

Introduction to Web Accessibility

Dan Ficker
Twin Cities DrupalCamp 2015

Accessibility: tl;dr

- Not just about screen readers
- Not just a set of simple rules
- Many interpretations of how to implement well
- Give some ideas for your business and workflow



About Me

- Site: <http://da-man.com/>
- Web Developer for 10+ years
- Been using Drupal for most work past 6 years or so
- Currently work at:





What is Web Accessibility?

And why does it matter?

Disability

- 1 in 5 persons are disabled
- Someday, you may be one of that 20%
- Can take many forms
- You may not be able to identify people as disabled



Photo: NASA HQ

My Personal Disability

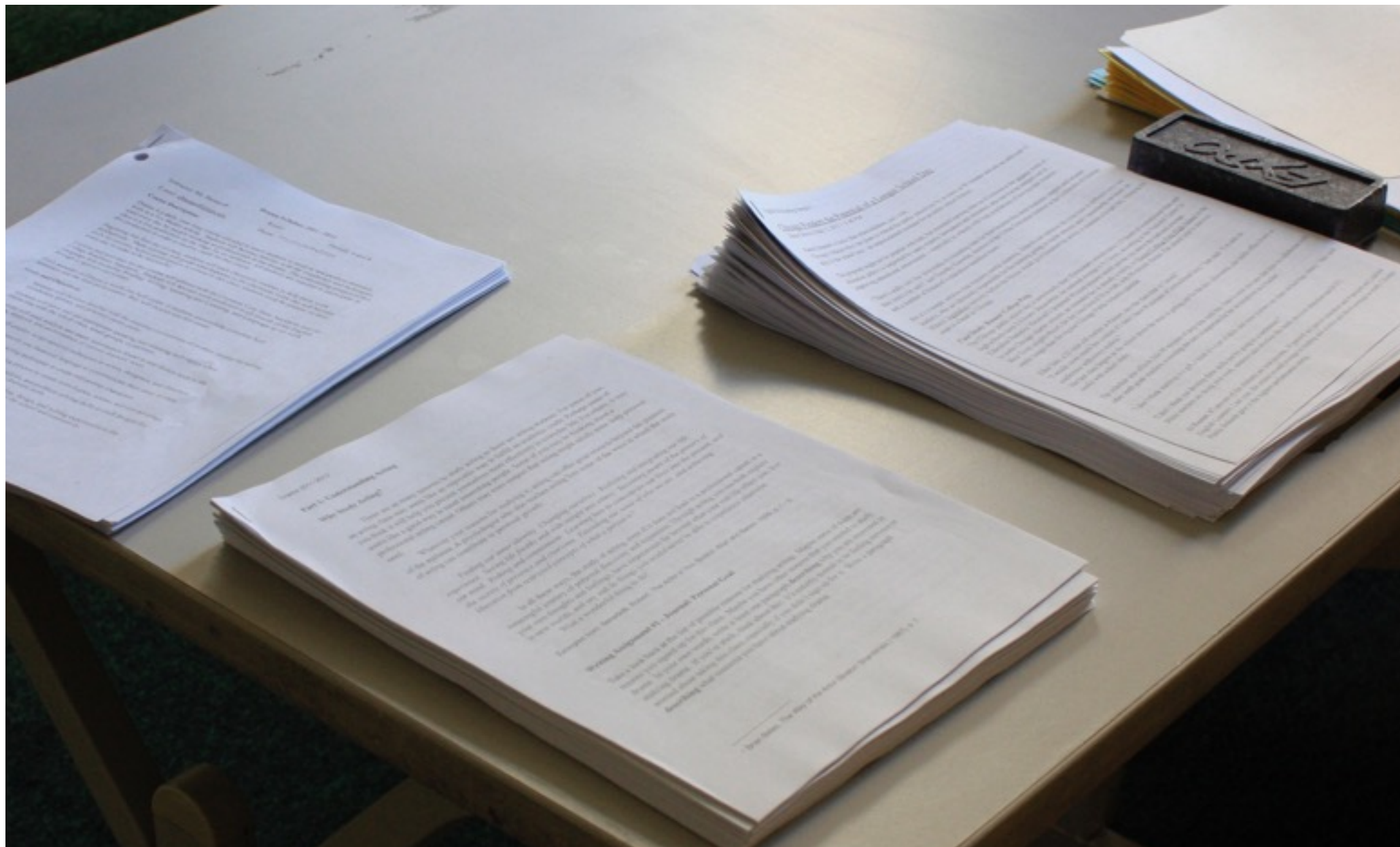
- Half-blind since birth
- Just need to get 5-10x closer
- Never needed or learned to use Braille and a cane
- Cannot drive a car
- Otherwise, I'm fine



Photo: Peter McWilliams

Website Accessibility

- Your site's features should be usable by everyone
- Build your site with common disabilities in mind
- The good news: Web Standards are a great start
- More good news: Drupal core is very accessible
- The bad news: No simple checklist or validation



The Standards

Guidelines you may not have to follow but you should

W3C's HTML5

- Recommendation Doc: <http://www.w3.org/TR/html5/>
- Standard for building a good, usable website
- This is generally what browsers render and how they function
- Not really Accessibility standard; just general web
- Allows your website to be viewed across a huge variety of devices and applications

US Government Section 508

- Site (w/docs): <https://www.section508.gov/>
- Compliance is required for government agencies
- Mostly about making sure website content is readable by screen readers and other assistive technologies for visually impaired visitors
- *‘Accessible sites offer significant advantages that go beyond access. For example, those with "text-only" options provide a faster downloading alternative[.]’*

W3C's WCAG

- Web Content Accessibility Guidelines (WCAG)
- Recommendation: <http://www.w3.org/TR/WCAG20/>
- Helps ensure content on your site is readable and navigable for all visitors.
- Key word: **Content**
- *“WCAG 2.0 success criteria are written as testable statements that are not technology-specific.”*
- WCAG 2.0 includes everything in Section 508

W3C's WAI-ARIA

- ARIA: Accessible Rich Internet Applications
- Recommendation: <http://www.w3.org/TR/wai-aria/>
- Sites are not just content, but often complicated interactions (forms, menus, JavaScript, etc.)
- *“...[ARIA] provide[s] proper semantics for custom widgets to make these widgets accessible, usable, and interoperable with assistive technologies.”*

```

<?php
// Try each external authentication source in series. Register user
// successful.
else if (!$user->uid && $server) {
    foreach (module_list() as $module) {
        if (module_hook($module, 'auth')) {
            if (module_invoke($module, 'auth', $name, $pass, $server)) {
                //if (variable_get('user_register', 1) == 1) {
                $account = user_load(array('name' => "$name@$server"));
                if (!$account->uid) { // Register this new user.
                    $user = user_save('', array('name' => "$name@$server",
user_password(), 'init' => "$name@$server", 'status' => 1, "authname_
"$name@$server", 'roles' => array(_user_authenticated_id())));
                    watchdog('user', t('New external user: %user using modu
array('%user' => "<em>$name@$server</em>", '%module' => "<em>$module<
('edit'), 'user/'. $user->uid .'/edit'));
                    break;
                }
            }
        }
    }
}
}
}
?>

```

Implementing Accessibility

Accessibility abbrev's to A11y

The A11y Expert

- At the end of building the site, have an accessibility expert look it over and recommend changes
- Often missed completely due to time and/or money
- Some items may get caught, but certainly not all
- Fundamental issues are not able to be fixed now

A11y Throughout

- All roles should learn applicable accessibility:
 - Business Owner
 - Interaction Designer
 - Visual Designer
 - Content Author
 - Developer

A11y Throughout

- Over half is Web Best Practices/Standards
- New ideas can be learned/taught
- All stakeholders are aware of pitfalls
- Catches issues before they happen
- Accessibility is built-in to the project



Common Pitfalls

Tips to Keep Your Sites Accessible

Design: Contrast/Colors

- Text should have a 3:1 contrast ratio to background
- Links should be easily distinguishable from non-link text
- Color should not be only method used to convey information
- Text should be resizable and content re-flow to viewing area

Functionality Degradation

- Build so that the website still is readable/usable without any CSS
- Content should be in order it shows up on the page
- The website should work without JavaScript or other add-on services
- If add-ons are used, a text version of content should be provided to users without add-on

Keyboard Navigation

- Some of your visitors do not use a mouse or touch to navigate your site; may use keyboard
- Often, will TAB through the links on your site in sequential order
- Keyboard shortcuts & order can be added by tags
- Order and some media can cause keyboard users to get trapped

Keyboard Nav: Focus

- Shows the focused link, by default, with a blue outline
- Make sure you're not resetting the focus outline; or make it custom integrated with your design



Design: Forms

- Form fields should have edges and focus
- Labels and edges should have sufficient contrast
- Placeholder text inside the field is a poor replacement for a label
 - Disappears when the field is in focus
 - Remains after the field is filled out




Drupal Is Accessible!

Follow The Community's Lead

Drupal's Admin A11y

Menu Sorting: With JavaScript On

[Home](#) » [Administration](#) » [Structure](#) » [Menus](#)


Main menu 

LIST LINKS

EDIT MENU

[+ Add link](#)

[Show row weights](#)


MENU LINK	ENABLED	OPERATIONS	
 Home	<input checked="" type="checkbox"/>	edit	delete
 Blog	<input checked="" type="checkbox"/>	edit	reset
 Blog Archive	<input checked="" type="checkbox"/>	edit	delete
 Blog Posts (menu position rule)	<input type="checkbox"/>	edit	
 My Movies	<input checked="" type="checkbox"/>	edit	reset
 My Music	<input checked="" type="checkbox"/>	edit	delete

Save configuration

Drupal's Admin A11y

Menu Sorting: With JavaScript Off

[Home](#) » [Administration](#) » [Structure](#) » [Menus](#)

Main menu 

LIST LINKS

EDIT MENU

[+ Add link](#)


MENU LINK	ENABLED	WEIGHT	OPERATIONS	
Home	<input checked="" type="checkbox"/>	<input type="text" value="-50"/>	edit	delete
Blog	<input checked="" type="checkbox"/>	<input type="text" value="-49"/>	edit	reset
Blog Archive	<input checked="" type="checkbox"/>	<input type="text" value="0"/>	edit	delete
Blog Posts (menu position rule)	<input type="checkbox"/>	<input type="text" value="0"/>	edit	
My Movies	<input checked="" type="checkbox"/>	<input type="text" value="-48"/>	edit	reset
My Music	<input checked="" type="checkbox"/>	<input type="text" value="-47"/>	edit	delete

Save configuration

Drupal's Admin A11y




Views Admin: With JavaScript On

[Home](#) » [Administration](#) » [Structure](#)

Views 

LISTSETTINGS


[+ Add new view](#) [+ Add view from template](#) [+ Import](#)

VIEW NAME	DESCRIPTION	TAG	PATH	OPERATIONS
Blog Displays: <i>Block, Feed, Page</i> In database Type: Content		default	/blog, /blog/feed	Edit 
Blog Categories Displays: <i>Block, Feed, Page</i> In database Type: Content		default	/blog/category, /blog/category/%/feed	Edit 
Mega Comments		default	/admin/content/mega-	Edit 

Drupal's Admin A11y

Views Admin: With JavaScript Off

[Home](#) » [Administration](#) » [Structure](#)

Views 

LIST

SETTINGS

[+ Add new view](#) [+ Add view from template](#) [+ Import](#)

VIEW NAME	DESCRIPTION	TAG	PATH	OPERATIONS
Blog Displays: <i>Block, Feed, Page</i> In database Type: Content		default	/blog, /blog/feed	Edit Disable Delete Clone Export
Blog Categories Displays: <i>Block, Feed, Page</i> In database Type: Content		default	/blog/category, /blog/category/%/feed	Edit Disable Delete Clone Export
Mega Comments		default	/admin/content/mega-	Edit

Drupal Accessibility

- These nice UI tools are available for your modules and admin pages
- Drupal provides `.element-invisible` which is better for screen readers than `display:none`
- With admin tools and/or modules, the CMS can require `alt` or `title` attributes where needed

Special Thanks

- Thanks to these people for inspiring me with their presentations. I borrowed and learned from them.
- Bill Tyler: www.billtyler.net
- The Accessibots (Chris & Helena):
www.accessibots.io @accessibots

Thanks for listening!

Any questions?

Resources/Tools

- WAVE Tool: <http://wave.webaim.org/>
- Color Oracle: <http://colororacle.org/>
- QUAIL Tester: <http://quailjs.org/>
- Drupal Accessibility Module: <https://www.drupal.org/project/accessibility>
- Book: <http://wcag2madeeasy.com/>