Compliance with Section 508 of the Rehabilitation Act of 1973 – Why It's Important

PROJECT MANAGEMENT COMMUNITY (PMC) MONTHLY MEETING, MAY 11, 2011

A Couple of Thoughts

- To understand the needs of disabled users is to understand the needs of everyone.

- To build applications and content that allows for heterogeneity, flexibility, and device independence is incredibly difficult, incredibly challenging, and incredibly necessary.

Agenda

- Segment 1: Brief introduction/ overview – Section 508
- Segment 2: EPLC
- Segment 3: Buy Accessible Wizard (BAW), VPATs and GPATs
- Segment 4: Testing

Section 508

- For the Federal government, the requirement for accessibility is a law known as Section 508 of the Rehabilitation Act

- Section 508 of the Rehabilitation Act requires agencies to give disabled employees and members of the public access to information that is comparable to the access available to others

- Section 508 as described in the Code of Federal Regulations, 36 CFR 1194, contains functional and technical standards and has been a legal requirement since June 21, 2001

- Section 508 compliance is required when Federal agencies develop, procure, maintain, or use Electronic & Information Technology (EIT) systems

- Legal compliance with Section 508 can be achieved by:

  - Meeting the applicable standards

  - Qualifying for a Section 508 Exception

Section 508 Accessibility Goals

- To support the employment and advancement of people with disabilities.

- To support the access to information generated or made available by the National Institutes of Health (NIH), particularly that for members of the public.

- To fully integrate 508 requirements into the development life-cycle and NIH's E&IT procurement and review processes

- To provide needed services, testing solutions and innovative strategies in implementing Section 508

- To increase awareness of accessibility issues and programs to internal and external NIH stakeholders by providing outreach services.

SECTION 508
IT'S THE LAW

THE LAW: Section 508 of The Rehabilitation Act 1973, as Amended (1998)

- Requires that any electronic and information technology (EIT) procured, developed, used or maintained by Federal agencies must be accessible to employees and members of the public with disabilities, unless an undue burden would be imposed on the agency.

Section 508 was enacted to:

- eliminate barriers in information technology

- make available new opportunities for people with disabilities

- encourage development of technologies that will help achieve these goals.

Section 508 Focus

- People with Visual Disabilities (blind, low vision, color blindness)

- People with Hearing Disabilities (deaf, hard-of-hearing)

- People with Mobility Impairments or Dexterity Impairments (amputee, individual with prosthetic hand, carpel tunnel syndrome, RMI, etc.)

- People with Cognitive Disabilities…

Definition of E&IT

Electronic and information technology: Includes information technology and any equipment or interconnected system or subsystem of equipment, which 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.

Definition of E&IT Continued

- 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.

Dissecting the Standards

Standards consist of three subparts.

- Subpart B – technical standards for six categories of products.
- Subpart C – functional performance criteria (if not covered by Subpart B).
- Subpart D – Information and documentation requirements.

Section 508 Standards

- Subpart B – technical standards for six categories of products:

1. Software Applications and Operating Systems,
2. Web-based Intranet and Internet Information and Applications,
3. Telecommunications Products,
4. Video and Multimedia Products,
5. Self Contained, Closed Products,
6. Desktop and Portable Computers,

- And their respective Information, Documentation, and Support.

Section 508 Standards

- Subpart C – functional performance criteria (if not covered by Subpart B).

  ○ 1194.31 Functional Performance Criteria (Must be accessible with assistive technology)

- Subpart D – Information and documentation requirements.

  ○ 1194.41 Information, Documentation and Support (Must also be accessible)

Exemptions and Exceptions

- Exemptions
  - National Security Exemption – Not applicable
  - Contractor Incidental
  - Back Office products
  - Fundamental Alteration
- Exceptions
  - Commercial Non-availability
  - Undue Burden Exception – Document!

All exceptions require sign-off from an official (who will perform due diligence).

- *NIH Accommodations*
  - HHS Section 508 Accessibility (508) Accommodation
  - HHS Section 508 Guidelines and Examples for Determining the Suitability of an Accessibility Accommodation (Issued March 2009)

What is Section 508?

- The long and short of it? It's the legal mandate that we do the right thing.

- 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.

- Your first stop for technical standards and reference: US Access Board

What Section 508 is NOT?

- It is not about adaptive technology or assistive technology

- It is not about providing reasonable accommodation for individuals with disabilities

- It is not about the size of the population of persons with disabilities.

ENTERPRISE PERFORMANCE LIFECYCLE (EPLC)

There are several possible approaches to accessibility:

1. Ignore it and hope it will go away
2. Bolt it on (add accessibility features after the "real" work is done)
3. Add as you go (throw in accessibility features here and there as you discover problems during the development phase)
4. Plan for accessibility throughout the whole process

Your Section 508 Checklist:

- Identify the product you need (to purchase or develop)

- Determine if the product is E & IT.

- If the product is E & IT, determine which standards apply. (Remember, more than one standard may apply.)

  ○ Subparts B, C, & D

- Review the applicable standards.

- If purchasing, perform market research to find 508-conformant products. If a decision is made to purchase a non-conformant product as-is, document the reasons. Request a commercial non-availability exemption.

- Follow any agency-specific requirements.

- Purchase or develop the product.

Build It In!

- Those of us in the accessibility field are always saying "build accessibility in"…

- However, Section 508 does not specify the processes that are required to support the legal and technical approach to compliance with the law

- *We need to provide project managers process tools and a plan – so they can perform*

- We believe that most efficient approach to Section 508 compliance is to include it in the life cycle requirements

Why Is "Building Accessibility In" Cost Effective?

○ Because it is expensive to retrofit software to meet accessibility standards

○ The cost of revision is estimated to be

• 1.5 - 6 times greater during development than during the design phase

• 60-100 times greater after release

[Pressman, 2005]

What do Project Managers Need? They Need A Plan That Includes Section 508 Requirements…

- A separate process should not be needed for compliance

- By being an intrinsic part of the life cycle, Section 508 can be managed the same as other requirements

- Project managers understand the language of requirements and costs because they focus on those aspects of development

- *Section 508 EIT Accessibility Planning and Documentation* has great value to them

  ◦ Embed it into your EPLC process!

Section 508 EIT Accessibility Planning

- For most government project managers, the main tool needed is clear planning for Section 508 conformance that maps to their own project's life cycle
- The plan document itself should be updated in each life cycle stage
  - Ensures review of the appropriate artifacts
  - Project updates include Section 508 in any schedule changes

The Project Manager's responsibilities include:

- Planning the acquisition along with the rest of the acquisition team, including the user (the Requiring Official).

- Performing market research for accessible E & IT.

- Drafting specifications and minimum requirements/agency needs, when these are needed for procurement.

- The Steps:
    1. Determine whether the buy falls under E & IT.
    2. Determine whether an exception (other than undue burden) applies.
    3. Review Access Board standards and determine which apply to the purchase.
    4. Perform market research to determine what items are available in the marketplace.
    5. Document non-availability and undue burden determination.
    6. Draft technical specifications and/or minimum requirements.

Section 508 EIT Accessibility Plan, As Part of EPLC

1. Initiation Phase
2. Concept Phase
3. Planning Phase
4. Requirements Analysis Phase
5. Design Phase
6. Development Phase
7. Test Phase
8. Implementation Phase
9. Operations and Maintenance Phase
10. Disposition Phase

Segment 2: Buy Accessible

- Buy Accessible Wizard
- Voluntary Product Accessibility Template (VPAT) – Vendor Provided documentation
- Government Product Accessibility Template (GPAT) – Government's customized edition of Section 508 conformance requirements
  - As any EIT that an agency is looking to develop, procure, maintain, or use since June 2001 is expected to comply with Section 508.

What is the Buy Accessible Wizard?

- The Buy Accessible Wizard is a web-based application that:
    ◦ Guides users through the acquisition process, gathering data and providing information about electronic and information technology (E&IT) and Section 508 compliance
    ◦ Compiles a running summary documenting the process and its results
- The Buy Accessible Wizard makes compliance with the requirements of Section 508 as easy and thorough as possible

Getting Started……

- Anyone can be a 'guest' user on the public Wizard hosted at GSA – but in addition with Wizard 3.0 …

- Agencies may also register with GSA to utilize secure database storage and manage their own Wizard users

Benefits:

◦ Individual user ID and passwords

◦ Save Wizard sessions to resume or re-use

◦ Share data with other users as appropriate

◦ Repository of Section 508 compliance documentation

◦ Management reporting over summary results

https://app.buyaccessible.gov/baw/   Bing

Favorites   Suggested Sites ▾   Free Hotmail   Web Slice Gallery ▾

FAST - Assistive Techn...   Shared Documents   Draft ICT Standards a...   BuyAccessible Wiza... ✕   Page ▾ Safety ▾ Tools ▾

Welcome to the BuyAccessible Wizard!

A tool to facilitate compliance with the requirements of Section 508

GSA

Site Layout Controls

Change Font   Arial
Change Font Size   12px

Enter

| Glossary | Wizard Training | Quick Reference | Design Guide |

NEW

Quick Links - Path to simplified Section 508 compliance (login not required)

What are Quick Links?

Is my Agency registered with GSA?

What is the BuyAccessible Wizard?

Wizard users if your Agency is registered with GSA, login as ➡ **Registered User**

Who should use this Wizard?

Wizard users to login as guest ➡ **Guest Login**

Links to Other Resources: ▪ Section508.gov   ▪ U.S. Access Board   ▪ Federal Acquisition Information Resources   ▪ Federal Acquisition Training Resources   ▪ Accessibility Forum Blog

Note: Your Wizard session will time out and data will be lost after 2 hours of inactivity. ❓ Questions or Comments ▪ Terms of Use & Privacy Statement

Application Version : 3.9
Build Date: 12/08/2010 01:09 PM

Done   Internet   100%

Start   BuyAccessible Wiz...   Removable Disk (G:)   Microsoft PowerPoint...   Search Desktop   1:52 PM

29

https://app.buyaccessible.gov/baw/MarketResearch.jsp?reload_top_level=yes

Bing

Favorites | Suggested Sites | Free Hotmail | Web Slice Gallery

FAST - Assistive Techn... | Shared Documents | Draft ICT Standards a... | BuyAccessible Mark...

Page ▾ | Safety ▾ | Tools ▾

| Glossary | Quick Reference | My Session | Tutorial |

Search with optional keyword

Enter product or vendor keyword (optional)

Search in... All Categories

Search

How does the search work?

How do keywords restrict the search?

What are these categories?

Search in Category : All Categories **Search**

▸ Audio and visual equipment (20 products) TV, television tuners, multimedia receivers, DVD players, VCRs, etc.

▸ Call management systems or accessories (2 products) automated attendant systems, voice mail systems, teleconference equipment, etc.

▸ Computers (254 products) desktop computers, personal computers, servers, notebook computers, personal digital assistant PDAs or organizers, etc.

▸ Computer data input devices (46 products) bar code/magnetic stripe readers, encoders, game pads/joy sticks, keyboards, stylus, mouse, trackballs, scanners, touch pads, biometric identification equipment, optical character recognition systems, microphones, etc.

▸ Computer displays (85 products) Monitors/Displays(Touch screen/LCD/plasma)/LCD Panels

▸ Computer printers (155 products) Dot matrix printers, dye sublimation printers, inkjet printers, laser printers, line matrix printers, plotters, multi function printers, etc.

▸ Computer services (5 products) Software or hardware engineering, programmers, system administrators, internet services etc.

▸ Duplicating machines (43 products) photocopiers, facsimile machines, multifunction machines, etc.

▸ Education and Training Services (14 products) scientific vocational training services, computer vocational training services, telecommunications vocational training services

▸ Management and Business Professionals and Administrative Services (2 products) Management advisory services, human resources services, legal services, marketing and distribution, etc.

▸ Personal communication devices (19 products) Mobile(Cell) phones, pagers, answering machines, two-way radios, IP phones, etc.

▸ Phone and video conference equipment (1 products) audioconferencing systems, videoconferencing systems, etc.

▸ Projectors and supplies (19 products) projection screens or displays, video projectors, etc.

▸ Published Products (5 products) Printed media, Electronic directories, Electronic dictionaries, Electronic encyclopedias, Electronic catalogs, etc.

▸ Software (591 products)

▸ Only EIT Related Categories(1507 products)

▸ All Categories(1507 products)

Done | Internet | 100%

Start | BuyAccessible Mar... | Removable Disk (G:) | Microsoft PowerPoint... | Search Desktop | 1:54 PM

All Categories

- **Audio and visual equipment** (20 products)
- **Call management systems or accessories** (2 products)
- **Computers** (254 products)
- **Computer data input devices** (46 products)
- **Computer displays** (85 products)
- **Computer printers** (155 products)
- **Computer services** (5 products)
- **Duplicating machines** (43 products)
- **Education and Training Services** (14 products)
- **Management and Business Professionals and Administrative Services** (2 products) **Personal communication devices** (19 products)
- **Phone and video conference equipment** (1 products)
- **Projectors and supplies** (19 products)
- **Published Products** (5 products)
- **Software** (591 products)
- Only EIT Related Categories(1507 products)
- All Categories(1507 products)

BuyAccessible Wizard Reports

- **<u>Solicitation Documentation:</u>**
- [Government Product / Service Accessibility Template (GPAT)](#)
- **<u>Supplemental Guides:</u>**
- [Evaluation Guide](#)
- [Acceptance Guide](#)
- [Design Guide](#)

https://app.buyaccessible.gov/baw/PAT.jsp

Bing

Favorites | Suggested Sites ▼ | Free Hotmail | Web Slice Gallery ▼

BuyAccessible Government Product / Service Accessib...

Page ▼ | Safety ▼ | Tools ▼

BuyAccessible Government Product / Service Accessibility Template (GPAT)

The GPAT is a simple tool to assist Federal contracting and procurement officials in fulfilling the market research requirements associated with Section 508 regulations. The GPAT is intended as a form to be included with government solicitations, to be filled out by solicitation respondents as a part of their proposal to indicate how their proposed solution addresses the applicable Section 508 requirements. The GPAT is organized as a series of ten tables. The first eight tables reflect accessibility information about EIT products, corresponding to the six technical sections, the functional performance criteria, and the requirements for information, documentation, and support as defined in the Access Board Standard for Section 508. The ninth and tenth tables correspond to accessibility information about information content deliverables and labor hours, respectively.

NOTE: Section 508 provisions are determined to apply based in part on EIT requirements characterized using the BuyAccessible Wizard. Provisions based on definite EIT requirements are identified by a "yes" in the Applicable column. Provisions based on possible EIT requirements are identified by a "maybe" in the Applicable column. Provisions not identified with program requirements for this acquisition have no entry in the Applicable column. However, if your product or service deliverable has physical or functional characteristics corresponding to any of the listed EIT accessibility requirements, even those beyond identified program requirements, then the requirement applies and you should provide appropriate accessibility information.

Please fill the information below as a part of request for accessibility information of your proposed deliverable.

Product Name:_____

Vendor Name:_____

Accessibility Information URL (if any):_____

1194.21 Software Applications and Operating Systems

Id	Provision Text	Applicable	Notes	How does the EIT meet this requirement?	Please explain
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.			☐ Fully ☐ Partially ☐ No ☐ Don't know	
	Applications shall not disrupt or disable activated features of other				

Section 508 Solicitation Documentation

Review Solicitation Checklist

Based on your responses using the Buy Accessible Wizard the following items are included with suggested language in the Solicitation Template report:

1. **Program Need:**
   - If Section 508 is relevant to program requirements based on identification of acquisition deliverables that are Electronic and Information Technology (E&IT)
   - Expected use and technical environment features that may affect Section 508

2. **Section 508 Product Requirements**
   - Technical standards according to 36 CFR part 1194 Subpart B applied to specific types of E&IT based on expected physical and functional characteristics
   - Functional performance criteria according to 36 CFR part 1194 Subpart C applied to all E&IT acquisition deliverables
   - Information, documentation, and support according to 36 CFR part 1194 Subpart D applied to support documentation and services provided by agencies to end users of the acquired E&IT.

3. **Section 508 Evaluation Factors:**
   - Best Meets factor applied to proposals received in response to an agency solicitation based on assessment of the expected satisfaction of documented solicitation requirements in the context of known commercial availability.

4. **Section 508 Acceptance Criteria:**
   - Best Meets factor applied to delivered E&IT based on assessment of satisfaction of the documented solicitation requirements corresponding to identified Section 508 requirements.

Buy Accessible Wizard Reports

Select a report type below and then click report button.

Solicitation Documentation: ○ Government Product Accessibility Template(GPAT) ○ Solicitation Template   How can I print these reports?

Supplemental Guides: ○ Evaluation Guide ○ Acceptance Guide ○ Design Guide   How can I include these reports in my solicitation?

Generate the selected report   **Report**

34

Testing is Critical

- Testing:

- Am I/is the Agency complying with the law?

- Does the EIT product or service conform to the standards?

- Is it accessible to persons with disabilities? Is it usable to persons with disabilities?

Testing

- Based on the Access Board's Standards
- Automated tools for web sites (including, but not limited to, Accenture, …)
- Assistive Technology – tests for Accessibility, Usability and Compatibility. Not for "508 conformance," but important nonetheless.

Testing

- Find the right mix of human and automated testing. A mix of human and automated testing of Section 508 compliancy is a best practice that offers checks and balances to ensure the project is compliant with Section 508. There may be some trial and error involved for your team to determine the appropriate mix of testing resources. While the contract or statement of work governing the contract may have specific requirements for the testing resources, this may not always be the case.

- Note that automated testing tools are not a substitute for human testing, which may not always be accurate. But human testing can be managed through test plans that verify Section 508 compliance.

Tools for Testing – Automatic

- Accenture (scanning tool used by HHS for Web sites)
- Cynthia Says
- Illinois iCITA Firefox Accessibility Extension
- Accessibility Testing with Opera Browser
- Fangs Screen Reader Emulator for Firefox
- Luminosity Colour Contrast Ratio Analyser
- WAVE
- Web AIM Accessibility Checker
- Wickline Color Filter
- GSA Listing of Technology Tools

Tools for Testing – Assistive Technology

- Testing with Assistive Technology is not a means of ensuring Section 508-conformance – that is done through manual checking with the US Access Board Standards for Section 508 and through Automatic tool testing.
- Use Assistive Technology to test for
  - Accessibility
  - Usability
  - Compatibility

Tools for Testing – Assistive Technology

- Examples Include:
- Screen Readers
  - Freedom Scientific, JAWS (Job Access with Speech)
  - GW Micro, Window Eyes
  - Dophin, SuperNova Screen Reader (formerly HAL)
- Screen Magnifiers
  - AI Squared, ZoomText Magnifier/Reader
  - Freedom Scientific, MAGic Professional with Speech - LVS
  - Dolphin, SuperNova
- Speech Recognition Software
  - Nuance, Dragon Naturally Speaking (Professional, Medical, Legal versions available)
  - IBM ViaVoice Pro

Testing of EIT

EIT	Manual	Automatic	AT
1194.21 Software Applications and Operating Systems	√		√
1194.22 Web-Based Intranet and Internet Information and Applications	√	√	√
1194.23 Telecommunications Products	√		√
1194.24 Video and Multimedia Products	√		√
1194.25 Self Contained and Closed Products	√		√
1194.26 Desktop and Portable Computers	√		√

Testing of EIT

EIT	Manual	Automatic	AT
C	√		√
D, documentation	√		√

Resources

- [Buy Accessible Wizard](#)
- [Computer/Electronic Accommodation Program (CAP)](#)
- [HHS Section 508](#)
- [NIH Section 508 SharePoint](#)
- [Section 508](#)
- [US Access Board](#)

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- For Section 508 Guidance

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