

Accessible Development

A quick overview

Agenda

- Common accessibility issues
- How to fix issues in your code
- How to manually test your site

Users browse websites with more than just their eyes

- Screen readers
- Braille readers
- Keyboard-only navigation

On top of that

- Color-blind users
- Users with different motor abilities
- Users with different cognitive abilities

Issue #1

I cannot easily find the information I need on the page.

Landmarks

Landmarks allow users to navigate through the major sections of a site.

HTML 5 Tag	Role
<code><header></code>	banner
<code><nav></code>	navigation
<code><main></code>	main
<code><aside></code>	complementary
<code><section></code>	region
<code><article></code>	article
<code><footer></code>	contentinfo
<code><form></code>	form

Section: Top carousel



AWARD RECIPIENT

MARIAN WRIGHT EDELMAN

Janet Reno Women's Leadership Award recipient

LEAD Conference
Georgetown University, April 6-7, 2017

#GULEAD2017



LEARN MORE

Marian Wright Edelman Wins Inaugural Janet Reno Award

The McCourt School and the Center for Juvenile Justice Reform are delighted to announce that the recipient of the Inaugural Janet Reno Women's Leadership Award is Marian Wright Edelman.



The McCourt School of Public Policy at Georgetown University is a policy school located in the center of the policy world in Washington, D.C.

Section: Primary content

Our mission is to teach our students to help design, analyze, and implement smart policies and put them into practice in the public, private, and nonprofit sectors, in the U.S. and around the world. The McCourt School flagship degree is the Master in Public Policy. McCourt also offers a Master in International Development Policy, a Master in Policy Management, an Executive Master in Policy Leadership, as well as other dual degree and executive programs.

REQUEST INFORMATION

MCCOURT SCHOOL NEWS

Section: News



Baker Center Introduces Innovation Grant Winners

January 26, 2017

The Baker Center for Leadership & Governance, a major center at Georgetown within the Institute of Politics and Public Service at the McCourt School of Public Policy, announced five students as recipients of the Baker Innovation Grant (BIG) to support the development of their ideas to solve pressing global policy challenges.



Treasury Secretary: Complacency Biggest Risk for Future Economic Security

November 17, 2016

Treasury Secretary Jacob Lew (R-RI) says complacency is the biggest danger in the stability of the economy going forward at a McCourt School of Public Policy's talk on the legacy of the Obama administration.



Harry J. Holzer Named John LaFarge Jr. S.J. Chair

October 25, 2016

A leading expert on the challenges facing low-wage workers, Dr. Holzer has written or edited 12 books and numerous journal articles with special focus on the experiences of minorities in the labor market.



Lynch Talks Criminal, Social Justice During 'Exit Interview' Series

October 14, 2016

U.S. Attorney General Loretta Lynch talked to members of the university community about criminal and social justice yesterday during a conversation series focusing on the political and policy issues that have shaped the nation during the Obama Administration.

[View More News](#)

Upcoming Events

There is a lot going on at McCourt-join us for an upcoming event.

Section: Secondary content

March 30

DC DAY Event: Running for Political Office
Edward B. Burns, S.J.
Intercultural Center, 12:15 PM

March 31

New Directions in Performance Measurement and Management
Copley Hall, 9 AM

April 3

NAFTA Renegotiated - The Winners and Losers
Arent Fox LLP, 8:30 AM

April 6

2017 LEAD Conference
Georgetown Hotel & Conference Center, 8:30 AM

April 7

2017 LEAD Conference
Georgetown Hotel & Conference Center, 8:30 AM

[View More Events](#)

McCourt School of Public Policy
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```
<header>
  <!-- Logo, etc. go here -->
  <nav> <!-- Site navigation --> </nav>
</header>

<main>
  <section> <!-- Important stuff goes here --> </section>
  <section> <!-- More stuff goes here --> </section>
  <aside> <!-- Incidental information goes here --> </aside>
</main>

<footer>
  <!-- Footer info goes here -->
</footer>
```

Landmarks are great... but they're kind of useless without names.

- The `aria-label` attribute gives your landmark a name!
- You can also use `aria-labelledby` to specify an ID of another element that can be used as a label.

```
<header aria-labelledby="site-name">
  <h1 id="site-name">Georgetown University</h1>
  <nav aria-label="Full site navigation"> <!-- ... --> </nav>
</header>
```

```
<main>
  <section aria-label="Important content">
    <!-- ... -->
  </section>
  <section aria-label="More important content">
    <!-- ... -->
  </section>
  <aside>
    <!-- ... -->
  </aside>
</main>
```

```
<footer aria-label="My site footer">
```

One more thing about landmarks

All content on the page must be inside some sort of landmark container.

Headings

Headings help users figure out the major themes of a page and the sub-topics for each theme.

Sounds like a term paper, right?

- H1 = Doctor Who
 - H2 = Doctors
 - H2 = Companions
 - H3 = Human companions
 - H3 = Not-so-human companions
 - H4 = K-9!
 - H2 = Enemies

Headings dos and don'ts

- Make sure your headings are in a logical order.
- It is OK to have more than 1 `<h1>` tag on the page!
- **DO NOT** use a `<h*>` tag just because it looks pretty.

Issue #2

I cannot get to where I want to go.

I'm going to say
something controversial
here.

STOP USING
CAROUSELS!

Why carousels are bad

- They are keyboard traps.
- Automatic motion is *very* distracting.
- No one clicks on anything past the first slide.

Alternatives to carousels

- Hero image
- List of things
- Better content management
 - Your carousel content may be better suited to its own page

Skip links

Lets keyboard users skip all of your navigation so they can go straight to the content.

Skip links HTML

```
<body>
  <nav aria-label="Skip links">
    <a href="#main-content" class="skip-link">
      Skip to main content
    </a>
  </nav>

  ...

  <main id="main-content">
    All the important stuff!
  </main>
</body>
```


Skip links Sass

```
.skip-link {  
  /* Make it pretty */  
  background: #333;  
  color: #fff;  
  padding: 0.5rem;  
  
  /* Make it hidden */  
  position: absolute !important;  
  clip: rect(1px,1px,1px,1px);  
  overflow: hidden;  
  height: 1px;  
  
  /* Show it on focus */  
  &:focus {  
    clip: auto;  
    overflow: visible;  
    height: auto;
```

}

While we are on the subject of keyboard users and links...

DO NOT turn off the outline around your links.

```
a {  
  outline: 0; /* This is really bad */  
}
```

General keyboard navigation

- Keyboard users expect to be able to tab through the page from left to right, top to bottom.
- This order is determined by your DOM.

Main site navigation

- **DO NOT** put your navigation drawer/panel code at the bottom of the DOM.
- Instead, put it where it logically makes sense.

Actually hide things.

- Hiding content by moving it off the screen or giving it no height or width only hides that content from sighted users.
- Screen readers still read that "hidden" content.

I mean, we've all done this at some point in our lives:

```
.my-hidden-thing {  
  height: 0;  
  width: 0;  
  overflow: hidden;  
  position: absolute;  
  right: -5000000000;  
}
```

This actually hides things:

```
.my-hidden-thing {  
  display: none;  
}
```


If you still want transitions:

```
.my-hidden-thing {  
  display: none;  
  width: 0;  
  transition: all 2s ease;  
  
  &.show {  
    display: inline-block;  
    width: 500px;  
  }  
}
```

Issue #3

There are 47 links on the page that all say the same thing.

Links

- Screen reader users can pull up a list of links and use that for navigation.
- The reader reads the link text, not the URL. This is ineffective if all of those links go to different places.

Stop using links that say any of these things:

- Click here
- Learn more
- Read more
- More info
- Contact
- More

Alternatively, our friend `aria-label` can help!

```
<a href="/kittenfez" aria-label="Kittens wearing fezzes">  
  Read more  
</a>
```

```
<a href="/bowties" aria-label="Why bowties are cool">  
  Read more  
</a>
```

Issue #4

I can't read the content on the page.

Color Contrast

Color blind users can't read red text on a blue background.

- For AA compliance, your color contrast must be:
 - 4.5:1 for normal text
 - 3:1 for large text
- WebAIM has a good online tool to check:
<http://webaim.org/resources/contrastchecker/>

Images

Always give your images alt text!

```

```

```

```



If your image is a decorative image with no meaning, you can have blank alt text:

```

```

Note the blank space in the `alt` value.

Phone numbers

(703) 555-1212

703.555.1212

This works, but...

```
<span>7</span> <span>0</span> <span>3</span>  
<span>5</span> <span>5</span> <span>5</span> -  
<span>1</span> <span>2</span>  
<span>1</span> <span>2</span>
```


Our telephone numbers

```
<a  
  href="tel:7035551212"  
  aria-label="7 0 3. 5 5 5. 1 2 1 2.">  
  (703) 555-1212  
</a>
```

Questions so far?

Manual testing!

Accessibility guideline documentation

- W3C
- Section 508
- WCAG
- WAI-ARIA
- Roles Specification
- Siteimprove

References

- Accessibility and phone number formatting
- I thought title text improved accessibility
- Semantic differences between ``, ``, `<i>`, and ``
- Testing with a screen reader
- Accessibility: Bold and italic formatting in HTML

