



perpendicular angel design

organizing and simplifying, one illumination at a time

AN EVENT APART DC 2018: THE FOUR DIVINE BEASTS OF ACCESSIBILITY BY DAVE RUPERT

This is the first time I've seen Dave speak, and it was awesome. This talk wasn't super code-heavy, but like some of the others, there are places where the notes aren't so great because I can't transpose a page of javascript into Twitter.

Oh, and the Divine Beasts is a reference to Legend of Zelda Breath of the Wild, which is like if traditional Zelda games and Elder Scrolls had a wonderful baby and I totally recommend it.

(pdf backup)



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Now [@davatron5000](#) is going to talk about "The Four Divine Beasts of Accessibility" - Zelda and accessibility! [#AEADC](#)

10:16 AM - Aug 1, 2018



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. [@davatron5000](#) started The Accessibility Project [a11project.com](#) - a community-driven effort to make web accessibility easier [#AEADC](#)

10:18 AM - Aug 1, 2018



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When you have accessibility issues on your site you're confronting people with their disabilities. #AEADC

10:21 AM - Aug 1, 2018

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We should build accessibly because it's our job.

"If you work on the web in any capacity, accessibility is your job."

@laurakalbag, Accessibility for Everyone #AEADC

10:22 AM - Aug 1, 2018

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. @davatron5000 rolled his own accessible components for a client because their javascript and css was already so large he didn't want to add another plugin to the site. #AEADC

10:25 AM - Aug 1, 2018

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Zelda Breath of the Wild is not too different from accessibility work.

Video games have a very intentional UX to teach you as you go.

Super Mario in the first 48 pixels teaches you everything you need to know to win the game [#AEADC](#)

10:27 AM - Aug 1, 2018

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There's a video series youtube.com/watch?v=ouO1R6... that diagrams all the Zelda levels in a very simplistic way - but even then it displays how complex the system is [#AEADC](#)

10:29 AM - Aug 1, 2018

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Accessibility has evolving expectations. It helps to jump into a component (or a level) and figure out “what does this thing expect?” Expectations grow over time for everything we do. Best practices change - even for accessibility. #AEADC

10:30 AM - Aug 1, 2018



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“I didn’t get the memo, because this job doesn’t have memos... it just has angry blog posts” @davatron5000 speaks truth

10:31 AM - Aug 1, 2018



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Sometimes it’s a puzzle to figure out what the expectations are. The WCAG guidelines are 1200 pages, and then you might find out the info you actually want is over on the WAI-Aria authoring practices page instead. #AEADC

10:32 AM - Aug 1, 2018



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How do we make some of this information about accessibility more consumable? Dave uses “Nutrition facts” as a model.

Tip: make your labels non-redundant. Nobody wants to hear “learn more” 8 times on a page. [#AEADC](#)

10:34 AM - Aug 1, 2018



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Dave’s component cards are at davatron5000.github.io/a11y-nutrition... [#AEADC](#) [#A11y](#)

10:35 AM - Aug 1, 2018



9



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Divine Beast #1:

Pop-up, popover, dropdown, hamburgers, fly-up, fly-over, fly-out, etc.

On the nutrition cards, it’s referred to as a disclosure.

(Code time: not going to try to tweet the code. Come to [@aneventapart](#) if you’re not here!) [#AEADC](#)

10:37 AM - Aug 1, 2018



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Adding aria-controls helps tell the system what the button controls. Adding aria-haspopup tells the screen reader to tell the user that the button opens a pop up. Adding aria-expanded tells the user whether the item is open or closed#AEADC

10:40 AM - Aug 1, 2018

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Then use javascript to change the state of the pop up, and also change the state of the aria tags so that they now reflect the state of the pop up. #AEADC

10:41 AM - Aug 1, 2018

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Divine beast #2: tooltips!

There's both hover and focus states to be worried about. (This is the Tooltip on the nutrition cards.)

Focus stays on the tooltip trigger while the tooltip is open. Good to know, Dave would've moved the focus to the tip itself w/o the specs. #AEADC

10:43 AM - Aug 1, 2018

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You can't focus span elements. You have to add focus to the tooltip if it's in a span - add it to a tabindex with `tabindex="0"`

Make sure you bind the escape key to close a tooltip. [#AEADC](#)

10:46 AM - Aug 1, 2018

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Divine Beast #3 - Tabs!

The Tabs card on the nutrition cards is much bigger than the others we've looked at.

They have a lot of key bindings. Home goes to the first tab, and End goes to the last tab, for example. [#AEADC](#)

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Focus expectations for tabs: tabs should activate automatically when rescinding focus as long as the tab panels are rendered quickly. (There may be some nuance battles around here.)

Aria-selected="true" identifies the selected tab [#AEADC](#)

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There are a lot of (good) aria controls we need to put on tabs to make sure that everything works, just in the HTML.

What's expected in the JS:

Set ARIA on the tablist, ARIA on the tabpanel, and ARIA on the tab.

Handle keyboard events and clicks for tabs [#AEADC](#)

10:51 AM - Aug 1, 2018

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Divine Beast #4: Accordions! (Accordion on the nutrition cards.)

Keyboard expectations look a lot like the tabs.

Essentially they're pop ups + tabs as far as expectations are concerned.

(TIL the accordion control should have role button!) [#AEADC](#)

10:53 AM - Aug 1, 2018

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In about 214 lines of javascript we have 4 accessible controls and that's way better than loading all of Bootstrap [#AEADC](#)

10:55 AM - Aug 1, 2018

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I'm not sure how clear it is in the tweets, but all the technology that Dave finishes his talk with is only partially supported. But hopefully this time next year we'll be further along!



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Coming soon to HTML and CSS:

```
<details>
```

```
  <summary> Clickable and focusable summary</summary>
```

```
  <p>Whatever you want to hide or collapse</p>
```

```
</details>
```

Once this is in place we won't need to roll our own accordion.

Not supported on Edge 17, *of course* sigh [#AEADC](#)

10:57 AM - Aug 1, 2018



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There are a few polyfills for the `<details>` tag. You might want to do some extra styling. [#AEADC](#)

10:59 AM - Aug 1, 2018



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```
<dialog>
```

What if you could make a modal in 4 lines of code? It's been in Chrome for forever.

```
<button>Open Dialog</button>
```

```
<dialog> Hello I am dialog content </dialog>
```

Show Modal gives you backdrop.

Behind a flag in Firefox, no commitment for Edge or Safari.

Polyfills! [#AEADC](#)

11:01 AM - Aug 1, 2018



15



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“Rather than me implementing 700 modals poorly, wouldn't it be nice if browsers had an accessible dialog?” that's the way we need to push the web#AEADC

11:02 AM - Aug 1, 2018



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:Focus-visible

Don't take the focus outline off a button.

Instead use

```
.button:focus-visible {  
  Background: dark blue;  
}
```

```
.button:focus:not(:focus-visible) {  
  Outline: none;  
}
```

this may not be the best solution but it beats what we (often) do today#AEADC

11:04 AM - Aug 1, 2018



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:focus-visible is really only in Firefox so we've got a ways to go until this is implemented everywhere.

“If there's one takeaway I want us all to have it's yell at browsers.”
#AEADC

11:05 AM - Aug 1, 2018



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@ inert (take the space out)

So when you hide something and I hide something it doesn't look so good.

Inert tells the browser "this is rendered off the page, it's not visible anymore, take it out of the accessibility tree."

<div id="hamburger-menu" inert> #AEADC

11:06 AM - Aug 1, 2018



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Tools and resources:

Accessibility for Everyone by @laurakalbag
abookapart.com/products/acces...

MIND patterns by eBay:ebay.gitbooks.io/mindpatterns/

Inclusive components:inclusive-components.design

Accessibility for Teamsaccessibility.digital.gov#AEADC

11:09 AM - Aug 1, 2018



Accessibility for Teams

Guidelines to help teams create accessible products and services

accessibility.digital.gov



20



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The A11y Project a11yproject.com

Axe Developer Tools (chrome extension) deque.com/axe/#AEADC

11:10 AM - Aug 1, 2018



The A11Y Project

A community-driven effort to make web accessibility easier.

a11yproject.com



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(In the next 3 beliefs, Dave worded the sentences almost identically, and used the voice track to get the point across, so if you have the slides, yes, these look different.)



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Belief 1

Designers and developers should code their own accessible components. You will learn a ton and have a better understanding of what's expected and what to look out for and what to ignore

[#AEADC](#)

11:11 AM - Aug 1, 2018



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Belief 2

Designers and developer should not [have to] code their own accessible components.

These problems are old and we keep building them poorly. It would be better if they were build into the browser in the first place.

[#AEADC](#)

11:12 AM - Aug 1, 2018



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Belief 3

Designers and developers should [know how to] code their own accessible components.

You need to know how to patch components, make them better, close gaps for the users[#AEADC](#)

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it is dangerous to go alone. Find resources online, talk to people on twitter, join the accessibility slack (web-a11y.herokuapp.com to join)

[#AEADC](#)

11:15 AM - Aug 1, 2018



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