Library Accessibility Alliance Impact and Analysis Report

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Executive Summary

This document summarizes findings related to the impact of the Big Ten Academic Alliance's (BTAA) E-resources Accessibility Task Force's primary activities, specifically related to:
1. BTAA-sponsored e-resource accessibility evaluations, which are provided to the vendors and made publically available on the BTAA website;
2. BTAA-developed standardized language regarding accessibility requirements for adoption and use in e-resource vendor negotiations.

The analysis found that the accessibility evaluations have been, in general, valued by vendors and actively used to inform their product development and increase the accessibility of their products and platforms. Most vendors did not utilize the additional consultation time offered by testing partners. Usage of the evaluation reports by libraries for e-resource acquisitions has been mixed; institutions were generally more likely to have utilized the boilerplate accessibility language for vendor negotiations than to have consulted the testing reports.

Based on the findings in these areas, the analysis group recommends that the Library Accessibility Alliance (LAA):
1. Revisit and increase transparency of the testing protocol, timeline, and product prioritization to ensure that the evaluation reports are useful to vendors and meet the needs of LAA member institutions;
2. Publicize and promote the value of the testing reports to institutions outside the LAA;
3. Create and offer standardized accessibility language for additional types of products and outsourced processes, such as large-scale digitization projects.

Background

In 2016, the Big Ten Academic Alliance Libraries, under the leadership of Michigan State University, formed the BTAA E-resources Accessibility Task Force. The group's primary activities were to sponsor high level accessibility testing on vendor products, create a repository of those testing reports, and to create accessibility-related boilerplate license language to use when negotiating with e-resource vendors. In 2019, the BTAA joined with the Association of Southeastern Research Libraries (ASERL) to form the Library Accessibility Alliance (LAA). In February 2021, the Greater Western Library Alliance (GWLA) and the Washington Research Library Consortium (WRLC) agreed to join the LAA. One of the LAA's first initiatives was to explore the impact of the BTAA's previous activities in order to determine how to effectively move forward as an expanded organization.

Accessibility Testing

After going through a singular testing process with potential companies, the BTAA contracted with Deque Systems, a digital accessibility company, and the Usability/Accessibility Research and Consulting group (UARC) based at Michigan State University, to complete high-level accessibility testing on a number of resources and platforms. Testing processes varied by firm, but all included automated compliance checking software for Level AA of the [Web Content Accessibility Guidelines 2.0 (WCAG 2.0 AA)](), and inspection by a human accessibility expert. Human evaluators typically examined specifically designated pages for issues not detected via the software as well as other concerns not covered by the WCAG guidelines. For example, the use of a carousel of pictures might be WCAG compliant but for a person with an attention disorder such a carousel could be too distracting and represent a barrier to use.

Priorities for testing were placed on high-use products to which the BTAA and members libraries subscribed. The group also accepted nominations from members for products/platforms that were not necessarily part of a consortial subscription but had high use or were held by multiple members. The BTAA focused on testing two platforms a month, one by Deque and one by UARC. Deque also offered a free one hour consultation to discuss findings with vendors so the BTAA decided to also offer vendors evaluated by UARC the same consultation opportunity.

Since 2017, 66 evaluations have been completed by both Deque and UARC. [The reports are posted publicly, along with vendor responses if provided]().

Contractual Language

The [standardized license language](#) is publicly available for use in contracts with domestic as well as international vendors. It outlines the BTAA's commitment to accessibility and provides high-level requirements that must be met in order to be considered for purchase. The language is used for consortial purchases/subscriptions and may also be adopted in whole or part by individual institutions. There are several versions of the boilerplate language available, ranging from fairly strict interpretations of accessibility to looser language to allow for a range of use by libraries when negotiating with vendors.

For a more in-depth analysis of the history of the BTAA project, as well as more contextualization with the wider issues of accessibility, please see:

Pionke, J. & Shroeder, H.M. (2020). Working together to improve accessibility: Consortial e-resource accessibility and advocacy. *Serials Review*, 46(2), 137-142. https://doi.org/10.1080/00987913.2020.1782630

Evaluation Methods

1. The analysis group examined 58 completed testing reports for general trends in WCAG 2.0 AA success criteria violations, conducted between 2017–2019.
2. A survey sent to e-resource vendors (See Appendix 1) was launched on August 17th, 2020 and closed two weeks later on August 31st, 2020. There were 39 responses.
3. A survey sent to Electronic Resources Librarians (See Appendix 2) was launched on August 18th, 2020 and closed two weeks later on August 31st, 2020. There were 16 responses.
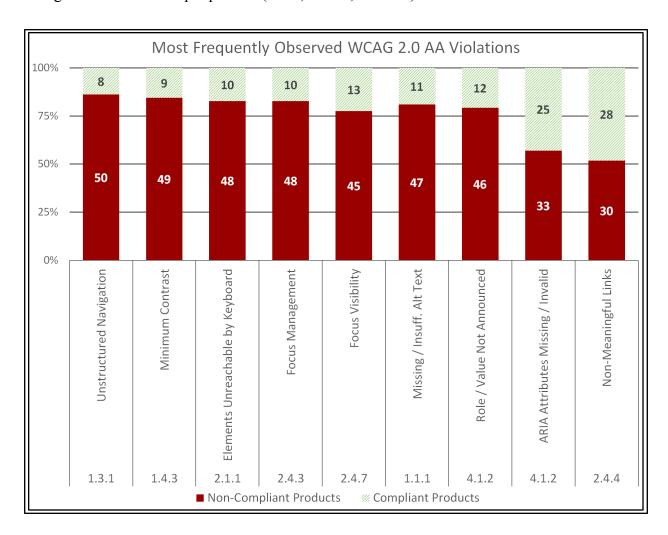
Findings & Discussion

Analysis of Completed Accessibility Evaluations

Although the tests and audit report formats of Deque, UARC, and other firms differ, they all indicate specific violations of WCAG 2.0 AA success criteria. Our analysis used the listed [WCAG 2.0 AA success criteria](#) violations as points of comparison between the 58 products that were audited.

Briefly, WCAG guidelines are organized hierarchically and proceed from four overall principles (Perceivability, Operability, Understandability, Robustness) that are further broken down into 12 guidelines, which themselves have testable success criteria. For example, success criterion 1.4.3 looks for whether text has a specific ratio of contrast to its background (Principle: (1) Perceivability; Guideline: (4) Distinguishable; Criterion: (3) Contrast Minimum). It should be noted that failure to meet a specific success criterion should be considered not as an individual infraction (e.g. the equivalent of a single typo) but as a problem in the design and organization of the product. For example, a 2018 audit of Springerlink observed failure to meet 19 success criteria; this does not mean there are only 19 individual errors in the entire product, but rather that the overall design of the product will be made more accessible if vendors work to implement 19 specific recommendations based on WCAG guidelines.

In summary, none of the products that were observed were in full compliance, with a median of 13.5 guideline violations per product (n=58; min: 9, max: 20).

Nine guideline problems were identified in more than half of the observed databases. In descending order of frequency, they were:

1.3.1 Info and Relationships (Unstructured Navigation) (50, 86%)
> *The structure of the page and the relationship of information and elements therein can be interpreted and navigated via assistive technology or are indicated textually*

1.4.3 Contrast (Minimum) (49, 84%)
> *Text is visibly distinct from background at a 4.5:1 contrast ratio*

2.4.3 Focus management (48, 83%)
> *The order that elements receive focus is appropriate (e.g., sequential) for the page content*

2.1.1 Elements unreachable by keyboard (48, 83%)
> *A keyboard interface can navigate / operate / interact with all content*

1.1.1 Missing or insufficient alt text (47, 81%)
> *Equivalent text alternatives for non-text elements and content*

4.1.2 Role/Value not announced (46, 79%)
> *Interface components (e.g., form fields) are visible to and can be modified by assistive tech and similar software*

2.4.7 Focus visibility (46, 79%)
> *Interfaces that can be operated via keyboard can visibly indicate the keyboard's focus*

4.1.2 ARIA attributes missing or invalid (33, 57%)
> *ARIA labels provide assistive tech readable semantic information about widgets, structures, functions, etc. for user interface and interactive elements.*

2.4.4 Link Purpose (In Context) (30, 52%)
> *Link text (or, link text and it's included alt text or labels) is relevant and indicates the purpose of all links.*

These issues can present problems for users with various disabilities and can make the resources anywhere from inconvenient to completely unusable. However, many of these issues, particularly insufficient contrast (1.4.3) and alt-text (when used in a navigational context) (1.1.1) can often be addressed with a reasonably minor investment of time or resources on the part of the vendor. This can further be inferred from a handful of vendor responses which referred to changes that had since been made to improve accessibility.

It should be noted that, in many of the audits we analyzed, the auditing agency did not report extensively on issues regarding database *content*. The use and navigation of the interface was tested, but the accessibility of the content itself may be more difficult to assess and therefore

summarize. For example, PDF files of scanned documents (dissertations, historical newspapers, hand-written letters) may or may not have reliable OCR- or human-generated plain text provided to users. Products that rely extensively on audiovisual multimedia may present issues with their media content players or with the content itself, which may lack sufficient captioning or transcription.

Vendor Survey

The vendor survey sought to get feedback directly from vendors (n= 16) on their usage of the accessibility report that was provided to them.

Did you make changes based on the analysis?
- Yes, some: 14
- No: 2

Did you have a post-evaluation consultation?
- Yes: 8
  - Extremely useful? 5
  - Moderately useful? 2
  - Slightly useful? 1
  - One vendor wasn't aware of the consultation but would have used it
- No: 6

Every vendor reported having some level of in-house testing, and most considered it to be extensive. Most have staff dedicated to accessibility, but it is most often not the only responsibility of that person (12 out of 17 responses).

Vendors provided the following positive comments:
- "Guidance has been invaluable."
- "[The report] has changed everything—we didn't previously consider accessibility specifically, but now "have a major redesign being launched in October in which accessibility was the starting point. We used the pointers provided to us by Big Ten as a starting point and built on those."
- "My experience with BTAA's accessibility initiative really raised my awareness of how people with various physical limitations are impacted by website design and layout. I regularly think about the recommendations shared with us when updating our website or even just writing an email. Thank you for investing in this worthy initiative."

- "Accessibility development is now considered at more points within the product development workflow. It is no longer an afterthought. We also continue to assess and improve where possible once live."
- "The accessibility evaluation was most useful and we made as many changes recommended as possible and strive to continuously improve."

Vendors also expressed concerns about some issues:
- One vendor noted that the age of the reports can be problematic, because buyers might not understand that the report might not be representative of the current product/platform. This vendor suggested that the BTAA publish a timeline for review or re-review, which would be useful for vendors and buyers.
- Another vendor remarked that the reports vary in quality, noting that the Deque reports seemed to be the most consistent, objective, and easy to respond to.

Electronic Resources Librarians Survey

The standardized accessibility language has been used to varying extents when considering resource acquisitions. Electronic Resources Librarians were surveyed to determine what and how the standardized language was used.

Did you use BTAA licensing language?
- At least some of the time: 12
- Never: 2
    - Of the two institutions who do not use the BTAA language, one has their own language, though they said they would look to the BTAA to determine whether they should make changes to their local language. The other said that it conflicts with campus policies or procedures.

What is useful about it?
- Easy to use
- Comprehensive
- Helpful to have US and international versions
- Reliable and current, so institutions don't need to do their own research
- Encourages vendors to comply with current law
- Leads to better outcomes
- Consortial language lends weight to individual institutions
- Useful for extra-library procurement groups (e.g., institutional budget offices) who do not understand library purchases
- Plain language, concise and understandable

- Provides talking points for vendor negotiations

One institution noted that they always start with the BTAA accessibility language, but "few vendors are willing to accept that language…" so the end results tends to be a "lighter" version that is still approved by BTAA.

Did you look at the vendor reports on the BTAA website?
- Not sure: 3
- Yes, sometimes: 6
  - Flaws can be communicated to subject liaisons so they are aware
- Rarely: 4
- Never: 2
  - Didn't really know about them and is more often cancelling than ordering
  - "It has not yet become a priority in the ordering process"

- Other comments included:
  - "Too often we don't really have a real choice between products"
  - "I feel guilty that accessibility issues, while important for us, are not deal breakers…"

Have you shared your contract language with us via survey form?
- 50% aren't sure
- Yes: 4
- No: 3 (2 did not know about it; 1 did not have language to share)

What would make the contract language more useful?
- Add a placeholder for state-specific accessibility language
- "An effective response to vendors who tell us that they cannot include the BTAA language, even in its least stringent form, in licenses because they are getting the content from a 3rd party through their own contracts with the content creators, and therefore cannot agree to modify or adapt content in any way to accommodate disabilities...I think this is a sneaky way of these big vendors avoiding responsibility for accessibility and would like a strategy to counter this."

What would make the reports more useful?
- Updated evaluations showing how they have or haven't improved, or for updated platforms
- More reports, more resources

Conclusion/Recommendations

It is clear that the activities undertaken by the BTAA have been productive and useful for vendors, member libraries, and users of e-resource platforms.

In order to further increase the impact of these activities, the impact analysis group recommends that the LAA:

1. Revisit and increase transparency of the testing protocol, timeline, and product prioritization to ensure that the evaluation reports are useful to vendors and meet the needs of LAA member institutions;
    a. Ensure that available reviews are timely, accurate, and clearly indicate which version of the product/platform is under evaluation
    b. Increase vendor adoption of optional followup from testing partners
    c. Improve presentation and usability of reports
2. Publicize the testing reports to institutions outside the LAA, both to demonstrate value to other institutions and to encourage vendors to prioritize accessibility;
3. Create and offer standardized accessibility language for additional types of products and outsourced processes;
    a. A BTAA subgroup is currently developing language for large-scale outsourced digitization projects
    b. Consider creating an example template for state-level language
    c. Consider a revision to the template language that encourages vendors to take responsibility for accessibility, even when they themselves are working with third party vendors who might not have accessibility material
4. Consider the value of the ERO survey for sharing contract language. Is this information being used? If the LAA decides to continue the survey, send out periodic reminders of its existence. Consider linking survey to the LAA website;
5. Expand testing to ensure that both platform and content are being considered in accessibility evaluations.

Appendix 1 - Vendor Survey

1. What company do you work for?
2. When your company received the accessibility evaluation from the BTAA, were changes to the product made based on the analysis?
3. Did your company take advantage of the one hour consultation offered by the evaluating company (Deque or UARC) to learn more about the accessibility evaluation process?

4. Did you find it useful?
5. Does your company perform in-house accessibility testing?
6. How extensive is the testing?
7. Do you have staff dedicated to working on accessibility?
8. During product development, when is accessibility considered? Please select all that apply.
9. In your estimation, how frequently do you receive complaints from customers regarding accessibility issues?
10. Do you have a publicly visible statement about product accessibility on your website?
11. How interested would you be in receiving future accessibility reports?
12. Do you have any additional comments to share about the testing process, communication, or anything else related to the Library Accessibility Alliance's initiatives?

Appendix 2 - Electronic Resources Librarians Survey

1. What institution do you work for?
2. Has your library used the licensing language developed by the BTAA Eresources Accessibility Taskforce when negotiating contracts with vendors?
   a. Why not? (e.g., wasn't aware of it? not a priority? conflicted with internal policies / procedures?)
3. What did you find particularly useful about the language?
4. When making decisions about whether or not to purchase a product, did your library examine the accessibility reports on the BTAA Eresources Accessibility Taskforce website?
   a. What was useful about these reports?
   b. Why not? (e.g. didn't know about them? didn't find them useful? etc.)
5. Has your library shared your contract language with us via the survey form found here?
   a. Why not? (e.g., legal issues? didn't know about it? etc.)
6. What, if anything, would make the example contract language more useful to you?
7. What, if anything, would make the accessibility reports more useful to you?
8. Are there any database products, vendors, or platforms that you would like to see receive an accessibility review?