

CodeMash 2020

Beyond Alt-Text: Trends in Online Accessibility

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Introductions



Beyond Alt-Text

1. Terminology
2. Why we do this (a history lesson)
3. Accessibility's Greatest Hits
4. Accessibility culture at your workplace

Beyond Alt-Text

1. **Terminology**
2. **Why we do this (a history lesson)**
3. **Accessibility's Greatest Hits**
4. **Accessibility culture at your workplace**

Terminology

disability: a physical, mental, cognitive, or developmental condition that limits a person's ability to engage in certain tasks or participate in typical daily activities

- <https://www.merriam-webster.com/dictionary/disability>
- <http://www.ohrc.on.ca/en/policy-ableism-and-discrimination-based-disability/2-what-disability>

Terminology

assistive technology: tools that help people perform tasks that might otherwise prove challenging or impossible.

- <https://webaim.org/articles/motor/assistive>

Terminology

- a11y
 - accessibility
 - a*****y (11 *'s)
- Legislation:
 - Americans with Disabilities Act (ADA) 1990, amended in 2009
- Guidelines:
 - Web Content Accessibility Guidelines (WCAG 2.1)
 - Defines how to make the Web more accessible to people with disabilities
 - A (lowest); AA (mid-tier); AAA (highest)
- Technical specifications:
 - Accessible Rich Internet Applications (ARIA)
 - HTML attributes that define ways to make web content more accessible to people with disabilities

Beyond Alt-Text

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4. Accessibility culture at your workplace

Why we do this (a history lesson)

- In our physical spaces, there are a lot of affordances which exist to help people with disabilities.

Why we do this (a history lesson)

- In the 1960s, most of this didn't exist.
- Strong Disability Rights Movement in the 60's & 70's.
 - https://en.wikipedia.org/wiki/Disability_rights_movement
 - [https://en.wikipedia.org/wiki/Ed_Roberts_\(activist\)](https://en.wikipedia.org/wiki/Ed_Roberts_(activist))

Why we do this (a history lesson)

The world was still not built for people with disabilities.



Why we do this (a history lesson)

- So we invented curb cuts!
 - And other things, like basic human decency! (WIP)
- For the first time, wheelchair riders are able to get around cities on their own.



Why we do this (a history lesson)

The Curb-Cut Effect: the idea that improvements we make for users with disabilities end up making things better for everyone.

- <https://99percentinvisible.org/episode/curb-cuts/>

Why we do this (a history lesson)

- Tenji Blocks / Tactile Paving
 - https://en.wikipedia.org/wiki/Tactile_paving
 - <https://www.cnet.com/news/google-doodle-pays-tribute-to-japanese-inventor-seiichi-miyake/>

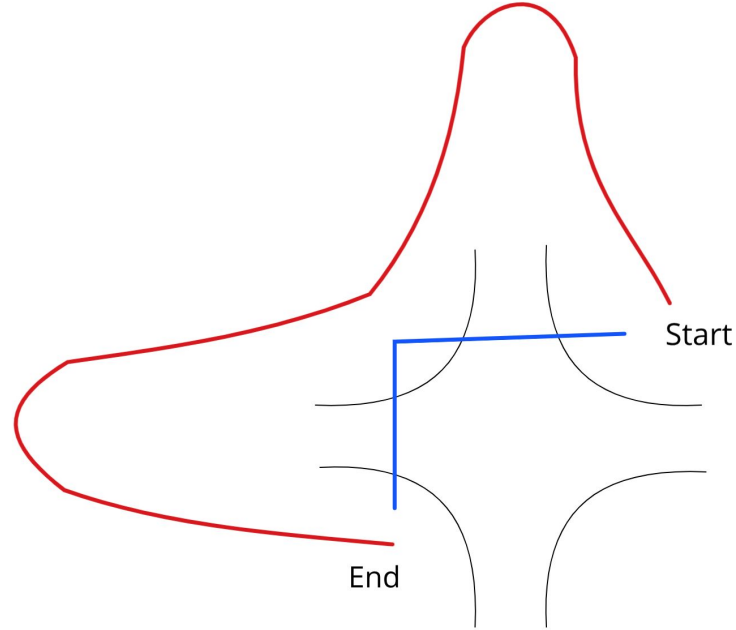


Why we do this (a history lesson)

We're still not perfect...



Why we do this (a history lesson)



Why we do this (a history lesson)

- We are in the midst of a similar push for disability rights, but this time for our digital spaces.

Beyond Alt-Text

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Accessibility Greatest Hits

Focus Management

- Goal: Users are able to tab through a page in a logical order
- Make sure the user can tell what element has focus
 - Show the “blue outline”
 - Use semantic HTML
 - It is vital that focus is adjusted when certain events happen, e.g. when an overlay pops up
- Bad:
 - https://miss.ent.sirsidynix.net/client/en_US/mlsathome/search/results?q=twilight+zone&x=0&y=0
 - <https://www.bklynlibrary.org/>

Accessibility Greatest Hits

The image shows a screenshot of the Brooklyn Public Library (Bklyn Public Library) website. The header includes the library logo, a search bar, and links for "HOURS + LOCATIONS", "LOG IN", and "DONATE". A navigation menu on the left lists "Borrow", "Learn", "Attend", and "More". A search bar in the center says "Search the catalog, website, and events...". Below the search bar, there's a link for "Advanced Catalog Search" and a link to "browse the Catalog". A blue banner at the bottom says "BPL is For Creating".

Overlaid on the bottom half of the image is a browser developer tool. The "Elements" panel shows the following HTML structure:

```
iii/encore/myaccount" class="col-header  
avatar account-login">...</a>  
▼<div class="col-header donate">  
  <a href="https://  
  apps.brooklynpubliclibrary.org/donate/?  
  utm_source=website&utm_medium=sitewide-  
  header" class="primary" id="donate-  
  header">DONATE</a> == $0  
</div>  
</div>
```

The "Styles" panel shows the following CSS rules:

```
Filter :hov .cls +  
text-decoration: none;  
:focus,  
a:active,  
a:hover {  
  outline: 0;  
}
```

The bottom of the developer tool shows the breadcrumb path: "... #UTILITIES div div div a#donate-header.primary".

Accessibility Greatest Hits

<http://www.outlinenone.com/>

a { outline: none; }

DON'T DO IT!

What does the outline property do?

It provides visual feedback for links that have "focus" when navigating a web document using the TAB key (or equivalent). This is especially useful for folks who can't use a mouse or have a visual impairment. If you remove the outline you are making your site inaccessible for these people.

Defining focus to navigation elements is an accessibility requirement, it's clearly stated in the [Web Content Accessibility Guidelines](#):

2.4.7 Focus Visible: Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. (Level AA)

Accessibility Greatest Hits

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- Make sure the user can tell what element has focus
 - Show the “blue outline”
 - Use semantic HTML
 - It is vital that focus is adjusted when certain events happen, e.g. when an overlay pops up
- Good:
 - <https://cml.bibliocommons.com/v2/search?query=kendrick+lamar&searchType=smart>
 - <https://slpl.bibliocommons.com/events/search/index>

Accessibility Greatest Hits

Skip links

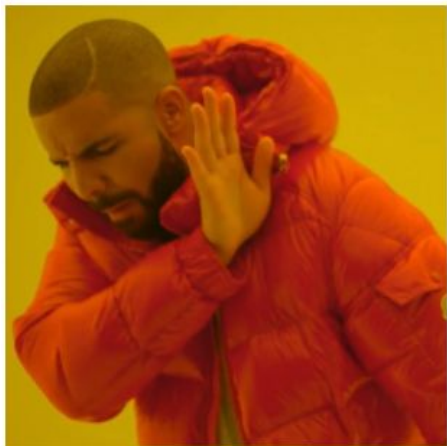
```
.a11y-skip-link {  
  position: absolute;  
  top: -1000px;  
  left: -1000px;  
  z-index: 0;  
}
```

```
.a11y-skip-link:focus {  
  position: absolute;  
  top: 0;  
  left: 0;  
  background: #fff;  
  display: block;  
  padding: 5px 10px;  
  border: 1px solid #333;  
  z-index: 10000;  
}
```

Accessibility Greatest Hits

Focus Management

- Use HTML links, buttons, form elements correctly
 - Buttons trigger interactions / changes on a page
 - Links direct users to new pages / routes
- The tab order will be reflect the order of these elements in the DOM
 - Avoid using tabindex values greater than 0
 - <https://adrianroselli.com/2014/11/dont-use-tabindex-greater-than-0.html>



```
<!-- Bad (not focusable) -->  
<div class="button">  
    View Menu  
</div>
```



```
<!-- Good! You can still style it! -->  
<button class="button">  
    View Menu  
</button>
```

Accessibility Greatest Hits

Focus Management

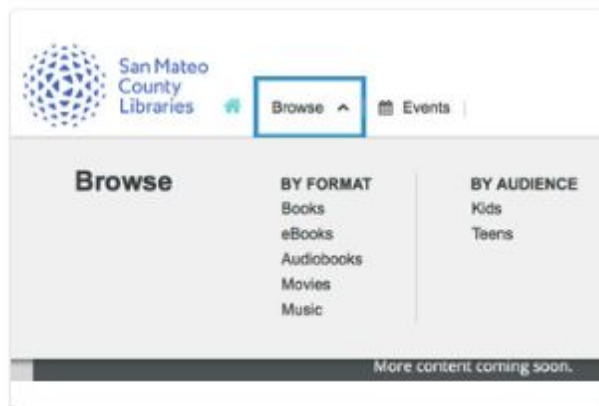
We've come a long way...

 CMS-5637

Blue outline around active elements in FF



In Firefox the active element on the CMS is outlined in blue. Is it possible to hide this?



Accessibility Greatest Hits

Focus Management

- Focus outlines are a default feature in all web browsers
- They are an example of a “digital curb cut”
 - They are helpful for everyone, e.g. tabbing through a form
- Removing them is a reverse curb-cut effect
 - Removing the underline from links is also (usually) a reverse curb-cut effect
 - https://miss.ent.sirsiidynix.net/client/en_US/mlsathome/search/results?q=twilight+zone&x=0&y=0

**“I don’t like the way curb cuts look so
let’s remove them to make our
intersections more aesthetically
pleasing.”**

Accessibility Greatest Hits

Focus Management (Aside)

- It sounds funny, but things like this still happen in physical spaces
- David Lepofsky (legally blind), AODA Alliance and Visiting Professor at Osgoode Hall Law School, on a11y problems at Ryerson University's new Student Learning Centre in Toronto
 - <https://www.youtube.com/watch?v=4oe4xiKknt0>
- See also:
 - <https://twitter.com/hashtag/AODAfail?src=hash&lang=en>
 - <https://twitter.com/hashtag/ADAFail?src=hash&lang=en>

Accessibility Greatest Hits



chris
@vitruvian_plan

When the federal government doesn't follow federal government policy, do you report it to the federal government? #ADAfail @KostelecPlan @BoiseStreetDept



3:10 PM · Apr 27, 2018 · Twitter for iPhone

https://twitter.com/vitruvian_plan/status/989944962685939712

Accessibility Greatest Hits



Don Kostelec
@KostelecPlan

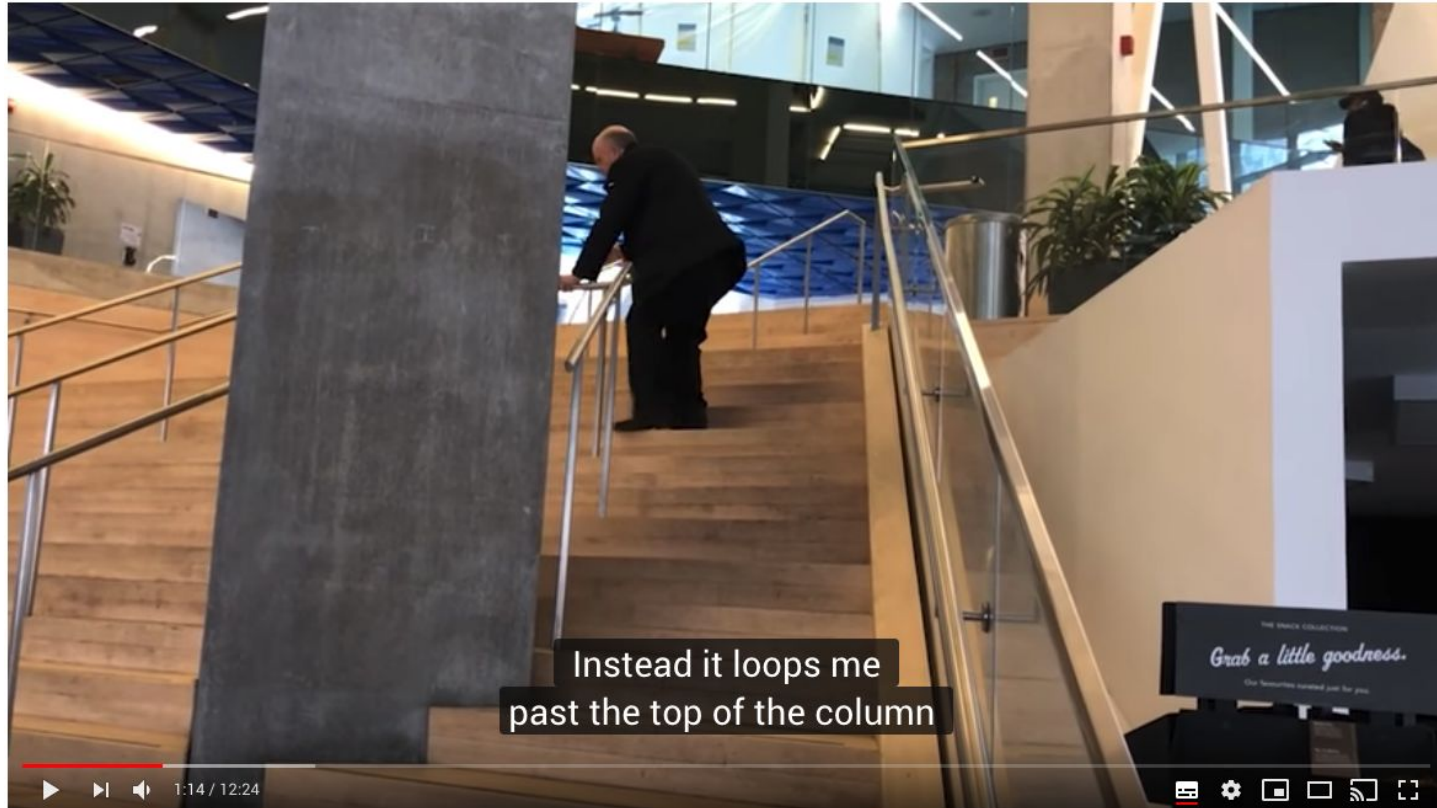
Another one for the #TruncatedDumb files. #ADAfail



2:20 PM · Aug 28, 2018 · Twitter for iPhone

https://twitter.com/vitruvian_plan/status/989944962685939712

Accessibility Greatest Hits



Accessibility Greatest Hits




Accessibility Greatest Hits


Alt Text and Screen Reader Text

- Goal: Screen reader users can understand what the active element is
 - Context is properly communicated to the user
 - Use semantic HTML
 - For informative images, icons, this means alt text
 - Many images are decorative and should have `alt=""`
- Bad:
 - https://miss.ent.sirsiidynix.net/client/en_US/mlsathome/search/results?qu=x+files&te=ILS
 - Poor pagination, confusing tabbing order, repetition on jacket covers / titles
 - <https://www.bestbuy.ca/en-CA/Search/SearchResults.aspx?query=twilight%20zone>
 - Alt text

Accessibility Greatest Hits

SHOPBRANDSDEALSSERVICES

twilight zone



1 - 32 of 35

◀ Prev12Next ▶

Sort: Best Match ▼

Help Topics (0)

Categories

Movies & Music (22)

Toys, Drones & Education (13)

Current Offers

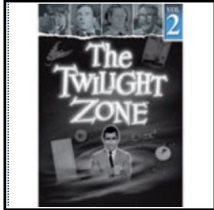
☐ Online Only (18)

Sold & Shipped By

☐ Best Buy (17)


☐ Marketplace Seller (18)

☐ Whats New (14)




\$4.99

The Twilight Zone:
Volume Two




\$138.30

Bif Bang Pow! The
Twilight Zone Series 2
Action Figure Kanamit



\$145.28

Clue The Twilight Zone
Tower Of Terror Disney
Theme Park Edition



\$34.22

The Twilight Zone Army
Major 3 3/4-Inch Figure
Series 3

☐ Compare

☐ Compare

☐ Compare

☐ Compare

× link, image, /m2222017.jpg list 32 items

BIBLIO
COMMONS

Accessibility Greatest Hits

Alt Text and Screen Reader Text

- Goal: Screen reader users can understand what the active element is
 - Context is properly communicated to the user
 - Use semantic HTML
 - For informative images, icons, this means alt text
 - Many images are decorative and should have `alt=""`
- Good:
 - <https://cml.bibliocommons.com/v2/search?query=margaret+atwood&searchType=smart>
 - Pagination screen reader text; jacket covers skipped when tabbing

Accessibility Greatest Hits

Repetitive links

```
<a href="/pride-and-prejudice">  
    
  <h3>Pride and Prejudice</h3>  
</a>
```

Accessibility Greatest Hits

Repetitive links

```
<a href="/catch-22" aria-hidden="true" tabindex="-1">  
    
</a>  
<span>Format: eBook</span>  
<a href="/catch-22">  
  <h3>Catch-22</h3>  
</a>
```

Accessibility Greatest Hits

Repetitive links

```
<!-- Bad (place a hold on what?) -->  
<a href="/the-color-purple">  
    Place hold  
</a>
```

```
<!-- Good! -->  
<a href="/the-color-purple">  
    Place hold  
    <span class="sr-only">on The Color Purple</span>  
</a>
```

Accessibility Greatest Hits

Headings

- Screen reader users rely on HTML headings (H tags) to understand how the content on the page is organized
 - Think of this like a table of contents for the page
- Headings of the same level do not need to be styled the same
 - E.g. it's okay if different H2's on the same page look different
- Good:
 - <https://www.chipublib.org/books/>
- Bad:
 - https://www2.hm.com/en_us/index.html

Accessibility Greatest Hits

Low Vision: Magnification

- Some users need to magnify the page content so that they can read it
 - On the right: new staff list compared to an older version of the same content, both at 200% text zoom
 - Do not use fixed heights in pixels, use rem's



Best Books of 2018: Top Ten»

Chicago Public Library recommends these titles as the top ten books published in 2018.

by [ChiPubLib Adults](#)

[STAFF LIST](#) / [Adults](#) / [Books](#) / [Staff Picks](#)

STAFF LIST

Best Books of 2018: Top Ten »

recommended by [ChiPubLib Adults](#)



Accessibility Greatest Hits

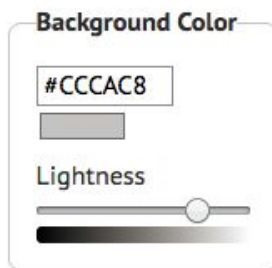
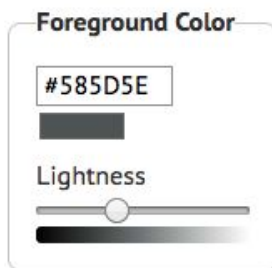
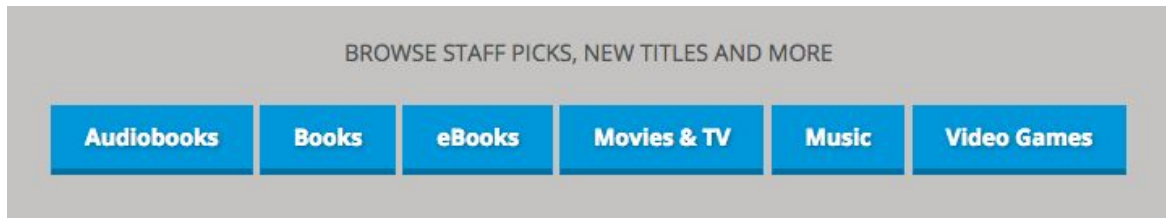
Low Vision: Colour Contrast

- Colours should meet WCAG AA requirements for colour contrast
 - <https://webaim.org/resources/contrastchecker/>
- Digital curb cut: good colour contrast benefits all users
 - Reading on your phone when you're outside on a sunny day
 - Thin, light grey fonts on a white background

Accessibility Greatest Hits

Low Vision

- Bad colour contrast



[permalink](#)

Normal Text

WCAG AA: **Fail**

WCAG AAA: **Fail**

The five boxing wizards jump quickly.

Accessibility Greatest Hits

Low Vision

- Good colour contrast

The screenshot shows a website header with a grey background. At the top, it says "BROWSE STAFF PICKS, NEW TITLES AND MORE". Below this is a navigation bar with six blue buttons: "Audiobooks", "Books", "eBooks", "Movies & TV", "Music", and "Video Games". Below the navigation bar, there is a color contrast tool. It has two sections: "Foreground Color" and "Background Color". The "Foreground Color" section shows a color picker for "#585D5E" and a "Lightness" slider. The "Background Color" section shows a color picker for "#CCCAC8" and a "Lightness" slider. To the right of these sections, a box displays the "Contrast Ratio" as "4.09:1" with a "permalink" link below it.

Large Text

WCAG AA: **Pass**

WCAG AAA: **Fail**

The five boxing wizards jump quickly.


Accessibility Greatest Hits

Low Vision: High Contrast Themes

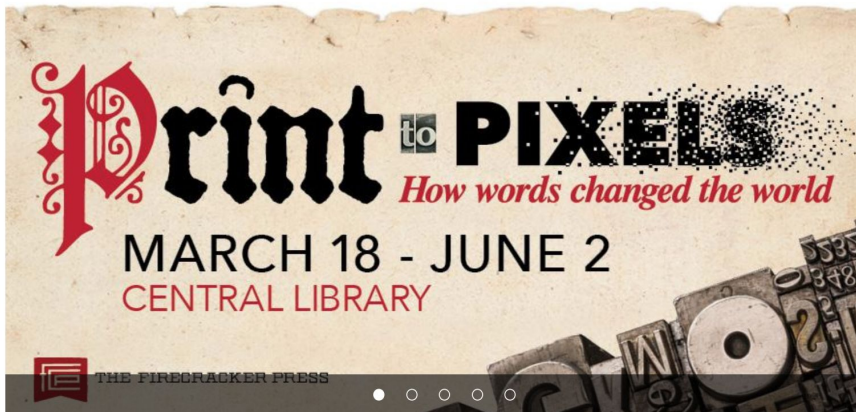
- Goal: Users with low vision are able to use your site with a high contrast theme.
 - Often this is done with a high contrast theme on Windows.

Accessibility Greatest Hits

[Hours & Locations](#) [Help](#) [Log In / My SLPL](#)

 Search the by
[Advanced Search](#)

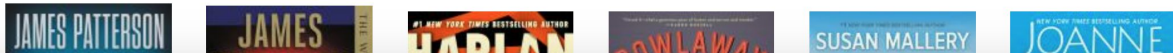
[Browse](#) [Digital Content](#) [Catalog](#) [Reserve a Computer](#) [Born to Read](#) [Teens](#) [Support Your Library](#)



Quick Links

[Get A Card](#)[Hours & Locations](#)[Events Calendar](#)[My Account](#)[Creative Experience](#)[Contact Us](#)

[New Fiction](#) [New Non-Fiction](#) [New for Children](#) [New Movies](#) [On Order](#)



Accessibility Greatest Hits

The screenshot displays the St. Louis Public Library website. At the top, there is a navigation bar with links for 'Hours & Locations', 'Help', and 'Log In / My SLPL'. Below this is a search bar with the text 'Search the Catalog by Keyword' and a search icon. The main content area features a large banner for 'Print to PIXELS' with the subtitle 'How words changed the world' and the dates 'MARCH 18 - JUNE 2' at 'CENTRAL LIBRARY'. To the right of the banner is a 'Quick Links' sidebar with buttons for 'Get A Card', 'Hours & Locations', 'Events Calendar', 'My Account', 'Creative Experience', and 'Contact Us'. At the bottom, there is a section for 'New Fiction', 'New Non-Fiction', 'New for Children', 'New Movies', and 'On Order', each with a corresponding book cover image.

ST. LOUIS PUBLIC LIBRARY

Search the Catalog by Keyword

Advanced Search

Browse Digital Content Catalog Reserve a Computer Born to Read Teens Support Your Library

Print to PIXELS
How words changed the world
MARCH 18 - JUNE 2
CENTRAL LIBRARY

Quick Links

- Get A Card
- Hours & Locations
- Events Calendar
- My Account
- Creative Experience
- Contact Us

New Fiction New Non-Fiction New for Children New Movies On Order

JAMES PATTERSON
THE

JAMES PATTERSON
GOLDEN RULE

#1 NEW YORK TIMES BESTSELLING AUTHOR
HARLAN COBEN

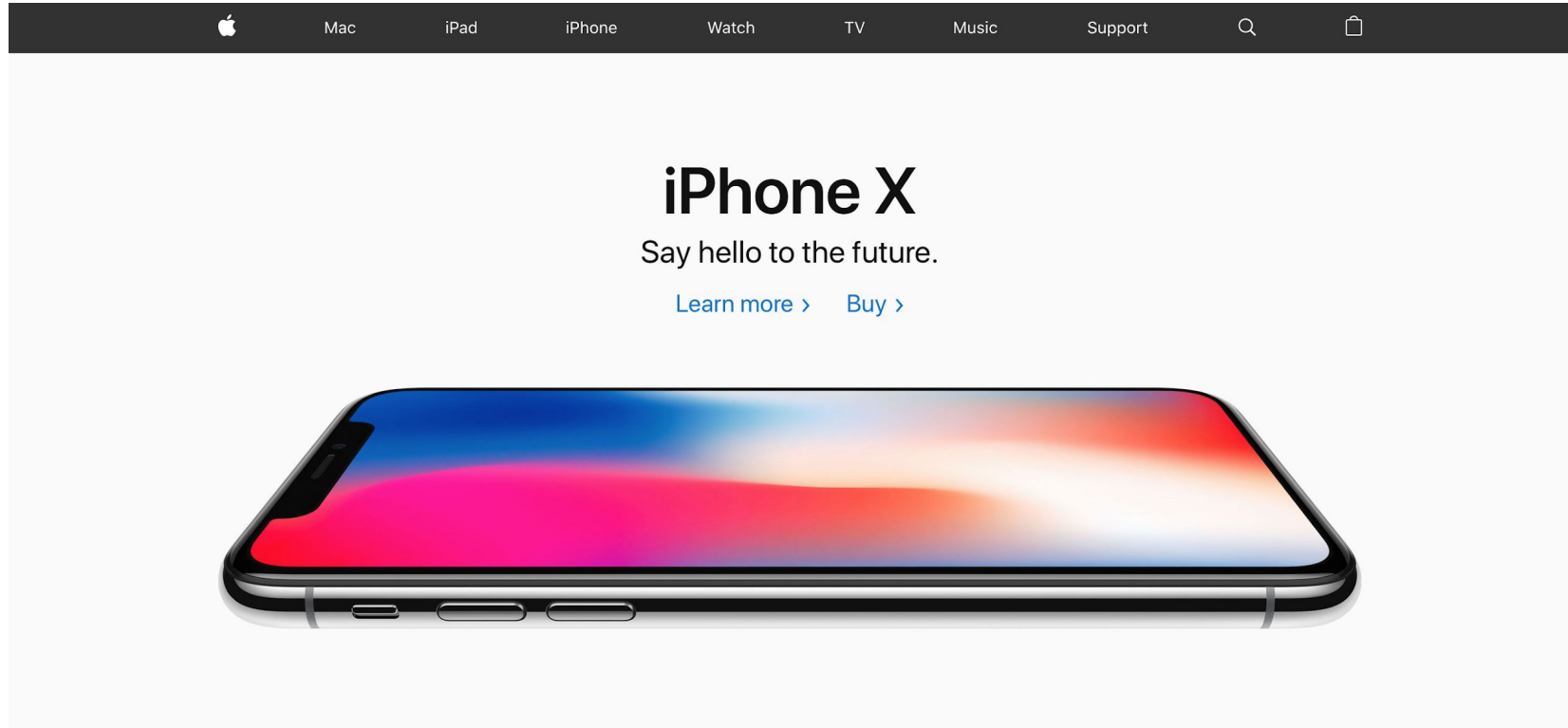
BOWLAWAY

SUSAN MALLERY
California

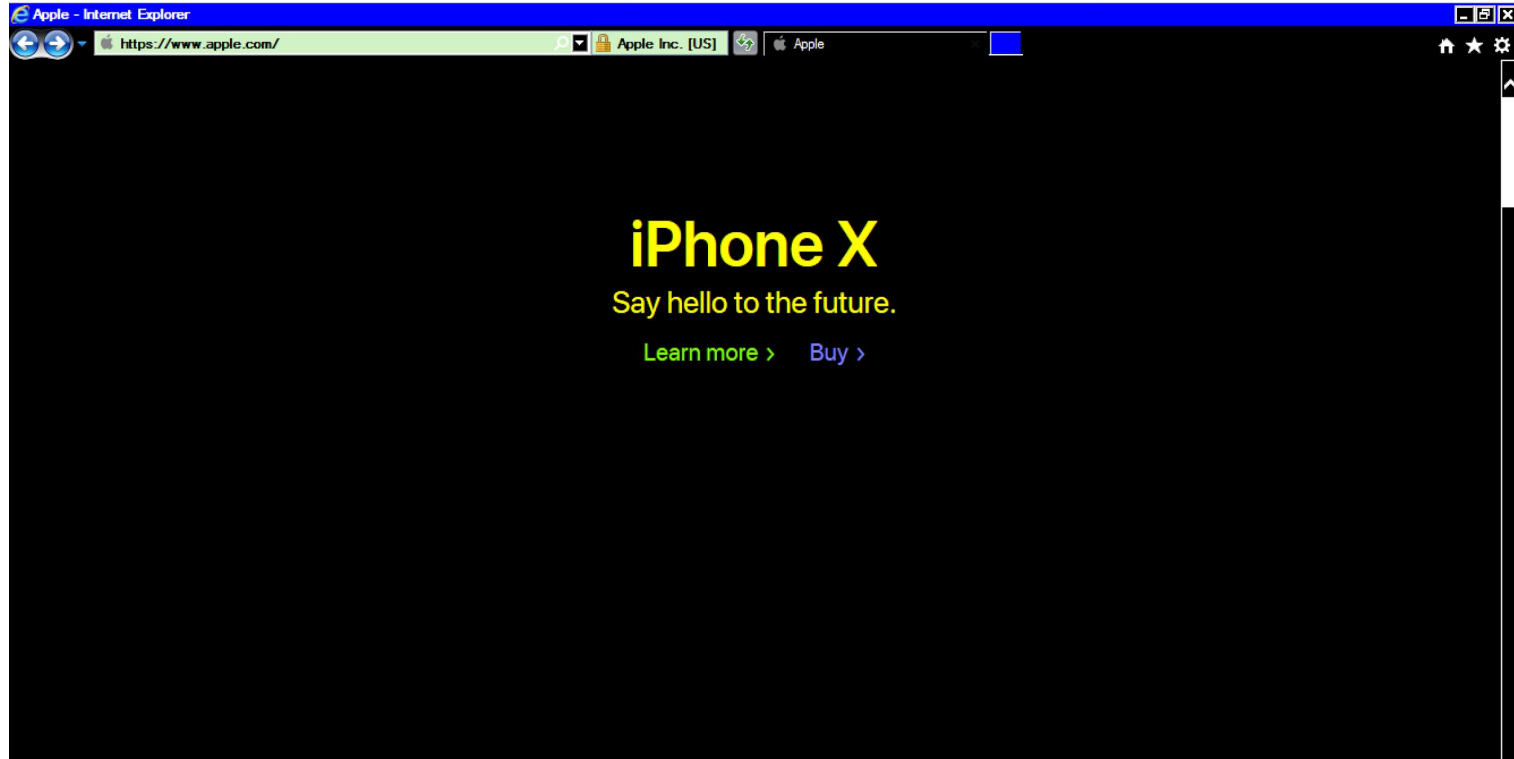
JOANNE FLUKE

C. J. BOX

Accessibility Greatest Hits



Accessibility Greatest Hits



Accessibility Greatest Hits

Are you a Massachusetts resident?

☐ Yes

☐ No

What is your library card number?


Name


First

Email *

Enter Email

This information will be submitted via email. [Learn More.](#)





[Back to Top](#)

Can you tell me more about this webform submission?

The contents of this webform are sent to library staff via email. We recommend that you do not submit confidential information (like your library card number, passwords or credit card information). If you need to share confidential information with library staff, we suggest that you use other channels of communication, such as the telephone.

Visit our [Privacy Statement](#) to learn more about how your personal information is handled and protected.

Accessibility Greatest Hits

Are You a Massachusetts Resident? *

☐ Yes

☐ No

What is your library card number?

Name

First

Email *

Enter Email

Confirm Email

Can you tell me more about this webform submission?

The contents of this webform are sent to library staff via email. We recommend that you do not submit confidential information (like your library card number, passwords or credit card information). If you need to share confidential information with library staff, we suggest that you use other channels of communication, such as the telephone.

Visit our [Privacy Statement](#) to learn more about how your personal information is handled and protected.

This information will be submitted via email. [Learn More.](#)

[Back to Top](#)

Accessibility Greatest Hits

Are You a Massachusetts Resident? *

☐ Yes

☐ No

What is your library card number?

Name

First

Email *

Enter Email

Confirm Email

This information will be submitted via email. [Learn More.](#)

[Back to Top](#)

Can you tell me more about this webform submission?
The contents of this webform are sent to library staff via email. We recommend that you do not submit confidential information (like your library card number, passwords or credit card information). If you need to share confidential information with library staff, we suggest that you use other channels of communication, such as the telephone.
Visit our [Privacy Statement](#) to learn more about how your personal information is handled and protected.

border: 1px solid transparent;

Accessibility Greatest Hits

Cognitive Accessibility

- We need to remember that your users are varied in terms of reading level or cognitive abilities.
- If a user cannot understand the sentences on your site, it is likely an accessibility issue (for the content writers).
- If a user cannot understand how to use your site, it might be an accessibility issue (for the developers or designers).
 - It could also be the case that the user doesn't know how to use their assistive technology.

Accessibility Greatest Hits

Cognitive Accessibility

- HemingwayApp is a tool that you can use to test the readability of your sentences or paragraphs. Content writers often use this as a text editor.
 - <http://www.hemingwayapp.com/>
 - Also a desktop app
- Example: TPL kids blog post:
 - <https://kids.tpl.ca/posts/9>

Beyond Alt-Text

1. Terminology
2. Why we do this (a history lesson)
3. Accessibility's Greatest Hits
4. Accessibility culture at your workplace

**EVERYBODY
NEEDS TRAINING**

Your Workplace and Accessibility

Accessibility Training

- At BiblioCommons, all Full-Stack developers take the free online course “Web Accessibility By Google: Developing with Empathy”
 - <https://www.udacity.com/course/web-accessibility--ud891>
- Frontend Masters: Accessibility in JavaScript Applications by Marcy Sutton
 - <https://frontendmasters.com/courses/javascript-accessibility/>

TEST FOR A11Y

Your Workplace and Accessibility

Accessibility Testing

- BiblioCommons works with Level Access to get a11y feedback on features as we build them.
- They are great, and they employ people with disabilities who are experts with their assistive technology.

Your Workplace and Accessibility

Accessibility Testing

- We have an internal a11y dashboard for tracking a11y metrics for our builds:
 - Uses: <http://pa11y.org/>
 - Similar to: <http://wave.webaim.org/>

LOCAL A11Y COMMUNITIES

Your Workplace and Accessibility

Local Accessibility Communities

- Cleveland Accessibility Meetup
 - <https://www.meetup.com/Cleveland-Accessibility-Meetup/>
- Applicable to Product, UX, Engineering, everyone.
- If you're from elsewhere:
 - <https://www.meetup.com/topics/web-accessibility/>

Your Workplace and Accessibility



**SHARE
YOUR KNOWLEDGE**

Your Workplace and Accessibility

Accessibility Slack Channel

- We use Slack for internal communication.
- We have a channel #guild-a11y dedicated to web accessibility.

Your Workplace and Accessibility

Documentation

- As we made many a11y improvements over the past couple years... we have code patterns documented in Confluence.
- This is internal, but other companies have made similar documentation public:
 - <https://ebay.gitbook.io/mindpatterns/>

Your Workplace and Accessibility

Documentation (example)

Every control must have a label

Every control should have an associated label, even if you do not want it visible. To hide it from visual users use an appropriate "visually hidden" class. If you are going to rely on the placeholder attribute for sighted users, ensure that the placeholder font colour has sufficient contrast (<http://webaim.org/resources/contrastchecker/>).

```
<!-- bad -->
<input type="text" name="firstname" placeholder="First Name">

<!-- good -->
<label class="sr-only" for="firstname">First Name</label>
<input type="text" name="firstname" id="firstname" placeholder="First Name">
```

Closing Thoughts

- Accessible patterns benefit everybody, but are essential for the people that need them the most.
- Accessibility is about more than screen readers.
- Show some damn empathy, this has an effect on real people.

THE END

@ianforr