

Accessibility

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Accessibility is a core value and design component of Fulcrum. We are dedicated to creating inclusive services and content for all readers, and are constantly working to make Fulcrum and its content as accessible and usable as possible.

The Fulcrum platform aims to meet the latest [WCAG 2 AA Standards](#) (currently WCAG 2.1 AA) in both the platform and its content by providing infrastructure and resources to support accessible books, image descriptions, transcripts for audio, captions for video, and alternative formats for digitized content.

The extent to which Fulcrum meets WCAG 2.0 and Section 508 of the U.S. Rehabilitation Act is measured and reported in Fulcrum's [Voluntary Product Accessibility Template \(VPAT®\) Version 2.3 INT](#). The extent to which electronic documents which comprise individual collections on Fulcrum meet WCAG 2.0 and Section 508 of the U.S. Rehabilitation Act is [documented in collection specific VPATs](#).

Accessibility features, compatibility, and known issues are also summarized on this page.

Need Help?

If you need to be provided with an accessible version of a book or need other assistance using the platform, please email fulcrum-info@umich.edu.

If you would like to share general comments, suggestions, or other ideas, please do so using our [feedback form](#).

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Accessibility Timeline and Roadmap

Our active development on accessibility issues is publicly available and can be tracked in our [issue tracker for Fulcrum](#).

2020

From January to March 2020, in collaboration with [Michigan State University Usability and Accessibility Research Consulting](#), Fulcrum was tested by assistive technology and limited dexterity users, identifying usability and accessibility issues with the Fulcrum E-Reader which we are actively working to address.

In March and May 2020, we worked to update our Voluntary Product Assessment Template from 2.1 to VPAT® Version 2.3 INT. In addition, we released collection-specific VPAT®s for the University of Michigan E-Book Collection, the ACLS Humanities E-Book Collection, and the BAR Digital Collection.

2019

In August and September 2019, the Fulcrum team collaborated with the [DAISY Consortium](#) to have the Fulcrum Reader evaluated for <http://epubtest.org>. Several accessibility and usability issues and best practices were identified and Fulcrum developers are working to address identified issues. We will continue to work with the DAISY Consortium to have future versions of the Fulcrum Reader evaluated.

In August and September 2019, the [University of Michigan Press Ebook Collection](#) received a high-level accessibility evaluation and a PDF accessibility evaluation. These evaluations were conducted by Deque on behalf of the [Big Ten Academic Alliance \(BTAA\) E-Resources Committee](#). The resulting [reports were published](#) alongside our response. Several new accessibility issues were identified and are currently being addressed by the Fulcrum development team.

In January 2019, Fulcrum released the [Fulcrum EPUB Specification](#).

2018

From June to August 2018, Michigan Publishing and Fulcrum worked with Luke Kudryashov through the [Rackham Public Engagement Fellowship program](#) to conduct an accessibility evaluation of the Fulcrum platform. Building on the previous usability testing, Luke completed a VPAT 2.1 by testing the platform with the use of assistive technology, documented additional accessibility and usability issues, and also worked with Emma DiPasquale, the Fulcrum community manager, to provide more detailed accessibility documentation for the Fulcrum website.

From January to March 2018, in collaboration with [Michigan State University Usability and Accessibility Research Consulting](#), Fulcrum was tested by assistive technology users, identifying usability and accessibility issues, which we are actively working to address. Some of these include: usability issues for assistive technology; missing image descriptions for assistive technology navigation; and missing captions and transcripts for video and audio content.

Compatibility with Keyboards and Screen Readers

Screen Reader Compatibility

Fulcrum should be compatible with most major screen readers, but is optimized for use with NVDA in Firefox. New features are tested with NVDA in Firefox and VoiceOver in Safari.

Fulcrum should be compatible with recent versions of the following screen readers:

- JAWS
- NVDA
- VoiceOver

The site should also be compatible with:

- basic operating system screen magnifiers and contrast settings
- accessibility browser extensions, such as Read Aloud (text to speech), Zoom Text Only (magnifier), and High Contrast for Chrome
- speech recognition software

- operating system speech packages

Known issues

For readers using NVDA:

- In the Fulcrum Reader, alt-text image descriptions will be read when the embedded image is selected via the TAB key, but will not be read automatically via continuous reading. Alt-text image descriptions can be accessed by selecting the embedded image via keyboard controls or by following the link to the full image media page.
- In the Fulcrum Reader, when searching inside the text of a book and following a search result, the matched term in the text is indicated on the page only through visual highlighting of the matched text, but the excerpts and chapter locations are accessible through screen reader technology.
- On **book title pages**, "Table of Contents" is the default tab. To get to other tabs on that page, navigate to the "Table of Contents" heading and press the right arrow key.
- On **resources pages**, "Info" is the default tab. To get to others tabs, navigate to the "Info" heading and press the right arrow key.

For readers using VoiceOver:

- When the focus in the Fulcrum Reader is on a piece of embedded content such as a video or image, the VoiceOver rotor only recognizes the media controls as links. To access the other links and menu buttons through the rotor, navigate away from the embedded piece of media first.

Keyboard Compatibility

- In the Fulcrum Reader, all of the pages, and media content such as videos, audio, and images should be accessible via standard keyboard controls only (no use of a mouse required).
- Standard keyboard controls include:
 - TAB to move through links and buttons
 - SHIFT+TAB to go back to a previous link or button
 - ENTER to select
- **Stats charts** and some specialized content such as 3D models cannot be controlled via keyboard.
- Left and right arrow keys in the Fulcrum Reader provide shortcuts for easy page flipping or scrolling.

- Using scroll mode in the Fulcrum Reader, Page Up and Page Down and up and down arrow keys also allow for page scrolling.
- The default video player shortcuts are as follows:
 - Alt + Control + p or spacebar = Play/Pause
 - Alt + Control + s = Restart
 - Alt + Control + r = Rewind
 - Alt + Control + f = Forward
 - Alt + Control + v or 1-9 = Volume
 - Alt + Control + m = Mute/Unmute
 - Alt + Control + c = Hide captions
 - Escape = Close current dialog or popup menu

(The modifier keys can be changed through video keyboard settings.)

Known issues

For readers using keyboard only:

- In the Fulcrum Reader, pressing TAB to enter the text of the book takes the focus back to the first link in the chapter, rather than the first link on the currently opened page.

Accessibility Features

- For certain content, users can choose between page-by-page and scroll view in the Fulcrum Reader. To switch views, select the Preferences and Settings button and choose your preferred Display mode.
- AblePlayer video and audio player has the capability for captions, audio descriptions, and transcripts, though not all publishers may provide these features. The caption font, size, color, and location can be adjusted in the player settings. Captions and transcripts are available when provided by the publisher.
- Image descriptions are enabled for screen readers through alt-text attributes (when provided by publisher).
- While there is no built-in text-to-speech feature, screen readers and text-to-speech browser extensions such as Read Aloud for Chrome should work with the Fulcrum Reader as well as all of the book, publisher, and media pages.

For readers with low vision:

- In the Fulcrum Reader, a book's text can be zoomed up to 400% through the Preferences and Settings menu. Switching to scroll view is recommended when enlarging the text as this will shift the text from two columns to one.
- Operating system text zoom and font accessibility settings and browser extensions such as Zoom Text Only for Chrome should work with all of the other text on book, publisher, and media pages, as well as the menu bars in the Fulcrum Reader.
- The video player offers a full screen view and the image viewer offers a zoom function.
- The video player supports user control of caption settings, including toggle, position, font, size, text color, background, and opacity as well as user control of audio description (when captions and audio descriptions provided by publisher).
- Operating system contrast accessibility features and browser extensions such as High Contrast for Chrome should work with the Fulcrum Reader in addition to all other Fulcrum pages.

Accessibility of Content on Fulcrum

Fulcrum provides hosting for a number of different publishers. Accessible content is the primary responsibility of each publisher and we work with them to support and improve the accessibility of their content. Below you will find a list of accessibility features and known content issues in large collections hosted on Fulcrum.

ACLS Humanities E-Book

ACLS HEB Voluntary Product Accessibility Template (VPAT®) Version 2.3 INT

There are two types of book content within the ACLS Humanities E-Book (HEB). The type informs the accessibility of that content:

- EPUBs created by reformatting print to digital and include page scans and uncorrected OCR text. When read in the Fulcrum Reader, the uncorrected OCR can be accessed by adjusting the Settings and Preferences to use the text renditions. These titles are available for chapter download only in PDF format. The PDF downloads do not include the uncorrected OCR.
- EPUBs created by reformatting print to digital and include reflowable, structured text. The content of these EPUBs are compatible with assistive technology. These titles are not available for download.

ACLS HEB titles do not contain textual descriptions of images.

To request remediation of any content in the ACLS HEB, it is recommended to first contact the publisher of that title. The publisher information can either be found in the Get Citation tool in the Fulcrum Reader, or found on the title landing page beneath the author name, and may include a link to the publisher's webpage. If you cannot find the publisher information, please send an email with the title of the content, your preferred format, and the URL to fulcrum-info@umich.edu.

University of Michigan Press Ebook Collection

UMP EBC Voluntary Product Accessibility Template (VPAT®) Version 2.3 INT

All titles in the University of Michigan Press Ebook Collection (UMP EBC) are available for download in EPUB and PDF formats, with the exception of a handful of titles only available in one format. In all cases, we recommend the EPUB format as the accessible format – all EPUBs in the UMP EBC have been designed following the Fulcrum EPUB Specification, designed to ensure compatibility with assistive technology and are more likely to contain image descriptions. However, we recognize not all print disabled users prefer EPUB and will remediate PDF files with textual descriptions of images upon request.

All titles published after 2019 contain at least basic textual descriptions of images, however these descriptions are only contained within EPUB files. All audio and video associated with books produced after 2018 have transcripts or captions available. Some supplemental content has been reformatted from print to digital and may not contain Optical Character Recognition text. If OCR text has been included it has not been corrected.

To request remediation of any content in the UMP EBC, please send an email with the title of the content, your preferred format, and the URL to umpress.accessibility@umich.edu.

Lever Press

It is the goal of Lever Press that every title containing illustrations also include textual descriptions of those images, and that audio and video content associated with titles include transcripts and captions.

Lever Press titles, while open access and freely available, are not available for download.

To request remediation or a file download of any Lever Press title, send an email with the title of the content, your preferred format, and the URL to mpub-help@umich.edu.

British Archaeological Reports Digital Collection

BAR Digital Collection Voluntary Product Accessibility Template (VPAT®) Version 2.3 INT

To request remediation of any content in the BAR Digital Collection, please send an email with the title of the content, your preferred format, and the URL to fulcrum-info@umich.edu.

Resources for Creating Accessible Content

There are several resources the Fulcrum team has developed to assist publishers in the creation of accessible content. These resources, as well as others on the web are detailed below.

- **Describing Visual Resources Toolkit**

Funded by the Kress Foundation, this resource was developed by the University of Michigan Press in partnership with leaders and experts in the fields of accessibility for libraries, museums, and archives. The resource aims to help authors, publishers, and others develop a best practice for describing images in the humanities and social sciences.

- **Fulcrum EPUB Specification**

In partnership with **Apex Covantage** we developed and released a specification for the creation of highly accessible and Fulcrum compliant EPUBs. The specification was released under an Apache 2.0 License and can be re-used in-house by publisher's production teams, or supplied to vendors that assist in the creation of a publisher's ebook files.

- **Accessibility and Publishing**, by Stephanie S. Rosen

Written by University of Michigan Library's Accessibility Specialist, this open access ebook is a primer for publishers looking to gain an orientation to the complex landscape of accessible publishing in the scholarly ecosystem.

- **Book Industry Study Group Guide to Accessible Publishing and Cheat Sheets**

A live, up-to-date guide for publishers looking to start making their content accessible.

Fulcrum is a publishing platform that helps publishers present the full richness of their authors' research outputs in a durable, discoverable, accessible, and flexible form. For more information about the platform, please subscribe to our [newsletter](#), follow us on [Twitter](#), or send an e-mail to fulcrum-info@umich.edu.

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