



# Empathy

---




**Web Axe**

April 12, 2016 · 



"Accessibility is like a blueberry muffin—you can't push the berries in there afterward" @jina quoting @CordeliaDillon at SmashingConf





*You never really know a man until  
you understand things from his  
point of view, until you climb  
into his skin and walk around in  
it.*

- Harper Lee in her book To Kill a Mockingbird

# The ADA/Section 508 says you must make *reasonable accommodations* for disabled persons

- providing accessible parking
- modifying work schedules or supervisory methods
- granting breaks or providing leave
- altering how or when job duties are performed
- removing and/or substituting a marginal function
- moving to different office space
- making changes in workplace policies
- providing assistive technology, including information technology and communications equipment or specially designed furniture

# But you don't have to make unreasonable accommodations

- Eliminating an essential job function
- Lowering production standards Having to provide personal-use items for daily activities (prosthetics, wheelchairs, hearing aids, etc.)

Basically, we are balancing the needs of the individual with the resources of the organization.

Here's a reasonable accomodation





But this is better!



ChicagoBus.org

Photo by Kevin Zolkewicz

# Universal design is awesome!

- Faster mental processing of pages
- Fewer errors
- Less fatigue





# Kinds of disabilities



And how do we make  
accommodations?

# Color blindness

---

# Different kinds of colorblindness

- prot - 1st
- deuter - 2nd
- trit - 3rd
- achrom -  
"without color"

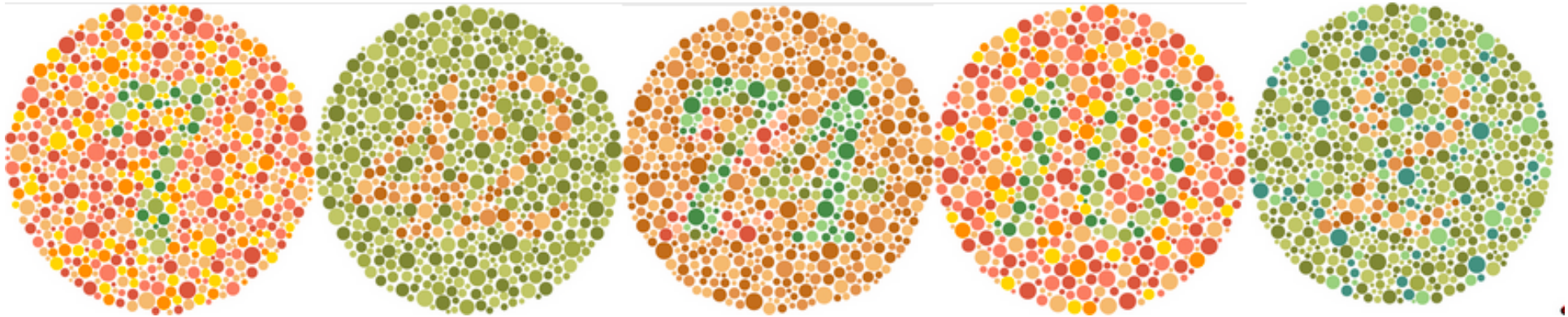


- anopia - missing
- anomaly - irregular



- protanopia - Missing first cone - Can't see red at all
- protanomaly - Broken first cone - Can't see red well
- deuteranopia - Missing 2<sup>nd</sup> cone - Can't see green at all
- tritanopia - Missing 3<sup>rd</sup> cone - Can't see blue at all
- achromatopia - Lit. "without color"

# Color blindness



Name:

Eva

E-mail:

asdf

Send

Name:

Eva

E-mail:

asdf

Send



Name:

Eva



E-mail:

asdf



Please insert a valid e-mail

Send

Name:

Eva



E-mail:

asdf



Please insert a valid e-mail

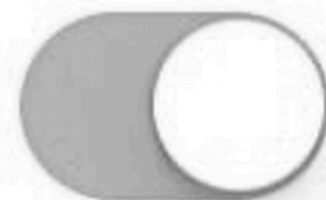
Send



Twitter



Vine



Low vision

---



When you're not completely blind but  
cannot see as well as most

# Don't block zoom

- For responsive design, many will recommend that you ...

```
<meta name="viewport" content="width=device-width,initial-scale=1,maximum-scale=1">
```

- But this is just as effective ...

```
<meta name="viewport" content="width=device-width,initial-scale=1 ">
```

# Hearing disabilities

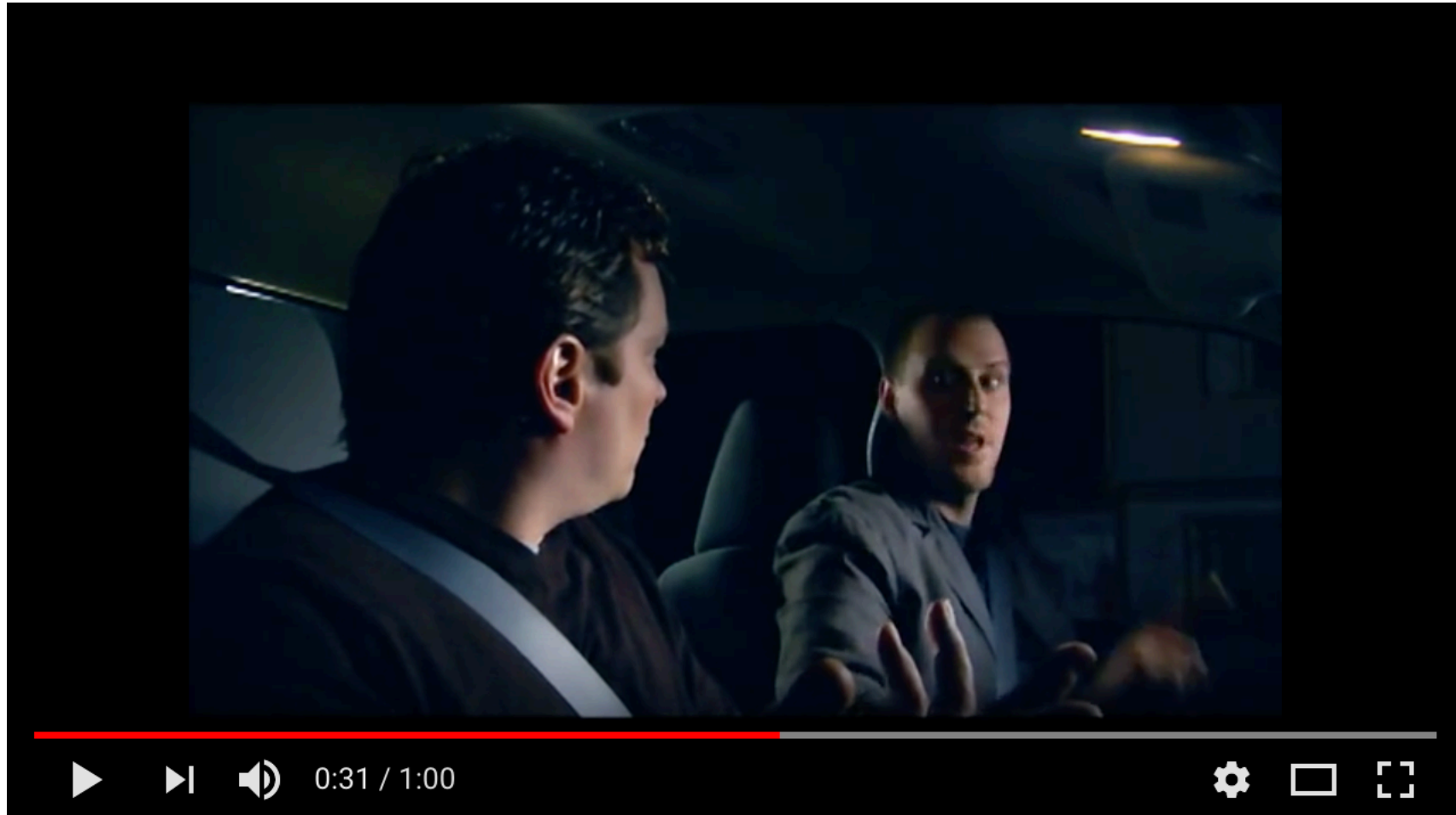
---



# Compensate when sound is important

- Video, mostly
  - Transcripts
  - Captions - Don't rely on autocaptions. They're still pretty poor.

# Bob's house



# Motor skills

---

# Operable is the main principle

- Not everyone can use a mouse well!
- Make your click targets (buttons, links, form fields, etc) BIG!

# Disability simulators

---

# NoCoffee is a Chrome plug-in



## NoCoffee Vision Simulator

[Reset all](#)

### Pervasive issues

Blur (low acuity):	<input type="range"/>	0
Contrast loss:	<input type="range"/>	0
Glare:	<input type="range"/>	0
Ghosting:	<input type="range"/>	0
Snow:	<input type="range"/>	0
Cloudiness (cataracts):	<input type="range"/>	0
Flutter (nystagmus):	<input type="range"/>	0

Color deficiency: **Tritanopia**

### Blocked visual field

- ☐ Normal
- ☐ Central (macular degeneration)
- ☐ Peripheral (glaucoma, retinitis pigmentosa)
- ☐ Corner (retinal detachment)
- ☐ Side (hemianopia)
- ☐ Large spots (diabetic retinopathy)
- ☒ Floaters


Strength and size:  40

[More info](#) [Feedback](#)

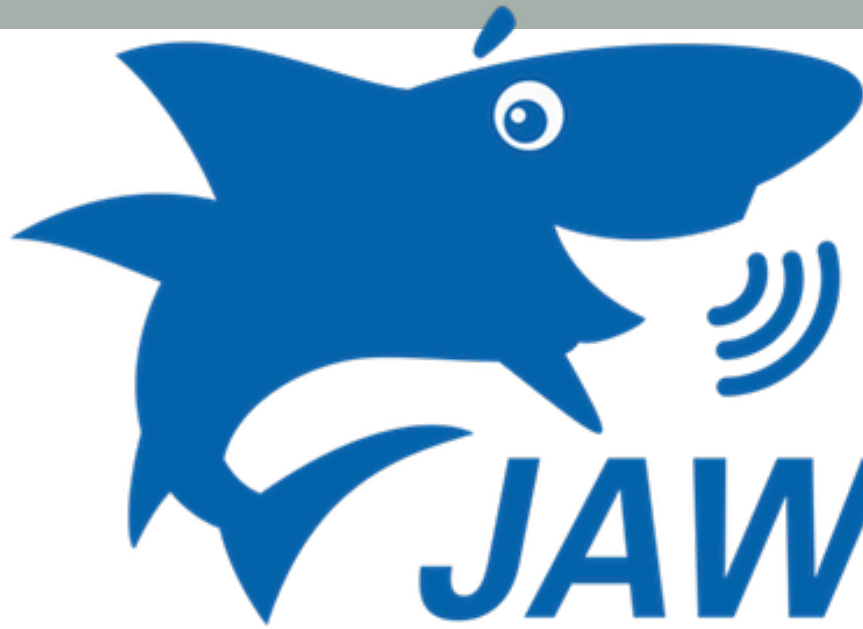


# Screen readers

---



To have empathy, we should all install a screen reader and navigate our pages with the visibility turned off.



**JAWS<sup>®</sup>** *for Windows*

The most  
popular options

