508 Training
Understanding Section 508 Standards and Accessibility

Presented to the Center for Usability in Design and Assessment, California State University Long Beach
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CUDA-CSULB Training Agenda

Day 1 Morning Session:
Overview of Section 508 legal and regulatory framework
Review of 1194.21 – Software, Applications and Operating Systems

Day 1 Afternoon Session:
Review of 1194.22 – Web-based Internet Information and Applications

Day 2 Morning Session:
Review of 1194.23 – Telecommunications Products
Review of 1194.24 – Video and Multimedia Products
Review of 1194.25 – Self Contained, Closed Products
Review of 1194.26 – Desktop and Portable Computers

Day 2 Afternoon Session:
Role of VPAT™s in Procurement: Buying Accessible IT

Overview of Section 508 Legal and Regulatory Framework

- What is Accessibility?
- Disabilities Defined
- What is Section 508?
- What is its purpose?
- Who is impacted by mandating Section 508?
- Who is covered by the standards?
- What do the standards require?
- How vendors can qualify in competitive bids
- Where to get professional help for Section 508
In the ever changing landscape of today’s technology – with improvements in biometrics, broadband access, and WiFi-enabled PDAs – we all need to work together towards making technology accessible to individuals with disabilities, the elderly, and the baby boomer/50+ population.

What Does It Mean to Be Accessible?

Technology is accessible if it can be used just as effectively by people with disabilities as it can by those without.

What Is Section 508?

President Clinton on 8/7/98 signed the Workforce Investment Act of 1998, which included the Rehabilitation Act Amendments of 1998.

Section 508 of the Rehabilitation Act requires:

- Access for disabled federal employees
- Access for disabled members of public using federal IT
Purpose of Section 508

“The purpose of Section 508 and these standards is to build as much accessibility as is reasonably possible into [information technology] developed, procured, maintained, or used by agencies.”

Who is impacted by mandating Section 508 compliance?

– End users. Developers. Trainers. EVERYBODY!
– Anyone who uses assistive technology, like screen magnifiers, Braille readers, screen readers, etc.

Section 508 Standards

Subpart A -- General

• 1194.1 Purpose.
• 1194.2 Application.
• 1194.3 General exceptions.
• 1194.4 Definitions.
• 1194.5 Equivalent facilitation.
Subpart B -- Technical Standards

- 1194.21 -- Software applications and operating systems
- 1194.22 -- Web-based information and applications
- 1194.23 -- Telecommunications
- 1194.24 -- Video and multimedia
- 1194.25 -- Self contained, closed
- 1194.26 -- Desktop and portable computers

Section 508 Standards

- Subpart C -- Functional Performance Criteria –
  a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.
- Subpart D -- Information, Documentation, and Support

Multiple Standards May Apply

- Cross over technology – Fax Machine with a handset
  - both 1194.25 and 1194.23
- One RFP may include technologies in many categories of 508 standards
  - Telecommunications – phones, voicemail systems
  - Software —softphone
  - Web Application - web-based voicemail portal
  - Documentation – user and reference Guides
**When does Section 508 not apply?**

Section 508 – Exceptions (1194.2 & 1194.3)
- If standards cause "undue burden"
- Intelligence or national security (not including normal business or administrative functions)
- "Incidental" contractor equipment
- Act does not require installation of assistive software, or attachment of assistive device at workstation of federal worker without disabilities
- Act does not require "fundamental alteration in nature of a product or its components"
- Products in spaces frequented only by service personnel

**What if it is difficult to locate accessible hardware, software or services?**

Ask two questions:
- Is a partially accessible product available?
- Would complying impose "undue burden"?

"If products are commercially available that meet some but not all of the standards, the agency must procure the product that best meets the standards."

"Undue burden" is a "significant burden or expense," considering the resources available to the program or component.

**“Equivalent” Means “Equal”**

FAQ
Is there a preference for a product that strictly meets the technical provisions of Subpart B over a product that provides the same or greater accessibility through equivalent facilitation?

No. Purchase of either EIT product would satisfy an agency’s obligations under section 508. Award should be made to the source whose offer is most advantageous to the Government based on the agency’s source selection criteria (which would include cost or price and may include quality).
Review of 1194.21 – Software Applications and Operating Systems

Teaching Methodology:

Here is the standard; Here is how you meet it

Section 508: 1194.21

- [a] Executing Function from Keyboard
- [b] Accessibility Features
- [c] Input Focus
- [d] User Interface Element
- [e] Bitmap Images
- [f] Textual Information
- [g] User Selected Attributes
- [h] Animation
- [i] Color Coded
- [j] Color and Contrast Settings
- [k] Flashing or Blinking Text
- [l] Electronic Forms

1194.21 Paragraph (a)

(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.
1194.21 Compliance with Paragraph (a)

- Ensure that ALL functionality and navigation is preserved when using a keyboard for access.
  - This does not mean a perfect duplication of all items in an application. For example, many toolbars have shortcut items that are also available on a menu bar.

1194.21 Paragraph (b)

(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.

1194.21 Compliance with Paragraph (b)

- Many commercially available software applications and operating systems have features built into the program that are labeled as accessibility features. These features can typically be turned on or off by a user.
  - High Contrast
  - Sticky Keys
  - Filter Keys

- This requirement prohibits software programs from disabling these features when they have been activated prior to running the application.
1194.21 Paragraph (c)

(c) A well defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that assistive technology can track focus and focus changes.

1194.21 Compliance with Paragraph (c)

- The position on a screen where an action will take place is referred to as the "focus." For example, when a menu item in a program is highlighted - meaning that if the user clicks the mouse or presses the enter key - the feature will activate and that item has the focus. Providing a visual indication of the focus allows someone who is viewing the screen to accurately access the programs' features. When a computer is being operated by a person who is also running a screen enlargement program or a speech or Braille output system, the assistive technology must discern the focus point. This provision requires that the position of the programs' focus be made available through its code to assistive technology.

1194.21 Paragraph (d)

(d) Sufficient information about a user interface element, including the identity, operation and state of the element, shall be available to assistive technology. When an image represents a program element, the information conveyed by the image must also be available in text.
1194.21 Compliance with Paragraph (d)-Example

Here, command buttons are separated from the text labels.

1194.21 Compliance with Paragraph (d)-Example

These command buttons are labeled with text:

1194.21 Paragraph (e)

(e) When bitmap images are used to identify controls, status indicators or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.
1194.21 Compliance with Paragraph (e)

- Consider this icon that represents the refresh command in Internet Explorer browser:
  - It has a text label "refresh" which is displayed as a tool tip.

- A usability issue is created if the icon is changed to represent another action during the course of the program, so use icons in a consistent manner.

1194.21 Paragraph (f)

(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location and text attributes.

1194.21 Compliance with Paragraph (f)

- When programs are written using unique schemes for writing text on the screen or use graphics, other programs such as software for assistive technology may not be able to interpret the information. It is required that when a unique method is used, the text should also be written to the screen through the operating system.
1194.21 Paragraph (g)

(g) Applications shall not override user selected contrast and color selections and other individual display attributes.

1194.21 Compliance with Paragraph (g)

- Persons with disabilities can increase their efficiency with a system by selecting colors, contrast, keyboard repeat rate, and keyboard sensitivity settings provided by an operating system. When an application disables or overrides these system-wide settings, accessibility is reduced. Allowing all users to select personalized settings increases usability and accessibility.
  - Programs are allowed to have their own settings, but must include a method to allow the user to use system display settings.

1194.21 Paragraph (h)

(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.
1194.21 Compliance with Paragraph (h)

- Animation causes accessibility problems if not handled correctly. First, people with cognitive problems have trouble understanding animated content such as scrolling marquees. Input controls should not be animated. However, if animation exists make sure the content is provided in an alternative format.
  - Allow users to turn off animation and still retain all content and functionality.

1194.21 Paragraph (i)

(i) Color-coding shall not be used as the only means of conveying information, indicating an action, prompting a response or distinguishing a visual element.

1194.21 Compliance with Paragraph (i)

- Select the green button to get Doug to shut up and select the red button to empty your bank account!

- "Fields marked in red are required"
Paragraph (j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.

Compliance with Paragraph (j)

- Users with different visual problems need the ability to vary the color and contrast choices to meet their needs. If a program allows color and contrast choices a good range must be provided.
  - This does not require that programs allow color and contrast choices, nor is the specific range of colors and contrast specified.

Paragraph (k) Software shall not use flashing or blinking text, objects or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.
1194.21 Compliance with Paragraph (k)

- Avoid animation! (This is different than a movie clip or multimedia piece.) The provision is generally referring to animated icons, although an embedded animation may also violate the Hz requirement.
  - review your content for movement and verify that it does not move outside of the Hz range.

1194.21 Paragraph (l)

(l) When electronic forms are used, 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.

1194.21 Compliance with Paragraph (l)

- In HTML, there is code which allows the explicit association of form elements with text labels. For software programs, this is limited. Place text labels near the form element and test the reading order with a screen reader. Some programs such as Microsoft Access allow form elements to be built with the text label as part of the control. You can also add tool tip text and status bar message to help the users of assistive technologies.
  - Review screenshot next slide.
Day 1 – Afternoon Session

Review of 1194.22 – Web-based Information and Applications

Teaching Methodology:

Here is the standard; Here is how you meet it

Section 508: 1194.22

- [http://www.access-board.gov/sec508/guide/1194.22.htm](http://www.access-board.gov/sec508/guide/1194.22.htm)
- (a) Text Tags
- (b) Multimedia Presentations
- (c) Color
- (d) Readability
- (e) Server-Side Image Maps
- (f) Client-Side Image Maps
- (g) Alternatives
- (h) Tables
- (i) Frames
- (j) Flicker Rate
- (k) Text-Only Alternative
- (l) Scripts
- (m) Applets and Plug-Ins
- (n) Electronic Forms
- (o) Navigation Links
- (p) Time Delays

1194.22 Paragraph (a)

(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).

- Compliance
  - All images need ALT attribute. `<IMG src="image.jpg" ALT=""/>`
  - Text alternative for graphic objects. Multimedia is considered a non-text object (such as Flash)
1194.22 Compliance with Paragraph (a)

All images need ALT attribute. `<IMG src="image.jpg" ALT="">`

- Text alternative for graphic objects. Multimedia is considered a non-text object (such as Flash)

1194.22 Compliance with Paragraph (a)-cont.

- ALT text should be succinct
  - ALT="guitar neck fingering"

1194.22 Compliance with Paragraph (a)-cont.

- ALT text should represent text placed on a graphic.
  - ALT="we proudly accept Visa, Mastercard, PayPal"
1194.22 Compliance with Paragraph (a)-cont.

Try to avoid large amounts of text on an image.
- Use mark-up with CSS styles instead.
- Otherwise you will need the longdesc attribute, or a link to an external HTML file with the content.

```
<IMG SRC="philos.jpg" LONGDESC="philos.htm" ALT="">
```

MY PHILOSOPHY
I am dedicated to giving each client personalized service. Being present at every step along the way.
I am dedicated to helping buyers being around to your needs.
I am dedicated to getting top dollar for home sales, keeping the process as stress free as possible.

1194.22 Compliance with Paragraph (a)-cont.

Images that do not convey content to the sighted do not need to convey content to the screen reader user, such as spacer images and “ambient” images. Use ALT=""

```
```

```
```

1194.22 Compliance with Paragraph (a)-cont.

For logos and emblems, duplicate the critical text.
- ALT="ABR Accredited Buyer’s Representative"
1194.22 Compliance with Paragraph (a)-cont.

ALT text extends beyond graphics!

- The concept is that non-text objects need a text alternative.
  - SWISH
  - Sound files
  - Video files

- ALT text may be placed inside of the OBJECT and the (deprecated) APPLET tag.
  - provides insight on what the Object is doing but not a real accessible alternative: “this displays a stock ticker”

1194.22 Paragraph (b)

(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.

1194.22 Compliance with Paragraph (b)

Ensure that all videos have captioning and video description if necessary.

- Captions turn the audio content of a visual presentation into text; they are an alternative format used to deliver audio content. Captions address the problems faced by users who are deaf or hard of hearing. Captions can also be used to translate languages for students, supplement poor audio quality, or create a quiet environment.
- Audio descriptions turn visual content into sound; they are simply additional narrative that describes a scene or setting. Audio descriptions address the problems faced by users who are blind or have other visual impairments.
1194.22 Compliance with Paragraph (b)-cont.

- What are considered equivalent alternatives?
- Captioning for the audio portion and audio description of visual information of multimedia presentations are considered equivalent alternatives. This provision requires that when an audio portion of a multimedia production is captioned, as required in provision (a), the captioning must be synchronized with the audio. Synchronized captioning would be required so someone reading the captions could also watch the speaker and associate relevant body language with the speech.
  - source: U.S. Access Board
- Audio files such as podcasts are not multimedia.
  - Requirement is for a text transcript.

1194.22 Paragraph (c)

(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.

1194.22 Compliance with Paragraph (c)

Look for language such as "required fields marked in red" or navigation directions based on color.

- Select the green button to get Doug to shut up and select the red button to empty your bank account!
- "Fields marked in red are required!"
1194.22 Paragraph (d)

(d) Documents shall be organized so they are readable without requiring an associated style sheet.

1194.22 Compliance with Paragraph (d)

- **Compliance:**
  - Disable CSS
  - Look at your source code—do the DIVs flow in the intended reading order?
  - One common error is hard-coded table backgrounds with styled text content
  - Users with low vision may create their own style sheet so that characters are displayed to their preference. If pages override user-defined style sheets, people with disabilities may not be able to see these pages:
    - Use an external style sheet
    - `<link rel="STYLESHEET" type="text/css" href="CSS_file_name.css">`

1194.22 Compliance with Paragraph (d)-cont.

**CSS style sheet common mistake:**

- Table cell or row with hard coded background and CSS styled text over it.
  - `<td background="#000000"><span class="white">hello</td>`
  - **with CSS:**
  - **without CSS:**
    - *hello*
1194.22 Paragraph (e)

(e) Redundant text links shall be provided for each active region of a server-side image map.

1194.22 Compliance with Paragraph (e)

- Server side image maps are "mouse centric" ("ismap" attribute)
  - require redundant text links in a list or a drop-down list (select box)

1194.22 Paragraph (f)

(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.
1194.22 Compliance with Paragraph (f)

- Favor client side maps over server side maps!
  - ALT text the regions of a client side map.
  - `<AREA coords="10,10,10,10" shape="rect" href="#" alt="California"`
## 1194.22 Compliance with Paragraph (g) and (h)-cont.

More complex tables may use the ID and HEADER:

```html
<TABLE border="1" summary="This table charts the number of cups of coffee consumed and detailed information.">
<tr><th id="header1">Name</th><th id="header2">Cups</th><th id="header3">Type of Coffee</th><th id="header4">Sugar?</th></tr>
<tr><td headers="header1">T. Sexton</td><td headers="header2">10</td><td headers="header3">Espresso</td><td headers="header4">No</td></tr>
<tr><td headers="header1">J. Dinnen</td><td headers="header2">5</td><td headers="header3">Decaf</td><td headers="header4">Yes</td></tr>
</TABLE>
```

- Identify **Layout and Data** tables.
  - Layout tables group content on a page, but the information in one TD is not dependent on the information in other TDs.
1194.22 Compliance with Paragraph (g) and (h)-cont.

- A data table contains information in TD cells related to information in header cells, such as this mortgage rate table:

<table>
<thead>
<tr>
<th>Week ending</th>
<th>30 year FRM</th>
<th>15 year FRM</th>
<th>1 year ARM</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/7/2006</td>
<td>6.43</td>
<td>6.19</td>
<td>5.5%</td>
</tr>
<tr>
<td>4/14/2006</td>
<td>6.49</td>
<td>6.14</td>
<td>5.61%</td>
</tr>
<tr>
<td>4/21/2006</td>
<td>6.53</td>
<td>6.17</td>
<td>5.63%</td>
</tr>
<tr>
<td>4/28/2006</td>
<td>6.59</td>
<td>6.21</td>
<td>5.66%</td>
</tr>
<tr>
<td>5/5/2006</td>
<td>6.59</td>
<td>6.22</td>
<td>5.65%</td>
</tr>
</tbody>
</table>

1194.22 Paragraph (i)

(i) Frames shall be titled with text that facilitates frame identification and navigation.

Identify frames and add descriptive title attributes:

`<FRAME src="nav.html" title="Navigation bar">`
`<FRAME src="doc.html" title="Documents">`
Paragraph (j)

(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.

Paragraph (k)

(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of these standards, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.
1194.22 Compliance with Paragraph (k)

- Only created when there is no way to make the primary content accessible or when an alternative version addresses specific disabilities.
  - Must be up to date with primary page.
  - Equal functionality.
  - Components are accessible (such as PDF)

1194.22 Paragraph (l)

(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.

1194.22 Compliance with Paragraph (l)

- This does not mean you can't use JavaScript!
  - document.write('hello');
  - Visual effects
  - Actually help with Paragraph P (timed response)
- Content created with JavaScript must be accessible
  - Keyboard accessible
  - ALT for images
1194.22 Compliance with Paragraph (l) – cont.

- Use device independent event handlers
  - Use onFocus and onBlur with onMouseOver and onMouseOut
- Web pages that utilize scripting must be fully navigable using a keyboard.
  - “onClick” is also a keyboard event in most major browsers when used with a link or form control (ENTER key activates). It is not usable by the keyboard when applied to text or table cells.

- JavaScript should not modify or override normal browser functionality in a way that may cause confusion.
  - For example, trapping someone in a form field until they enter data.
- When JavaScript cannot be made natively accessible, an accessible alternative must be provided.
  - Use the NOSCRPT tag
  - OnChange events for drop-down lists are not accessible, because the event will be triggered for every item in the list when using a keyboard.
  - Use caution when deploying dynamic layers. Content that changes without a page refresh can cause problems for screen reader users.

1194.22 Paragraph (m)

(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).
1194.22 Compliance with Paragraph (m)

- A link is provided to a page where the plug-in can be downloaded.
- All Java applets, scripts and plug-ins (including MS office files and PDFs, etc.) are accessible to assistive technologies, or else means of accessing equivalent content is provided.

1194.22 Paragraph (n)

(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.

1194.22 Compliance with Paragraph (n)

- Use the "LABEL FOR" tag for input controls
  <form action="">
  <label for="firstName">First Name:</label>
  <input name="firstName" ID="firstName" type ="text">
  </form>

  NOTE: Association is made with the ID attribute of the input tag, NOT the name attribute!
1194.22 Compliance with Paragraph (n)

- Radio button:
  
  Are the Beatles the greatest group ever?
  <input type="radio" name="greatest" ID="beatlesYes">
  <label for="beatlesYes">Yes</label>
  <input type="radio" name="greatest" ID="beatlesNo">
  <label for="beatlesNo">No</label>

  <label>
    Use hidden text to add text labels for multiple input fields 
    that represent one piece of data (phone numbers, SS 
    numbers, credit cards, etc)
  </label>

  for="areaCode"><span class="hidden">area code</span></label>

1194.22 Compliance with Paragraph (o)

- A method shall be provided that permits users to skip repetitive 
  navigation links.

1194.22 Paragraph (o)

(o) A method shall be provided that permits users to skip repetitive 
navigation links.

- Very simple! Use an anchor link to skip content.
  
  <a href="#skipnav">Skip navigation</a>

  <a name="skipnav"></a>

  - The skip nav link can be around a 1 pixel gif with alt text 
  of "skip navigation"
  - You may also hide the link via a hidden style.
1194.22 Paragraph (p)

When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.

1194.22 Compliance with Paragraph (p)

- Add a method to extend time for user response
- Addresses slower rates of response by disabled users:
  - Screen reader users.
  - Those with cognitive disabilities.

Questions?

Thank you for participating in our professional training sessions!

Tomorrow's Agenda:

Morning Session:
- Review of 1194.23 – Telecommunications Products
- Review of 1194.24 – Video and Multimedia Products
- Review of 1194.25 – Self Contained, Closed Products
- Review of 1194.26 – Desktop and Portable Computers

Afternoon Session:
- Role of VPAT™s in Procurement: Buying Accessible IT
The Role of Voluntary Product Accessibility Templates (VPATs™) in Procurement

Day 2

Presented to the Center for Usability in Design and Assessment, California State University Long Beach

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Day 2 Afternoon Session:
Role of VPAT™s in Procurement: Buying Accessible IT

VPATs™ are a critical tool for both government and industry

VPAT™ Value Statement

Consistent reporting of product accessibility information simplifies product comparisons for government purchasers. A consistent report format ensures IT vendors that their products will be considered with a “level playing field”.

Course Overview

During this course, we will:

- Explore the origin of VPATs & their relevancy today
- Discuss how VPATs are acquired
- Examine the structure of the VPAT template
- Using some "real world" examples, we’ll look at how vendor-provided VPATs can be analyzed to determine accuracy and completeness, and discuss the challenges of comparing VPATs from multiple vendors to determine "best fit" for your requirements

Course Plan

Lesson One: Understanding origin & relevance of VPATs
Lesson Two: Acquiring VPATs
Lesson Three: Examining VPAT structure
Lesson Four: Analyzing VPAT product information

Course Plan Objective

Lesson One: Understanding the origin & relevance of VPATs

- Understand the needs of persons with disabilities
- Understand how the June 2001 mandate for Section 508 compliance impacted government procurement practices
- Government procurement drives market response
- The forces in the market place that defined the need for a VPAT vehicle in 2001 are the same forces at work today
Lesson Two: Acquiring VPATs

- List the resources available to you as a procurement agent to locate VPATs to support Market Research requirements to source Section 508-compliant IT
- Understand the options potentially available to purchasers who need "complete" VPATs
- Identify the resources available to you as a developer of IT to develop and offer your products and VPATs to government

Lesson Three: Examining the structure of VPATs

- Understand how the template can capture the overall accessibility of a product "from 5000 feet", as well as address specific product features and other functional areas
- Understand how the template provides both information—and opportunities—for the VPAT reviewer and the VPAT offeror

Lesson Four: Analyzing VPAT product information

- Determine if a VPAT is responsive to your requirements
- Recognize "red flags" in completed VPATs that indicate the offeror may not understand how to present their data correctly
- Recognize incomplete—or inaccurate—compliance statements
- Compare multiple VPATs to determine "best fit"
Understanding the Needs of People with Disabilities

Who is in Need of Accessibility?

- 500 to 750 Million People with Disabilities Worldwide
- 54 to 56 Million Americans have a Disability

The US population is aging:

Consider this question:

What types of limitations or disabilities could affect a user’s ability to use hardware or software?
Lesson One: Origin & Relevance
Understanding the Needs of People with Disabilities (cont.)

Types of Disabilities

- Blindness and visual limitations
- Deafness and hearing limitations
- Speech limitations
- Mobility limitations
- Multiple limitations

How Section 508 impacted government procurement

When the U.S. Access Board first published the Section 508 standards in December of 2000, government purchasers easily understood they were required to buy E&IT that was compliant to the standards. But...what were the metrics?

- For the most part, Section 508 standards tell you “what”, not “how”
- Government recognized that they could expect to have different IT vendors offer “proof of compliance” in different ways
- There was no clear mechanism for easily identifying which IT products complied with the standards, or to what extent they complied
- General concern that different vendor products might be evaluated based on different criteria, depending on how the evaluations were conducted
- Other concerns relating to “fairness” and “even playing field”

Government and Industry worked together

GSA and The Information Technology Industry Council (ITI) partnered to create a simple, Internet-based tool to assist Federal contracting and procurement officials in fulfilling the new Market Research requirements contained in the Section 508 implementing regulations.

The result: the Voluntary Product Accessibility Template, or VPAT™.
Lesson One: Origin & Relevance

Government procurement drives market response

With few exceptions, compliance to Section 508 is part of most federal IT procurements

• The task of performing Market Research to identify and source most-compliant-to-standards IT can be cumbersome
• VPATs offer a structured, standardized approach of comparing the extent of 508 compliance among IT products of similar form, fit and function
• Initially, some IT vendors felt 508 standards were “an annoyance” that might simply fade away over time
• The evidence is certainly clear now: those who invest in making their IT products and services compliant to Section 508 gain—and tend to promote—a strong competitive advantage over those who do not.

Lesson One: Summary

Section 508 became law in 2001

• VPAT developed as a cooperative effort of government and industry
• VPAT is a structured means of documenting compliance to 508
• VPATs support harmonization
• VPATs remain an important component of Market Research by procurement officials
• Visit http://www.section508.gov

Break
Lesson Two: Acquiring VPATs

Objectives

- List the resources available to you as a procurement agent to locate VPATs to support Market Research requirements to source Section 508-compliant IT
- Understand the options potentially available to purchasers who need "complete" VPATs
- Identify the resources available to you as a developer of IT to prepare quality VPATs

Lesson Two: Acquiring VPATs™

How can you acquire VPATs?
Lesson Two: Acquiring VPATs™

Once you have determined the type of IT you want to purchase, you should augment your Market Research by considering these sources of completed VPATs for those products:

– IT vendor websites
– Direct from the vendor

The blank template can be obtained from this online source: http://www.itic.org/archives/articles/20040506/voluntary_product_accessibility_template.php

Lesson Two: Acquiring VPATs™

As a procurement agent, what are your options for acquiring VPATs?

• Acquire VPATs from Buy Accessible or other online resources
• If known to you, ask the vendors’ federal sales representative for the VPATs you are interested in reviewing
• Select the best product that meets your business requirements and most closely meets the requirements of Section 508 from the VPATs you acquire

Lesson Two: Acquiring VPATs™

As an IT vendor, what are your options for developing complete and accurate VPATs?

• Develop your VPAT as an internal effort, using your technical and marketing staff to create a clearly written, comprehensive VPAT based on your product’s features and specifications
• Outsource VPAT creation to a technology company that specializes in evaluating compliance of E&IT products to Section 508 standards by means of qualified testing, then prepares a VPAT for your product
Lesson Two: Summary

Procurement: Use www.BuyAccessible.gov to identify products and links to vendor VPATs online.

Vendors:
- Ensure your products are listed in Buy Accessible; maintain currency as products are upgraded/replaced.
- Assign qualified internal technical resources to develop your product’s VPAT; alternatively, hire a qualified third party technology company to evaluate your product for compliance to Section 508 and develop a comprehensive VPAT for you.

Objectives

- Understand the tables and columns of a VPAT.
- Understand how the template provides both information—and opportunities—for the VPAT reviewer and the VPAT offeror.

Lesson Three: Examining the Structure of VPATs

VPATs are structured as a series of tables, each of which has three columns:

- A Summary Table, which provides a “snapshot” of the Section 508 standards. Each of the major subsections of Section 508 is listed in this table. Hyperlinks from this Summary table link to other tables representing each major subsection of the standards.
- Eight Subsection Tables, representing standards associated with each of the principle technology and functional areas covered by Section 508.
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Supporting Features</th>
<th>Remarks and Explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1194.21 Software Applications and Operating Systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section 1194.22 Web-based Internet Information and Applications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section 1194.23 Telecommunications Products</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section 1194.24 Video and Multimedia Products</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section 1194.25 Self-Contained, Closed Products</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section 1194.26 Desktop and Portable Computers</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Lesson Three: Examining the Structure of VPATs

Supporting Features (Column 2 on VPAT)

- **Support**: Use this language when you determine the product fully meets the letter and intent of the Criteria.
- **Support with Exceptions**: Use this language when you determine the product does not fully meet the letter and intent of the Criteria, but provides some level of access relative to the Criteria.
- **Supports through Equivalent Facilitation**: Use this language when you have identified an alternate way to meet the intent of the Criteria or when the product does not fully meet the intent of the Criteria.
- **Supports when combined with Compatible AT**: Use this language when you determine the product fully meets the letter and intent of the Criteria when used in combination with Compatible AT. For example, many software programs can provide speech output when combined with a compatible screen reader (commonly used assistive technology for people who are blind).

Lesson Three: Examining the Structure of VPATs

Supporting Features (Column 2 on VPAT) – cont.

- **Does not Support**: Use this language when you determine the product does not meet the letter or intent of the Criteria.
- **Not Applicable**: Use this language when you determine that the Criteria do not apply to the specific product.
- **Not Applicable – Fundamental Alteration Exception Applies**: Use this language when you determine a Fundamental Alteration of the product would be necessary to meet the Criteria (see the access board standards for the definition of "fundamental alteration").
Lesson Three: Examining the Structure of VPATs

Reviewing the VPAT Tables

Please refer to student handout: ITI VPAT™ Template

Lesson Three: Examining the Structure of VPATs

Summary

• VPATs™ are structured as a series of tables, starting with a Summary Table.

• The Summary Table generally tells you which subsections of the template are applicable to the vendor’s product, and you can expect to see those particular sections actually attached to their completed template.

• Sections of the VPAT that are not applicable to the product are usually omitted from the completed template.

• IT vendors should generally follow the language suggested by ITI for completing the VPAT. Reviewers should look a little more closely if this is not the case.

Lesson Four: Analyzing VPAT product information

Objectives

• Determining if a VPAT is responsive to your requirements
• Understanding what comprises a “Good VPAT”
• Recognizing “Red Flags” in VPATs
• Comparing multiple VPATs to determine “Best Fit”
Lesson Four: Analyzing VPAT Product Information

Determining if the VPAT is responsive to your requirements

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Supporting Features</th>
<th>Remarks and explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1194.21 Software Applications and Operating Systems</td>
<td>Supported with exceptions. See attached VPAT.</td>
<td></td>
</tr>
<tr>
<td>Section 1194.22 Web-based Internet Information and Applications</td>
<td>Supported with exceptions. See attached VPAT.</td>
<td></td>
</tr>
<tr>
<td>Section 1194.23 Telecommunications Products</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Section 1194.24 Video and Multimedia Products</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Section 1194.25 Self-Contained, Closed Products</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Section 1194.26 Desktop and Portable Computers</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Section 1194.31 Functional Performance Criteria</td>
<td>Supported with exceptions. See attached VPAT.</td>
<td></td>
</tr>
<tr>
<td>Section 1194.41 Information, Documentation and Support</td>
<td>Supported with exceptions. See attached VPAT.</td>
<td></td>
</tr>
</tbody>
</table>

Lesson Four: Analyzing VPAT Product Information

What comprises a “Good VPAT?”

Completeness
Accuracy
Honesty!

Other attributes:
- The vendor provides clear, concise explanations of how their product does, does not, or partially complies with requirements
- The vendor takes the opportunity to show how areas of compliance that are now deficient (or lacking) will be addressed in future releases of the product, and provides supporting details
- Everything you expect to see in the VPAT is included!

Lesson Four: Analyzing VPAT Product Information

Recognizing “Red Flags” in VPATs

VPAT for a Pretty Good Little Widget
Section 1194.21 Software Applications and Operating Systems – Omal Voluntary Product Accessibility Template:

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Supporting Features</th>
<th>Remarks and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1194.21 Software Applications and Operating Systems</td>
<td>N</td>
<td>No alternative solution shall be provided in advance to a person with a visual impairment, large print, voice and braille translation.</td>
</tr>
</tbody>
</table>
Lesson Four: Analyzing VPAT Product Information

Recognizing “Red Flags” in VPATs (cont.)

• Partially Supported, Supported with Limitations, Supported with Exceptions are used, but little or no supporting details are provided by the vendor

• Repetitive use of an accommodation statement in the Remarks and Explanations column. See example on previous slide with “Send Braille in advance” as the proposed means of complying

• Vague, or “elusive” statements in either the Supporting Features or Remarks and Explanations columns. This may be frequently used throughout a “Bad” VPAT

Assumption: You determine that the IT products you are considering are essentially equivalent in terms of form, fit, features and function. All will meet your organization’s technical and operational requirements.

Challenge: Use vendor-supplied VPATs to decide which product—or products—is most compliant to the applicable Section 508 standards.

A methodical process for comparing VPATs:

• Use the VPAT™ Review Checklist, or a similar document, to capture a top-level view of the “completeness” of each VPAT.

• Review each VPAT separately, on its own merits. Despite the broad acceptance of ITI’s recommended language, many vendors have adopted their own “style” of responding to the fields in the VPAT.
Lesson Four: Analyzing VPAT Product Information

Reviewing multiple VPATs to decide “Best Fit” (cont.)

A methodical process for comparing VPATs:

Apply the skills we have addressed in this course to determine: Responsiveness to your requirements, completeness, reasonableness, and accuracy for each VPAT.

• Make a determination as to the seriousness of Not Supported or Partially Supported statements. Review the Remarks and Explanations offered by the vendor carefully. Seek advice from a Section 508 expert if in doubt.

• After all VPATs have been reviewed, perform a comparison of your VPAT Checklists to see if one product is clearly the most compliant to 508 standards.
• If needed to draw a conclusion, compare Partially Supported statements and explanations to see which vendor offers the most compliant—and accessible—solution.
• Select the vendor and product whose compliance to Section 508—as reflected in their VPATs—is closest to full compliance, meets the needs of your organization, and will likely be most accessible to users of assistive technology. This is the “Best Fit” you are looking for.

Summary

• Check to ensure the VPAT offered is responsive to your requirements—start with the Summary Table
• Check for completeness—use VPAT Checklist
• Watch for Red Flags—look more closely; get advice from experts to determine impact of “Partially Supports” or “Supported with Exceptions” statements, if needed
• Apply the “reasonableness test” to explanations provided by the vendor. Do they make sense?
• Compare multiple VPATs from different vendors on their own merit first; then select “Best Fit” to meet your organization’s operational requirements
**Course Summary**

During this course, we have learned:

- Section 508 was enacted to ensure disabled users can effectively interact with E&IT purchased by the government.
- VPATs and the VPAT process support both industry and government in meeting the requirements of Section 508.
- VPATs and the VPAT process are as important to government and industry today as they were in 2001.
- Completeness, Accuracy and Honesty are the measures of a “Good VPAT.”
- Your Handouts contain tools to help your prepare or evaluate VPATs to support your Market Research requirements.

**Questions?**

Thank you for participating in our professional training sessions!

**Getting Professional Help**

Accessible Systems and TecAccess offer VPAT™ training as a separate, interactive training class.

Please contact us if you are interested in VPAT™ training tailored for your procurement needs.

Contact Accessible Systems Inc.

www.accessible-systems.com

Attention: Terri Youngblood

Terri@accessible-systems.com

410-305-0528
Understanding Section 508 Standards and Accessibility

Day 2

Presented to the Center for Usability in Design and Assessment, California State University Long Beach
By
Doug Wakefield

CUDA-CSULB Training Agenda

Day 2 Sessions

Morning Session:
- Review of 1194.23 – Telecommunications Products
- Review of 1194.24 – Video and Multimedia Products
- Review of 1194.25 – Self Contained, Closed Products
- Review of 1194.26 – Desktop and Portable Computers
- Review of 1194.31 – Functional Performance Criteria

Afternoon Session:
- Role of VPAT™s in Procurement: Buying Accessible IT

Day 2 – Morning Session

Review of 1194.23 – Telecommunications Products

Teaching Methodology:

Here is the standard; Here is what it means to you
Three Types of Access

- Communications access, which includes telephones that provide magnetic coupling that could enable use by individuals who use hearing aids and cochlear implants.
- Information access, which includes announcement of which line is ringing, so that a person with a visual disability could work as a call center.
- Physical access, which includes the ability to connect a cellular phone battery charger without requiring tight pinching.

1194.23 Paragraph (a)

(a) Telecommunications products or systems which provide a function allowing voice communication and which do not themselves provide a TTY functionality shall provide a standard non-acoustic connection point for TTYs. Microphones shall be capable of being turned on and off to allow the user to intermix speech with TTY use.

1194.23 Understanding Paragraph (a)

- Interpreted to mean that analog tip/ring RJ-11 input/output ports must be available on PBX systems and on telephones. Industry standard 2.5mm and 3.5mm jacks on wireless products are expected to be permitted as a substitute for the RJ-11 ports.
- Systems must permit users to intermix speech & TTY on the same call!
1194.23 Paragraph (b)

(b) Telecommunications products which include voice communication functionality shall support all commonly used cross-manufacturer non-proprietary standard TTY signal protocols.

1194.23 Understanding Paragraph (b)

- There are currently two commonly used TTY protocols: 45.5 baud Baudot and 300 baud ASCII.

Telecommunications products which include voice communication functionality must support these non-proprietary TTY signal protocols.

This has been interpreted to mean only the US standard 45.45 baud Baudot communication protocol, but may be extended to include TurboCode, 300 baud ASCII, and the V.18 modem protocol.

1194.23 Paragraph (c)

(c) Voice mail, auto-attendant, and interactive voice response telecommunications systems shall be usable by TTY users with their TTYs.
1194.23 Understanding Paragraph (c)

Functions that are available to voice users must also be accessible to TTY users with their TTYs.

For many people who use TTYs, these services often present barriers when, due to an inability to hear voice prompts, persons with hearing disabilities cannot get past an automated receptionist to a live person; don’t know when to start leaving a voice mail message or which buttons to press in order to save or delete messages; or when to enter data such as social security numbers into an automated system in order to obtain information.

1194.23 Paragraph (d)

(d) Voice mail, messaging, auto-attendant, and interactive voice response telecommunications systems that require a response from a user within a time interval, shall give an alert when the time interval is about to run out, and shall provide sufficient time for the user to indicate more time is required.

1194.23 Understanding Paragraph (d)

In addition to addressing the needs of people with mobility limitations, this requirement addresses a problem faced by TTY users who rely on relay services: in the amount of time it takes for a relay operator to type a voice menu for the TTY user, and then receive & forward the response from that user, many systems will “time out” and hang up.
1194.23 Paragraph (e)

(e) Where provided, caller identification and similar telecommunications functions shall also be available for users of TTYs, and for users who cannot see displays.

1194.23 Understanding Paragraph (e)

The displays on most telephones continue to work properly when a TTY is used. The challenge is providing caller ID and related info for users who cannot see displays. Given that only a small proportion of people who are blind or visually impaired are able to read Braille, it is generally felt that provision of this information by voice output is probably the best approach.

1194.23 Paragraph (f)

(f) For transmitted voice signals, telecommunications products shall provide a gain adjustable up to a minimum of 20 dB. For incremental volume control, at least one intermediate step of 12 dB of gain shall be provided.
1194.23 Understanding Paragraph (f)

Under certain conditions, the 20 dB requirement could conflict with other Federal regulations, such as the OSHA limit on the maximum SPL for transducers held against the ear.

If a volume control (usually a calibrated wheel or slide) is provided that allows a user to set the level anywhere from 0 to the upper requirement of 20 dB, there is no need to specify an intermediate level. If a stepped volume control is provided (usually through pressing a button repeatedly), one of the intermediate levels must provide 12 dB of gain.

1194.23 Paragraph (g)

(g) If a telecommunications product allows a user to adjust the receive volume, a function shall be provided to automatically reset the volume to the default level after every use.

1194.23 Understanding Paragraph (g)

This is a safety net, given that the 20 dB gain required by 1194.23(f) could harm others who use the phone.

• It serves, for example, to protect people from damaging their hearing, which might occur if they answer a telephone with the amplification accidentally turned too high.
1194.23 Paragraph (h)

(h) Where a telecommunications product delivers output by an audio transducer which is normally held up to the ear, a means for effective magnetic wireless coupling to hearing technologies shall be provided.

1194.23 Understanding Paragraph (h)

If an object gets within a few inches of most hearing aids, the aids often emit a loud howling sound due to acoustic feedback. To prevent this when a phone is being used, the microphone in the aid must be turned off; the signal from the phone is transmitted to the aid via magnetic inductive coupling.

1194.23 Paragraph (i)

(i) Interference to hearing technologies (including hearing aids, cochlear implants, and assistive listening devices) shall be reduced to the lowest possible level that allows a user of hearing technologies to utilize the telecommunications product.
Although there are commonly accepted techniques that permit the strength of electro-magnetic "noise" to be measured, this requirement has been criticized because, in the absence of specific metrics, there is no way to really assess whether a product complies.

Products that transmit or conduct information or communication, shall pass through cross-manufacturer, non-proprietary, industry-standard codes, translation protocols, formats or other information necessary to provide the information or communication in a usable format. Technologies which use encoding, signal compression, format transformation, or similar techniques shall not remove information needed for access or shall restore it upon delivery.

Basically an extension of 1194.23(b), this is intended to include functions such as closed-captioned video.

Note: With regard to VoIP, it's okay to encode the TTY tones for transmission if the tones are reconstructed at the far end, assuming that the implementation does not preclude mixed-mode voice and TTY communication.
1194.23 Paragraph (k)

- (1) Products which have mechanically operated controls or keys shall comply with the following: Controls and Keys shall be tactilely discernible without activating the controls or keys.

- (2) Products which have mechanically operated controls or keys shall comply with the following: Controls and Keys shall be operable with one hand and shall not require tight grasping, pinching, twisting of the wrist. The force required to activate controls and keys shall be 5 lbs. (22.2N) maximum.

- (3) Products which have mechanically operated controls or keys shall comply with the following: If key repeat is supported, the delay before repeat shall be adjustable to at least 2 seconds. Key repeat rate shall be adjustable to 2 seconds per character.

- (4) Products which have mechanically operated controls or keys shall comply with the following: The status of all locking or toggle controls or keys shall be visually discernible, and discernible either through touch or sound.

1194.23 Understanding Paragraph (k)

(1) Products which have mechanically operated controls or keys shall comply with the following: Controls and Keys shall be tactilely discernible without activating the controls or keys.

- Because touch is necessary to discern tactile features, this provision requires keyboards to enable touch that does not automatically activate a function based on mere contact. Fortunately most keyboards require some pressure on individual keys in order to enable a keystroke.

- However, “capacitive” keyboards would not meet this provision because they react as soon as they are touched and have no raised marks or actual keys. They may not react at all when touched by persons with prostheses. A “membrane” keypad with keys that must be pressed can be made tactilely discernible by separating keys with raised ridges so that individual keys can be distinguished by touch.

1194.23 Understanding Paragraph (k) – cont.

(2) Products which have mechanically operated controls or keys shall comply with the following: Controls and Keys shall be operable with one hand and shall not require tight grasping, pinching, twisting of the wrist. The force required to activate controls and keys shall be 5 lbs. (22.2N) maximum.

- Individuals with tremor, cerebral palsy, or other disabilities may have difficulty operating systems which require fine motor control, a steady hand, or two hands to be used simultaneously for operation. Individuals with high spinal cord injuries, arthritis, and other conditions may have difficulty operating controls which require significant strength. The standard limits the force required to five pounds and is based on section 4.27.4 of the ADA Accessibility Guidelines.

- Get specific amounts of force required from your supplier.
1194.23 Understanding Paragraph (k) – cont.

(3) Products which have mechanically operated controls or keys shall comply with the following: If key repeat is supported, the delay before repeat shall be adjustable to at least 2 seconds. Key repeat rate shall be adjustable to 2 seconds per character. Because touch is necessary to discern tactile features, this provision requires keyboards to enable touch that does not automatically activate a function based on mere contact. Fortunately most keyboards require some pressure on individual keys in order to enable a keystroke.

- This provision addresses a challenge encountered by some people with fine motor coordination difficulty. Sometimes they accidentally press a key several times when intending to hit it only once. This could potentially result in the same character displaying several times on the screen. However, where key repeat is provided, this provision requires the repeat to be adjustable. Specifically, the delay must be adjustable for a length of time that is no greater than 2 seconds between repeats.
- Confirm that any key repeat provided is adjustable.

(4) Products which have mechanically operated controls or keys shall comply with the following: The status of all locking or toggle controls or keys shall be visually discernible, and discernible either through touch or sound.

- This provision requires the status of toggle controls, such as the "caps lock" or "scroll lock" keys to be identifiable by either touch or sound, in addition to visual means. For example, adding audio patterns, such as ascending and descending pitch tones that indicate when a control is turned on or off, would alleviate the problem of a person who is blind inadvertently pressing the locking or toggle controls. Also, buttons which remain depressed when activated and switched with distinct positions may meet this provision.
- Examine your products to understand how the state of controls is communicated.

1194.23 Telecommunications Products – cont.

- Cell phones are a bigger problem as they are very LCD oriented in most instances. And unless speech has been programmed into the OS (operating system) to read back menus, or the phone has a platform that a screen reader can be loaded onto so that access can be obtained, features such as address books, caller ID and text messaging cannot be used.
- Currently few cell phones are hearing aid-compatible. Most hearing aid users use a T-coil mode of the hearing aid in order to hear on phones which generate sound via a magnetic field. However, cell phones create a lot of interference and thus are not generally compatible with T-coil.
Day 2 – Morning Session

Review of 1194.24 – Video and Multimedia Products

Teaching Methodology:
Here is the standard; Here is how you meet compliance

1194.24 Definition of Multimedia

Multimedia products involve more than one media and include, but are not limited to, video programs, narrated slide production and computer-generated presentations.

- Standards apply to caption decoder circuitry (for any system with a screen larger than 13 inches) and secondary audio channels for television tuners, including tuner
cards for use in computers.
- The standards also require captioning and video description for certain training and informational multimedia productions developed or procured by procuring agencies in
custom made with a time schedule.
- The standards also provide that viewers are able to turn captioning or video
description features on or off.

1194.24 Paragraph (a)

a) All analog television displays 13 inches and larger, and computer
equipment that includes analog television receiver or display circuitry,
shall be equipped with caption decoder circuitry which appropriately
receives, decodes, and displays closed captions from broadcast, cable,
videotape, and DVD signals. As soon as practicable, but not later than
July 1, 2002, widescreen digital television (DTV) displays measuring at
least 17.8 inches vertically, DTV sets with conventional displays
measuring at least 13 inches vertically, and stand-alone DTV tuners,
whether or not they are marketed with display screens, and computer
equipment that includes DTV receiver or display circuitry, shall be
equipped with caption decoder circuitry which appropriately receives,
decodes, and displays closed captions from broadcast, cable,
videotape, and DVD signals.
1194.24 Understanding Paragraph (a)

- Captions display spoken dialogue as printed words on a television screen or computer monitor.
- Open captions are displayed automatically as part of the video, without having to be selected by the user.
- Closed captions normally do not appear as part of the video portion of a multimedia presentation unless the viewer has selected them to appear.

1194.24 Paragraph (b)

(b) Television tuners, including tuner cards for use in computers, shall be equipped with secondary audio program playback circuitry.

1194.24 Understanding Paragraph (b)

- The most common method of broadcasting audio description is through the Secondary Audio Program (SAP) feature of stereo televisions. SAP can deliver audio descriptions and provide more information for low vision and blind users.
  - An “audio description” is a description of the visual content of a presentation. Portions of the audio description are narrated during what would otherwise be natural silences in the presentation.
  - Tuner cards enable a computer to receive television broadcasts.
1194.24 Paragraph (c)

(c) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain speech or other audio information necessary for the comprehension of the content, shall be open or closed captioned.

1194.24 Understanding Paragraph (c)

"Video and multimedia productions" refers to productions that present information in more than one sensory mode (sound and vision).

1194.24 Paragraph (d)

(d) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain visual information necessary for the comprehension of the content, shall be audio described.
1194.24 Understanding Paragraph (d)

Ensure that audio descriptions are added to presentations.

1194.24 Paragraph (e)

(e) Display or presentation of alternate text presentation or audio descriptions shall be user-selectable unless permanent.

1194.24 Understanding Paragraph (e)

- Most digital technologies can support alternate audio channels for audio description
- Older analog technology such as VHS does not support user selected options and are thus open captioned.
Day 2 – Morning Session

Review of 1194.25 – Self Contained, Closed Products

Teaching Methodology:
Here is the standard; Here is how you meet compliance

1194.25 Paragraph (a)

(a) Self-contained products shall be usable by people with disabilities without requiring an end-user to attach Assistive Technology to the product. Personal headsets for private listening are not Assistive Technology.

1194.25 Understanding Paragraph (a)

- Persons with disabilities must be able to access and operate self-contained products without connecting assistive technologies, such as screen readers, to the systems. Examples of self-contained products include automated teller machines (ATMs) that provide audible instructions, printers that have easily reachable controls, and fax machines that have identifiable buttons.
- However, some assistive technologies still can be used without attachment to the products. Examples include mouth sticks and head pointers.
1194.25 Paragraph (b)

(b) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.

1194.25 Understanding Paragraph (b)

- As with webpages and telecommunication products, self-contained products often have functions with timed responses. If a user does not enter a fax number into a fax machine within a certain amount of time, for instance, the fax machine disconnects. The scenario may occur frequently with persons who have dexterity impairments.
- Like other E&IT products, self-contained products must provide alerts that time will expire soon for an interaction to be completed. An option also must be given for extra time.

1194.25 Paragraph (c)

(c) Where a product utilizes touchscreens or contact-sensitive controls, an input method shall be provided that complies with §1194.23 (k) (1) through (4).

Note: These sub-provisions apply only to the operation of self-contained products, excluding their maintenance and repair. Therefore, while pushing the Start button on a printer must comply with the sub-provision, changing the cartridge is exempted.
1194.25 Understanding Paragraph (c) – cont.

(1) Controls and keys shall be tactiley discernible without activating the controls or keys.

- The sub-provision benefits individuals with vision impairments who should be able to locate, identify, and remember buttons and controls through touch. Tactile cues include spacing, markings, and different shapes. For instance, some three-in-one office machines have specifically shaped buttons for copying, printing, and scanning.

(2) Controls and keys shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls and keys shall be 5 lbs. (22.2 N) maximum.

- This sub-provision is beneficial to persons who lack fine motor control. Disabilities that affect dexterous control include cerebral palsy, tremors, high spinal cord injuries, and others.
- To conform to the sub-provision, simultaneous operation of any type (i.e. firmly pressing two areas on a touchscreen) should be avoided. Moreover, individual buttons should not be held down for more than 5 seconds. Another conforming technique is using controls that do not require too much pressure to activate, such as push buttons and up/down switches.

(3) If key repeat is supported, the delay before repeat shall be adjustable to at least 2 seconds. Key repeat rate shall be adjustable to 2 seconds per character.

- Like 1194.25(c) (2), 1194.25 (c) (3) also benefits persons with dexterity impairments. Since an individual without fine motor control may not be able to release a button on a control panel or an area on a touch screen quickly enough, unwanted results can occur such as repeated characters on the screen or several unnecessary copies.
- To remedy the issue, an option should be provided to disable the key repeat function if one exists. Additionally, an option should be offered to set the length of time that a user should depress a key to activate it, which is referred as key acceptance rate. Lastly, if the repetition of a button is intended to perform a function, an alternative must be provided. For example, instead of repetitively depressing a button to copy 10 pages, the user could press "1" and "0."
1194.25 Understanding Paragraph (c) – cont.

(c) (d) The status of all locking or toggle controls or keys shall be visually discernible, and discernible either through touch or sound.

- Persons with hearing impairments may not know when a key is unlocked or a control is activated unless a visual cue accompanies it. Conversely, persons with vision impairments may not know the status of an element unless an audio cue accompanies it.
- Therefore, products should implement a combination of audio and visual feedback. When audio feedback is used, sounds should reflect the status. For instance, a beep on a calculator may indicate that an equation is completed, whereas the word “completed” on the calculator’s LCD obviously shows the same status.

1194.25 Paragraph (d)

(d) When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.

1194.25 Understanding Paragraph (d)

- Biometric forms of identification or control are prints of an individual’s physical aspects, such as a fingerprint or a voiceprint. Biometric forms are implemented for security measures. An ATM machine is a good example of where these biometric access methods can be used.
- Persons with disabilities may not be able to access such self-contained systems biometrically. For instance, a person with cerebral palsy may not be able to hold a finger on the screen so a print can be taken. In those circumstances, the system must accept a non-biometric alternative (i.e., personal identification number) that does not interfere with security.
1194.25 Paragraph (e)

(e) When products provide auditory output, the audio signal shall be provided at a standard signal level through an industry standard connector that will allow for private listening. The product must provide the ability to interrupt, pause, and restart the audio at anytime.

1194.25 Understanding Paragraph (e)

Users must be able to manipulate audio output on information kiosks in museums, for instance, if they would like to hear the audio again or stop it. Furthermore, these self-contained systems must be compatible with the standard connector of non-proprietary headsets or earplugs that individuals with visual impairments carry sometimes.

1194.25 Paragraph (f)

(f) When products deliver voice output in a public area, incremental volume control shall be provided with output amplification up to a level of at least 65 dB. Where the ambient noise level of the environment is above 45 dB, a volume gain of at least 20 dB above the ambient level shall be user selectable. A function shall be provided to automatically reset the volume to the default level after every use.
1194.25 Understanding Paragraph (f)

- The Occupation Health and Safety Administration, and the American Speech, Language, and Speech Association have determined that the standard volume level of speech is 65 db. Thus, this provision requires that information kiosks, such as those as parts of museum displays, have a minimum volume level of 65. Like the telecommunications sub-provision of 1194.23(g), the volume level of the self-contained system is reset after every use.
- If the background noise interferes with the audio output of the self-contained product, individuals with partial hearing may have difficulty comprehending the information. The minimum interference level is 45 db. To override ambient noise, the self-contained product must provide an option to allow users to raise the volume 20 db higher that 45 db.

1194.25 Paragraph (g)

(g) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.

1194.25 Understanding Paragraph (g)

- As with software and web applications, color alone should not convey information regarding self-contained products. The sub-provision benefits all users, not only those with cognitive and visual impairments. Different colored buttons on a printer, for instance, must have text labels to identify their functions.
1194.25 Paragraph (h)

(h) When a product permits a user to adjust color and contrast settings, a range of color selections capable of producing a variety of contrast levels shall be provided.

1194.25 Understanding Paragraph (h)

• Like software and web applications, users may need to adjust color and color settings in self-contained products. Some people may be sensitive to brighter and thus cannot distinguish text. Others may need a sharp contrast between background and foreground colors.

1194.25 Paragraph (i)

(i) Products shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.
1194.25 Understanding Paragraph (i)

• The sub-provision echoes that of sub-provision 1194.22(j). Flashing or flickering on the screens of self-contained products may cause persons with photosensitive epilepsy to have seizures. To prevent episodes from occurring, an option should be provided that would stop the flickering.

1194.25 Paragraph (j)

(j) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following:

• (1) The position of any operable control shall be determined with respect to a vertical plane, which is 48 inches in length, centered on the operable control, and at the maximum protrusion of the product within the 48-inch length.
• (2) Where any operable control is 10 inches or less behind the reference plane, the height shall be 54 inches maximum and 15 inches minimum above the floor.
• (3) Where any operable control is more than 10 inches and not more than 24 inches behind the reference plane, the height shall be 46 inches maximum and 15 inches minimum above the floor.
• (4) Operable controls shall not be more than 24 inches behind the reference plane.

1194.25 Understanding Paragraph (j)

• These sub-provisions benefit users with mobility impairments, such as individuals in wheelchairs, who may have difficulty reaching operable controls (i.e. Print or Stop button). The sub-provisions cover large office equipment, such as printers and copiers, and information kiosks. Once again, controls and parts that involve maintenance or repair of self-contained products are exempt. The sub-provisions prevent operable controls from being too high, too low, or too far from the reach of the user.
Day 2 – Morning Session

Review of 1194.26 – Desktop and Portable Computers

Teaching Methodology:
Here is the standard; Here is what it means to you

1194.26 Definition

- This section of the Section 508 standards focuses on keyboards and other mechanically operated controls, touch screens, use of biometric forms of identification, and ports and connectors.

1194.26 Paragraph (a) and (b)

Provision 1194.26 of Section 508 requires that operable features of all desktop and portable computers be accessible. Three of its sub-provisions are the same as those regarding telecommunications and self-contained products.

- 1194.26(a) All mechanically operated controls and keys shall comply with §1194.23 (k) (1) through (4).

- 1194.26(b) If a product utilizes touchscreens or touch-operated controls, an input method shall be provided that complies with §1194.23 (k) (1) through (4).
1194.26 Understanding Paragraphs (a) and (b)

- Like telecommunications products and self-contained systems, desktop and portable computers also should have controls that are tactically discernable and operable with minimum effort. A good example of easily operable features is a touch screen area where users do not have to press it for a certain period to activate it. If a touchscreen cannot be compliant, a redundant set of controls should be provided for users with dexterity impairments.
- An example of tactically discernable controls is spacing between the arrow keys and the numeric pad on computer keyboards. The spacing allows persons with visual impairments to locate these elements easily.
- Furthermore, the controls should have audio and visual indication when they are selected or deselected. For instance, the visual indication of an operating computer is a green light while the audio indication is a humming sound of the motor.
- Lastly, keys should have an adjustable repeat rate. Since an individual without fine motor control may not be able to release a button on a control panel or an area on a touch screen quickly enough, unwanted results can occur such as repeated characters on the screen.

1194.26 Paragraph (c)

(c) When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.

1194.26 Understanding Paragraph (c)

- As explained with 1194.25(d), biometric forms of identification or control are prints of an individual’s physical aspect, such as a fingerprint or a voiceprint. Biometric forms are implemented for security measures. An ATM machine is a good example of where these biometric access methods can be used.
- Persons with disabilities may not be able to access such self-contained systems biometrically. For instance, a person with cerebral palsy may not be able to hold a finger on the screen so a print can be taken. In those circumstances, the system must accept a non-biometric alternative (i.e., personal identification number) that does not interfere with security.
1194.26 Paragraph (d)

(d) Where provided, at least one of each type of expansion slots, ports and connectors shall comply with publicly available industry standards.

1194.26 Understanding Paragraph (d)

- Computers must have non-proprietary connectors so developers of assistive technologies are assured that their devices can interface with computer systems. Standard connectors include RS-232, Centronics, SCSI interfaces, PCMCIA, or USB.

Questions?

Thank you for participating in our professional training sessions!

This afternoon's agenda:

Role of VPAT™s in Procurement: Buying Accessible IT
The purpose of the Voluntary Product Accessibility Template™, or VPAT™, is to assist Federal contracting officials and other buyers in making preliminary assessments regarding the availability of commercial “Electronic and Information Technology” products and services with features that support accessibility. It is assumed and recommended that offerers will provide additional contact information to facilitate more detailed inquiries.

The first table of the Template provides a summary view of the section 508 Standards. The subsequent tables provide more detailed views of each subsection. There are three columns in each table. Column one of the Summary Table describes the subsections of subparts B and C of the Standards. The second column describes the supporting features of the product or refers you to the corresponding detailed table, "e.g., equivalent facilitation." The third column contains any additional remarks and explanations regarding the product. In the subsequent tables, the first column contains the lettered paragraphs of the subsections. The second column describes the supporting features of the product with regard to that paragraph. The third column contains any additional remarks and explanations regarding the product.

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<td>Section 1194.23 Telecommunications Products</td>
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<td>Section 1194.24 Video and Multi-media Products</td>
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Section 1194.21 Software Applications and Operating Systems – Detail
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<th>Criteria</th>
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<tr>
<td>(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.</td>
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<td>(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.</td>
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<td>(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface</td>
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elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.

(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.

(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.

(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.

(g) Applications shall not override user selected contrast and color selections and other individual display attributes.

(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.

(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.

(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.

(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency.
greater than 2 Hz and lower than 55 Hz.

(1) When electronic forms are used, 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.

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### Section 1194.22 Web-based Internet information and applications – Detail

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<tr>
<td>(a) A text equivalent for every non-text element shall be provided (e.g., via &quot;alt&quot;, &quot;longdesc&quot;, or in element content).</td>
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<td>(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.</td>
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<td>(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.</td>
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<td>(d) Documents shall be organized so they are readable without requiring an associated style sheet.</td>
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<td>(e) Redundant text links shall be provided for each active region of a server-side image map.</td>
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<td>(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.</td>
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<td>(g) Row and column headers shall be</td>
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identified for data tables.

(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.

(i) Frames shall be titled with text that facilitates frame identification and navigation.

(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.

(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.

(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.

(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).

(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.

(o) A method shall be provided that permits users to skip repetitive navigation links.
(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: 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: Paragraph (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.

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### Section 1194.23 Telecommunications Products – Detail

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<td>(a) Telecommunications products or systems which provide a function allowing voice communication and which do not themselves provide a TTY functionality shall provide a standard non-acoustic connection point for TTYs. Microphones shall be capable of being turned on and off to allow the user to intermix speech with TTY use.</td>
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<td>(b) Telecommunications products which include voice communication functionality shall support all commonly used cross-manufacturer non-proprietary standard TTY signal protocols.</td>
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<td>(c) Voice mail, auto-attendant, and interactive voice response telecommunications systems shall be usable by TTY users with their TTYs.</td>
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<tr>
<td>(d) Voice mail, messaging, auto-attendant, and interactive voice response telecommunications systems</td>
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that require a response from a user within a time interval, shall give an alert when the time interval is about to run out, and shall provide sufficient time for the user to indicate more time is required.

(e) Where provided, caller identification and similar telecommunications functions shall also be available for users of TTYs, and for users who cannot see displays.

(f) For transmitted voice signals, telecommunications products shall provide a gain adjustable up to a minimum of 20 dB. For incremental volume control, at least one intermediate step of 12 dB of gain shall be provided.

(g) If the telecommunications product allows a user to adjust the receive volume, a function shall be provided to automatically reset the volume to the default level after every use.

(h) Where a telecommunications product delivers output by an audio transducer which is normally held up to the ear, a means for effective magnetic wireless coupling to hearing technologies shall be provided.

(i) Interference to hearing technologies (including hearing aids, cochlear implants, and assistive listening devices) shall be reduced to the lowest possible level that allows a user of hearing technologies to utilize the telecommunications product.

(j) Products that transmit or conduct information or communication, shall pass through cross-manufacturer, non-proprietary, industry-standard codes, translation protocols, formats or other information necessary to provide the information or communication in a usable format. Technologies which use

| that require a response from a user within a time interval, shall give an alert when the time interval is about to run out, and shall provide sufficient time for the user to indicate more time is required. | (e) Where provided, caller identification and similar telecommunications functions shall also be available for users of TTYs, and for users who cannot see displays. | (f) For transmitted voice signals, telecommunications products shall provide a gain adjustable up to a minimum of 20 dB. For incremental volume control, at least one intermediate step of 12 dB of gain shall be provided. | (g) If the telecommunications product allows a user to adjust the receive volume, a function shall be provided to automatically reset the volume to the default level after every use. | (h) Where a telecommunications product delivers output by an audio transducer which is normally held up to the ear, a means for effective magnetic wireless coupling to hearing technologies shall be provided. | (i) Interference to hearing technologies (including hearing aids, cochlear implants, and assistive listening devices) shall be reduced to the lowest possible level that allows a user of hearing technologies to utilize the telecommunications product. | (j) Products that transmit or conduct information or communication, shall pass through cross-manufacturer, non-proprietary, industry-standard codes, translation protocols, formats or other information necessary to provide the information or communication in a usable format. Technologies which use |
encoding, signal compression, format transformation, or similar techniques shall not remove information needed for access or shall restore it upon delivery.

(k)(1) Products which have mechanically operated controls or keys shall comply with the following: Controls and Keys shall be tactilely discernible without activating the controls or keys.

(k)(2) Products which have mechanically operated controls or keys shall comply with the following: Controls and Keys shall be operable with one hand and shall not require tight grasping, pinching, twisting of the wrist. The force required to activate controls and keys shall be 5 lbs. (22.2N) maximum.

(k)(3) Products which have mechanically operated controls or keys shall comply with the following: If key repeat is supported, the delay before repeat shall be adjustable to at least 2 seconds. Key repeat rate shall be adjustable to 2 seconds per character.

(k)(4) Products which have mechanically operated controls or keys shall comply with the following: The status of all locking or toggle controls or keys shall be visually discernible, and discernible either through touch or sound.

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Section 1194.24 Video and Multi-media Products – Detail

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<td>a) All analog television displays 13 inches and larger, and computer equipment that includes analog television receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals. As soon as practicable, but not later than July 1, 2002, widescreen digital television (DTV) displays measuring at least 7.8 inches vertically, DTV sets with conventional displays measuring at least 13 inches vertically, and stand-alone DTV tuners, whether or not they are marketed with display screens, and computer equipment that includes DTV receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals.</td>
<td>Supporting Features</td>
<td>Remarks and explanations</td>
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<tr>
<td>(b) Television tuners, including tuner cards for use in computers, shall be equipped with secondary audio program playback circuitry.</td>
<td>Supporting Features</td>
<td>Remarks and explanations</td>
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<tr>
<td>(c) All training and</td>
<td>Supporting Features</td>
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informational video and multimedia productions which support the agency's mission, regardless of format, that contain speech or other audio information necessary for the comprehension of the content, shall be open or closed captioned.

(d) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain visual information necessary for the comprehension of the content, shall be audio described.

(e) Display or presentation of alternate text presentation or audio descriptions shall be user-selectable unless permanent.

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<tbody>
<tr>
<td>(a) Self contained products shall be usable by people with disabilities without requiring an end-user to attach Assistive Technology to the product. Personal headsets for private use.</td>
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</table>
listening are not Assistive Technology.

(b) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.

(c) Where a product utilizes touchscreens or contact-sensitive controls, an input method shall be provided that complies with §1194.23 (k) (1) through (4).

(d) When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.

(e) When products provide auditory output, the audio signal shall be provided at a standard signal level through an industry standard connector that will allow for private listening. The product must provide the ability to interrupt, pause, and restart the audio at anytime.

(f) When products deliver voice output in a public area, incremental volume control shall be provided with output amplification up to a level of at least 65 dB. Where the ambient noise level of the environment is above 45 dB, a volume gain of at
least 20 dB above the ambient level shall be user selectable. A function shall be provided to automatically reset the volume to the default level after every use.

(g) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.

(h) When a product permits a user to adjust color and contrast settings, a range of color selections capable of producing a variety of contrast levels shall be provided.

(i) Products shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.

(j) (1) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: The position of any operable control shall be determined with respect to a vertical plane, which is 48 inches in length, centered on the operable control, and at the maximum protrusion of the product within the 48 inch length on products which are freestanding, non-portable, and intended to be used in one location and which have operable
controls.

(j)(2) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: Where any operable control is 10 inches or less behind the reference plane, the height shall be 54 inches maximum and 15 inches minimum above the floor.

(j)(3) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: Where any operable control is more than 10 inches and not more than 24 inches behind the reference plane, the height shall be 46 inches maximum and 15 inches minimum above the floor.

(j)(4) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: Operable controls shall not be more than 24 inches behind the reference plane.
### Criteria

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<tr>
<td>(a) All mechanically operated controls and keys shall comply with §1194.23 (k) (1) through (4).</td>
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<tr>
<td>(b) If a product utilizes touchscreens or touch-operated controls, an input method shall be provided that complies with §1194.23 (k) (1) through (4).</td>
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<tr>
<td>(c) When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.</td>
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<tr>
<td>(d) Where provided, at least one of each type of expansion slots, ports and connectors shall comply with publicly available industry standards</td>
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**Section 1194.31 Functional Performance Criteria – Detail**

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<tr>
<td>(a) At least one mode of operation and information retrieval that does not</td>
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require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.

(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people who are visually impaired shall be provided.

(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.

(d) Where audio information is important for the use of a product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.

(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.

**Section 1194.41 Information, Documentation and Support – Detail**

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<td>(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge</td>
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<tr>
<td>(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.</td>
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<tr>
<td>(c) Support services for products shall accommodate the communication needs of end-users with disabilities.</td>
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Date: 04/09/1993
Name of Product: NotGoodStuffzzzzz Release 556
Minimum Version: 9.0.2.0.0

Name of product: NotGoodStuffzzzzz Release 556
Minimum Version: 9.0.2.0.0

NotGoodStuffzzzzz Release 556 is coded to meet the standards of Section 508 subject to
the remarks in the Details below.

The following components of NotGoodStuffzzzzz Release 556 do not expose a user interface:
BC4J, OC4J, mod_odav, Ultra Search, Syndication Server and mod_ossl.

Section 508 standards do not apply to TreasureMap Eyer, one component of NotGoodStuff
StringFree, because it falls within the Section 508 exceptions for "fundamental alterations" and
"commercial non-availability."

TreasureMap Eyer, which is a subcomponent of the zzzzcomponent of NotGoodStuff 9zzzzz
Release 556 has some accessibility limitations; these limitations are currently scheduled to be
addressed in the 9.0.3 release of the product.

NotGoodStuff has developed a script to facilitate JAWS Screen Reader usage with SQL*Plus, and
is available on OTN or by request.

The following are supported utilities of NotGoodStuffzzzzz Release 556, which are being offered
through OTN, and which are considered coded to meet the standards of Section 508 by virtue of
the fact that they are all commandline utilities: NotGoodStuffiAS Proxy Plug-In, the GoodStuff
zzzzzzDrivers, Clickstream Collector Agent, Borland JBuilder plugin, Webgain Visual Cafe Plugin,
Server Configuration Tool, Data Source Configuration Tool, Build Generator Tool for Jakarta Ant,
WAR/EAR Assembler, Extension for Macromedia UltraDev, and the Mapping Tool for CMP Entity
Beans.

Contact for more Information: accessible_us@NotGoodStuff.com
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<th>Criteria</th>
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<td>Section 1194.21 Software Applications and Operating Systems Accessibility</td>
<td>Product has been coded to meet these standards subject to the remarks in the Details below.</td>
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<tr>
<td>Section 1194.22 Web Accessibility</td>
<td>Product has been coded to meet these standards subject to the remarks in the Details below.</td>
<td></td>
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<tr>
<td>Section 1194.23 Telecommunications Products</td>
<td>Not Applicable</td>
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<td>Section 1194.24 Video and Multi-media Products</td>
<td>Not Applicable</td>
<td></td>
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<tr>
<td>Section 1194.25 Self-Contained, Closed Products</td>
<td>Not Applicable</td>
<td></td>
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<tr>
<td>Section 1194.26 Desktop and Portable Computers</td>
<td>Not Applicable</td>
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<tr>
<td>Section 1194.31 Functional Performance Criteria</td>
<td>Product has been coded to meet these standards subject to the remarks in the Details below.</td>
<td></td>
</tr>
<tr>
<td>Section 1194.41 (a) Information, Documentation and Support</td>
<td>Support for these standards is provided as described in the remarks in the Details below.</td>
<td></td>
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### Section 1194.21 Software Applications and Operating Systems - Detail

Voluntary Product Accessibility Template

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<tbody>
<tr>
<td>(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program.</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
</tbody>
</table>
### Criteria

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<tr>
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<tbody>
<tr>
<td><strong>Element, the information conveyed by the image must also be available in text.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.</strong></td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
</tr>
<tr>
<td><strong>(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.</strong></td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
</tr>
<tr>
<td><strong>(g) Applications shall not override user selected contrast and color selections and other individual display attributes.</strong></td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
</tr>
<tr>
<td><strong>(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.</strong></td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.</strong></td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
</tr>
<tr>
<td><strong>(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.</strong></td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
</tr>
<tr>
<td>Criteria</td>
<td>Supporting Features</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>(l) When electronic forms are used, 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.</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
</tr>
</tbody>
</table>
### Section 1194.22 Web-based Internet information and applications - Detail

#### Voluntary Product Accessibility Template

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<th>Criteria</th>
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<th>Remarks and explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) A text equivalent for every non-text element shall be provided (e.g., via &quot;alt&quot;, &quot;longdesc&quot;, or in element content).</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>(d) Documents shall be organized so they are readable without requiring an associated style sheet.</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>(e) Redundant text links shall be provided for each active region of a server-side image map.</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>(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.</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>(g) Row and column headers shall be identified for data tables.</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>(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.</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>(i) Frames shall be titled with text that facilitates frame identification and navigation</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>(k) A text-only page, with equivalent text to any non-text elements, shall be provided for people with disabilities.</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>Criteria</td>
<td>Supporting Features</td>
<td>Remarks and explanations</td>
</tr>
<tr>
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</tr>
<tr>
<td>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.</td>
<td>subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>(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.</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>(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).</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>(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.</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>(o) A method shall be provided that permits users to skip repetitive navigation links.</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
<tr>
<td>(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.</td>
<td>Product has been coded to meet this standard subject to the remarks on the right.</td>
<td></td>
</tr>
</tbody>
</table>
### Section 1194.23 Telecommunications Products - Detail
#### Voluntary Product Accessibility Template

<table>
<thead>
<tr>
<th>Criteria</th>
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<tr>
<td>(a) Telecommunications products or systems which provide a function allowing voice communication and which do not themselves provide a TTY functionality shall provide a standard non-acoustic connection point for TTYs. Microphones shall be capable of being turned on and off to allow the user to intermix speech with TTY use.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(b) Telecommunications products which include voice communication functionality shall support all commonly used cross-manufacturer non-proprietary standard TTY signal protocols.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(c) Voice mail, auto-attendant, and interactive voice response telecommunications systems shall be usable by TTY users with their TTYs.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(d) Voice mail, messaging, auto-attendant, and interactive voice response telecommunications systems that require a response from a user within a time interval, shall give an alert when the time interval is about to run out, and shall provide sufficient time for the user to indicate more time is required.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(e) Where provided, caller identification and similar telecommunications functions shall also be available for users of TTYs, and for users who cannot see displays.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(f) For transmitted voice signals, telecommunications products shall provide a gain adjustable up to a minimum of 20 dB. For incremental volume control, at least one intermediate</td>
<td>Not Applicable</td>
<td></td>
</tr>
</tbody>
</table>
### Criteria

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<tr>
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<tr>
<td>step of 12 dB of gain shall be provided.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(g) If the telecommunications product allows a user to adjust the receive volume, a function shall be provided to automatically reset the volume to the default level after every use.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(h) Where a telecommunications product delivers output by an audio transducer which is normally held up to the ear, a means for effective magnetic wireless coupling to hearing technologies shall be provided.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(i) Interference to hearing technologies (including hearing aids, cochlear implants, and assistive listening devices) shall be reduced to the lowest possible level that allows a user of hearing technologies to utilize the telecommunications product.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(j) Products that transmit or conduct information or communication, shall pass through cross-manufacturer, non-proprietary, industry-standard codes, translation protocols, formats or other information necessary to provide the information or communication in a usable format. Technologies which use encoding, signal compression, format transformation, or similar techniques shall not remove information needed for access or shall restore it upon delivery.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(k)(1) Products which have mechanically operated controls or keys shall comply with the following: Controls and Keys shall be tactilely discernible without activating the controls or keys.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(k)(2) Products which have mechanically operated controls or keys shall comply</td>
<td>Not Applicable</td>
<td></td>
</tr>
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</table>
## Criteria

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<tr>
<td>with the following: Controls and Keys shall be operable with one hand and shall not require tight grasping, pinching, twisting of the wrist. The force required to activate controls and keys shall be 5 lbs. (22.2N) maximum.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(k)(3) Products which have mechanically operated controls or keys shall comply with the following: If key repeat is supported, the delay before repeat shall be adjustable to at least 2 seconds. Key repeat rate shall be adjustable to 2 seconds per character.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(k)(4) Products which have mechanically operated controls or keys shall comply with the following: The status of all locking or toggle controls or keys shall be visually discernible, and discernible either through touch or sound.</td>
<td>Not Applicable</td>
<td></td>
</tr>
</tbody>
</table>
### Section 1194.23 Video and Multimedia Products - Detail

**Voluntary Product Accessibility Template**

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<td>a) All analog television displays 13 inches and larger, and computer equipment that includes analog television receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals. As soon as practicable, but not later than July 1, 2002, widescreen digital television (DTV) displays measuring at least 7.8 inches vertically, DTV sets with conventional displays measuring at least 13 inches vertically, and stand-alone DTV tuners, whether or not they are marketed with display screens, and computer equipment that includes DTV receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(b) Television tuners, including tuner cards for use in computers, shall be equipped with secondary audio program playback circuitry.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(c) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain speech or other audio information necessary for the comprehension of the content, shall be open or closed captioned.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(d) All training and informational video and multimedia productions which</td>
<td>Not Applicable</td>
<td></td>
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</table>
### Criteria

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</thead>
<tbody>
<tr>
<td>support the agency's mission, regardless of format, that contain visual information necessary for the comprehension of the content, shall be audio described.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e) Display or presentation of alternate text presentation or audio descriptions shall be user-selectable unless permanent.</td>
<td>Not Applicable</td>
<td></td>
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</table>
### Section 1194.25 Self-Contained, Closed Products - Detail

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<tbody>
<tr>
<td>(a) Self contained products shall be usable by people with disabilities without requiring an end-user to attach Assistive Technology to the product. Personal headsets for private listening are not Assistive Technology.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(b) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(c) Where a product utilizes touchscreens or contact-sensitive controls, an input method shall be provided that complies with §1194.23 (k) (1) through (4).</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(d) When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(e) When products provide auditory output, the audio signal shall be provided at a standard signal level through an industry standard connector that will allow for private listening. The product must provide the ability to interrupt, pause, and restart the audio at anytime.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(f) When products deliver voice output in a public area, incremental volume control shall be provided with output amplification up to a level of at least 65 dB. Where the ambient noise level of the environment is above 45 dB, a volume gain of at least 20 dB above the ambient</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>Criteria</td>
<td>Supporting Features</td>
<td>Remarks and explanations</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>----------------------------------------------------------</td>
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</tr>
<tr>
<td>level shall be user selectable. A function shall be provided to automatically reset the volume to the default level after every use.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(g) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(h) When a product permits a user to adjust color and contrast settings, a range of color selections capable of producing a variety of contrast levels shall be provided.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(i) Products shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(j) (1) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: The position of any operable control shall be determined with respect to a vertical plane, which is 48 inches in length, centered on the operable control, and at the maximum protrusion of the product within the 48 inch length on products which are freestanding, non-portable, and intended to be used in one location and which have operable controls.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(j)(2) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: Where any operable control is 10 inches or less behind the reference plane, the height shall be 54 inches maximum and</td>
<td>Not Applicable</td>
<td></td>
</tr>
</tbody>
</table>
### Criteria Supporting Features Remarks and explanations

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<tbody>
<tr>
<td>15 inches minimum above the floor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(j)(3) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: Where any operable control is more than 10 inches and not more than 24 inches behind the reference plane, the height shall be 46 inches maximum and 15 inches minimum above the floor.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(j)(4) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: Operable controls shall not be more than 24 inches behind the reference plane.</td>
<td>Not Applicable</td>
<td></td>
</tr>
</tbody>
</table>
### Section 1194.26 Desktop and Portable Computers - Detail
Voluntary Product Accessibility Template

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<tr>
<th>Criteria</th>
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<th>Remarks and explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) All mechanically operated controls and keys shall comply with §1194.23 (k) (1) through (4).</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(b) If a product utilizes touchscreens or touch-operated controls, an input method shall be provided that complies with §1194.23 (k) (1) through (4).</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(c) When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>(d) Where provided, at least one of each type of expansion slots, ports and connectors shall comply with publicly available industry standards</td>
<td>Not Applicable</td>
<td></td>
</tr>
</tbody>
</table>
## Section 1194.31 Functional Performance Criteria - Detail
### Voluntary Product Accessibility Template

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Supporting Features</th>
<th>Remarks and explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.</td>
<td>Yes</td>
<td>Subject to the information provided in this document, this product has been coded to meet the applicable technical provisions of the 508 standards.</td>
</tr>
<tr>
<td>(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people who are visually impaired shall be provided.</td>
<td>Yes</td>
<td>Subject to the information provided in this document, this product has been coded to meet the applicable technical provisions of the 508 standards.</td>
</tr>
<tr>
<td>(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.</td>
<td>Not Applicable</td>
<td>There is no reliance on sound.</td>
</tr>
<tr>
<td>(d) Where audio information is important for the use of a product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.</td>
<td>Not Applicable</td>
<td>There is no reliance on sound.</td>
</tr>
<tr>
<td>(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.</td>
<td>Not Applicable</td>
<td>There is no reliance on speech input.</td>
</tr>
<tr>
<td>(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous</td>
<td>Yes</td>
<td>Subject to the information provided in this document, this product has been coded to meet the applicable technical provisions</td>
</tr>
</tbody>
</table>
actions and that is operable with limited reach and strength shall be provided.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Supporting Features</th>
<th>Remarks and explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1194.41(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.</td>
<td>Support documentation for this product is available in accessible electronic format on the NotGoodStuff Application Server Documentation Library CD-ROM that ships with the product. This documentation may include some content that was written and produced by other companies or organizations that NotGoodStuff Corporation does not own or control. NotGoodStuff Corporation neither evaluates nor makes any representations regarding the accessibility of this content.</td>
<td></td>
</tr>
<tr>
<td>1194.41(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.</td>
<td>Information about accessibility features of NotGoodStuff products is available in HTML format at <a href="http://www.NotGoodStuff.com/inaccessible">www.NotGoodStuff.com/inaccessible</a>.</td>
<td></td>
</tr>
<tr>
<td>1194.41(c) Support services for products shall accommodate the communication needs of end-users with disabilities.</td>
<td>NotGoodStuff Support’s portfolio of service offerings provide two basic customer interfaces: the Internet, using StringFree, or the phone. While NotGoodStuff customers have access to electronic support via StringFree and in the near future NoSupport, customers always have the option of calling. TTY access is available using 1-800-who-cares for technical questions and 1-800-who-does for non-technical questions.</td>
<td></td>
</tr>
</tbody>
</table>
Dependent Products - Detail

This product interacts with or is built with the other NotGoodStuff products listed in this section. Click below to view information about the inaccessibility of these products.

**Dependent Products**

[NotGoodStuffzzzzz Release 556: NotGoodStuff HTTP Server](#)

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Date: 04/30/2002  
Name of Product:  
- CanDoItAll Eyball Studio .NET Professional  
- CanDoItAll Eyball Studio .NET Enterprise Developer  
- CanDoItAll Eyball Studio .NET Enterprise Architect  
Contact for more Information: [www.candoitall.com](http://www.candoitall.com)  

Summary Table  
Voluntary Product Accessibility Template

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Supporting Features</th>
<th>Remarks and explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1194.21 Software Applications and Operating Systems Accessibility</td>
<td>Supported. Please refer to the attached VPAT</td>
<td>CanDoItAll Eyball Studio .NET is not primarily considered a web-based internet information and applications product. Eyball Studio .NET is used, however, to build Web-based and other types of applications.</td>
</tr>
<tr>
<td>Section 1194.22 Web Accessibility</td>
<td>Supported. Please refer to the attached VPAT</td>
<td>CanDoItAll Eyball Studio .NET is not primarily considered a web-based internet information and applications product. Eyball Studio .NET is used, however, to build Web-based and other types of applications.</td>
</tr>
<tr>
<td>Section 1194.23 Telecommunications Products</td>
<td>CanDoItAll Eyball Studio .NET is not considered a telecommunications product.</td>
<td>CanDoItAll Eyball Studio .NET is considered a telecommunications product.</td>
</tr>
<tr>
<td>Section 1194.24 Video and Multi-media Products</td>
<td>CanDoItAll Eyball Studio .NET is not a multimedia product.</td>
<td>CanDoItAll Eyball Studio .NET is not a multimedia product.</td>
</tr>
<tr>
<td>Section 1194.25 Self-Contained, Closed Products</td>
<td>CanDoItAll Eyball Studio .NET is not a self-contained product.</td>
<td>CanDoItAll Eyball Studio .NET is not a self-contained product.</td>
</tr>
<tr>
<td>Section 1194.26 Desktop and Portable Computers</td>
<td>CanDoItAll Eyball Studio .NET is software as defined under section 1194.21</td>
<td>CanDoItAll Eyball Studio .NET is software as defined under section 1194.21</td>
</tr>
<tr>
<td>Section 1194.31 Functional Performance Criteria</td>
<td>Supported. Please refer to the attached VPAT</td>
<td>CanDoItAll Eyball Studio .NET is software as defined under section 1194.21</td>
</tr>
<tr>
<td>Section 1194.41 (a) Information, Documentation and Support</td>
<td>Supported. Please refer to the attached VPAT</td>
<td>CanDoItAll Eyball Studio .NET is software as defined under section 1194.21</td>
</tr>
</tbody>
</table>
### Section 1194.21 Software Applications and Operating Systems - Detail

**Voluntary Product Accessibility Template**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Supporting Features</th>
<th>Remarks and explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.</td>
<td><strong>Supported with minor exceptions:</strong> CanDoltAll Eyball Studio .NET includes support for accessing many functions using only the keyboard with minor exceptions.</td>
<td>CanDoltAll Eyball Studio .NET does not include full support for accessing all functions using only the keyboard. For example, the HTML Designer was designed to enable the Eyball layout and construction of Web pages and XML documents. While users can modify html using the text editor, there is no keyboard shortcut for resizing elements in HTML Design View.</td>
</tr>
<tr>
<td>(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.</td>
<td><strong>Supported with minor exceptions:</strong> Eyball Studio .NET enables individuals to customize their desktop elements, including resizing and rearranging toolbars and menus, choosing color, size, sound, and format options. Eyball Studio .NET supports large fonts in the title bar, toolbars and most dialogs. It fully supports operating system accessibility features including StickyKeys, FilterKeys, MouseKeys, Serial Keys, and Toggle Keys. It also supports Online Help and the ability to automatically reset options.</td>
<td>CanDoltAll Eyball Studio .NET does not disrupt or disable accessibility features of the operating system with a few caveats. For instance, Eyball Studio .NET does not support Show Sounds and the cursor size does not increase significantly. Eyball Studio .NET supports High Contrast options; however, there are some issues with enabling large icons and some tabs/panes are jumbled in High Contrast mode.</td>
</tr>
<tr>
<td>(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.</td>
<td><strong>Supported with minor exceptions:</strong> CanDoltAll Eyball Studio .NET provides a well-defined on-screen indication of the current focus that moves among interactive interface elements as the input focus changes with minor exceptions.</td>
<td>CanDoltAll Eyball Studio .NET provides Quicktips that do not appear for the top row of icons if the top row or the left row of icons are in focus. Also, no visible indication exists as to which frame is in focus when using Frameset Design mode.</td>
</tr>
</tbody>
</table>
### Appendix I: Good VPAT

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Supporting Features</th>
<th>Remarks and explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(d) Sufficient information about a user interface element including the</td>
<td><strong>Supported with minor exceptions:</strong> CanDoItAll Eyball Studio .NET provides</td>
<td>Tooltips in the Code Editor may not be exposed for Assistive Technology to identify. Also, an error dialog appears when trying to select an item using Intellisense Statement Completion while Tooltips is showing and some screen readers are running.</td>
</tr>
<tr>
<td>identity, operation and state of the element shall be available to</td>
<td>sufficient information about user interface elements and program elements represented by images are available in text in virtually all cases.</td>
<td></td>
</tr>
<tr>
<td>Assistive Technology. When an image represents a program element, the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>information conveyed by the image must also be available in text.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e) When bitmap images are used to identify controls, status indicators,</td>
<td><strong>Supported with minor exceptions:</strong> CanDoItAll Eyball Studio .NET provides</td>
<td>With CanDoItAll Eyball Studio .NET there is a known bug with the keyboard shortcut for expanding and collapsing the Course Links hierarchy. Also, in the String Collection Editor of the Property Browser, pressing the tab key deletes text rather than moving between buttons.</td>
</tr>
<tr>
<td>or other programmatic elements, the meaning assigned to those images</td>
<td>consistent usage of bitmap and other graphical elements with minor exceptions.</td>
<td></td>
</tr>
<tr>
<td>shall be consistent throughout an application's performance.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f) Textual information shall be provided through operating system</td>
<td><strong>Supported with minor exceptions:</strong> CanDoItAll Eyball Studio .NET provides</td>
<td>CanDoItAll Eyball Studio .NET does not notify users that there are required fields on the closed AddEditCourse Page. The Breakpoint Tool Window or the Customize Toolbox may not notify Assistive Technology that a checkbox is present.</td>
</tr>
<tr>
<td>functions for displaying text. The minimum information that shall be</td>
<td>textual information through operating system functions for displaying text at required minimum levels with minor exceptions.</td>
<td></td>
</tr>
<tr>
<td>made available is text content, text input caret location, and text</td>
<td></td>
<td></td>
</tr>
<tr>
<td>attributes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(g) Applications shall not override user selected contrast and color</td>
<td><strong>Supported with minor exceptions:</strong> CanDoItAll Eyball Studio .NET does not override user selected contrast and color selections or display attributes with minor exceptions.</td>
<td></td>
</tr>
<tr>
<td>selections and other individual display attributes.</td>
<td></td>
<td>CanDoItAll Eyball Studio .NET provides excellent support for the appropriate Keyboard Repeat Rate or Display Settings (color). There are issues, however, with the Web Project Requirements dialog box, which cannot be read due to the black text in High Contrast mode. Also, closed Tabs and panes are jumbled when switching to High Contrast mode and closed Tool Windows persist as if they were still in High Contrast mode.</td>
</tr>
<tr>
<td>(h) When animation is displayed, the information shall be displayable in</td>
<td><strong>Fully supported:</strong> CanDoItAll Eyball Studio .NET provides</td>
<td></td>
</tr>
<tr>
<td>at least one non-animated presentation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Acquiring Technology: Integrating Section 508 into the Procurement Life cycle

#### Appendix I: Good VPAT

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Supporting Features</th>
<th>Remarks and explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode at the option of the user.</td>
<td>Functionality that conforms to these criteria.</td>
<td></td>
</tr>
<tr>
<td>(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.</td>
<td><strong>Supported with minor exceptions:</strong> CanDoItAll Eyball Studio .NET does not use color coding as the only means of conveying information to users in virtually all situations.</td>
<td>Color names and RGB values in the ColorPicker Dialog may not be exposed to Assistive Technology.</td>
</tr>
<tr>
<td>(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.</td>
<td><strong>Fully supported:</strong> CanDoItAll Eyball Studio .NET provides functionality that conforms to these criteria.</td>
<td></td>
</tr>
<tr>
<td>(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.</td>
<td><strong>Fully supported:</strong> CanDoItAll Eyball Studio .NET provides functionality that conforms to these criteria.</td>
<td></td>
</tr>
<tr>
<td>(l) When electronic forms are used, 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.</td>
<td><strong>Not Applicable:</strong> This functionality does not apply to CanDoItAll Eyball Studio .NET functionality.</td>
<td></td>
</tr>
<tr>
<td>Criteria</td>
<td>Supporting Features</td>
<td>Remarks and explanations</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>(a) A text equivalent for every non-text element shall be provided (e.g., via &quot;alt&quot;, &quot;longdesc&quot;, or in element content).</td>
<td><strong>Supported with minor exceptions:</strong> CanDollAll Eyball Studio .NET provides a text equivalent for every non-text element with a few minor exceptions.</td>
<td>Required fields on the closed AddEditCourse page may not be exposed to Assistive Technology. For example, in the Closed Resource View, the error icon when an .rc file is open in another editor may not be exposed. Finally, the Closed Status bar currently does not give any indication that a macro has finished playing.</td>
</tr>
<tr>
<td>(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.</td>
<td><strong>Not Applicable:</strong> This functionality does not apply to CanDollAll Eyball Studio .NET functionality.</td>
<td></td>
</tr>
<tr>
<td>(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.</td>
<td><strong>Supported with minor exception:</strong> CanDollAll Eyball Studio .NET provides functionality that conforms to these criteria.</td>
<td>Color name or RGB values for selected color in the Web Forms color chooser may not be exposed to Assistive Technology.</td>
</tr>
<tr>
<td>(d) Documents shall be organized so they are readable without requiring an associated style sheet.</td>
<td><strong>Fully supported:</strong> CanDollAll Eyball Studio .NET provides functionality that conforms to these criteria.</td>
<td></td>
</tr>
<tr>
<td>(e) Redundant text links shall be provided for each active region of a server-side image map.</td>
<td><strong>Not Applicable:</strong> This functionality does not apply to CanDollAll Eyball Studio .NET functionality.</td>
<td></td>
</tr>
<tr>
<td>(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.</td>
<td><strong>Not Applicable:</strong> This functionality does not apply to CanDollAll Eyball Studio .NET functionality.</td>
<td></td>
</tr>
<tr>
<td>(g) Row and column headers shall be identified for data tables.</td>
<td><strong>Not Supported:</strong> CanDollAll Eyball Studio .NET does not identify row and column headers for data tables adequately although there are plans to address this with future versions of the product.</td>
<td></td>
</tr>
<tr>
<td>(h) Markup shall be used to associate</td>
<td><strong>Supported with minor exceptions:</strong></td>
<td>When using the Batch Build Dialog</td>
</tr>
</tbody>
</table>

**Appendix I: Good VPAT**

Section 1194.22 Web-based Internet information and applications - Detail
Voluntary Product Accessibility Template
## Criteria Supporting Features Remarks and explanations

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Supporting Features</th>
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</tr>
</thead>
<tbody>
<tr>
<td>data cells and header cells for data tables that have two or more logical levels of row or column headers.</td>
<td>CanDoItAll Eyball Studio .NET uses markup to associate data cells and header cells for data tables with two or more logical levels of row or column headers with some exceptions.</td>
<td><em>project configurations</em> table, the table may not be exposed to Assistive Technology. For Dataset Properties, items in a table that are unavailable and for Property Window, items listed on left side of the grid may not be exposed to Assistive Technology.</td>
</tr>
<tr>
<td>(i) Frames shall be titled with text that facilitates frame identification and navigation</td>
<td><strong>Fully supported:</strong> CanDoItAll Eyball Studio .NET provides functionality that conforms to these criteria.</td>
<td></td>
</tr>
<tr>
<td>(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.</td>
<td><strong>Fully supported:</strong> CanDoItAll Eyball Studio .NET provides functionality that conforms to these criteria.</td>
<td></td>
</tr>
<tr>
<td>(k) A text-only page, with equivalent information or functionality, shall be provided to make a web page 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.</td>
<td><strong>Not Applicable:</strong> This functionality does not apply to CanDoItAll Eyball Studio .NET functionality.</td>
<td></td>
</tr>
<tr>
<td>(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.</td>
<td><strong>Not Applicable:</strong> This functionality does not apply to CanDoItAll Eyball Studio .NET functionality.</td>
<td></td>
</tr>
<tr>
<td>(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).</td>
<td><strong>Not Applicable:</strong> This functionality does not apply to CanDoItAll Eyball Studio .NET functionality.</td>
<td></td>
</tr>
<tr>
<td>(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,</td>
<td><strong>Not Applicable:</strong> This functionality does not apply to CanDoItAll Eyball Studio .NET functionality.</td>
<td></td>
</tr>
</tbody>
</table>
### Appendix I: Good VPAT

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>and functionality required for completion and submission of the form, including all directions and cues.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(o) A method shall be provided that permits users to skip repetitive navigation links.</td>
<td><strong>Fully supported:</strong> CanDoItAll Eyball Studio .NET provides functionality that conforms to these criteria.</td>
<td></td>
</tr>
<tr>
<td>(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.</td>
<td><strong>Supported with minor exceptions:</strong> CanDoItAll Eyball Studio .NET provides sufficient time for a user to indicate that more time is required when a timed response occurs with minor exceptions.</td>
<td>“Setup will reboot your computer in 15 seconds” dialog may be inadequate time for Assistive Technology to identify.</td>
</tr>
</tbody>
</table>

### Section 1194.31 Functional Performance Criteria - Detail

#### Voluntary Product Accessibility Template

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Supporting Features</th>
<th>Remarks and explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or Eyballly impaired shall be provided.</td>
<td><strong>Fully supported:</strong> CanDoItAll Eyball Studio .NET provides functionality that conforms to these criteria.</td>
<td></td>
</tr>
<tr>
<td>(b) At least one mode of operation and information retrieval that does not require Eyball acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people who are Eyballly impaired shall be provided.</td>
<td><strong>Fully supported:</strong> CanDoItAll Eyball Studio .NET provides a mode of operation in audio and enlarged print that does not require Eyball acuity greater than 20/70.</td>
<td></td>
</tr>
<tr>
<td>(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.</td>
<td><strong>Not Applicable:</strong> This functionality does not apply to CanDoItAll Eyball Studio .NET functionality.</td>
<td></td>
</tr>
<tr>
<td>Criteria</td>
<td>Supporting Features</td>
<td>Remarks and explanations</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| (d) Where audio information is important for the use of a product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided. | **Fully supported:**
CanDolItAll Eyball Studio .NET provides functionality that conforms to these criteria. |                                                                                          |
| (e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided. | **Not Applicable:**
This functionality does not apply to CanDolItAll Eyball Studio .NET functionality. |                                                                                          |
| (f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided. | **Fully supported:**
CanDolItAll Eyball Studio .NET provides functionality that conforms to these criteria. |                                                                                          |

Note to AT Users: Upon the release of software upgrades, there is often a lag between the software release date and the time it takes for some Assistive Technology vendors to upgrade their software and device drivers to support the new releases. The vendor’s porting timeframe may be a factor in determining when you decide to upgrade to take advantage of new features. CanDoItAll provides the software code within its products to make those products “ready” for the AT devices and works closely with AT vendors in an effort to decrease time to market for new versions of AT products. CanDoItAll encourages both end users and purchasers of AT to contact their AT vendor to determine the current compatibility of their AT with CanDoItAll products.
### Section 1194.41 Information, Documentation, and Support - Detail

<table>
<thead>
<tr>
<th>Section 1194.41 (a) Product Support Documentation</th>
<th>Supported</th>
<th>Documentation is provided in digital format for customers on the web and available for no-charge download at <a href="http://msdn.CanDoItAll.com/vstudio">http://msdn.CanDoItAll.com/vstudio</a>.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1194.41 (b) Accessibility and Compatibility Features</td>
<td>Supported</td>
<td>CanDoItAll Eyball Studio .NET includes Help File documentation listing accessibility and compatibility features. An individual may access and view Help File topics online or may select a topic for print.</td>
</tr>
<tr>
<td>1194.41 (c) Support Services</td>
<td>Supported</td>
<td>The CanDoItAll Product Support Services Help Desk is familiar with such features as keyboard access and other options important to people with disabilities. CanDoItAll offers a teletypewriter (TTY) service for customers who are hearing impaired. For assistance in the United States, contact CanDoItAll Technical Support on a TTY at 1-800-892-5234. This service is available Monday through Friday 5:00 A.M. to 9:00 P.M. and 5:00 A.M. to 3:00 P.M. Saturday PST. For information on additional support services, visit the CanDoItAll Accessibility Web site at <a href="http://www.CanDoItAll.com/enable/products/support.htm">http://www.CanDoItAll.com/enable/products/support.htm</a>.</td>
</tr>
</tbody>
</table>

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CanDoItAll regularly updates its websites and provides new information about the accessibility of products as that information becomes available.
1998 Amendment to Section 508 of the Rehabilitation Act


SEC. 508. ELECTRONIC AND INFORMATION TECHNOLOGY

(a) REQUIREMENTS FOR FEDERAL DEPARTMENTS AND AGENCIES.--

(1) ACCESSIBILITY.--

(A) DEVELOPMENT, PROCUREMENT, MAINTENANCE, OR USE OF ELECTRONIC AND INFORMATION TECHNOLOGY.--When developing, procuring, maintaining, or using electronic and information technology, each Federal department or agency, including the United States Postal Service, shall ensure, unless an undue burden would be imposed on the department or agency, that the electronic and information technology allows, regardless of the type of medium of the technology--

(i) individuals with disabilities who are Federal employees to have access to and use of information and data that is comparable to the access to and use of the information and data by Federal employees who are not individuals with disabilities; and

(ii) individuals with disabilities who are members of the public seeking information or services from a Federal department or agency to have access to and use of information and data that is comparable to the access to and use of the information and data by such members of the public who are not individuals with disabilities.

(B) ALTERNATIVE MEANS EFFORTS.--When development, procurement, maintenance, or use of electronic and information technology that meets the standards published by the Access Board under paragraph (2) would impose an undue burden, the Federal department or agency shall provide individuals with disabilities covered by paragraph (1) with the information and data involved by an alternative means of access that allows the individual to use the information and data.

(2) ELECTRONIC AND INFORMATION TECHNOLOGY STANDARDS.--

(A) IN GENERAL.--Not later than 18 months after the date of enactment of the Rehabilitation Act Amendments of 1998, the Architectural and Transportation Barriers Compliance Board (referred to in this section as the 'Access Board'), after consultation with the Secretary of Education, the Administrator of General Services, the Secretary of Commerce, the Chairman of the Federal Communications Commission, the Secretary of Defense, and the head of any other Federal department or agency that the Access Board determines to be appropriate, including consultation on relevant research findings, and after consultation with the electronic and information technology industry and appropriate public or nonprofit agencies or organizations, including organizations representing individuals with disabilities, shall issue and publish standards setting forth--
(i) for purposes of this section, a definition of electronic and information technology that is consistent with the definition of information technology specified in section 5002(3) of the Clinger-Cohen Act of 1996 (40 U.S.C. 1401(3)); and

(ii) the technical and functional performance criteria necessary to implement the requirements set forth in paragraph

(1). (B) REVIEW AND AMENDMENT.--The Access Board shall periodically review and, as appropriate, amend the standards required under subparagraph (A) to reflect technological advances or changes in electronic and information technology.

(3) INCORPORATION OF STANDARDS.--Not later than 6 months after the Access Board publishes the standards required under paragraph (2), the Federal Acquisition Regulatory Council shall revise the Federal Acquisition Regulation and each Federal department or agency shall revise the Federal procurement policies and directives under the control of the department or agency to incorporate those standards. Not later than 6 months after the Access Board revises any standards required under paragraph (2), the Council shall revise the Federal Acquisition Regulation and each appropriate Federal department or agency shall revise the procurement policies and directives, as necessary, to incorporate the revisions.

(4) ACQUISITION PLANNING.--In the event that a Federal department or agency determines that compliance with the standards issued by the Access Board under paragraph (2) relating to procurement imposes an undue burden, the documentation by the department or agency supporting the procurement shall explain why compliance creates an undue burden.

(5) EXEMPTION FOR NATIONAL SECURITY SYSTEMS.--This section shall not apply to national security systems, as that term is defined in section 5142 of the Clinger-Cohen Act of 1996 (40 U.S.C. 1452).

(6) CONSTRUCTION.--

(A) EQUIPMENT.--In a case in which the Federal Government provides access to the public to information or data through electronic and information technology, nothing in this section shall be construed to require a Federal department or agency--

(i) to make equipment owned by the Federal Government available for access and use by individuals with disabilities covered by paragraph (1) at a location other than that where the electronic and information technology is provided to the public; or

(ii) to purchase equipment for access and use by individuals with disabilities covered by paragraph (1) at a location other than that where the electronic and information technology is provided to the public.

(B) SOFTWARE AND PERIPHERAL DEVICES.--Except as required to comply with standards issued by the Access Board under paragraph (2), nothing in paragraph (1)
requires the installation of specific accessibility-related software or the attachment of a specific accessibility-related peripheral device at a workstation of a Federal employee who is not an individual with a disability.

(b) TECHNICAL ASSISTANCE.--The Administrator of General Services and the Access Board shall provide technical assistance to individuals and Federal departments and agencies concerning the requirements of this section.

(c) AGENCY EVALUATIONS.--Not later than 6 months after the date of enactment of the Rehabilitation Act Amendments of 1998, the head of each Federal department or agency shall evaluate the extent to which the electronic and information technology of the department or agency is accessible to and usable by individuals with disabilities described in subsection (a)(1), compared to the access to and use of the technology by individuals described in such subsection who are not individuals with disabilities, and submit a report containing the evaluation to the Attorney General.

(d) REPORTS.--

(1) INTERIM REPORT.--Not later than 18 months after the date of enactment of the Rehabilitation Act Amendments of 1998, the Attorney General shall prepare and submit to the President a report containing information on and recommendations regarding the extent to which the electronic and information technology of the Federal Government is accessible to and usable by individuals with disabilities described in subsection (a)(1).

(2) BIENNIAL REPORTS.--Not later than 3 years after the date of enactment of the Rehabilitation Act Amendments of 1998, and every 2 years thereafter, the Attorney General shall prepare and submit to the President and Congress a report containing information on and recommendations regarding the state of Federal department and agency compliance with the requirements of this section, including actions regarding individual complaints under subsection (f).

(e) COOPERATION.--Each head of a Federal department or agency (including the Access Board, the Equal Employment Opportunity Commission, and the General Services Administration) shall provide to the Attorney General such information as the Attorney General determines is necessary to conduct the evaluations under subsection (c) and prepare the reports under subsection (d).

(f) ENFORCEMENT.--

(1) GENERAL.--

(A) COMPLAINTS.--Effective 6 months after the date of publication by the Access Board of final standards described in subsection (a)(2), any individual with a disability may file a complaint alleging that a Federal department or agency fails to comply with subsection (a)(1) in providing electronic and information technology.
(B) APPLICATION.--This subsection shall apply only to electronic and information technology that is procured by a Federal department or agency not less than 6 months after the date of publication by the Access Board of final standards described in subsection (a)(2).

(2) ADMINISTRATIVE COMPLAINTS.--Complaints filed under paragraph (1) shall be filed with the Federal department or agency alleged to be in noncompliance. The Federal department or agency receiving the complaint shall apply the complaint procedures established to implement Section 504 for resolving allegations of discrimination in a federally conducted program or activity.

(3) CIVIL ACTIONS.--The remedies, procedures, and rights set forth in sections 505(a)(2) and 505(b) shall be the remedies, procedures, and rights available to any individual with a disability filing a complaint under paragraph (1).

(g) APPLICATION TO OTHER FEDERAL LAWS.--This section shall not be construed to limit any right, remedy, or procedure otherwise available under any provision of Federal law (including sections 501 through 505) that provides greater or equal protection for the rights of individuals with disabilities than this section.
Section 508 Standards

- Subpart A -- General
  - 1194.1 Purpose.
  - 1194.2 Application.
  - 1194.3 General exceptions.
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  - 1194.5 Equivalent facilitation.
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  - 1194.23 Telecommunications products.
  - 1194.24 Video and multimedia products.
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  - 1194.26 Desktop and portable computers.
- Subpart C -- Functional Performance Criteria
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- Subpart D -- Information, Documentation, and Support
  - 1194.41 Information, documentation, and support.
- Figures to Part 1194

Authority: 29 U.S.C. 794d.

Subpart A -- General

§ 1194.1 Purpose.

The purpose of this part is to implement section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794d). Section 508 requires that when Federal agencies develop, procure, maintain, or use electronic and information technology, Federal employees with disabilities have access to and use of information and data that is comparable to the access and use 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.

§ 1194.2 Application.

(a) Products covered by this part shall comply with all applicable provisions of this part. When developing, procuring, maintaining, or using electronic and information technology, each agency shall ensure that the products comply with the applicable
provisions of this part, unless an undue burden would be imposed on the agency.

(1) When compliance with the provisions of this part imposes an undue burden, agencies shall provide individuals with disabilities with the information and data involved by an alternative means of access that allows the individual to use the information and data.

(2) When procuring a product, if an agency determines that compliance with any provision of this part imposes an undue burden, the documentation by the agency supporting the procurement shall explain why, and to what extent, compliance with each such provision creates an undue burden.

(b) When procuring a product, each agency shall procure products which comply with the provisions in this part when such products are available in the commercial marketplace or when such products are developed in response to a Government solicitation. Agencies cannot claim a product as a whole is not commercially available because no product in the marketplace meets all the standards. If products are commercially available that meet some but not all of the standards, the agency must procure the product that best meets the standards.

(c) Except as provided by §1194.3(b), this part applies to electronic and information technology developed, procured, maintained, or used by agencies directly or used by a contractor under a contract with an agency which requires the use of such product, or requires the use, to a significant extent, of such product in the performance of a service or the furnishing of a product.

§ 1194.3 General exceptions.

(a) This part does not apply to any electronic and information technology operated by agencies, the function, operation, or use of which involves intelligence activities, cryptologic activities related to national security, command and control of military forces, equipment that is an integral part of a weapon or weapons system, or systems which are critical to the direct fulfillment of military or intelligence missions. Systems which are critical to the direct fulfillment of military or intelligence missions do not include a system that is to be used for routine administrative and business applications (including payroll, finance, logistics, and personnel management applications).

(b) This part does not apply to electronic and information technology that is acquired by a contractor incidental to a contract.

(c) Except as required to comply with the provisions in this part, this part does not require the installation of specific accessibility-related software or the attachment of an assistive technology device at a workstation of a Federal employee who is not an individual with a disability.

(d) When agencies provide access to the public to information or data through electronic and information technology, agencies are not required to make products owned by the agency available for access and use by individuals with disabilities at a location other than that where the electronic and information technology is provided to
the public, or to purchase products for access and use by individuals with disabilities at a location other than that where the electronic and information technology is provided to the public.

(e) This part shall not be construed to require a fundamental alteration in the nature of a product or its components.

(f) Products located in spaces frequented only by service personnel for maintenance, repair, or occasional monitoring of equipment are not required to comply with this part.

§ 1194.4 Definitions.

The following definitions apply to this part:

Agency. Any Federal department or agency, including the United States Postal Service.

Alternate formats. Alternate formats usable by people with disabilities may include, but are not limited to, Braille, ASCII text, large print, recorded audio, and electronic formats that comply with this part.

Alternate methods. Different means of providing information, including product documentation, to people with disabilities. Alternate methods may include, but are not limited to, voice, fax, relay service, TTY, Internet posting, captioning, text-to-speech synthesis, and audio description.

Assistive technology. Any item, piece of equipment, or system, whether acquired commercially, modified, or customized, that is commonly used to increase, maintain, or improve functional capabilities of individuals with disabilities.

Electronic and information technology. Includes information technology and any equipment or interconnected system or subsystem of equipment, that is used in the creation, conversion, or duplication of data or information. The term electronic and information technology includes, but is not limited to, telecommunications products (such as telephones), information kiosks and transaction machines, World Wide Web sites, multimedia, and office equipment such as copiers and fax machines. The term does not include any equipment that contains embedded information technology that is used as an integral part of the product, but the principal function of which is not the acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. For example, HVAC (heating, ventilation, and air conditioning) equipment such as thermostats or temperature control devices, and medical equipment where information technology is integral to its operation, are not information technology.

Information technology. Any equipment or interconnected system or subsystem of equipment, that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. The term information technology includes computers, ancillary equipment, software, firmware and similar procedures, services (including
support services), and related resources.

Operable controls. A component of a product that requires physical contact for normal operation. Operable controls include, but are not limited to, mechanically operated controls, input and output trays, card slots, keyboards, or keypads.

Product. Electronic and information technology.

Self Contained, Closed Products. Products that generally have embedded software and are commonly designed in such a fashion that a user cannot easily attach or install assistive technology. These products include, but are not limited to, information kiosks and information transaction machines, copiers, printers, calculators, fax machines, and other similar types of products.

Telecommunications. The transmission, between or among points specified by the user, of information of the user’s choosing, without change in the form or content of the information as sent and received.

TTY. An abbreviation for teletypewriter. Machinery or equipment that employs interactive text based communications through the transmission of coded signals across the telephone network. TTYs may include, for example, devices known as TDDs (telecommunication display devices or telecommunication devices for deaf persons) or computers with special modems. TTYs are also called text telephones.

Undue burden. Undue burden means significant difficulty or expense. In determining whether an action would result in an undue burden, an agency shall consider all agency resources available to the program or component for which the product is being developed, procured, maintained, or used.

§ 1194.5 Equivalent facilitation.

Nothing in this part is intended to prevent the use of designs or technologies as alternatives to those prescribed in this part provided they result in substantially equivalent or greater access to and use of a product for people with disabilities.

Subpart B -- Technical Standards
§ 1194.21 Software applications and operating systems.

(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.

(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to
the product developer.

(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that assistive technology can track focus and focus changes.

(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to assistive technology. When an image represents a program element, the information conveyed by the image must also be available in text.

(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.

(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.

(g) Applications shall not override user selected contrast and color selections and other individual display attributes.

(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.

(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.

(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.

(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.

(l) When electronic forms are used, 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.

§ 1194.22 Web-based intranet and internet information and applications.

(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).

(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.

(c) Web pages shall be designed so that all information conveyed with color is also
available without color, for example from context or markup.

(d) Documents shall be organized so they are readable without requiring an associated style sheet.

(e) Redundant text links shall be provided for each active region of a server-side image map.

(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.

(g) Row and column headers shall be identified for data tables.

(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.

(i) Frames shall be titled with text that facilitates frame identification and navigation.

(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.

(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.

(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.

(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).

(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.

(o) A method shall be provided that permits users to skip repetitive navigation links.

(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:

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<th>Section 1194.22 Paragraph</th>
<th>WCAG 1.0 Checkpoint</th>
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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. WCAG 1.0 is available at http://www.w3.org/TR/1999/WAI-WEBCONTENT-19990505.

§ 1194.23 Telecommunications products.

(a) Telecommunications products or systems which provide a function allowing voice communication and which do not themselves provide a TTY functionality shall provide a standard non-acoustic connection point for TTYs. Microphones shall be capable of being turned on and off to allow the user to intermix speech with TTY use.

(b) Telecommunications products which include voice communication functionality shall support all commonly used cross-manufacturer non-proprietary standard TTY signal protocols.

(c) Voice mail, auto-attendant, and interactive voice response telecommunications systems shall be usable by TTY users with their TTYs.

(d) Voice mail, messaging, auto-attendant, and interactive voice response telecommunications systems that require a response from a user within a time interval, shall give an alert when the time interval is about to run out, and shall provide sufficient time for the user to indicate more time is required.

(e) Where provided, caller identification and similar telecommunications functions shall
also be available for users of TTYs, and for users who cannot see displays.

(f) For transmitted voice signals, telecommunications products shall provide a gain adjustable up to a minimum of 20 dB. For incremental volume control, at least one intermediate step of 12 dB of gain shall be provided.

(g) If the telecommunications product allows a user to adjust the receive volume, a function shall be provided to automatically reset the volume to the default level after every use.

(h) Where a telecommunications product delivers output by an audio transducer which is normally held up to the ear, a means for effective magnetic wireless coupling to hearing technologies shall be provided.

(i) Interference to hearing technologies (including hearing aids, cochlear implants, and assistive listening devices) shall be reduced to the lowest possible level that allows a user of hearing technologies to utilize the telecommunications product.

(j) Products that transmit or conduct information or communication, shall pass through cross-manufacturer, non-proprietary, industry-standard codes, translation protocols, formats or other information necessary to provide the information or communication in a usable format. Technologies which use encoding, signal compression, format transformation, or similar techniques shall not remove information needed for access or shall restore it upon delivery.

(k) Products which have mechanically operated controls or keys, shall comply with the following:

1) Controls and keys shall be tactically discernible without activating the controls or keys.

2) Controls and keys shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls and keys shall be 5 lbs. (22.2 N) maximum.

3) If key repeat is supported, the delay before repeat shall be adjustable to at least 2 seconds. Key repeat rate shall be adjustable to 2 seconds per character.

4) The status of all locking or toggle controls or keys shall be visually discernible, and discernible either through touch or sound.

§ 1194.24 Video and multimedia products.

(a) All analog television displays 13 inches and larger, and computer equipment that includes analog television receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals. As soon as practicable, but not later than July 1, 2002, widescreen digital television (DTV) displays measuring at least 7.8 inches vertically, DTV sets with conventional displays measuring at least 13 inches
vertically, and stand-alone DTV tuners, whether or not they are marketed with display screens, and computer equipment that includes DTV receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals.

(b) Television tuners, including tuner cards for use in computers, shall be equipped with secondary audio program playback circuitry.

c) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain speech or other audio information necessary for the comprehension of the content, shall be open or closed captioned.

d) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain visual information necessary for the comprehension of the content, shall be audio described.

e) Display or presentation of alternate text presentation or audio descriptions shall be user-selectable unless permanent.

§ 1194.25 Self contained, closed products.

(a) Self contained products shall be usable by people with disabilities without requiring an end-user to attach assistive technology to the product. Personal headsets for private listening are not assistive technology.

(b) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.

(c) Where a product utilizes touchscreens or contact-sensitive controls, an input method shall be provided that complies with §1194.23 (k) (1) through (4).

(d) When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.

(e) When products provide auditory output, the audio signal shall be provided at a standard signal level through an industry standard connector that will allow for private listening. The product must provide the ability to interrupt, pause, and restart the audio at anytime.

(f) When products deliver voice output in a public area, incremental volume control shall be provided with output amplification up to a level of at least 65 dB. Where the ambient noise level of the environment is above 45 dB, a volume gain of at least 20 dB above the ambient level shall be user selectable. A function shall be provided to automatically reset the volume to the default level after every use.

(g) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.
(h) When a product permits a user to adjust color and contrast settings, a range of color selections capable of producing a variety of contrast levels shall be provided.

(i) Products shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.

(j) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following:

(1) The position of any operable control shall be determined with respect to a vertical plane, which is 48 inches in length, centered on the operable control, and at the maximum protrusion of the product within the 48 inch length (see Figure 1 of this part).

(2) Where any operable control is 10 inches or less behind the reference plane, the height shall be 54 inches maximum and 15 inches minimum above the floor.

(3) Where any operable control is more than 10 inches and not more than 24 inches behind the reference plane, the height shall be 46 inches maximum and 15 inches minimum above the floor.

(4) Operable controls shall not be more than 24 inches behind the reference plane (see Figure 2 of this part).

§ 1194.26 Desktop and portable computers.

(a) All mechanically operated controls and keys shall comply with §1194.23 (k) (1) through (4).

(b) If a product utilizes touchscreens or touch-operated controls, an input method shall be provided that complies with §1194.23 (k) (1) through (4).

(c) When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.

(d) Where provided, at least one of each type of expansion slots, ports and connectors shall comply with publicly available industry standards.

Subpart C -- Functional Performance Criteria
§ 1194.31 Functional performance criteria.

(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.

(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for assistive technology used by people
who are visually impaired shall be provided.

(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for assistive technology used by people who are deaf or hard of hearing shall be provided.

(d) Where audio information is important for the use of a product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.

(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for assistive technology used by people with disabilities shall be provided.

(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.

Subpart D -- Information, Documentation, and Support
§ 1194.41 Information, documentation, and support.

(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.

(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.

(c) Support services for products shall accommodate the communication needs of end-users with disabilities.

Figures to Part 1194

Figure 1
Vertical Plane Relative to Operative Control
1. Section 508 does not apply to national security systems, as that term is defined in section 5142 of the Clinger-Cohen Act of 1996 (40 U.S.C. 1452).

2. The Access Board is an independent Federal agency established by section 502 of the Rehabilitation Act (29 U.S.C. 792) whose primary mission is to promote accessibility for individuals with disabilities. The Access Board consists of 25 members. Thirteen are appointed by the President from among the public, a majority of who are required to be individuals with disabilities. The other twelve are heads of
the following Federal agencies or their designees whose positions are Executive Level IV or above: The departments of Health and Human Services, Education, Transportation, Housing and Urban Development, Labor, Interior, Defense, Justice, Veterans Affairs, and Commerce; the General Services Administration; and the United States Postal Service.

3. Whenever the Access Board revises its standards, the Federal Acquisition Regulatory Council is required to revise the FAR, and each appropriate Federal agency is required to revise its procurement policies and directives within six months to incorporate the revisions.

4. 48 CFR Chapter 1, part 2, §2.101 Definitions Information Technology (c).
Your Opinion Counts!

Training & Seminar Evaluation Questionnaire

**Date:** November 6, 2007  **Instructor:** Doug Wakefield

**Seminar Title:** Review of 1194.23-1194.26 (Morning Session)
The Role of VPATs in Procurement (Afternoon Session)

Name and Contact Information: (optional) ___________________________________________________

Thank you for attending a TecAccess Section 508 Training Class. In order to help plan future training courses, please respond to the questions below using the four-point scale. One is low; four is high. Respond to items 8 – 12 in narrative form.

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Please elaborate on any item above: _________________________________________________________
______________________________________________________________________________________

What was the most value to you in this seminar? _____________________________________________
______________________________________________________________________________________

What was of least value to you in this seminar? ____________________________________________
______________________________________________________________________________________

Your suggestions for improving this seminar _________________________________________________
______________________________________________________________________________________

Please tell us about other classes you would like to attend____________________________________
______________________________________________________________________________________

TecAccess
Mac McCuller, Training Manager
mmcculler@tecaccess.net
(804)-365-8476
Your Opinion Counts!

Training & Seminar Evaluation Questionnaire

Date: November 5, 2007  Instructor: Doug Wakefield

Seminar Title: Overview of Section 508 and Review of 1194.21 and 1194.22

Name and Contact Information: (optional) ___________________________________________________

Thank you for attending a TecAccess Section 508 Training Class. In order to help plan future training courses, please respond to the questions below using the four-point scale. One is low; four is high. Respond to items 8 – 12 in narrative form.

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<th>Unsatisfactory</th>
<th>Poor</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Quality</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Registration process</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Schedule / Agenda</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Content / Topics</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Speaker(s)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Student Materials</td>
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<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Meeting Room</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Please elaborate on any item above: _______________________________________________________
______________________________________________________________________________________

What was the most value to you in this seminar? ____________________________________________
______________________________________________________________________________________

What was of least value to you in this seminar? ____________________________________________
______________________________________________________________________________________

Your suggestions for improving this seminar ________________________________________________
______________________________________________________________________________________

Please tell us about other classes you would like to attend______________________________
______________________________________________________________________________________
VPAT™

Voluntary Product Accessibility Template

Review Checklist

A VPAT™ provides information on how a product or service claims to conform to the standards of Section 508 of the Rehabilitation Act of 1973 (as amended). It is recommended that E&IT vendors prepare VPATs™ by following the basic guidelines suggested by the Information Technology Industry Council (ITI) in their “Best Practices for Electronic and Information Technology Vendors” at http://www.itic.org/.

It is also recommends that procurement agents, or those responsible for conducting Market Research to identify accessible and Section 508-compliant Electronic and Information Technology (E & I T), review VPATs with the understanding that vendors who employ the suggested language from ITI are demonstrating a good first step: they understand the importance of communicating their product’s accessibility and compliance to Section 508 in a manner that will facilitate the market research requirements of government procurement officials.

The following checklist is useful for recording the results of VPAT™ reviews.
Questions to ask when analyzing VPATs™:

1. YES □ NO □
   Is the VPAT™ Date included? This will show you that the VPAT is up to date.

2. YES □ NO □
   Is the product clearly identified by Name and Version Number, or Release Date?

3. YES □ NO □
   Is Vendor Contact (POC) Information readily available? This will allow you to easily contact the vendor with additional questions.

4. YES □ NO □
   Is there a Summary Table (or snapshot equivalent) that shows the subsections of subparts B and C of the Section 508 Standards, and does it identify those that apply?

5. YES □ NO □
   Are there Subsequent Tables that contain the actual Section 508 language of the referenced subsection, divided up into its respective subparagraphs (a, b, c, etc.) for each subpart that does apply?

6. YES □ NO □
   Does the VPAT™ use the ITI-suggested language, and is it used consistently throughout?

Questions to ask for the Summary Table:

1. YES □ NO □
   Does Column 1 (Criteria) of the Summary Table describe the subsections?

2. YES □ NO □
   Does Column 2 (Supporting Features) of the Summary Table describe whether the product has features that support the accessibility Criteria of the corresponding subsection, or, state “Not Applicable”?

3. YES □ NO □
   Does Column 3 (Remarks & Explanations) of the Summary Table contain additional General remarks about the product?
Questions to ask for the Subsequent Tables

1. YES ☐ NO ☐
   Does Column 1 (Criteria) of Subsequent Tables contain the lettered paragraphs of the respective subsection?

2. YES ☐ NO ☐
   Does Column 2 (Supporting Features) of the Subsequent Tables describe whether the product has features that support the accessibility criteria of the corresponding subparagraph, or, state “Not Applicable”?

3. YES ☐ NO ☐
   Does Column 3 (Remarks & Explanations) of the Subsequent Tables contain additional Detailed remarks and explanations about the product?

If applicable:

3.1. YES ☐ NO ☐
   Is there a list of Accessibility Features?

3.2. YES ☐ NO ☐
   Does it explain in detail where in the product an “Exception” occurs?

3.3. YES ☐ NO ☐
   Does it explain the “Equivalent Methods of Facilitation”?