

Making Accessible Ebooks at Minnesota



- Preamble
- Manuscript Foundations
- Scribe's "Hub"
- Passing Through Typesetting
- Getting to the Ebook
- Enhancing the Ebook
- Caveats and Constraints
- Next Steps

Preamble

- Our ebook process is entirely enmeshed with our print process.
- We have one singular workflow for print and digital titles.
- Accessibility concerns impact both formats every step of the way.
- Our workflow relies on Scribe—a subscription-based vendor who give us access to a set of local and online production tools that are the foundation of all our work.
- Once we have final PDFs ready for the print edition, we continue on with our workflow to produce an ebook in-house in the .epub format.
- EPUBs are collections of, primarily, XHTML files. XHTML is a stricter paradigm of HTML.

Manuscript Foundations

- The manuscript stage spans final manuscript submission through the end of copy editing, and takes place entirely in Microsoft Word.
- Using Word's style pane, manuscripts are tagged by editorial assistants with [Scribe](#) styles, giving a manuscript semantic structure.
- Styles are applied to paragraphs, as well as runs of text within them—all of which eventually correspond to an [HTML element](#).
- During this stage editorial assistants ask authors to provide brief descriptive statements for every image in their art package—alt text. Long descriptions are secured as needed.

Scribe's "Hub"

- When copyediting is complete, the final manuscript is loaded to Scribe's online Hub and converted from Word files into InDesign Tagged Text (IDTT) for typesetting.
- Into the Hub we also load all the art, alt text, and general metadata about the book—as well as metadata specific to the title's accessibility affordances.
- At this point we also use a file the Hub creates to isolate terms that have been tagged as coming from a foreign language. Authors are then asked to define the language of each in an Excel document.

Passing Through Typesetting

- Typesetting begins when an in-house production editor or freelance packager or typesetter places the IDTT file into InDesign.
- The text remains associated with the same Scribe styles they were in Word, both at the paragraph and character level.
- How different elements render here are specific to InDesign. The design implemented for print has no bearing on the look of the ebook.
- Even in print there are accessibility considerations: distinguishing elements with patterns instead of colors, for example.
- When typesetting is complete, a final PDF is sent to the printer *and* an XML file is exported from InDesign, the basis for our ebook.

Getting to the Ebook

- Using Scribe's Hub, we convert the XML we exported from InDesign into a Scribe Abbreviated Markup (SAM) file. This file is like a plain-text Word file.
- We run a series of quality control checks on this file and also associate non-English terms with their proper ISO language code, changing things like this `<i class="fterm">Ich laufe sehr gerne</i>` into this `<i class="fterm" lang="de" xml:lang="de">Ich laufe sehr gerne</i>`.
- After we confirm we still have a valid SAM file, we use the Hub to convert it to an ScML (Scribe Markup) file, moving us closer to the final XHTML of the EPUB. We run more checks on the ScML file, confirming the presence of alt text and the quality of our ebook art package.
- At last we have the Hub convert our ScML to an EPUB—a baseline one . . .

Enhancing the Ebook

- The EPUB the Hub produces gets us nearly where we need to be.
- We still need to check coding for [ARIA roles](#), we add back-link titles for end notes. If there is complex art, we'll add in author-supplied "long descriptions." And we update the navigation files for completeness.
- To make these adjustments we need to break apart the EPUB into its constituent files, and then once done run a script in Terminal to repack everything back into an EPUB.
- After repacking the file, we confirm it is valid and also run an automated accessibility check, using a Terminal script and a specialized app to do so.
- Manifold titles receive additional attention, adjusting coding patterns to be more useful for navigation by screen readers.

Caveats and Constraints

- The process we just covered is a best-case scenario.
- Elements like the following all require individual attention to make them accessible in the EPUB: mathematical notation (simple or otherwise), computer code, linguistic notation, concrete poetry, strikethrough, true underlining, involved tables and lists, sidebars, glossaries, columns, and other complicated items.
- We are limited in how we can address concerns by the [EPUB spec](#) (spine elements), HTML standards (mapping print concepts to digital ones), distribution channels (file size), assistive technology ([punctuation](#)), and reading systems (inconsistent treatment).
- For ethical and legal purposes, as well as functional reading ones, the [WCAG \(Web Content Accessibility Guidelines\) 2.x AA standards](#) are our guiding light.

Next Steps

- That is what we're doing now. As the industry adapts to meet the demands and challenges of making publications accessible, things will change.
- Scribe has made significant changes in the past few months, with more promised before the end of the year.
- As part of our process, we are exploring ways to engage with these concerns before a manuscript is done and (mostly) set, so the process flows more seamlessly.
- We expect (hope) that as these concerns permeate the academy, authors will begin to have a better natural feel and expectation for them.