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Is It Really "Not Applicable?" Zoom In to Understand E-Book Accessibility

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Abstract

The decisions that we make when reviewing our collections and negotiating licenses have enormous effects on our users. They also have the potential to, in turn, shape the priorities and decisions of publishers and platform creators. The questions we ask and standards we set now set the stage for the chapters our users inherit. And while users with special access needs might not form a large percentage of our current user population, they will always be part of that population. For e-book accessibility, it can be difficult to draw the line between what is essential, what is aspirational, and what isn't (yet) applicable. There are numerous standards, some that are fundamental to providing access to users, some that you might be told don't apply, and some that will matter more and more as the e-book changes and becomes a fuller, richer text.

Our goal in this session is to share what we've learned about what accessibility assessment resources publishers are likely to provide you with, what the different sections of those documents mean, how to look at the information you have and make a judgment on how accessible an e-book on a platform would be, and how to incorporate accessibility in collection selection and licensing negotiations so that ultimately the de facto design of e-books is one that supports access by all library users.

Introduction

The libraries' mission is to serve our community, which includes all people with all abilities. While users with special access needs might not form a large percentage of our current user population, they will always be part of that population. Digital content in library collections should be equally accessible to all users including those with disabilities.

Accessibility-related lawsuits have been brought against content providers and academic institutions. You may be familiar with University of California (UC) Berkeley's textbook settlement in 2013 (Loftus, 2016), which was ultimately settled through a structured negotiation with UC Berkeley found to be in violation of ADA's Title III. UC Berkeley's administration made substantial changes to their library and print-to-digital conversion process after the case.

This implies that library professionals should be aware of the topic and take actions to ensure accessibility.

Accessibility Principles

The W3 Web Accessibility Initiative develops the four main guiding principles of accessibility in WCAG 2.0: Perceivable. Operable. Understandable. Robust. Understanding the principles will help us understand what accessibility means.

Perceivable means content and user interface must be presentable by sight or hearing.

Operable means users must be able to operate the interface using the standard keyboard, mouse, or adaptive/alternative devices that accommodate their disabilities.

Understandable means the contents must be digestible. Regular text may need to be supplemented with illustration, video, or other alternative format to help people with cognitive or reading disability.

Robust means contents should remain accessible across a variety of browsers and platforms, and work with different assistive technologies.

Key Elements for E-Book Accessibility

The e-book accessibility audit 2016 project (Ebook Audit 2016), a collaboration between several UK Higher Education Institution (HEI) disability and library services, JISC, and representatives from the book supply industry, identified a number of key elements for e-book accessibility: formats, appearance, navigation, text-to-speech software/screen reading software, image/animation, and support.

E-book formats, including PDF, EPUB, and HTML, support assistive technologies at different levels.

Appearance, for example text color or background color, is critical for people with dyslexia and visual impairments to efficiently access text. Navigation is another key element. Visually impaired users rely on screen reader to navigate the Web page, so Table of Contents (TOC) is essential for them. Text-to-speech software helps to enhance understanding of the content for dyslexic readers. Alternative text for images is necessary for screen reader users. Animations can be very distracting to those with ADHD, who would be able to concentrate on the content without animations. Other types of support like keyboard shortcuts are useful for users who don't use a mouse.

Accessibility Standards

The environmental scan that we conducted on our collection revealed three main sources of information on accessibility provided by e-book content providers: Accessibility Statements, Voluntary Product Accessibility Templates (VPATs), and Web Content Accessibility Guide (WCAG) compliance statements. Nearly every content provider had a statement or assessment, but the mode through which these documents were made available was highly variable. Some were posted publicly on the provider's Web page, and others were made available only by request through a sales representative. These variations in public accessibility tended to correlate with the level of detail provided by a document—the more detailed the information, the less open the document was. Many providers explained that because their products were under constant development and improvement, they preferred to provide documents on an on-request basis to ensure that the most current information was under review.

Accessibility Statement

An accessibility statement is a general statement from the organization citing the accessibility standards they comply with and to what level, citing which assistive technologies they support, and providing access to further forms of support available to users. Not all are so specific and complete—at the most basic, accessibility statements can be an expression of a commitment to accessibility for all users and contact information for user support. Accessibility statements are the most general and the most publicly available forms of accessibility information.

In our review of the accessibility statements from e-book providers, we found it useful to consider the level of detail provided in the statement about standards and compliance, specific supported assistive technologies, testing policies, and the frequency with which this information is updated.

Voluntary Product Accessibility Template

The Voluntary Product Accessibility Template (VPAT) is a standard document used by many organizations to describe their level of compliance with Section 508 of the Rehabilitation Act (Figure 1). The VPAT is ideally created by someone familiar with both the Section 508 requirements and the technical aspects of the

Section 1194.22 Web-based Internet information and applications * Refer to (http://www.access-board.gov/sec508/guide/1194.22.htm) for details on the guidelines listed below.		
Criteria	**Supporting Features**	**Remarks and explanations**
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports	All images provide alternate text or descriptions; background images contain element content descriptions.
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Supports with Exceptions	Website allows 3rd party to provide supplemental material that may be in a multimedia format; equivalent alternatives are encouraged but not required.
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports	Color used for emphasis—not for functionality.

Figure 1. An example of a portion of the VPAT section "Web-based Internet information and applications." The Criteria describe accessibility features important to Section 508 compliance, the Supporting Features field uses a controlled vocabulary of seven terms, and the Remarks and Explanations field is used to elaborate on the supporting features.

product and using the standardized controlled vocabulary. It is necessary to keep in mind when reviewing the VPAT that there can be an inherent incentive to misrepresent the capabilities of a product. Bad actors who falsely claim that their product delivers on every aspect of the VPAT may be rewarded over good actors who honestly acknowledge that there are areas where their product could be improved. To mitigate this, it is important to conduct your own independent assessment of the product and use the VPAT as a place for conversations to begin, rather than a straightforward metric (NCSU OIT, 2017).

Over 50% of the e-book providers in our environmental scan of our collection generally provided support for the sections "Software Applications and Operating Systems," "Web-based Internet Information and Applications," "Functional Performance Criteria," and "Information Documentation and Support." These sections make logical sense for the majority of e-books, but as e-books become richer and more varied documents with more interactive features, other sections, such as "Video and Multimedia Products," will become more relevant to the accessibility of e-book content. Already 8% of the e-book providers reviewed cited some form of support in the "Video and Multimedia Products" section.

All of this reinforces the usefulness of the VPAT as a starting point, not a cut-and-dried evaluative resource. E-books have different features and need different support, and even for sections of the VPAT that most providers generally support, there are still providers who say they are "Not Applicable." These are places to ask questions and start conversations.

Web Content Accessibility Guide 2.0

The Web Content Accessibility Guide 2.0 (WCAG 2.0) came out of the Web Accessibility Initiative of the World Wide Web Consortium (W3C). The WCAG 2.0 is a citable technical standard. It is also unique in that it is testable—there is a greater burden of proof than with other forms of accessibility information. This standard does focus exclusively on Web content, so it is a good option for evaluating Web-based provider interfaces, but it won't give you any information on the accessibility of the content once it has been downloaded. WCAG 2.0 has three levels of compliance, A, AA, and AAA, with AAA being the highest level of compliance.

WCAG 2.0 has identified a set of 12 guidelines organized under the four principles of POUR (see Figure 2). Each of these guidelines has various success criteria associated with them, and the success criteria are grouped under A-, AA-, and AAA-level compliance. The level of each success criterion is based on a balance of the importance and potential impact to the accessibility of the resource against the difficulty of implementing the support.

WCAG - Web Content Accessibility Guide

Perceivable

Provide text alternatives for non-text content

Provide captions and other alternatives for multimedia

Create content that can be presented in different ways

Make it easier for users to see and hear content

Operable

Make all functionality available from a keyboard

Give users enough time to read and use content

Do not use content that causes seizures

Help users navigate and find content

Understandable

Make text readable and understandable

Make content appear and operate in predictable ways

Help users avoid and correct mistakes

Robust

Maximize compatibility with current and future user tools

Figure 2. The four principles of the POUR accessibility framework, with the 12 WCAG guidelines.

In order to be WCAG 2.0 compliant a resource must meet all of the success criteria for at least level A, and all the success criteria for any compliance levels below the target level (i.e., for level AA compliance all of the success criteria for level A and AA must be met). All of the associated pages must also comply, so that if one page leads on to another, both pages must be compliant. Similarly, the complete process must conform, meaning that when the page is part of a series of steps or tasks, everything in the series must also be compliant. In addition to features that would make the pages more accessible, the page must also conform to noninterference with accessibility. This means, for example, that a user navigating with the keyboard would not become trapped in an interactive element or control but would always be able to navigate away.

Because the WCAG is a very clear, very testable standard, it's a very reliable source of information on the accessibility features of a resource. However, it does only take into consideration the accessibility of the Web interface, and you'll still want to consider support for downloadable content.

Applicable Laws and License Negotiation
Applicable Laws

Knowing the applicable laws and university policies will help library professionals determine what's mandatory and what's acceptable when working with vendors.

The Americans with Disabilities Act of 1990 is a civil rights law that prohibits discrimination based on disability. Title II and Title III of the ADA affect Web accessibility.

Title II prohibits disability discrimination in services, programs, and activities provided by state and local government entities. Title III prohibits disability discrimination by "places of public accommodation" (ADA), which includes libraries, universities, hotels, museums, theaters, transportation services, doctors' offices, daycare, and so on.

The Rehabilitation Act of 1973, as amended in 1998 by Congress, requires federal agencies to make their electronic and information technology (EIT) accessible to people with disabilities. A final rule, issued on January 18, 2017, by the Access Board, updates accessibility requirements for information and communication technology (ICT) in the federal sector covered by Section 508 of the Rehabilitation Act. The

rule references Web Content Accessibility Guidelines (WCAG) Level A and Level AA Success Criteria and Conformance Requirements in WCAG 2.0 (link is external), and applies them not only to websites, but also to electronic documents and software.

Section 508 applies to the federal government; many states have also passed legislation requiring EIT accessibility based on Section 508 or other standards.

In Canada, the AODA (Accessibility for Ontarians with Disabilities Act) "became law on June 13, 2005 and applies to all levels of government, nonprofits, and private sector businesses in Ontario that have one or more employees (full-time, part-time, seasonal, or contract)" (Accessibility Ontario). AODA aims to create a universally accessible province by 2025.

Each university may have its own accessibility policies based on its local laws. It's important to be aware of them because they can significantly affect libraries' acquisition policies on accessibility.

License Negotiation

Efforts by the Association of Research Libraries have been made to develop model license languages on accessibility. As shown below, these languages state complying with ADA, being consistent with WCAG, and having a completed VPAT detailing compliance with section 508. It also requires vendors to resolve inaccessible issues in a timely fashion and grant licensees the right to make changes for accessibility.

> Licensor shall comply with the Americans with Disabilities Act (ADA), by supporting assistive software or devices such as large-print interfaces, text-to-speech output, refreshable braille displays, voice-activated input, and alternate keyboard or pointer interfaces in a manner consistent with the Web Content Accessibility Guidelines published by the World Wide Web Consortium's Web Accessibility Initiative. Licensor shall provide Licensee current completed Voluntary Product Accessibility Template (VPAT) to detail compliance with the federal Section 508 standards. In the event that the Licensed Materials are not Accessibility compliant, the Licensee may demand that the Licensor promptly make modifications that will make the Licensed Materials Accessibility compliant; in addition, in such an event, the Licensee shall have [the] right to modify or copy the Licensed Materials in order to make it useable for Authorized Users.

These model languages serve as a good starting point for libraries to develop their own accessibility languages and procedures through incorporating their local accessibility requirements.

As librarians negotiate accessibility terms with vendors, it may be helpful to have a checklist with items pertinent to accessibility. First ask the vendor if the product complies with Section 508. Then check about WCAG 2.0 and request testing results for WCAG compliance. VPAT is another factor for consideration and an accessibility statement may be requested as well. For some libraries, e-mail confirmation on the listed items or an online statement may be sufficient, but it's almost always desired and sometimes it's required to add an accessibility compliance clause in a license. And whether or not the product is compliant with section 508 or WCAG 2.0, it will never hurt to add a clause for remediation and that states the remediation must be done in a reasonable timeframe at no charge to the university. If none of the above can be obtained, librarians at least should check with a vendor to see if they can provide a roadmap toward accessibility compliance.

Moving Forward

There's always more we could be doing. Accessibility awareness and commitment are increasing all the time. By acting intentionally, we can make e-book accessibility even better.

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