

# 508 and You: Taking the Pain Out of Accessibility

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# Background

What is it?



# Background

What is it?

- Comes from a government mandate

# Background

What is it?

- Comes from a government mandate
- Applies to all government agencies

# Background

What is it?

- Comes from a government mandate
- Applies to all government agencies
- Applies not only to websites, but documents

# Background

Who does it cover?



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Who does it cover?

- Anyone who would need to use a website, but has special needs

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Like:

- The blind



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- The blind
- The color blind
- The deaf
- Physically disabled

# Background

Who does it cover?

- Anyone who would need to use a website, but has special needs

Like:

- The blind
- The color blind
- The deaf
- Physically disabled
- People who are -temporarily- disabled

# Background

Why bother?



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- If you want government contracts, you will have to produce 508 compliant sites

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- If you want government contracts, you will have to produce 508 compliant sites
- Guess what? Many foreign governments use the US 508 standard!

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## Why bother?

- If you want government contracts, you will have to produce 508 compliant sites
- Guess what? Many foreign governments use the US 508 standard!
- It's just a good idea!



# Background

How important is it?

- The Plone story

# Basics

508 basics:



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508 basics:

- If it is said or shown, it must exist in text

# Basics

508 basics:

- If it is said or shown, it must exist in text
- A group of people should not be excluded from being able to read something

# Basics

508 basics:

- If it is said or shown, it must exist in text
- A group of people should not be excluded from being able to read something
- Try not to annoy the user

# Visually impaired

Not only the blind!



# Visually impaired

Not only the blind!

Includes:

- Visually impaired (extremely poor vision)
- Color blind - 7 - 8% of all males!

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Not only the blind!

Includes:

- Visually impaired (extremely poor vision)
- Color blind - 7 - 8% of all males!

90% of 508 efforts cover this group



# Visually impaired: The Blind

How do I test my site?

# Visually impaired: The Blind

How do I test my site?

- Get a free screen reader

<http://www.screenreader.net/> - PC

VoiceOver - Mac

# Visually impaired: The Blind

How do I test my site?

- Get a free screen reader
- Turn off your damn monitor!

# Visually impaired: The Blind

How do I test my site?

- Get a free screen reader
- Turn off your damn monitor!
- No, really. Turn it off.

# Alt tags



# Alt tags

- Make them useful!

# Alt tags

- Make them useful!
- Easy to trick the scanners... please don't!

# Alt tags

- Make them useful!
- Easy to trick the scanners... please don't!
- Don't just copy the caption... Enhance it!



# Alt tags

- Make them useful!
- Easy to trick the scanners... please don't!
- Don't just copy the caption... Enhance it!
- Don't put alt tags on spacers, prettifying images, logos

# Alt tags



# Alt tags

Worst:

""

# Alt tags

Worst:

" "

Bad:

"Image"

# Alt tags

Worst:

" "

Bad:

"Image"

Okay:

"Picture of James Bennett"

# Alt tags

Best:

"Image of James Bennett in his embarrassingly pink Django Pony hoodie, looking displeased."



# Alt tags: the Code

```
<img  
  src = "ponyboy.png"  
  alt = "Image of James Bennett in his embarrassingly pink Django  
Pony hoodie, looking displeased.">
```

# Skip Navigation





# Skip Navigation

- Navigation is necessary

# Skip Navigation

- Navigation is necessary
- Navigation is boring

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- Navigation is necessary
- Navigation is boring
- Do not make people listen through navigation!

# Skip Navigation

- Navigation is necessary
- Navigation is boring
- Do not make people listen through navigation!
- Offer more than one skip:
  - Skip to page navigation
  - Skip to body content

# Skip Navigation: the code

```
.hide {  
    position: absolute;  
    left: -500px;  
}
```

-----  
<a href = "#main" class = "hide">Skip to main content</a>

<ul id = "mainnav">

<li>Home</li>

<li>Donuts</li>

</ul>

<a name = "main" />Main stuff starts!

# Tableless layout

- Do you use tables for layout?

# Tableless layout

- Do you use tables for layout?
  - Stop that

# Tableless layout

- Do you use tables for layout?
  - Stop that
  - Tables are for *tabular data*



# Tableless layout

- Do you use tables for layout?
  - Stop that
  - Tables are for *tabular data*
  - Messes up screen readers

# Tableless layout

- Do you use tables for layout?
  - Stop that
  - Tables are for *tabular data*
  - Messes up screen readers
  - Shows you're not cool enough to use CSS properly

# Tableless layout

- Lay out content in a sensible order

# Tableless layout

- Lay out content in a sensible order
  - Pretend like you're writing a paper

# Tableless layout

- Lay out content in a sensible order
  - Pretend like you're writing a paper
  - Content in a logical order

# Tableless layout

- Lay out content in a sensible order
  - Pretend like you're writing a paper
  - Content in a logical order
  - Headers descend logically

Display: none

# Display: none

- Common trick to style headers, divs, etc.



# Display: none

- Common trick to style headers, divs, etc.
- Displays an image instead of some text

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- Instead, push text off the screen

# Display: none

- Common trick to style headers, divs, etc.
- Displays an image instead of some text
- Display: none is evil
- Readers don't read it!
- Instead, push text off the screen
- Don't forget! Hidden text == image text!

# Display: none: the code

```
span.hide {  
    position: absolute;  
    left: -500px;  
}
```

```
div#flower {  
    background: url(flower.png);  
    height: 100px;  
    width: 300px;  
}
```

# Display: none: the code

```
<div id = "flower">  
  <span>A pretty flower</span>  
</div>
```

# Access Keys





# Access Keys

- Awesome for getting around a site

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- Keyboard shortcuts to common pages

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## Example:

- Search
- Site map
- Home

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- Awesome for getting around a site
- Keyboard shortcuts to common pages

## Example:

- Search
- Site map
- Home
- Standards are emerging (UK, Plone, etc)

# Access Keys: the code

```
<ul id = "mainnav">  
  <li>  
    <a href="index.html"  
      accesskey="h">  
      Home  
    </a>  
  </li>  
  <li>  
    <a href="search.html"  
      accesskey="1">  
      Section 1  
    </a>  
  </li>
```

# Forms



# Forms

- Readers rely on proper markup to read your form

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- Don't forget:



# Forms

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- Don't forget:
  - Labels for your fields!

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  - Titles for your fields!

# Forms

- Readers rely on proper markup to read your form
- Don't forget:
  - Labels for your fields!
  - Titles for your fields!
  - Error out vocally! Not just visually!

# Forms: the code

How would you rate this tutorial?<br />

```
<input type="radio" name="rate" id="cb1"  
title="Excellent" />
```

```
<label for="cb1">Excellent</label><br />
```

```
<input type="radio" name="rate" id="cb2"  
title="Fair" />
```

```
<label for="cb2">Fair</label><br />
```

```
<input type="radio" name="rate" id="cb3"  
title="Terrible" />
```

```
<label for="cb3">Terrible</label>
```

# Forms: the code

How would you rate this tutorial?<br />

```
<input type="radio" name="rate" id="cb1"  
title="Excellent" />
```

```
<label for="cb1">Excellent</label><br />
```

```
<input type="radio" name="rate" id="cb2"  
title="Fair" />
```

```
<label for="cb2">Fair</label><br />
```

```
<input type="radio" name="rate" id="cb3"  
title="Terrible" />
```

```
<label for="cb3">Terrible</label>
```

# Forms: the code

How would you rate this tutorial?<br />

```
<input type="radio" name="rate" id="cb1 "
```

```
title="Excellent" />
```

```
<label for="cb1">Excellent</label><br />
```

```
<input type="radio" name="rate" id="cb2"
```

```
title="Fair" />
```

```
<label for="cb2">Fair</label><br />
```

```
<input type="radio" name="rate" id="cb3"
```

```
title="Terrible" />
```

```
<label for="cb3">Terrible</label>
```

# Tables



# Tables

- Tables are for tabular data!



# Tables

- Tables are for tabular data!
- Add a summary to the table

# Tables

- Tables are for tabular data!
- Add a summary to the table
- Add scopes to columns and rows to help the screen reader

# Tables: the code

```
<table summary = "Donuts by framework">  
  <tr scope = "row">  
    <th scope = "col">Donut type</th>  
    <th scope = "col">Framework</th>  
    <th scope = "col">Number</th>  
  </tr>  
  <tr scope = "row">  
    <td>Pink sprinkles</td>  
    <td>Django</td>  
    <td>254</td>  
  </tr>  
  ...
```

# Visually impaired



# Visually impaired

Who are they?



# Visually impaired

Who are they?

- Those that are not using a screen reader

# Visually impaired

Who are they?

- Those that are not using a screen reader
- Still have poor vision

# Forms





# Forms

- Highlight where the user is

# Forms

- Highlight where the user is
  - Cursors can be hard to see

# Forms

- Highlight where the user is
  - Cursors can be hard to see
  - Highlighting gives location

# Forms: the code

```
input:focus,  
input:hover,  
input:active,  
textarea:focus,  
textarea:hover,  
textarea:active {  
    background:#ffffcc;  
    border:1px solid #73A6FF;}
```

# Grow gracefully

- Grow your font size 3x
- Did it break your site?
- Make your site grow gracefully
- Navigation should always remain usable

# Color blind



# Color blind

- 7 - 8% of all males!

# Color blind

- 7 - 8% of all males!
- 0.4% of all females



# Color blind

- 7 - 8% of all males!
- 0.4% of all females
- Many different kinds



# Color blind

- 7 - 8% of all males!
- 0.4% of all females
- Many different kinds
  - Due to variations, removing color won't work as a test!

# Color blind

## Rules of thumb:

- Color as only indicator = bad

Check iPhone availability at your local Apple Store

California  ● iPhones available ● iPhones unavailable

California Stores Wednesday, July 4

San Diego, <a href="#">UTC</a>	●
San Francisco, <a href="#">Stonestown</a>	●
San Francisco, <a href="#">San Francisco</a>	●
San Jose, <a href="#">Oakridge</a>	●
San Luis Obispo, <a href="#">Higuera Street</a>	●
Santa Clara, <a href="#">Valley Fair</a>	●
Santa Monica, <a href="#">Third Street Promenade</a>	●

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# Color blind

## Rules of thumb:

- Color as only indicator = bad
- Watch for mouseovers

# Color blind

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- Color as only indicator = bad
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- Aim for non-annoying contrast

# Color blind

## Rules of thumb:

- Color as only indicator = bad
- Watch for mouseovers
- Aim for non-annoying contrast
- Provide a key

# Existing designs



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- Run through Vischeck ([vischeck.com](http://vischeck.com))



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- Try running it through Daltonize (also at vischeck)

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- Run through Vischeck ([vischeck.com](http://vischeck.com))
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- Try running it through Daltonize (also at vischeck)
  - Offers very similar colors

# Existing designs

- Run through Vischeck ([vischeck.com](http://vischeck.com))
  - Free add-on for Photoshop
  - Shows -all- variations
- Try running it through Daltonize (also at vischeck)
  - Offers very similar colors
  - Still distinguishable by the color blind!

# Existing designs

- Run through Vischeck ([vischeck.com](http://vischeck.com))
  - Free add-on for Photoshop
  - Shows -all- variations
- Try running it through Daltonize (also at vischeck)
  - Offers very similar colors
  - Still distinguishable by the color blind!
- Also, Color Oracle

# New designs



# New designs

- Start off on the right foot!



# New designs

- Start off on the right foot!
- Pick colors that contrast from the beginning

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  - Online color scheme designers  
(<http://colorschemedesigner.com>)

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# New designs

- Start off on the right foot!
- Pick colors that contrast from the beginning
  - Online color scheme designers  
(<http://colorshemedesigner.com>)
  - For the picky: Photoshop + Vischeck
- Don't forget mouseovers!

# The Deaf



# The Deaf

- If it is -said-, it needs to be shown

# The Deaf

- If it is -said-, it needs to be shown
- Caption it

# The Deaf

- If it is -said-, it needs to be shown
- Caption it
- Give a visual indicator for bells, dings, etc



# The Deaf

- Subtitles

# The Deaf

- Subtitles
  - Don't be too fancy: captions that disappear suck.



What is going on here, anyway?

# The Deaf

- Subtitles
  - Don't be too fancy: captions that disappear suck.
  - Free ones exist: our design team uses Magpie

# Physically disabled



# Physically disabled

Who is this?



# Physically disabled

Who is this?

- People with motion disorders

# Physically disabled

Who is this?

- People with motion disorders
- Amputees

# Physically disabled

Who is this?

- People with motion disorders
- Amputees
- People with iguanas



# Physically disabled

Who is this?

- People with motion disorders
- Amputees
- People with iguanas

Wait, what?

# Physically disabled

Who is this?

- People with motion disorders
- Amputees
- People with iguanas

Wait, what?

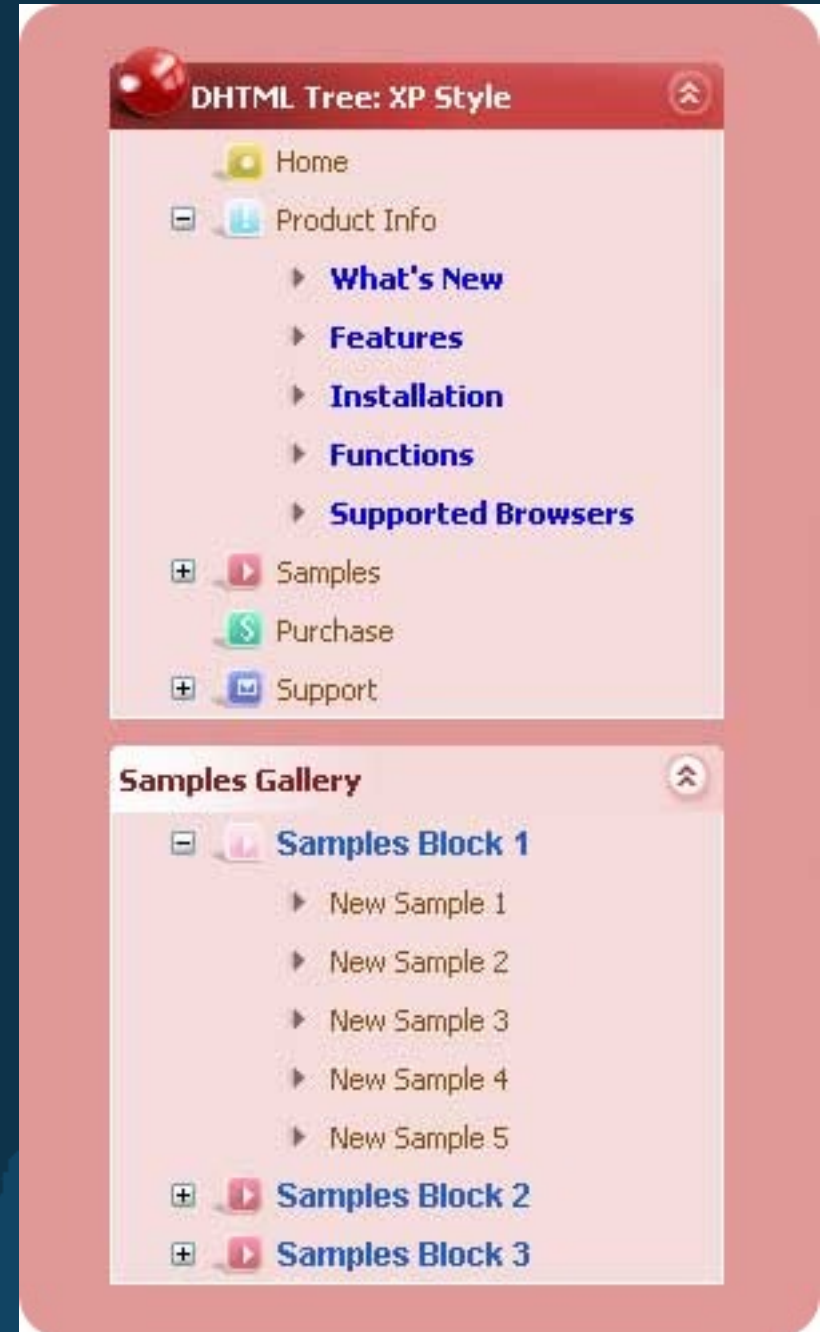
Moral of the story: Not every disabled person will be handicapped forever.

# Physically disabled



# Physically disabled

- Pinpoint accuracy bad!



# Physically disabled

- Pinpoint accuracy bad!
- Rubber band menus VERY bad!

The screenshot shows the NetBank website header with the logo and tagline "Banking how you live. Member FDIC". Below the header is a navigation menu with items: Banking, Investments, Loans, About Netbank, Demos, Contact Us, Home, Security & Privacy, and Site Map. A mouse cursor is hovering over the "Loans" menu item, which has opened a sub-menu with options: Overview, Home Equity, Mortgages, Business Leasing, Loan Glossary, and Loan Disclosures. To the right of the menu is a promotional banner for "Get Free Bill Pay & Pay No Fees NetValue Interest Checking" with a sub-headline "Only \$50 deposit to open, free unlimited transactions three times the average checking. Apply Now". Below the banner is a table with columns "Services" and "Our Rates".

Services	Our Rates
Checking	2.02% APY* <a href="#">APY</a>
Money Market Account	4.75% APY* <a href="#">APY</a>
1 Year CDs (other terms available)	5.26% APY* <a href="#">APY</a>
Home Equity Loans (intro rate fixed for 3 months)	6.99% APR <a href="#">APR</a>

# Physically disabled

- Pinpoint accuracy bad!
- Rubber band menus VERY bad!
- Needless clicking bad!

# Physically disabled

- Pinpoint accuracy bad!
- Rubber band menus VERY bad!
- Needless clicking bad!
- Sticky mouse-overs everywhere bad!

# Resources

<http://www.section508.gov>

- Scary government site

[http://www.section508.gov/SSA\\_BestPractices/default.htm](http://www.section508.gov/SSA_BestPractices/default.htm)

- Much less scary government site!

<http://vischeck.com>

- Daltonizer and vischeck plug-in

<http://colororacle.cartography.ch>

- Color Oracle



Questions?