Inclusive Design

an Introduction to Accessibility Whys and Hows

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Session highlights

- For whom do we do it?
- Why do we bother?
- How do we make it possible?
- 10(ish) tips for accessible content

WHO?

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Who

EU-Statistics on Income and Living Conditions (EU-SILC) from 2014

No limitations | Moderate | Severe

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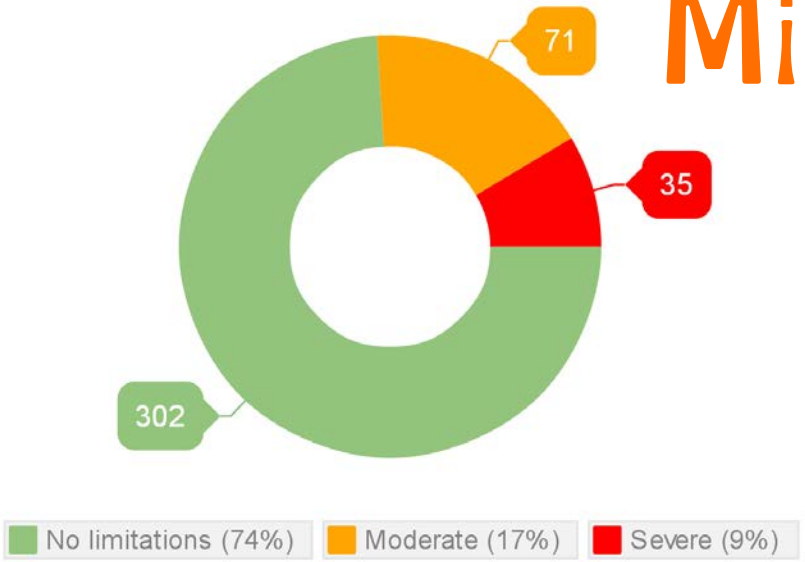
Who

EU-Statistics on Income and Living Conditions (EU-SILC) from 2014

Millions!



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Types of disability

- Temporary

- Situational

- Permanent

http://selouk.me/2013/10/31/7-things-i-learned-from-wearing-an-eyepatch/

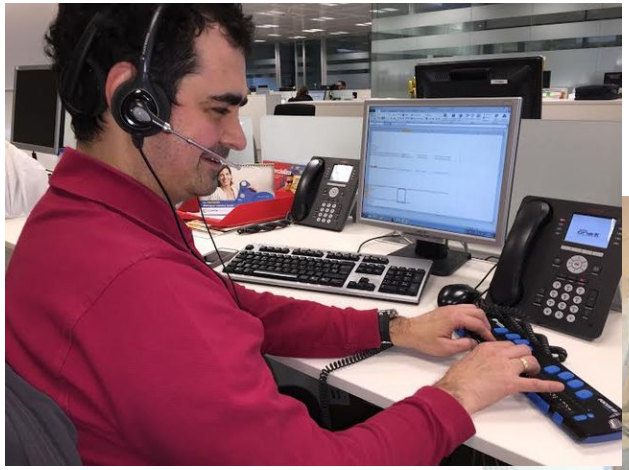
"Technology is the limb I never had."

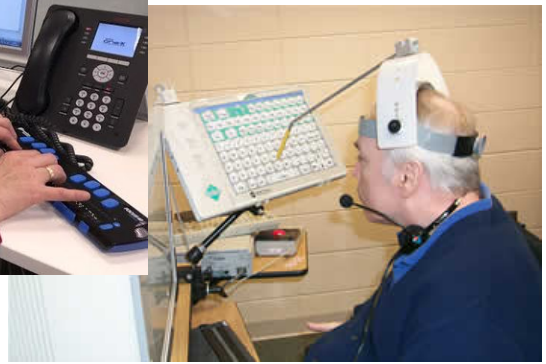
Joanne O'Riordan

EVERYONE

Types of disability

- Visual
- Auditory
- Mobility
- Cognitive





http://www.eldiario.es/hojaderouter/tecnologia/accesibilidad_web-internet-paginas-personas_invidentes_0_361164102.html
http://www.sc.edu/scatp/cdrom/scatphelp.htm

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Types of disability

Cognitive >

Mobility >

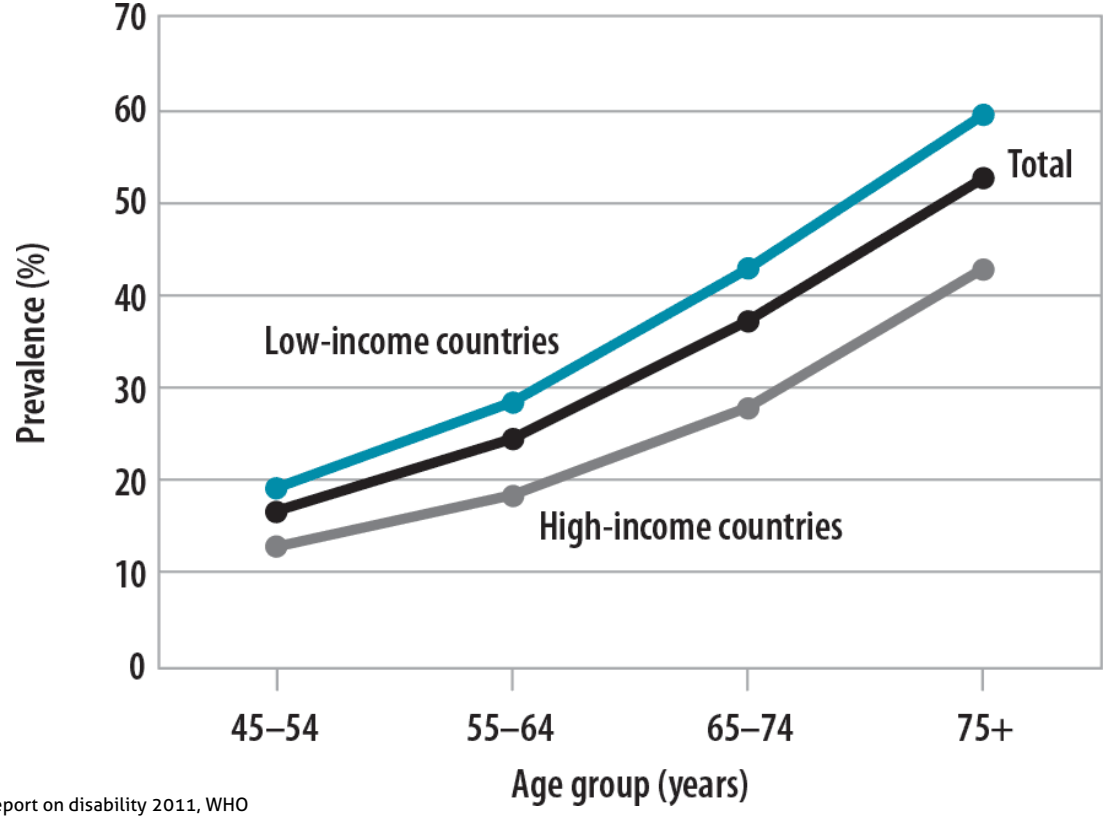
Auditory >

Visual

http://blog.sciencedirect.com/posts/enabling-people-of-all-abilities-to-access-content-quickly-and-easily

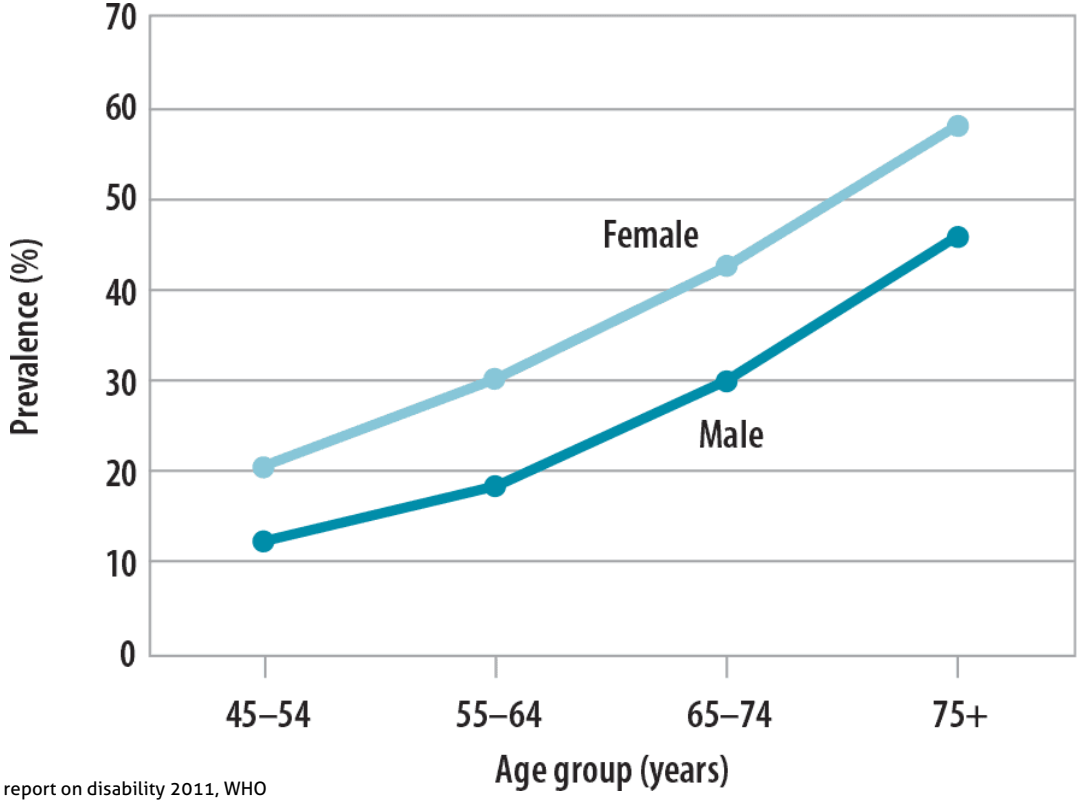
Everyone

Everyone



World report on disability 2011, WHO

Everyone



World report on disability 2011, WHO

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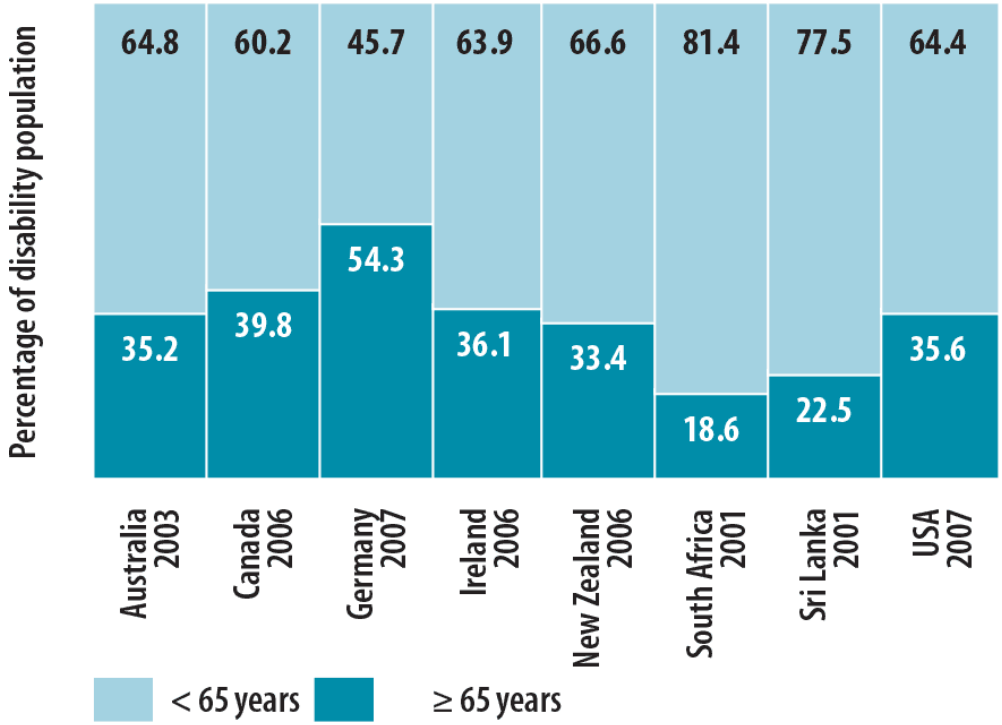
Everyone

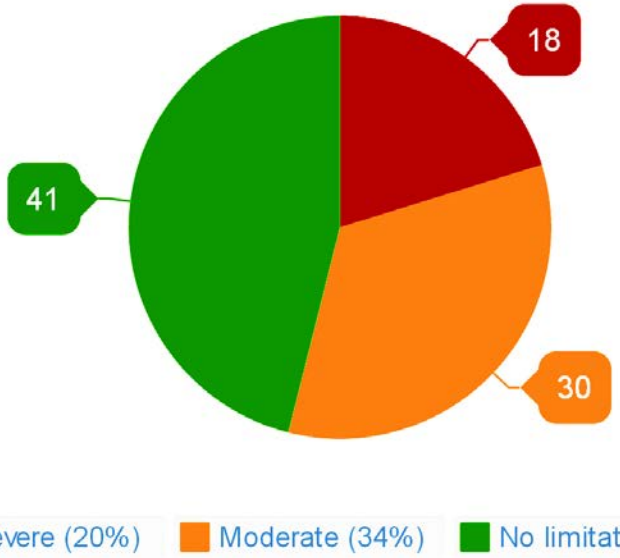


World report on disability 2011, WHO

Everyone

EU-Statistics on Income and Living Conditions (EU-SILC) from 2014

65+



Millions!

EVERYONE

WHY?

Good for Business

- PR impact derived from corporate social responsibility
- Increases market share
- Benefits SEO
- Improves mobile access and overall usability
- Reduces legal risk

"Accessibility is about good customer service."

Jonathan Lazar

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Standards & Laws

http://barrydahl.com/2014/12/30/mea-culpa-accessibility-concerns-of-using-external-tools-in-the-lms/

Standards & Laws

- European Standard on accessibility requirements for public procurement of ICT products and services (EN 301 549 - 2014)

- Spanish norm UNE 139803:2012

- US - Section 508 (1998) & ADA
- 21st Century & Video Accessibility Act (2010)

- WCAG 2.0 as ISO/IEC 40500 (2012)

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Accessibility mishaps make headlines (and courtrooms)

- National Association of the Deaf (NAD) v. Netflix (2012)
- Google Books (2012)
- Harvard & MIT (edX) MOOCs (2015)

http://www.karlgroves.com/2011/11/15/list-of-web-accessibility-related-litigation-and-settlements/

HOW?

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Strategy & Best Practices

John Kotter's 8-Step Process for Leading Change

A sense of urgency

Find allies & build coalitions

Have a vision & communicate it

Involve the users into planning and testing!

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Strategy & Best Practices

John Kotter's 8-Step Process for Leading Change

You can't fix everything at once

Make process part of the culture

Use Drupal A11y resources
Accessibility project & modules

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Guidelines

- Web Content (WCAG)
- User Agent (UAAG)
- Authoring Tools (ATAG)
- WAI ARIA: Accessible Rich Interactive Applications

POUR principles

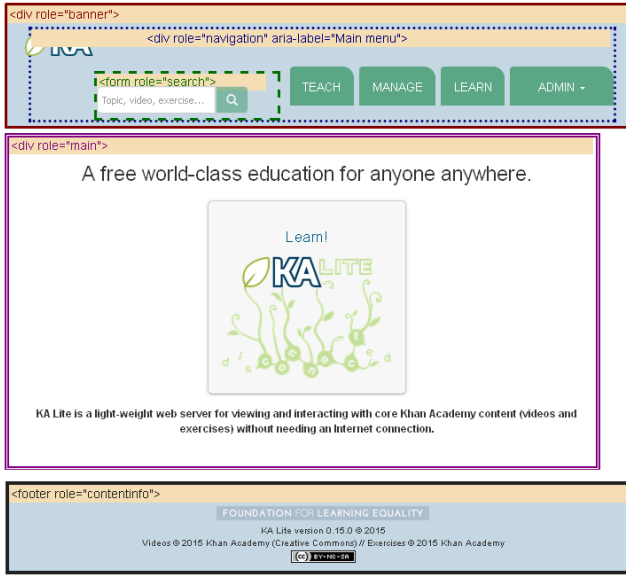
Information must be:

- Perceivable
- Operable
- Understandable
- Robust

OFFER
ALTERNATIVES

Document Structure

- Title (unique and descriptive; H1)
- Sequential headings
- Page landmarks
  (semantic HTML5 or ARIA)



Document Structure - Tools

Juicy Studio Accessibility Toolbar
https://addons.mozilla.org/en-uS/firefox/addon/juicy-studio-accessibility-too/

Jim Thatcher's Favelets
http://jimthatcher.com/favelets/

NCAM Accessibility QA Favelet
http://ncam.wgbh.org/invent_build/web_multimedia/tools-guidelines/favelet

Visual ARIA Bookmarklet
http://whatsock.com/training/matrices/visual-aria.htm

tota11y - an accessibility visualization toolkit
http://khan.github.io/tota11y/

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Keyboard navigation

- Tab & Shift Tab through all the links
- Arrow keys through menus
- Skip-to links on top (first element after <body>)
- Accesskeys (debatable – better avoid)

Define visible focus state!

```
:focus{
outline: 0;
}
```

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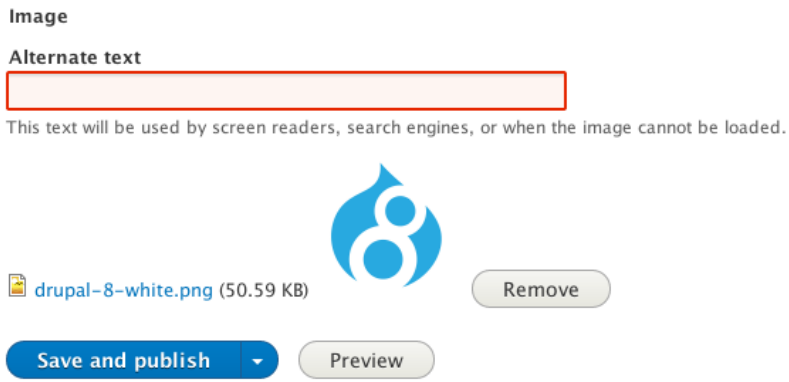
Images - The elusive ALT attribute

- `alt="?????"`



- DESCRIBE the image

  convey both content and functionality

- Do not put text inside images (localization)

- Decorative images – empty `alt=""`

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Describing images - Tools

http://webaim.org/articles/gonewild/#alttext

http://accessibility.psu.edu/images/

http://ncam.wgbh.org/experience_learn/educational_media/describing-images-for-enhanced

http://diagramcenter.org/webinars.html

(resources for accessible images & math)

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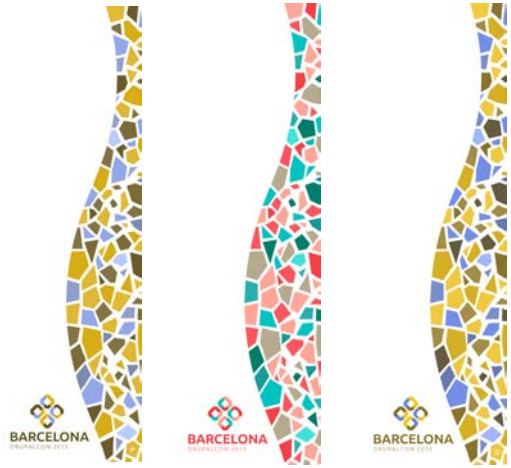
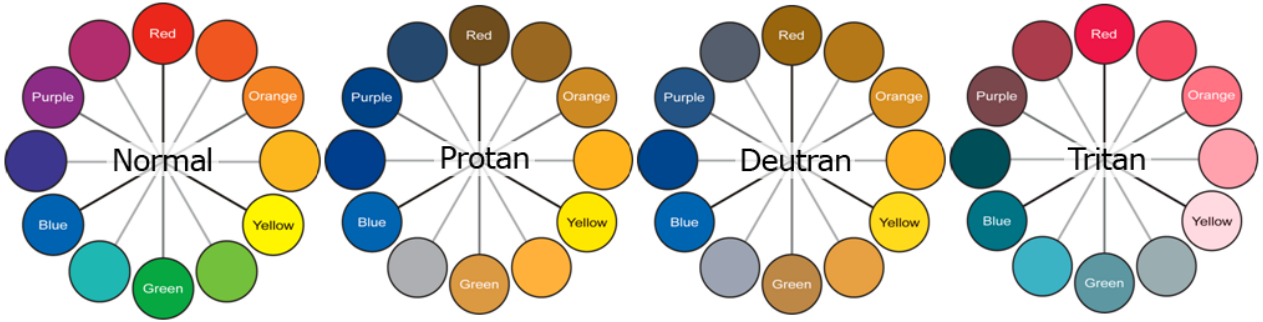
Color & Contrast

foreground vs. background

3:1 for large text
4.5:1 for smaller text





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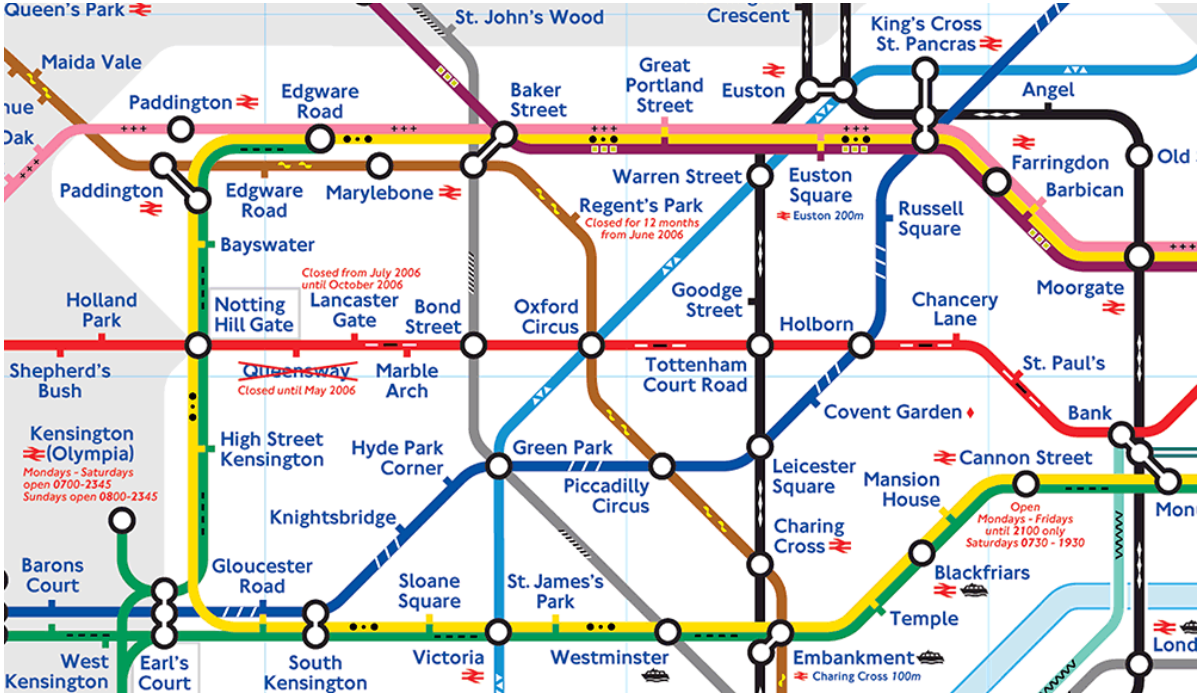
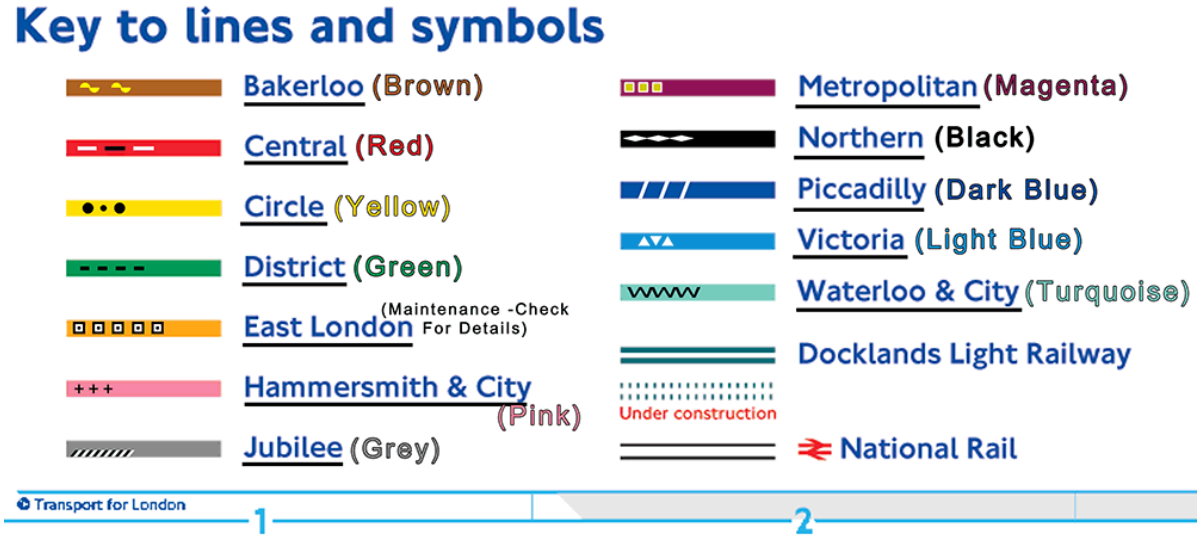


Color & Contrast



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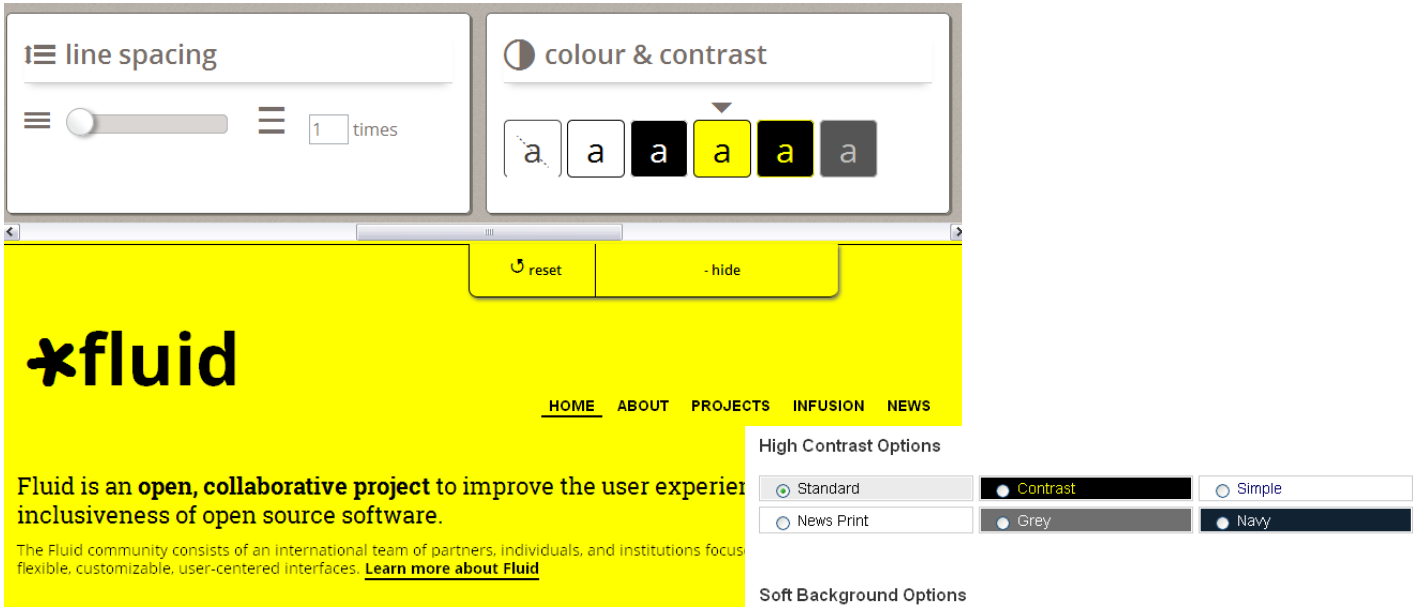


http://www.floeproject.org/

Color & Contrast - Tools

Accessibility Color Wheel - http://gmazzocato.altervista.org/colorwheel/wheel.php

CONTRAST-A-WEB - http://dasplankton.de/ContrastA/

Color Safe - http://colorsafe.co/

WCAG Contrast checker - https://addons.mozilla.org/ca/firefox/addon/wcag-contrast-checker/

Color Palette Accessibility Evaluator - http://accessibility.oit.ncsu.edu/tools/color-contrast/

Color Extractor Bookmarklet - http://accessibility.oit.ncsu.edu/tools/color-extractor/ & http://accessibility.oit.ncsu.edu/tools/color-contrast-chrome/

Contrast Analyzer - http://www.paciellogroup.com/resources/contrastanalyser/

Color Contrast Visualizer

http://www.stainlessvision.com/blog/projects/colour-contrast-visualiser

Tables are for data!

- headings
- captions
- summary

```
<table>
    <caption><h3>Color Contrast tools</h3></caption>
        <thead>
            <tr>
                <th scope="col">tools</th>
                <th scope="col">observations</th>
            </tr>
        </thead>
```

Links and Forms

Links
- Concise
- Descriptive

Click More Here

Forms
- Labels
- Fieldsets for grouping
- Tabbing order

Avoid CAPTCHAs!

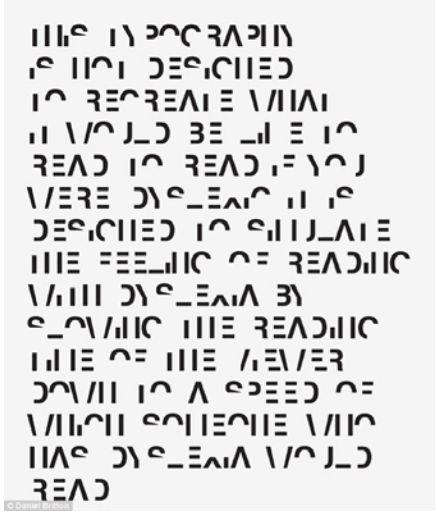
http://www.accessibilityoz.com/2014/02/links-and-accessibility/

Writing

- Plain language
- Sentences up to 25 words
- Paragraphs up to 3-4 sentences
- Active voice
- Consistent vocabulary
- Bulleted lists
- Consistent format & navigation

Font for Dyslexia

- columns of up to nine words
- text into paragraphs
- adequate line spacing
- space between content blocks



http://www.dailymail.co.uk/sciencetech/article-3112756/Take-reading-test-shows-s-like-dyslexic-Font-recreate-frustration-felt-condition.html

Always align the text to the left!

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General A11y Tools

WAVE Web Accessibility Evaluation Tool - http://wave.webaim.org/ (Firefox toolbar & Chrome extension)

OpenAjax Alliance (OAA) Accessibility Extension - https://addons.mozilla.org/EN-US/firefox/addon/openajax-accessibility-exte/

AInspector Sidebar - https://addons.mozilla.org/en-US/firefox/addon/ainspector-sidebar/

Accessibility Evaluation Toolbar - https://addons.mozilla.org/en-US/firefox/addon/accessibility-evaluation-toolb/

Automated A11y testing

pa11y - https://github.com/nature/pa11y quails - http://quailjs.org/

Tanaguru - https://github.com/Tanaguru/Tanaguru TENON - http://tenon.io

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Accessible Multimedia

- Test transcript for audio only
- Text description for video with no audio
- Closed captions & interactive transcript & audio description for video with audio

Don't Autoplay!

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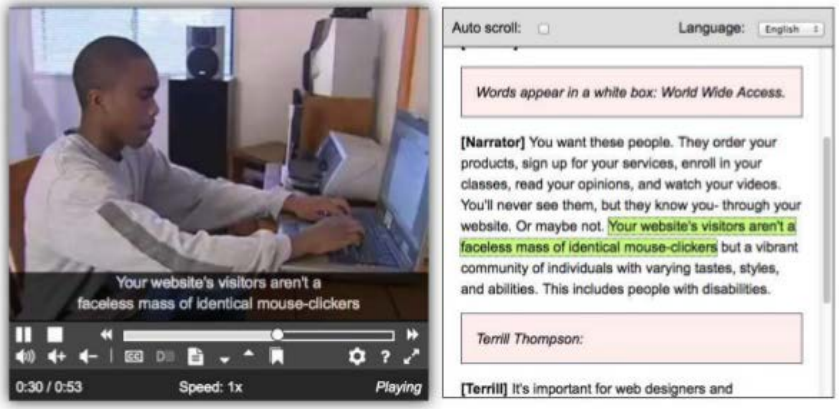
Accessible Video Players

Media Player Accessibility Comparisons

https://docs.google.com/spreadsheets/d/1QJVcXx5hTWYBcJbHJD3DrL3hSFVbfy1VQFyADMtrDFY/edit?pli=1#gid=0



http://uw.edu/doit/video

http://www.icant.co.uk/easy-youtube/

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Accessible PDF

...go to the source!

- Tagged-PDF (ISO 32000-1, 14.8)
- PDF/UA (Universal Access) - ISO standard 14289
- creating from Office:

  "Save/Export as", do NOT "Print as PDF"

Accessible PDF - Tools

- Acrobat Pro Accessibility checkers
- PDF Accessibility Checker (PAC 2.0)
- AccessODF - accessibility checker for Libre Office Writer

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Drupal A11y

Drupal 7

- Accessibility modules

Leveraging Drupal 8 to Make Your Site Wickedly Accessible
https://www.youtube.com/watch?v=54kbg0B2iNw

- Drupal.Announce
- Drupal.TabbingManager

Thank you!

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