Athletic Rivalries and Web Accessibility: Who is in the Sweet 16 this Year?

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Abstract
Web accessibility is an important yet little understood problem by IT administrators, development teams and procurement staff. Analytics are needed to help people learn and understand a university's current level of accessibility. The OpenAjax accessibility (OAA) evaluation library is an open source library designed to evaluate dynamically generated web content for WCAG 2.0 Level A and AA requirements using the HTML5 and Accessible Rich Internet Application (ARIA) 1.0 specifications. The OAA library was used to evaluate over 35,000 web pages from 125 universities. The data is useful in helping in the development and monitoring the progress of accessibility plans. The data can be used by administrators to understand which units on campus are complying with accessibility standards, the types of accessibility features units seem to be implementing and what features they need help and training in understanding and implementation. These results are a first step in providing web accessibility information and identifying the metrics that are most useful to support web accessibility policies of a university.

Rule Categories

Landmarks
Landmark roles are used to structure the content of a page and identify major sections of content, thus making them more findable and navigable.

Headings
Use heading elements (H1-H6) provide a means to identify sections and subsections of content within landmarks.

Style/Content
HTML markup identifies the page semantics, language of text content and ensure that text is readable.

Images and Graphics
Images have text alternatives

Link
Links are consistent and descriptive.

Table
Provide captions, row and column headers for data tables.

Form
Form controls are labelled and error feedback is accessible.

Widget/Scripting
Ensure that custom widgets created using JavaScript support keyboard interaction and describe their roles, properties and states using WAI-ARIA.

Audio/Video
Multimedia content have text transcripts, captions and/or audio descriptions.

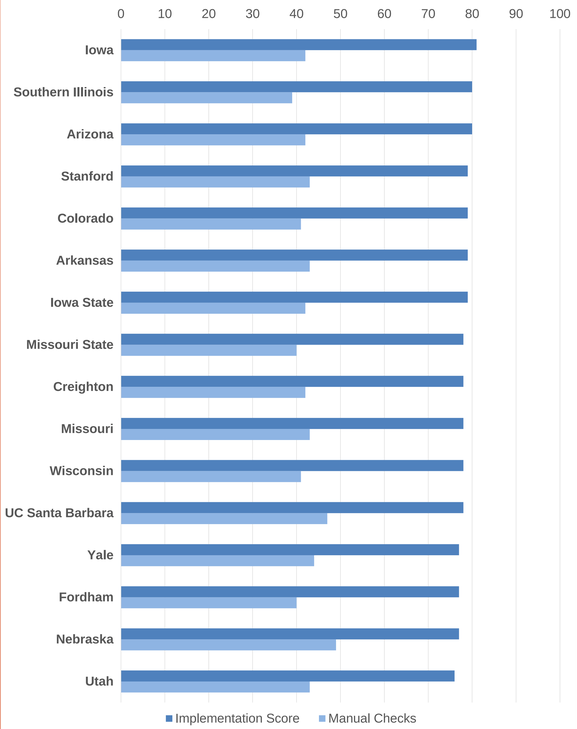
Keyboard
Web pages support keyboard only operation.

Timing
Allow extension to time limits and control of content that moves, scrolls, flashes or auto-updates.

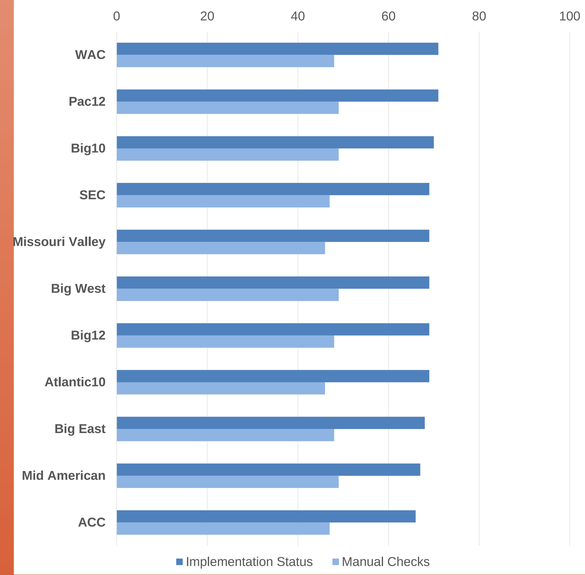
Site Navigation
Provide consistent page tilting and the labeling and ordering of recurrent page sections of pages within a website.

Website Accessibility Results
A implementation score of 100 means that the university would be fully compliant with the automated rules in the rulesets. The manual checks indicate the number of manual checks the university requires based on the content in the websites.

Sweet 16

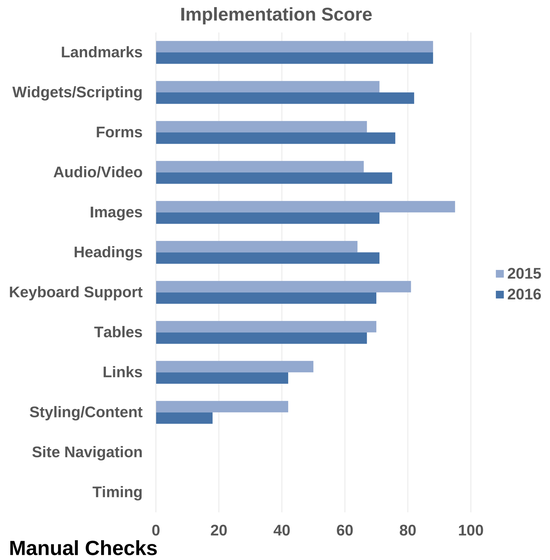


Athletic Conferences

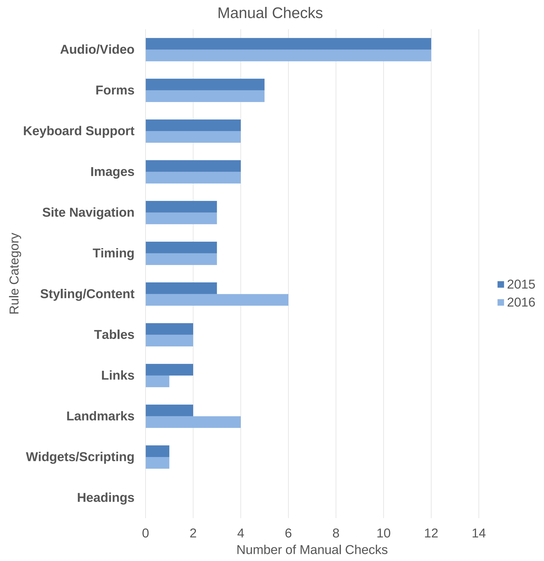


Rule Category Results

Automated Rule Results
Some rules can detect the presence or absence of an accessibility feature (e.g. main landmark, label on a form control). The following implementation scores indicate the level of implementation of automated rules for each rule category over the 40,000 web pages.



Manual Checks
The majority of accessibility features cannot be checked automatically, so manual checks are required to verify accessibility requirements. The following indicates the number of manual checks required for a website for each rule category. Automated tools can filter manual checks required based on the markup. For example if a page does not have any markup associated with video or audio, the requirements for audio and video do not need to be evaluated.



Conclusions
The results show there is still much work to do to improve the accessibility and usability of web resources to people with disabilities in higher education. Universities need to implement proactive plans to support the accessibility and usability of online administrative and instructional materials. To move web accessibility into the main stream of web development, online instructional design and procurement of vended online resources universities need tools to help them understand the accessibility of existing campus web resources.

Data is needed to help answer the following questions:

- Current level of implementation of web accessibility in higher education
- What accessibility requirements are understood and what requirements do people need to learn about
- What development and procurement teams need to understand to improve accessibility

Open Source Evaluation Tools

Functional Accessibility Evaluator 2.0
http://fae.disability.illinois.edu

AInspector Sidebar for Firefox
http://ainspector.github.io/

OpenAjax Evaluation Library Rulesets
http://fae.disability.illinois.edu/rulesets/

Join Announcements listserv
https://lists.illinois.edu/lists/info/oaa-tools-announcements

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