content author adds an image via the Rich Content Area widget, the author can add the alt text description by either right clicking on the image and selecting “Image Properties” or double-clicking on the image. At that point, the content author can enter the descriptive text in the “Alternative Text” field of the “Image Properties” window shown in Figure 6.



**Figure 6:** Image Properties for a Rich Content Area image

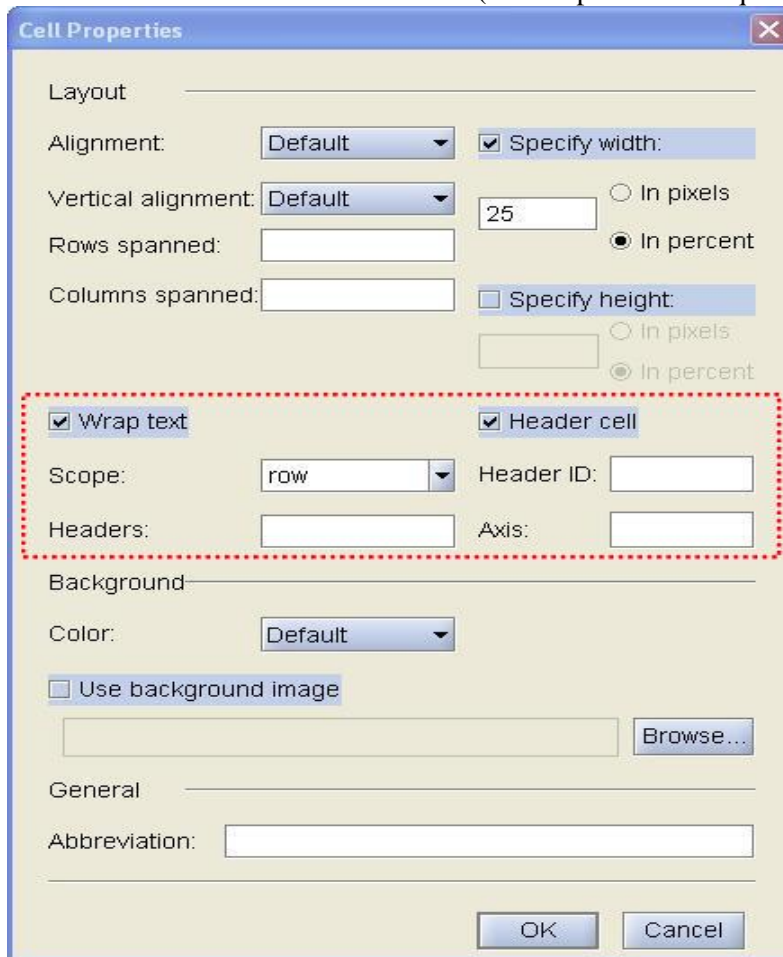
▪ **Ensuring Section 508 compliance for tables**

Another major provision of Section 508 is to ensure accessibility of data contained in tables. Similar to images, tables are required to have descriptive identifiers to be Section 508 compliant. Section 508 has two requirements related to tables:

1. “Row and column headers shall be identified for data tables.”
2. “Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.”

Since visually impaired visitors are unable to ascertain the contextual clues (such as color highlighting) that might indicate a table has a header row, these two requirements ensure accessibility. In general, tables should be properly formatted and used for data representation, not for general page layout.

Like images added via the Rich Content Area widget, Web Publisher enables content authors to easily identify and mark tables as necessary to be Section 508 compliant. By highlighting the table cells, right clicking, and selecting “Cell Properties”, a content author can quickly add the appropriate tags to make a table Section 508 compliant. The “Cell Properties” window (Figure 7) allows an author to mark rows and/or columns as header cells (important for requirement #1) as well as set the Header ID and the Headers attribute (both important for requirement #2).



**Figure 7:** Cell Properties for a Rich Content Area table

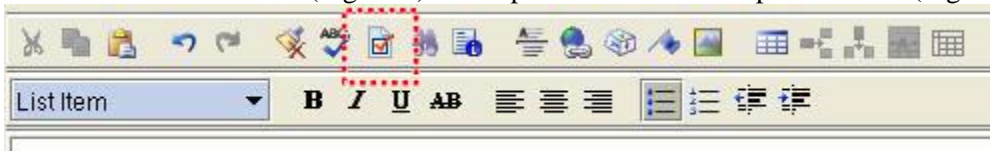


By checking the “Header cell” box, the previously selected cells are changed from td elements to the elements. Assistive devices will read this markup and inform a user that these cells are header cells and not data cells. To link a data cell with a header cell, as required by #2, a content author can set the “Header ID” on the header cell(s) and then set the “headers” on the data cell.

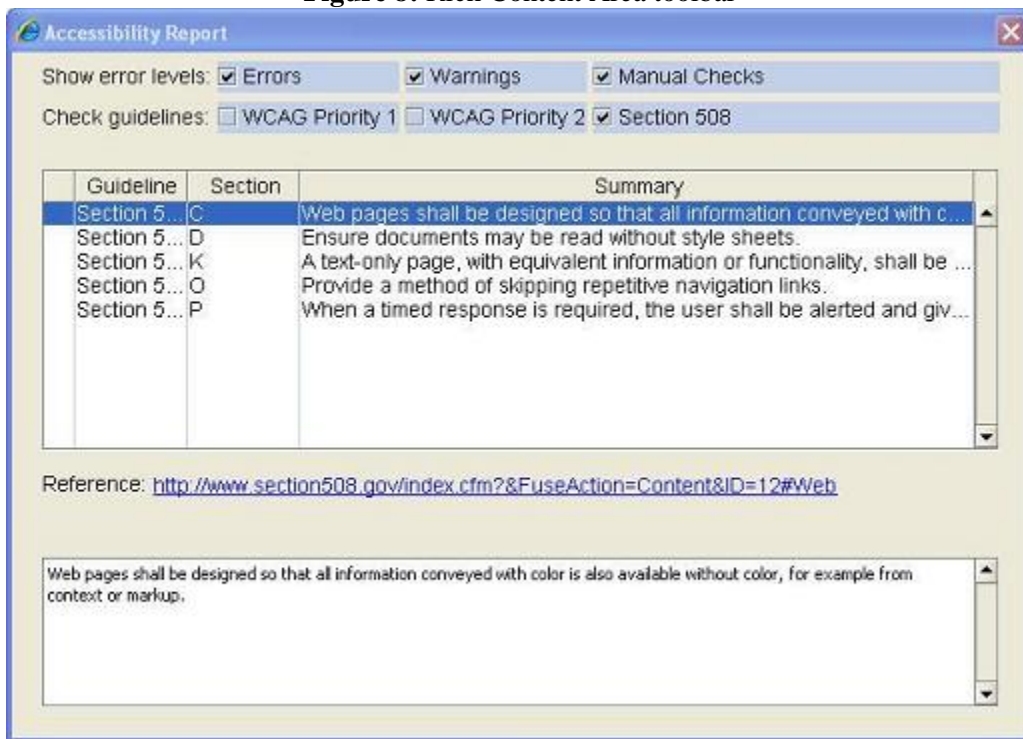
As with rich content area images, there is no way to be certain content authors have properly entered these descriptors for a table. Blue Fish uses processing in the XSL presentation file as well as best practice education during training to help our clients ensure compliance.

- **Documentum Accessibility Report**

Beginning with D6, Documentum has included a new option - the Accessibility Report — for the Rich Content Area widget in Web Publisher. This option, when enabled, allows content authors to generate a variety of simple reports for a rich content area that highlight potential compliance issues. To run the Accessibility Report, a content author clicks on the accessibility report icon in the rich content area toolbar (Figure 8) and is presented with the report window (Figure 9).



**Figure 8: Rich Content Area toolbar**



**Figure 9: D6 Accessibility Report**

The accessibility report window allows content authors to check against both Section 508 as well as the WCAG standards. Additionally, by checking the “Errors”, “Warning”, and “Manual Checks” boxes, the content author is given different information to consider for the content’s compliance. This new tool combined with the best practices already outlined can help ensure Section 508 compliance for Web Publisher based WCM solutions.

**Note:** While documented as an option for the Rich Content Area widget in D6 and D6 SP1, how to enable the Accessibility Report toolbar option was not documented at the time of publication. To enable this option, the following steps must be taken.

In the `/wp/wp/editors/contenteditor/resources/editliveConfig.xml` file located on the Application Server:

1. Insert  
`<toolbarButton name="Accessibility"/>`  
immediately after  
`<toolbarButton name="tlbSpelling"/>`
2. Insert  
`<action-mapping>`  
`<contentwidget-action>accessibilitycheck</contentwidget-action>`  
`<editlive-action>tlbAccessibility</editlive-action>`  
`<editlive-action>Accessibility</editlive-action>`  
`</action-mapping>`  
immediately after  
`<action-mapping>`  
`<contentwidget-action>spellcheck</contentwidget-action>`  
`<editlive-action>tlbSpelling</editlive-action>`  
`<editlive-action>BackgroundSpellChecking</editlive-action>`  
`</action-mapping>`
3. Restart the Web Publisher Application Server
4. In each XML rules file where the Accessibility Report is desired, add the attribute-value pair of `Accessibility="Y"` to the appropriate `<content>` tag(s)

#### **4. Is there an official “508 compliant” certification? If so, are we required by contract to get this?**

Basically, statutory compliance can be “certified” by a competent, independent third party or it can be “self-certified” by the vendor. How is this accomplished? First, as a practical matter, a vendor’s products and services are not generally brought into compliance all at once. Compliance involves a multi-phase process. In most cases, assessment and testing are completed first, and then a recommendation is developed for each product. The recommendation includes an action plan designed to drive each product to full compliance. The action plan should include a number a critical components: testing, assessment and training, marketing and engineering strategies.

As a consequence of the passage of Section 508, many Federal contractors currently find themselves challenged with the task of understanding how this new law affects them and their products. One of their more pressing, immediate concerns has been that of compliance certification. Some companies have elected to self-certify their products as being Section 508 compliant; while others have yet to address the issue as required by the law. The preferred - and most prudent -- route is to seek guidance and certification from an objective, independent organization. Why? Clearly, such an outside “seal of approval” is most compatible with public confidence. In addition, an objective, third party evaluation can help deter legal problems.

Private companies cannot be sued directly under Section 508. Indeed, Section 508 does not require private companies to comply with its accessibility mandates. Only Federal government agencies are directly accountable for complying with this law. Thus, a vendor might well ask: Are there legitimate, practical reasons for not making some or all of your products Section 508 compliant or accessible? Perhaps.

- Vendors could decide to “dumb down” some of their products. They could even produce two versions: one that is Section 508 compliant and one non-compliant version. Having several

versions, however, could not only be significantly more expensive; but could result in additional concerns, such as quality control and technical support.

- Vendors certainly could elect not to do EIT business with the U.S. government. But is this really a viable “long-term” option? This would certainly be a questionable decision if government sales and service constitutes a significant percentage of its business.
- Vendors could conclude that 508 Compliance is just too expensive. Such short-term thinking, however, could become far more expensive in the long run. Indeed, there is no reason to assume that compliance would be expensive at all, particularly since this cost would be “passed along.”

Is non-compliance really an option for a current government vendor? I think not. Accessibility compliance is here for the long term. While vendors must make prudent business decisions for their companies, it would be erroneous to conclude that accessibility only impacts their contracts with U.S. government agencies. Increasingly, State agencies here in the US, as well as nations around the world are becoming committed to EIT accessibility - either by law or by choice. Also to be considered is that many companies in the private sector, needing EIT products and services, have come to recognize that the community of disabled persons is a viable economic force with significant amounts of disposable income. Such leading companies are beginning to demand accessible products and services. Those providing EIT products and services to such companies, literally, cannot afford to ignore this reality.

I should also make note that accessibility is more than just a legal or economic issue. Important as those issues may be, the accessibility “rights” of people with disabilities have become a virtual “civil rights” issue. Predictably, laws and regulations and programs catering to the legitimate needs of people with disabilities will become more pervasive. Moreover, as accessibility becomes more “mainstream”, assistive devices and technology will come to be relied upon by the non-disabled. For example, years ago localities started cutting portions of curbs out of sidewalks to provide accessibility to persons using wheel chairs. Today, this “accessibility” benefits a far greater population: skateboarders, baby carriages, streetcart vendors and bicyclists. When a product or service is made accessible it becomes more usable for everyone. This, increasingly, has become the case with assistive technology as well, particularly within the field of telecommunications.

Thus, Corporate America has come to realize that there are social and economic incentives - not just legal compliance requirements -- to focus its EIT attention on issues of real accessibility and usability and not merely legal compliance. The law may simply require technical compliance; but the marketplace will demand functional accessibility. Frankly, I believe that everyone will be compliant in a few years, but those companies that are first to make their services and products more accessible and usable and “friendly” to people with disabilities will be the clear economic winners in an expanding and evolving EIT marketplace.

### **Potential Problems with Self-Certification**

From the vendors’ perspective, it is useful to regard certification as both a legal issue and a public relations issue. It is one thing to inform the public that one’s products and services are legally compliant. It is another issue entirely for this to be done in a way that produces public confidence in the accessibility of these products.

My recent experience has exposed a number of potential problems in addressing these dual certification issues. For example, some vendors have gone public with glowing claims, self-certifying the accessibility of their products. Yet, these vendors have refused to allow any qualified, outside party to review their products and services to verify these compliance claims. Why deny access? Why expose yourself to criticism and open the door for your competitors to raise legitimate questions about the authenticity of

these self-serving assertions? I believe that, at the very least, this is a shortsighted practice.

I have also become familiar with companies, after publicly self-certifying the accessibility of their products, coming up considerably short when users with disabilities tested these products. For example, one product with which I am familiar did in fact provide accessibility for the blind and visually impaired; however these products proved to be inaccessible to the mobility-impaired. Additionally, the accessibility of this vendor's website had not been addressed at all. Since the product had to be launched from the website, it remained effectively inaccessible to the visually impaired, blind and mobility-impaired population. Website accessibility is required under Section 508.

These illustrations bring to light some of the problems associated with vendor self-certification. An objective, outside evaluation would have detected these issues at the outset. Thus, while it certainly is possible for a vendor to be qualified to self certify; this practice can lead both to public confidence issues and questions involving verification.

Let me address one additional, sensitive issue. A vendor might be tempted to make misleading or erroneous claims to gain a short-term advantage over its competitors. It is more likely that "honest" mistakes could be made during the self-certification process. Certainly, the vendor could correct these "errors" eventually; but by then the damage would be done. Before the government or anyone else is likely to discover these inaccuracies, the company could secure multiple government contracts worth millions of dollars. But they could be the loser in the long run! These "mistakes" could lead to very costly litigation for the government and the vendor. While a disabled end user cannot sue a private company directly under Section 508, the wronged government agency certainly could sue for breach of contract, fraud or misrepresentation. Furthermore, there would be adverse public exposure for the guilty vendor. This vendor would instantly become "persona non grata" within the government contracting community. Is this a risk worth taking? I certainly do not think that it is. So why open yourself up, unnecessarily, to such avoidable problems?

In addition, it is estimated that the community of disabled persons has access to about \$740 billion in discretionary income (1). This is the largest single demographic minority in the United States, constituting a pool of about 27 million people of working age with disabilities; a mere 29 percent of whom are currently employed (2). It is a larger group than the teenage market. It is also a minority group that people can become a member of at different times in their lives. Additionally, since we are an aging population, these numbers will continue to grow. It would seem most unwise to risk alienating this population with questionable claims as to compliance.

There is one more issue that needs to be addressed. When companies publicize accessibility and compliance, they must be able to document and defend their assertions. As noted earlier, if your product or information is not in compliance and accessible to people with disabilities, you could be facing an ADA complaint or a lawsuit! Independent, third party certification can help protect a company from such unwanted consequences and help provide an effective litigation defense.

## **5. What manual tests can we perform to verify compliance? (E.g. checklists?)**

The U.S Department of Health and Human Services (HHS) has made guidelines and checklists for ensuring your files are 508 compliant available at <http://www.hhs.gov/web/508/testdocuments.html>.

- The checklist includes guidelines for files created in Microsoft Word, Microsoft Excel, Microsoft PowerPoint and Adobe Acrobat.

- The checklists provide tips for conveying information electronically so that it is accessible by disabled and non-disabled persons alike.
- If you are purchasing software, you should ask the vendor to certify Section 508 compliance or, in the absence of such certification, fill out a VPAT (Voluntary Product Accessibility Template) for the software. Many software vendors provide VPAT's for their software.

## 6. What are good automated tools we could use to verify 508 Compliance?

There are tools available to help you assess your Website. Your site can be checked and validated for conformance to the WCAG 1.0 guidelines, HTML specifications, Cascading Style Sheets (CSS), and the ability to be viewed with any browser. Many of the validation tools are available at no cost. Fee-based tools and services are also available. SSB Technologies has developed software that can check and repair Websites based on the legal compliance standards established by the Access Board.

Several tools exist which may guide the web designer in building accessible web pages and meeting Section 508 Compliance. Each of these tools is unique and uses unique criteria to gauge accessibility. However, use of any individual tool will not necessarily mean your site is 508 Compliant. Further steps may be required to ensure your site meets 508 Compliance. FITAI lists the following tools as a service to web designers. A tool's inclusion on this page does not represent an endorsement of that tool, nor does it imply a requirement for web designers to use any tool.

- [Bobby 3.2](#) - The Bobby tool identifies issues by priority level and provides hyperlinks to more detailed explanations and sample code.
- [The Wave](#) - The Wave helps people perform design tasks that require human judgment (e.g. "Does this ALT text provide a functional equivalent for this image?" "Does this reading order make sense?"). The Wave displays the ALT text of images and areas on the page for comparison with the images, provides numbered arrows to show the linearized reading order, and shows the HTML equivalent (if any) provided for applets. Wave features that help users compare visual and textual representations are not directly useful to people who are blind; but the output is accessible so people who are blind can check the output for completeness.
- [Lynx Viewer](#) - The Lynx Viewer generates an HTML page that indicates how much of the content of your page would be available to Lynx, which is a text-only browser. In addition to showing how useful a site would be for a visually-impaired person, it is also a good indicator for anyone with older technology.
- [Connect Outloud](#) - Connect Outloud is an easy to use web access tool for blind or visually impaired computer users. It offers speech and Braille output to the web using Internet Explorer 5.5. Send and receive email using Outlook Express and also create documents in your easy to use FS Editor word processor with its own spell checker that is included. Connect Outloud works with the Windows® Desktop, Windows Explorer and many other applications and accessories including Windows Media Player and Real Player.
- [Web Metrics](#) - The NIST WebMetrics project provides tools and techniques to facilitate evaluation of the usability of web sites.
- SSB Technologies - A software suite that diagnoses and retrofits inaccessible web sites. [InSight](#) allows page authors to diagnose a web page for inaccessibility. [InFocus](#) allows the author to quickly fix the problems of an inaccessible web page.
- [W3C Web Accessibility Initiative](#)
  - [W3C Web Accessibility Initiative's Web Tools Page](#) - Evaluation, Repair, and Transformation Tools for Web Content Accessibility

- [W3C HTML Validator](#) - The W3C HTML Validation Service checks HTML documents for conformance to W3C HTML and XHTML recommendations and other HTML standards.
- [CSS Validator](#) - If you are using Cascading Style Sheets (CSS), then you should use the CSS Validator.
- For more information, visit the [W3C's Evaluation & Repairs Tools page](#).

## 7. Are there any specific 508 compliance requirements specific to IPCA (i.e. anything communicated to the client previously, anything in our contract language, etc.)?

Below are specific 508 compliance regarding IPCA which were documented in the “IPCA ConOps Deployable Application Baseline 02.00.00 Document Version 0.8, 13 March 2009 »

### Usability and Section 508 Compliance

Usability is the ease-of-use and usefulness of a software system. The user interface and workflow of IPCA 01 are not as intuitive as they could be. There are multiple ways to perform the same action in IPCA 01. For example, users can record ID documents of the child, LBP and TP on either the subject or Travel/Location tabs. Document and journal management features are cumbersome. For example, users cannot have more than one open letter. Additionally an attachment, such as a PDF file, cannot be saved to a journal. Users are unable to scan in documents such as birth certificates and attach them to the appropriate cases. Furthermore, IPCA 01 forces users to work with multiple applications. For example, users must copy email text from Microsoft Office Outlook into IPCA 01 to associate the email to a journal. They may need to cut text from an email into several pieces because of text size limitations in IPCA 01. Microsoft Office documents must be manually uploaded into IPCA. Any changes made to a document already in IPCA must be manually uploaded again into the system. IPCA contacts cannot be downloaded to Outlook and action items are accessible only from within IPCA and do not integrate with Outlook tasks. These extra steps reduce user productivity, increase potential for errors, generate additional work, and create a negative user experience. IPCA 02 will alleviate these problems by integrating with Microsoft Office, the primary business productivity software of CA. The need to switch between different applications to manage cases will be reduced, and IPCA 02 will ***work the way people work***. The design of the user interface and workflow of IPCA 02 will encompass usability concepts including efficiency, online and contextual help, and error prevention.

Section 508 of the Rehabilitation Act specifies mandatory accessibility features required to enable people with visual impairments to use the software. For example alternative keyboard navigation is essential for people with vision impairments who cannot rely on pointing devices such as a mouse. IPCA 01 is currently not compliant with Section 508. (For example no alternative keyboard or navigation assisted technology). Additionally, some important information is conveyed via use of color, such as tickler items which are displayed in red when past due. IPCA 02 will be fully 508 compliant.

### Accessibility Software

IPCA 02 accessibility and Section 508 compliance is based upon using Freedom Scientific’s JAWS tool for Windows 10.0 as the screen reader software. JAWS 10.0 is currently in beta testing stage as of December 11, 2008. Version 10.0 of JAWS is required over the released version 9.0 because of the added AJAX support in this latest version.

**JAWS 10.0:** The IPCA 02 user interface will be designed to comply with the Section 508 of the Rehabilitation Act. Freedom Scientific’s JAWS 10.0 tool will be used as the screen reader software to

make IPCA 02 accessible for a person with visual impairment.

## Reference Materials:

Use the HHS Checklists: <http://www.hhs.gov/web/508/testdocuments.html>

HHS 508 Web Site: <http://www.hhs.gov/web/508/>

Upcoming HHS 508 online training classes: <http://www.hhs.gov/web/508/Training/index.html>

See <http://www.hhs.gov/web/508/video/> for HHS guidance on creating 508-compliant video. As for 508-compliant video players, I didn't find any useful information. I think that this is a new question, as the speakers seemed surprised to hear it. I imagine that, in time, HHS will provide some guidance.

Electronic and Information Technology Accessibility Standards (Section 508) <http://www.access-board.gov/sec508/standards.htm>

Web Accessibility Initiative (WAI) <http://www.w3.org/WAI/>

The World Wide Web Consortium <http://www.w3.org/>

The United States Access Board <http://www.access-board.gov/508.htm> and <http://www.access-board.gov/sec508/standards.htm>

Section 508 Web Accessibility Checklist: <http://web508.gsfc.nasa.gov/developing/checklist/index.cfm>

Testing Documents for Section 508 Compliance: <http://www.hhs.gov/web/508/testdocuments.html>

Web Content Checklist for Section 508 Compliance:

[http://www.uspto.gov/web/offices/cio/s508/web\\_checklist.pdf](http://www.uspto.gov/web/offices/cio/s508/web_checklist.pdf)

Web Content Checklist for Section 508 Compliance:

[http://www.uspto.gov/web/offices/cio/s508/web\\_checklist.htm](http://www.uspto.gov/web/offices/cio/s508/web_checklist.htm)

Section 508: Compliance Toolkit:

[http://www.epa.gov/accessibility/toolkit/508\\_compliance\\_toolkit\\_overview.htm](http://www.epa.gov/accessibility/toolkit/508_compliance_toolkit_overview.htm)

Toolbar downloads you can use with firefox and IE. <http://www.tomjewett.com/accessibility/508-eval-tools.html>

Section 508 Standards: <http://www.access-board.gov/sec508/standards.htm>

<http://www.access-board.gov/sec508/FAQ.htm#1>

<http://www.access-board.gov/sec508/FAQ.htm>

<http://www.ramincorp.com/section508compliance.html>

<http://www.section508.gov/index.cfm?FuseAction=Content&ID=12#Software>

<http://www.tsbvi.edu/technology/tools.htm>

<http://www.w3.org/TR/WCAG10/full-checklist.html>

<http://www.access-board.gov/sec508/standards.htm>

<http://webaim.org/standards/508/checklist>

[http://www.criterion508.com/index.cfm?ContentName=section\\_508\\_notes](http://www.criterion508.com/index.cfm?ContentName=section_508_notes)

[http://www.accessibility.com/S508C\\_Booklet.pdf](http://www.accessibility.com/S508C_Booklet.pdf)

<http://webaim.org/standards/508/checklist>

[http://www.epa.gov/accessibility/toolkit/508\\_compliance\\_toolkit\\_web\\_apps.htm](http://www.epa.gov/accessibility/toolkit/508_compliance_toolkit_web_apps.htm)

<http://www.bluefishgroup.com/library/2008/tips-for-making-your-website-section-508-compliant/>

<http://www.access-board.gov/sec508/guide/1194.22.htm>

<http://www.tomjewett.com/accessibility/508-eval.html>

[http://www.epa.gov/accessibility/toolkit/508\\_compliance\\_toolkit\\_web\\_apps.htm](http://www.epa.gov/accessibility/toolkit/508_compliance_toolkit_web_apps.htm)