



# Incorporating Accessibility in the Development Process

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# Accessibility Matters!

- Steps to Implementing Accessibility
- Testing and Tools
- Training Series
- Making Surveys Accessible (examples)
- Progress and Lessons Learned

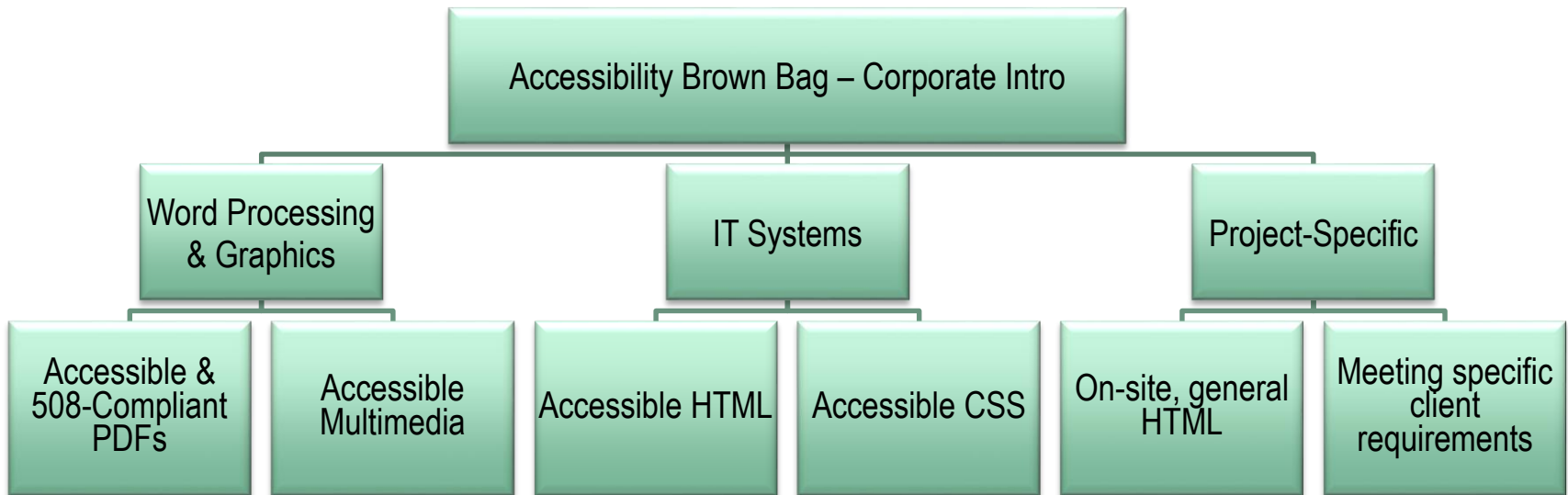
# Implementing Accessibility

- **Assemble your accessibility team:** For example, a 508 coordinator, IT manager or systems representatives, human resources, legal, graphics, word processing, etc.
- **Develop your implementation plan:** Consider, your web site, intranet, software development life cycle, experience with assistive technologies (ATs), tools, introduction (brown bag), and training.
- **Accessibility should be incorporated in the design phase of the project's life cycle** - not considered as an afterthought during testing.
- Assess your compliance level(s), implement your initiatives, and follow-up on the progress.



# Testing Tools

- Free downloads and online page validators
  - ⦿ **WAVE** - *[wave.webaim.org](http://wave.webaim.org)*
  - ⦿ CynthiaSays - *[www.cynthiasays.com](http://www.cynthiasays.com)*
  - ⦿ Total Validator - *[www.totalvalidator.com](http://www.totalvalidator.com)*
- Desktop solutions (~\$250-\$2000)
  - ⦿ **SortSite – Electrum** [www.powermapper.com](http://www.powermapper.com)
  - ⦿ AccVerify and AccRepair – [www.hisoftware.com](http://www.hisoftware.com)
  - ⦿ Ramp - [www.deque.com](http://www.deque.com)
- Enterprise solutions (~\$30K-\$100K)
  - ⦿ Compliance Sheriff (HiSoftware), Policy Tester (IBM Rational), AMP (SSB BART Group), Worldspace (Deque)



## Training Series for Staff

# Accessible Coding

- Separate content, presentation, and scripting (HTML – CSS – JS)
- Hand coding vs. framework libraries
  - ◉ .NET

# Accessible HTML

- Best Coding Practices
  - ◉ Use Doctype (Avoid Quirks Mode)
  - ◉ Semantic structure / proper tagging
    - ✦ The right tag for the right element
    - ✦ No layout tables
    - ✦ No spacer gifs
    - ✦ Helpful tags / attributes (lang, acronym)
  - ◉ Skip to Main Content
  - ◉ Alt text
    - ✦ Images, video (closed-captioning), etc.
    - ✦ Choose meaningful text equivalent
  - ◉ Tables
    - ✦ Simple (Scope)
    - ✦ Complex (Header IDs)
  - ◉ Forms
    - ✦ Fieldset / legend
    - ✦ Label
    - ✦ Titles?
- Validation / testing
  - ◉ WAVE toolbar
  - ◉ JAWS
  - ◉ Expert Review

# Accessible CSS

## Positioning

- Lets you specify content order semantically (contrast with table layouts, where content is linearized out of order)

## Visibility / Display

- Be aware of how screen readers treat CSS properties
- Skip navigation treatment
- Background images to replace headers
- No content conveyed solely through design

## Low-Vision / Color Blindness User Issues

- Color contrast
- Readable text



# Accessible JavaScript

- Section 508 conformance: Content presented via scripting must be accessible.
- WCAG conformance: Content and functionality must be accessible with scripting **disabled**.
- Progressive Enhancement.

# Can AJAX Be Accessible?

## JavaScript issues that plague AJAX applications:

- **Navigation.** Inability or difficulty navigating using a keyboard or assistive technology.
- **Hidden content.** Presentation of content or functionality that is not accessible to assistive technologies.
- **User control.** Lack of user control over automated content changes.
- **Confusion/Disorientation.** Altering or disabling the normal functionality of the user agent (browser) or triggering events that the user may not be aware of.

Source: <http://www.webaim.org/techniques/javascript/>

# Lessons Learned

- Section 508 versus accessible (WCAG) – continue educating staff
- Screen reader testing
- Accessibility is the highest level of usability

# More Resources

- Checklists

- ⊙ Section 508 <http://webaim.org/standards/508/checklist>
- ⊙ WCAG 2.0 <http://webaim.org/standards/wcag/checklist>
- ⊙ Section 508 <http://web508.gsfc.nasa.gov/developing/checklist/index.cfm>

- Internet

- ⊙ Web Accessibility in Mind - <http://webaim.org/>
- ⊙ Keeping Web Accessibility in Mind Video <http://webaim.org/intro/#types>
- ⊙ Top 10 Accessible Web Authoring Practices [http://websavvy-access.org/resources/top\\_ten.php](http://websavvy-access.org/resources/top_ten.php)
- ⊙ Web Accessibility Toolbar <http://www.visionaustralia.org/info.aspx?page=577>
- ⊙ Developing Accessible Software Tutorial <http://www.access-board.gov/508.htm>

- Books

- ⊙ *Web Accessibility – Web Standards and Regulatory Compliance*, Thatcher, Burks, et al., 2006
- ⊙ *Designing with Web Standards*, Jeffrey Zeldman
- ⊙ *Constructing Accessible Web Sites*, Thatcher, Bohman, et al., 2003
- ⊙ *Building Accessible Websites*, Joe Clark, 2002