

An Honest Look at Digital Accessibility in Libraries

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What is Digital Accessibility?

- W3C or the World Wide Web Consortium, states “Web Accessibility means that people with disabilities can perceive, understand, navigate and interact with the Web and that they can contribute to the Web.”
- Disabilities that may affect access to library digital spaces include visual, auditory, physical, speech, cognitive and neurological disabilities.
- Digital accessibility benefits all users.

Why should we care about Digital Accessibility?

- Libraries have **ETHICAL OBLIGATION** to support accessibility.
 - *Equality is a foundational value of Library Science.*
 - Equal Access = Equal Opportunity
 - *“Unequal access is also a violation of the general notions of equality and justice that are inherent in a democratic society and in the concept of public libraries.” (Jaeger 2002).*
 - *United Nations Convention on the Rights of Persons with Disabilities recognizes access to information and communications technologies (ICT) as a basic human right. (CRPD, 2006)*

Why should we care about Digital Accessibility?

- Libraries have a **LEGAL OBLIGATION** to support accessibility.
 - *Rehabilitation Act of 1973*
 - *1973 Education for All Handicapped Children Act/Individuals with Disabilities Education Act (IDEA)*
 - *Americans With Disabilities Act of 1990*
 - *Telecommunications Act of 1934*
- This legislation protects children and adults with disabilities from exclusion, unequal treatment in schools, jobs and the community and **unequal access to information or services**.
- Vendors' commitment to accessibility is directed by the commitment of public institutions.

WCAG: Gold Standard of Web Accessibility- Success Criteria

- WCAG, Web Content Accessibility Guidelines
 - *Developed by W3C an independent web standards organization.*
 - *Section 508 refresh in 2017 included many WCAG Success Criteria*
- “Success criteria” is important access issues for people with disabilities and required to allow access by users with disabilities.
 - *Perceivable: Web Content is made available to the senses- sight, hearing and/or touch.*
 - *Operable: interface forms, controls and navigation are operable*
 - *Understandable: Content and interface are understandable*
 - *Robust: Content can be used reliably by a wide variety of user agents, including assistive technologies*

Diversity & Inclusion at Wichita State University Libraries

- Commitment to more accessible digital spaces
 - *Library created content*
 - Work with Disability Services and Media Resource Center for training on how to create accessible webpages and accommodations
 - Complete redesign of library's website as per findings of university and in-house accessibility audit

Diversity & Inclusion at Wichita State University Libraries

- Commitment to more accessible digital spaces
 - *Library licensed content*
 - Collected VPATS and other accessibility documentation
 - *Linked to accessibility documentation from Databases A-Z list*
 - *Accessibility notes in catalog records for relevant resources*
 - Reviewed VPATs in 2017-2019
 - *Creation of Accessibility Remediation Guide*
 - E-Resources Workflow

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Callas a documentary /

Title: Callas a documentary / produced and directed by Peter Weinberg ;
Swank in the arts.

Electronic Resource: [View Terms of Use](#)
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Other Author/Title: [Ardoin, John.](#)
[Callas, Maria, 1923-1977.](#)
Swank, [Patsy.](#)
[Weinberg, Peter.](#)
[Zeffirelli, Franco.](#)

Publisher: [S.I.] : Bel Canto Society, 1978.

Description: 1 online resource (117 min.).

Subjects: [Callas, Maria, 1923-1977.](#)
[Sopranos \(Singers\)--United States--Biography.](#)

Access restrictions: Due to licensing restrictions, this resource is only available to curre

Summary: [Some accessibility features are available on Alexander Street Pres](#)

The life and work of Maria Callas is told through interviews with frie
Notes: Electronic reproduction. Alexandria, VA : Alexander Street Press, 2

Language: Narrated in English.

Holdings Information

<http://libcat.wichita.edu/vwebv/holdingsInfo?bibId=2165059>

Tools for assessing accessibility

■ Screen Reading Software

- *Uses keyboard commands to carryout different tasks*
- *[NVDA](#), from NV Access, is a free downloadable software*

■ [ePUB validator](#)

- *checking the code within e- books to make sure it displays on all kinds of devices*
 - *Assistive technology will work with OS to read epub files*
- *Ebook validation rules were established by the International Digital Book Forum.*

Tools for assessing accessibility

- PDF Accessibility validator
 - *Checks for tags, document titles, descriptive text etc. so PDF can work with assistive technologies*
 - *Included with PDF creating tools*
- [WAVE](#), Achecker, AXE accessibility add-on etc.
 - *Points out accessibility issues so web content is accessible to everyone regardless to the technology they may be using, or their abilities or disabilities.*
- [Color contrast checker](#)
- [Colorblind web page filter](#)
- [VPAT Repository](#)
- [Big Ten Academic Alliance E-Resource Testing](#)

Voluntary Product Accessibility Template (VPAT)

- Developed by Information Technology Industrial Council in partnership with General Services Administration
- Checklist of Section 508 accessibility requirements
 - *Includes all three levels of WCAG 2.0 Criteria and Conformance Requirements*
 - *Includes European Accessibility Standards EN 301*
- Required by Federal Agencies before purchasing or releasing ICT
- Cons
 - *Voluntary*
 - *No legal recourse for inaccurate VPAT (unless stated in a license)*
 - *Varying level of detail regarding a product's accessibility deficiencies*
 - *Takes skill to interpret and validate*
 - *New VPATs aren't required for interface updates*

Usability Test: Approach

- 351 Databases reviewed
- Aspects Tested:
 - *Alternative Text*
 - *Keyboard Navigation, Non-Auditory & Non-Visual Operation*
 - *Presence of Keyboard Traps*
 - *Document Readability (Online and Downloaded)*
 - *Captions and Transcripts*
 - *Optical Character Recognition*
 - *Forms and Other Interactive Elements*
 - *Skip Navigation*

Alternative Text for Non-Text Content

- VPAT Versions 1-1.6: 1194.22 A
- VPAT Version 2-2.3 E101 & E102
- WCAG 1.1.1
- Alt-text, longdesc or description of any visual content
 - *Read by screen readers in place of images allowing content and function of the image to be accessible to users with visual impairments or cognitive disabilities.*
 - Also displays when image isn't loading

Readability

- VPAT Version 1-1.6: 1194.22 D
- VPAT Version 2-2.3: E205.2-4 (Electronic Content)
- WCAG: 1.3.2 (Meaningful Sequence)
- “Documents shall be organized so they are readable without requiring an associated style sheet”
- “Documents” describe the webpage- is the webpage organized so it’s readable without style elements (colors, blocking, font sizes, etc.)
- “Documents” also refers to format of downloadable content
- Tested with web accessibility checker or screen reader

Document Types

- Web Page
 - *Style separate from Content*
- HTML
 - *Text file, often has “read aloud” feature*
- Text
 - *TXT*
- Epub
 - *Compatible with assistive technologies*
- PDF
 - *Portable Document Format*
 - *IMAGE FILE*

Optical Character Recognition

- VPAT Version 1-1.6: 1194.31 A
- VPAT Version 2-2.3: 302.1 (Vision)
- WCAG: 1.4.5 Images of Text
- Optimal Character Recognition (OCR)
- Conversion of images of type, handwritten or printed text into machine-encoded text
 - *Makes PDFs compatible with Assistive Technologies*
- Test with Screen reader

Tables

- VPAT version 1-1.6: 1194.22 D & L
- VPAT version 2-2.3: E205.2-4
- WCAG: 1.3.2 Meaningful Sequence
- Sighted users can make visual associations between data in the table and the row or column header. Screen Readers cannot make those associations without proper markup
 - *Header cells need to differentiate from data cells*
 - Header cells establish scope and give context to data
 - *Data cells need to be associated with appropriate header cells*
 - *Markup allows assistive technology users to navigate through data tables one cell at a time*
- Tested with Screen Reader & Keyboard

Non-Auditory & Non- Visual Operation

- VPAT Version 1-1.6: 1194.31 A & C
- VPAT Version 2-2.3: 303.4 & 302.1
- WCAG: 1.2.1 & 1.2.2 & 1.4.5
- Can this website be used without auditory cues?
- Can this site be used without visual cues?

Captions & Transcripts

- VPAT version 1-1.6: 1194.22 B
- VPAT 2-2.3: 500 (Software)
- WCAG: 1.2.2 (Captions- Prerecorded) & 1.2.3 (Audio Description)
- Equivalent alternatives for any multimedia presentations and synchronized with the presentation
- Flagged as “Streaming Media Only” but all research databases may have such content
- Look for closed captioning and/or transcript
- Test with screen reading software & keyboard

Identification of Interactive Elements

- VPAT Version 1-1.6: 1194.22 L
- VPAT Version 2-2.3: E205.2-4
- WCAG: 2.1.1
- Refers to interactive content (buttons, check boxes or other mouse input), news tickers, media players and browser games, etc. Is this content accurately identified via text for use with screen readers?
- Tested with screen reader

Forms

- VPAT Version 1-1.6: 1194.22 N
- VPAT Version 2-2.3: E205.2-4
- WCAG: 2.3.2.1
- “forms” includes search boxes in databases, entry boxes, drop down menus etc.
- Is the purpose of form stated? Is the purpose accurate?

Skip Navigation

- VPAT Version 1-1.6: 1194.22 0
- VPAT Version 2-2.3: E205.2-4
- WCAG: 2.4.1 & 1.3.1
- By-pass blocks
- Can a user skip directly to content or must they tab through every word, every option?

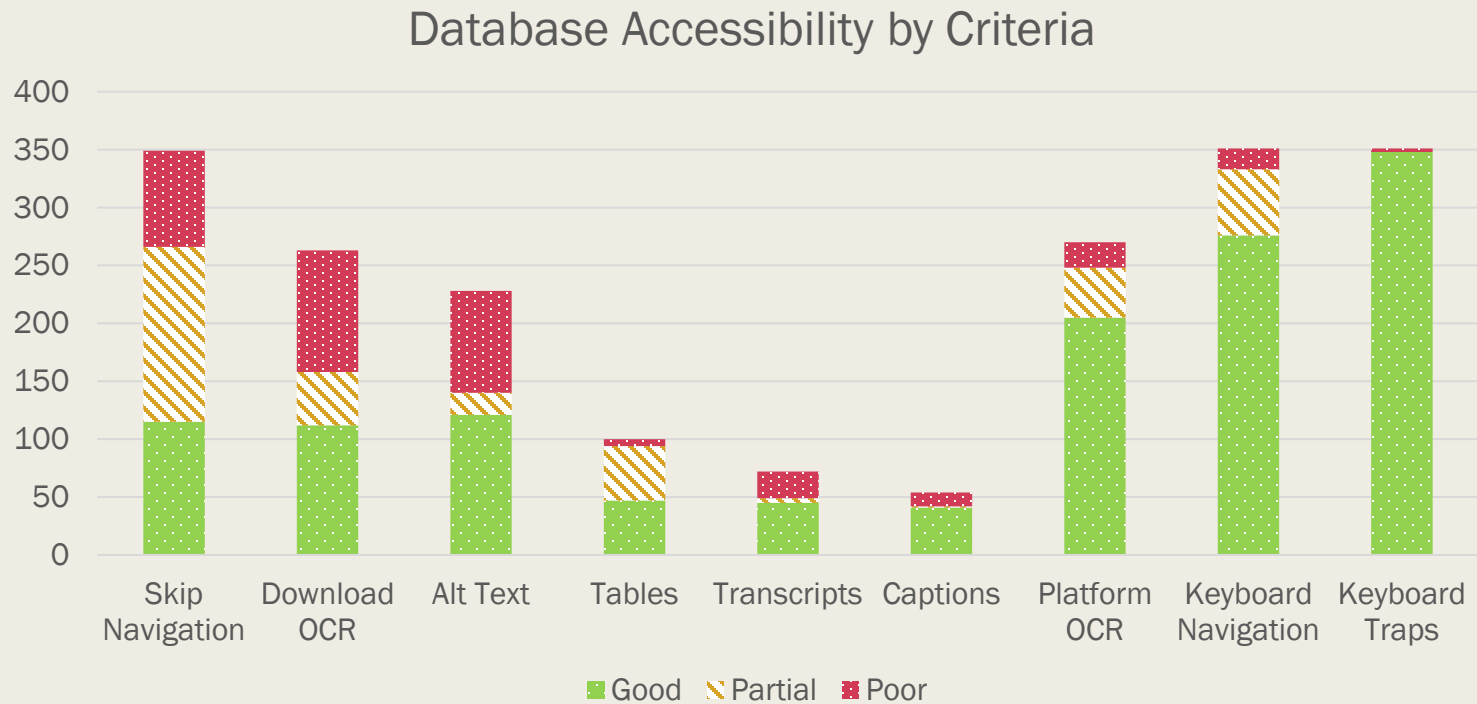
Limited Movement Operation

- VPAT Version 1-1.6: 1194.31 F VPAT Version 2-2.3: 303.7 & 303.8
- WCAG: 2.1.1
- Can this website be used with a keyboard?
- Watch for keyboard traps
 - [Video of keyboard trap example](#)

Documentation

- VPAT Version 1-1.6: 1194.41 B “End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats for alternate methods upon request, at no additional charge. “
- VPAT Version 2-2.1: 602.2 & 603.2 “Accessibility and Compatibility Features”
- WCAG: 3.3.5 “Help”
- Are users able to easily find information regarding the site’s accessibility features and compatibility information? Is this documentation available in alternate formats?
- Tested using NVDA (or other screen reading software) and keyboard

Usability Testing: Results



Helpful Resources

- BTAA (Big Ten Academic Alliance) E-Resource Accessibility
 - [*E-Resource Testing*](#)
 - [*Standardized License Language*](#)
- [VPAT Repository](#)
- Training Resources
 - [*North American Serials Interest Group \(NASIG\)*](#)
 - [*Kansas Accessibility Resource Network \(KSARN\)*](#)
- [Accessibility Remediation Guide](#)
- [VPAT 2.3 Template](#)

Questions?

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Digital Accessibility Standards

- WCAG: <https://www.w3.org/TR/WCAG20/>
- WAI-ARIA: <https://www.w3.org/TR/wai-aria/>
- ATAG: <https://www.w3.org/TR/ATAG20/>
- UAAG: <https://www.w3.org/TR/UAAG10/>