Accessibility Beyond the Guidelines
Lessons from usability testing with disabled users

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Who we are

- **User Vision**
  - Usability and Accessibility Consultancy formed in 2000
  - Strong record of applying usability & web accessibility to benefit clients in:
    - Public Sector
    - Financial Services
    - Online Retail

- **DMAG**
  - Based in the Department of Applied Computing at the University of Dundee, providing consultancy in accessible, usable design
  - 160 strong evaluator base of disabled users, elderly people and children

- Both User Vision and DMAG have extensive experience conducting usability studies with a wide variety of disabled users
The WCAG

- The recognised ‘standard’ for web accessibility
- Can’t account for all circumstances
- Hard to keep pace with web technologies
- DRC study showed about half the cases where disabled users had problems were not directly attributable to the WCAG

- These could be
  - Areas covered by ATAG, UAAG
  - Plain old usability problems
Usability and accessibility

- Usability and accessibility are not 2 separate initiatives. Often it is thought
  - **Accessibility** is for disabled people. Its about meeting the WCAG technical guidelines, staying legal
  - **Usability** is for non disabled people, and is improving conversion rates, findability etc

- The technical basis for many accessibility issues (coding, tags etc) can encourage a focus on automated testing & technical led approach rather than empirical evidence

- PAS 78 aims to redress that balance
Things you will find from testing with disabled users

➢ Unusable accessibility
  ▶ Over elaborate, unnecessary or detailed alt text
  ▶ Access keys conflicting with access software
  ▶ Accessibility statement not focused on disabled users

➢ Issues not fully identified by WCAG
  ▶ Inconsistency between terms used
  ▶ Relating to visual position of screen
  ▶ Pop up window size and placement
  ▶ Recursive links

➢ Usability & accessibility in conflict?
  ▶ Initial field focus on forms
  ▶ Auto-tabbing multiple fields
  ▶ Auto-triggering dropdowns
Coleman Nevada Tent

Coleman Nevada Tent featuring extra durable double polyester ground sheet and rear window for ventilation. Lightweight and simple to put up.
Technical accessibility statement

- Standards Compliance
- Navigation Aids
- Links
- Images
- Visual Design
- Acronyms and abbreviations
- Back to Top

Standards compliance

All pages validate as XHTML 1.0 Strict. The templates use Cascading Style Sheets which can be read by CSS-P compliant and non-compliant browsers. These pages meet the W3C Level-A standards, as well as Levels AA and AAA where possible. All pages use structured semantic markup. For example, H1 is used for main page headings, and H2 for subsequent section headings within each web page. JAWS users can skip to the next section of a page using ALT+INSERT+2.

Where we have chosen not to meet Level-AA at present

1. 3.2 The search results page code for searches of externally available content does not validate to the W3C validation service. This is due to restrictions on our access to a third-party service.
2. 3.3 Style sheets have been used to control layout and positioning, but user agents do not consistently support positioning on pages where two fixed and one scalable column are required on a page. On such pages a table has been used for layout. However (5.3) the table content will still make sense to the user when linearised (such as in text-only browsers), and we suggest that this site does conform to this requirement to the level that is practicable with popular browsers.
3. 13.1 The title attribute has not been used on some links, but wherever possible, links are written to make sense out of context. Many browsers (such as JAWS, Home Page Reader, Lynx, and Opera) can extract the list of links on a page and allow the user to browse the list, separately from the page.
4. 13.2 Resource Definition has not been added to the metadata elements.
5. 13.3 Until infrastructure technology permits, there is no sitemap.

Where Level-AAA has not been met

1. 9.4 A tab order has not been established using the "tabindex" attribute.
2. 13.6 Grouping related links has not been followed (for example, by using the 'MAP' attribute).

Where we have chosen not to meet Level-AAA at present

1. 9.5 We have chosen not to employ access keys. Research suggests that these can sometimes conflict with shortcut keys used by assistive technologies.
2. 10.4 We have chosen to leave text boxes (such as in 'search') blank.

Navigation aids

All tables on this site have a caption, a summary, and properly scoped header cells, to allow screen readers to render the calendar intelligently. All pages include a search box, and a more advanced search page is provided.
Inconsistency in terms used

- Text on page asks them to ‘Register or Log In’
Visual relationships

- Directions meaningless in linearised or non-visual context

Specifically accounted for in WCAG 2
Restricting window sizes

- Screen magnification users find it difficult to distinguish the edge of windows
Recursive Links

Clicking on ‘Family’ category takes us to this page

Category Search

Related Collections

On hearing the Navigation options, ‘Family’ seems unselected

It is selected again and just refreshes the page
Shipping Information
Enter an address for "Me"

Shipping Address

Address Location
- United States / US Territories
- Canada
- Japan
- Other International Location

Nickname: Me
First Name
Middle Initial (optional)
Last Name
Selection tools
Usability testing

“People will gladly waste a million dollars on their fancy design and not spend $4000 to see if it works”

Jakob Nielsen
Testing with people with disabilities

- More challenging than standard usability tests
- Recruitment can be a barrier
- Technical constraints
  - Variety of screen readers, assistive technologies
  - Usually we go to them
  - If client requires observation, can be especially difficult
  - Recreating user settings can also be a factor
- Slower tests, less coverage of site, tasks
- Travel time to be factored in
Some Attitudes – Results from recent survey

- Over 50 people involved with commissioning or maintaining websites were surveyed
- Target accessibility level: 75% want AA
- Barriers to better accessibility
  - Lack of awareness by content contributors
  - CMS Limitations
  - Lack of time, resources, in house skills
  - Some elements of WCAG unrealistic / archaic
  - Perception: accessible = boring
Some Attitudes – Results from recent survey

- How useful are current WCAGs?
  - 29% Very useful
    - Useful benchmark, the ONLY standard
  - 60% Somewhat useful
  - 11% Not useful at all
    - Too vague, open to interpretation (e.g. ‘Until user agents..’)
    - Too complex and technical, alienating, not practical

- Testing with disabled users
  - 44% had involved users with disabilities in tests
  - Reasons why others had not
    - Not seen as necessary
    - Expense
    - Difficulty in recruiting
    - Lack of awareness of accessibility by design team / agency
Conclusions

- WCAG 1.0 is still the reference for web accessibility
- Version 2.0 will have some interesting changes – More on these tonight!
- Guidelines cannot cover all circumstances
- Empirical evidence – and PAS 78 - welcome
- Including users with disabilities in site or software testing often reveals new issues
Thank you

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