

# Accessible Websites

Whether or not the Americans with Disabilities Act or other Accessibility Legislation applies the business case for an Accessible Site.



# Is Your Site Required to be Accessible?

This question has been asked in many forms with regard to different disabilities ranging from low or no vision, hearing impaired, physically challenged, or mentally challenged whether through a learning or cognitive disability.



# The Answer Is:

- §508 or §504 of the Rehabilitative Act Apply if:
  - Are you a government or quasi-government entity?
  - Are you an educational facility?
  - Do you receive any public funds?
  - Do you wish to sell a product or service to a governmental agency or educational facility?
- If the answer to any of the above is “yes” then your site needs to be accessible.  
(see <http://section508.gov/> for more info)



# What does §508 require?

§508 requirements are basically the same as the Web Content Accessibility Guidelines or WCAG from the W3C's Website Accessibility Initiative (WAI)  
(<http://www.w3.org/TR/WAI-WEBCONTENT/full-checklist.html>)

The complete Checklist is available at  
<http://www.webaim.org/standards/508/checklist> )

You might also want to look at  
<http://www.jimthatcher.com/sidebyside.htm> for a comparison between the two sets of requirements



# What about the ADA?

## *(Americans with Disabilities Act)*

There are two specific section of the ADA, Title II & Title III, that apply to Web accessibility.

Title II in particular Section VI: Communications Pertains to the Government (State/Local)

Title III Technical Assistance Manual. (Section 1.2 Public Accommodation ) deals with public accommodation of people with disabilities.

**Question:** *Does the internet qualify as a place of public accommodation?*





# National Federation of the Blind vs. AOL

- This was one of the earliest cases and like most ADA related website litigation resulted in a settlement before trial.
- The NFB (National Federation of the Blind) filed suit against AOL because its entire ISP service as well as browser were incompatible with screen readers. At the time this case was filed it AOL was the dominant national ISP and the only one available in many markets.
- As usually happens in litigation under the ADA the suit never made it to trial with AOL agreeing to make changes to its service to make it compatible with screen readers.



# Litigation under the ADA

- There have been different interpretations by various courts on whether or not the ADA applies to websites.
- The case Southwest Airlines vs. Robert Gumson where the District Court Judge ruled that the website was not “a place of public accommodation” and the ADA does not apply is under appeal.
- Courts of Appeal such as the 11<sup>th</sup> Circuit have indicated that the judge in Southwest Airlines made an incorrect ruling in discussion of other ADA related cases such as Rendon vs. Valley Crest Prods, Ltd have indicated that the ADA would apply if the case were before them.
- At this time there is no definitive yes or no on the applicability of the ADA to private websites.



# Department of Justice

While the courts have not been clear on the issue of the ADA and websites the Department of Justice has. To quote from their amicus brief in Hooks v Oakbridge:

"The Internet is an excellent source of information and, of course, people with disabilities should have access to it as effectively as people without disabilities."





# State Enforcement of the ADA

Within the last couple of week (August 2004) the New York State Attorney General Eliot Spitzer today announced settlements with two major travel web sites that will make the sites far more accessible to blind and visually impaired users.

These sites are <http://priceline.com> and <http://ramada.com>

In going after Ramada Inns and Priceline the New York Attorney General relied on both the ADA and New York anti-discrimination legislation.

\*a company that offers services both on-site and through other means (such as a travel service that arranges reservations both over the phone and at a walk-in office) would be required to offer non-discriminatory services on-site, but be free to discriminate over the phone or the internet.\*



# Spitzer Agreement

Under the Spitzer Agreement both companies agreed to what is basically \$508 or WCAG Level A compliance.

- Not including costs associated with complying under their settlement each company was required to pay the costs of the investigation into their violations.
- That cost was between \$35,000 and \$40,000 each.



# Business Reasons for an Accessible Site

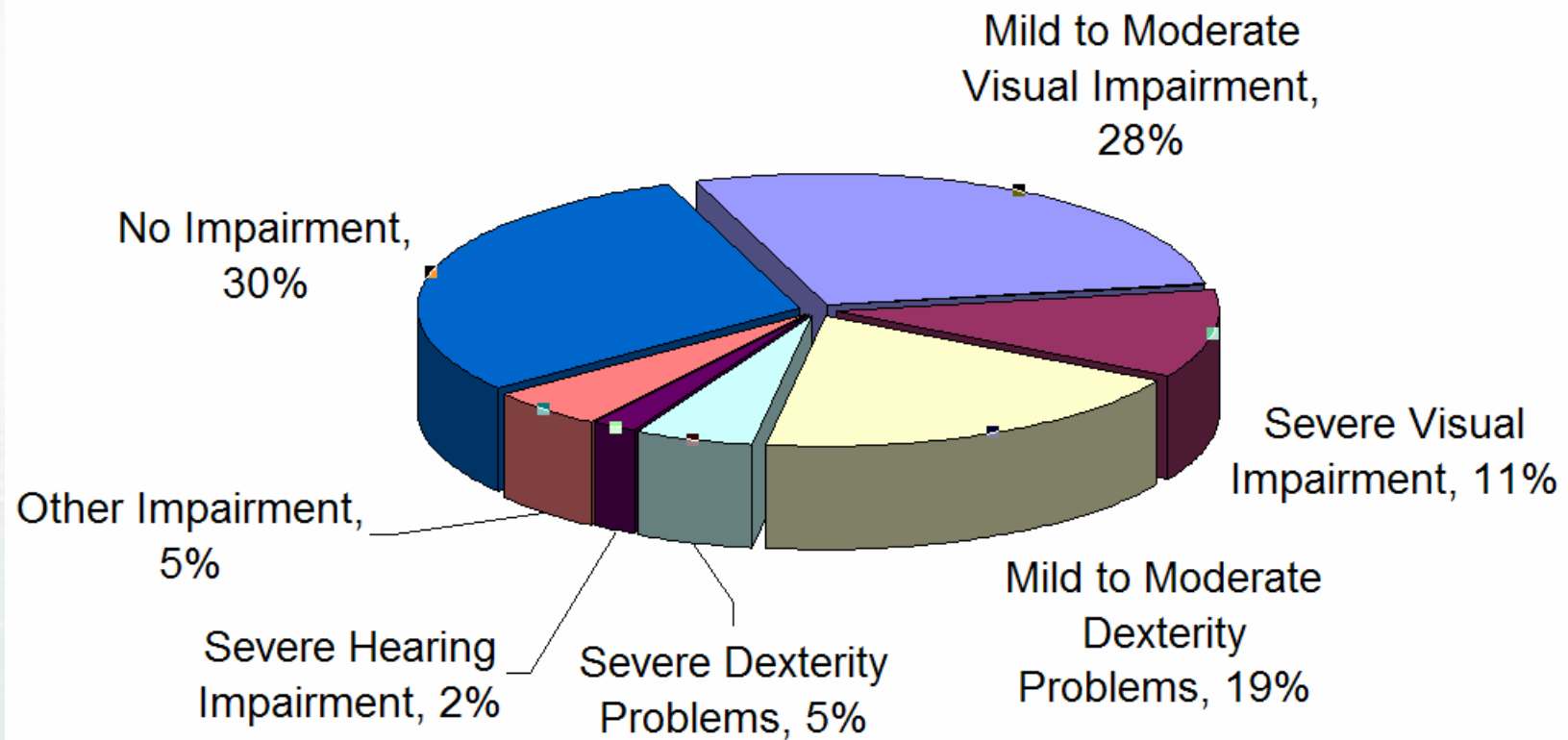
Whether or not you are required to comply with the ADA, §508 or §504 it makes business sense to make your site as accessible as possible.

An accessible site will:

1. Increase the number of people who can find out about your product.
2. Will work on a wide variety of devices.
3. Is less technology dependent which makes it easier/less expensive to maintain.



# 70% of Web Users Benefit



# Visual Difficulties

- 11,400,000 people have severe visual conditions not correctible by glasses.
- 100 million Americans are visually disabled without corrective lenses (70 million are myopic).
- 80 million people suffer from potentially blinding eye disease.
- 2,800,000 people are visually handicapped from color blindness.
- 1,100,000 people are legally blind.





# Dexterity Problems

- 19% (24.4 million) of computer users have a mild dexterity difficulty or impairment
- 5% (6.8 million) of computer users have a severe dexterity difficulty or impairment.



# Hearing Difficulties

- Hearing Difficulties  
18% (24.0 million) of computer users have a mild hearing difficulty or impairment
- 2% (2.5 million) of computer users have a severe hearing difficulty or impairment.



# Where to Get Started

1. Assess the situation of your current site (test it)
2. Determine and set the standard you will use
3. Create or update your site
4. Test again



# Assessing the situation

1. Define your testing objectives
2. Determine priorities
3. Set a schedule for testing
  1. Automated Testing
  2. Designer/Coder Manual Checks
  3. End User Checks
4. Establish a time frame for repairs



# Minimum Testing

1. Home Page
2. At least 5 pages 1 level below home
3. At least 5 pages at each additional level
4. All form pages
5. All Plug-in Pages
6. Site Map Page
7. Any part of the site with a “User interactive Process” (i.e. Registration process. Purchase process.)





# Automated or Semi-Automated Testing

1. Validate the HTML/XHTML for compliance
2. Validate the CSS for compliance
3. Test the HTML Schematic Structure.
4. Check page against a tool like CynthiaSays.com or the Wave
5. Test with VisCheck for Color Blindness issues.



# Designer/Coder Manual Checks

1. Test with Client Scripts turned off.
2. Test without images.
3. Manually verify all Definitive Tag Attributes.
4. Verify That the linguistics' are clear and precise to what they define.
5. Test Media for Hearing disability and Cognitive disability issues.
6. Check for Keyboard Accessibility Issues.



# End User Checks

- In an ideal world every site would be tested by people with disabilities using their assistive technology of choice.
- Unfortunately in the real world there normally is not the budget to allow for extensive usability or accessibility testing by a wide variety of end users.
- Don't have access to formal testing lab, recruit friends, especially those not computer literate. Ask strangers at Starbucks or other facility with internet access to test using your computer.



# Benefits of Testing HTML & CSS

- To make sure of compatibility with accessible technology readers.
- HTML if not well written will cause reader issues.
  - Remember the M in HTML stands for Mark-up use it correctly
  - HTML errors can prevent the page from rendering at all
- CSS if not well written will:
  - Over write user needs/preferences for font size
  - Will cause screen readers and other assistive devices not to see the content
  - Will not display properly cross browser/platform



# Use Proper Structural Mark-Up

- Your document schematic should make sense. NO Formatting Text to look like a header. Use Header Tags!

Do Not : `<span class="HeaderText">The most important information on the page.</span>`

DO: `<h1 class="HeaderText"> The most important information on the page </h1>`

- Screen Readers and keyboard users rely on properly document structure to assist in navigating your site.





# Example of HTML, CSS, and a Structured Document Schema

A well structured document looks similar to:

Heading 1 <h1>

Heading 2 <h2>

Paragraph <p>

Heading 2 <h2>

Paragraph <p>

Heading 3 <h3>

Paragraph <p>

Heading 3 <h3>

Paragraph <p>

Heading 4 <h4>

Paragraph <p>

Heading 3 <h3>

Paragraph <p>



# Inspect and Verify All Informational Tag Attributes

## Informational Tag Attributes:

- alt
- summary
- caption
- abbr
- acronym
- Consider longdesc but it isn't well supported at this time.

NOTE: All tags in your code should be lower case for compatibility with current and future standards.

## TABLES

- Don't use <th> tags with layout tables.
- Designate Row and Column Headers Using the <th> Tag
- Use Appropriate Headers for the Data Cells
- Use Proportional Sizing over Absolute Sizing
- Provide Titles for Data Tables Using the <caption> Tag
- Provide Summaries Using the Summary Attribute



# Multimedia Testing

- Provide synchronized captions for any audio that conveys content or if that is not possible then provide a link to a transcript.
- Provide text equivalents for all non-text elements that convey content or provide a function.
- Give users control over time sensitive content.
- Remove strobing content that flashes between 2 and 55 times per second (can cause epileptic seizures).



# Additional Testing Areas

- Ensure the content is keyboard accessible and not usable only with the mouse
- Use the clearest, simplest language appropriate to the content
- Provide plenty of contrast between text, background and other elements
- Don't use color only to indicate meaning
- Ensure screen reader accessibility or provide an accessible alternative



# Testing Keyboard Accessibility

- Easily navigatable via tab key.
- Easily navigatable with JavaScript turned off.
- Allow content skipping.
- If you do not use tabindex attribute and keyboard shortcuts
  - Check the default tab order in multiple browsers and screen readers





# Setting Standards – Style Guides

## Benefits of Using Style/Content Guides

- Standards books help consistent accessibility design.
- Give a site template for multiple contributors.
- Allows less room for mistakes.
- Easier to maintain.



# When the Site is Live

Don't stop testing just because the site is live.

Sites are continually being updated and pages can break when edited.

- Use Human Testing.
- Random Audit Testing.
- Scheduled post-project testing



# More Resources

- **Web Accessibility Initiative -**  
<http://www.w3.org/WAI>
- **Americans With Disabilities Act -**  
<http://www.usdoj.gov/crt/ada/adahom1.htm>
- **Accessible Technology in Computing-**  
<http://www.microsoft.com/enable/research/phase2.aspx>



# Accessibility Tools- Checkers

- **Wave Accessibility Evaluator** (WAI Beta) - WAVE complete (includes WCAG 1.0, Section 508) checking - <http://www.wave.webaim.org/index.jsp>
- **A-prompt Accessibility Checker** - <http://www.websavvy-access.org/resources/aprompt.shtml>
- **Cynthia Says** - reports WCAG Level 1 & 2 errors and provides an alt text quality report  
[http://www.icdri.org/test\\_your\\_site\\_now.htm](http://www.icdri.org/test_your_site_now.htm)
- **Dottie** - to automate the process of checking a Web page for compliance with many of the NIA\NLM (<http://www.nia.nih.gov>) guidelines for Web accessibility for older adults  
<http://www.cba.nau.edu/becker-a/Accessibility/Dottie/Dottie.html>
- **Monitor Central** - finding and fixing Section 508 Problems WC3 standards compliance <http://www.brownsite.net/moncen.htm>
- **Vischeck** - simulates color blindness – <http://www.vischeck.com>



# Accessibility Articles

- **Designing More Usable Web Sites**  
<http://www.trace.wisc.edu/world/web>
- **When The Americans With Disabilities Act Goes Online**  
<http://www.ncd.gov/newsroom/publications/adainternet.html>
- **Disability Central**  
<http://www.disabilitycentral.org/graphichtml/webaccessibility.htm>
- **Understanding Accessible Table Mark-Up**  
<http://access.idyllmtn.com/tables>
- **Usability 101**  
<http://www.useit.com/alertbox/20030825.html>





# PBS Special-Freedom Machines

This PBS documentary on assistive technology should prove interesting and informative. It debuts September 14, 2004 and promises to examine not only the technologies that with disabilities use but it also delves into the culture, attitudes, and politics that hinder or support universal freedom for all.

Associated with this documentary is a wonderful article by Judy Brewer, the director of the World Wide Web Consortium's Web Accessibility Initiative, titled The Promise of the Web.

<http://www.pbs.org/pov/pov2004/freedommachines/index.html>

