Comm Lab Website Accessibility Guide

Written by Brian Mernoff, edited by Diana Chien
Last updated 9/26/2024

This guide is designed to help you
1. make sure that all new content posted on the web pages meets accessibility standards, and
2. update previously uploaded content.

Please note that this guide is not comprehensive. More information on specific areas of accessibility can be found in the AeroAstro Comm Lab Accessibility CommKit (mitcommlab.mit.edu/aeroastro/commkit/accessible-communication)

MIT Disability Access Services (https://studentlife.mit.edu/das)is a useful internal resource.

I also recommend the W3C Web Accessibility Initiative Website (www.w3.org/WAI) for the most detailed and up-to-date best practices.

Table of contents

I. Key advice

- Don't let perfect be the enemy of the good.
- Ask for guidance as needed.
- Integrate accessible practices into the process, not as an add-on at the end. If materials are designed to be accessible from the beginning, it will save a lot of time, effort, and money.
    - Build these practices into your content design process with your Fellows to delegate these tasks as they need to be done either way.
- Be wary of services claiming to be quick accessibility fixes, such as Overlays, as they often do not meet minimum requirements.
- Once you go through this process a few times, these adjustments generally become very quick, especially when integrated from the beginning.

Many of these practices are to make sure the website can be accurately interpreted by a screen reader. There are many additional best practices and requirements, such as keyboard navigability, that are handled on the back-end by the web developer.

II. Workflow for remediating content

1. Checking general accessibility

- Use a website accessibility checker such as WAVE to review website pages and identify issues such as missing alt text, issues with headers, HTML, and more.
    - This is a good way to create a list of things to address when you have a lot of already published pages.
    - Note that this does not catch everything, including pdfs.
- Contact MIT Disability and Access Services for expert advice.

2. Text and Tables

2a. Text

- Text should be high contrast against background
- All text should be in HTML.
    - Text should not be provided as an image.
    - If text must be in an image, the information within in it must be accessible in at least one of the following ways. (multiple modes of access is even better)
        - Information in the image can be fully provided in a caption if appropriate
        - Visual information is provided through short alt text
            - Complex images may need a separate long description, which can be linked as a separate page or document to the main page
        - All of the information contained in the image is also provided through another mode such as in the main body of the text.
- Appropriate header and paragraph tags are used
    - Do not skip header levels

2b. Links

- Links should be provided as descriptive text with a hyperlink.
- Positive example:
    - MA Best Ice Cream Guide
- Do not use links like those below:
    - Click here
    - https://www.pbs.org/food/features/best-ice-cream-massachusetts/
      [A screen reader would read all of the above hypertext text. Imagine listening to many very long links.]

2c. Tables

- Table regularity: Tables created using the new (as of fall 2023) table tool in WordPress should be accessible by default.
- Be cautious with tables as they can be tricky to make accessible.
-

3. PDFs

- Use HTML as much as possible.
- If you have to use a PDF (which will generally be necessary for annotated examples), follow these steps to make them more accessible. This guide covers the most common issues I have come across. For more information, see Adobe's Accessibility Support Page (https://helpx.adobe.com/acrobat/using/create-verify-pdf-accessibility.HTML).

1. Open the PDF in Adobe Acrobat.
2. Make sure all text is detected as text. You should be able to click and place a cursor anywhere in a text block.
   a. If you can only select large chunks of text…
      i. Click "All Tools" → "Scan & OCR"
      ii. This will convert any text that is detected as an image into selectable text
3. Click "All Tools" → "View More" → "Prepare for Accessibility".
4. Click "Accessibility Check" → "Start Checking".
   a. This will generate an accessibility report
5. Click the resulting drop-down menus to view issues with the document.
   a. Access Flags and Fixes for items with ⊗ or ❓
      i. Tagged PDF
         1. Click "Autotag Document" in "Prepare for Accessibility" menu
   b. Title
      i. Right-click the document → "Document Properties" and enter the document title
   c. Primary Language
      i. Right-click the document → "Document Properties"→ "Advanced" and set language to English (or another language as appropriate)
   d. Alternative Text
      i. Right-click on "Figures alternate text – Failed" → "Fix"
      ii. Use the pop-up menu to add alt text to each image.
      iii. Click "Save & Close" when finished
   e. Headings
      i. Click Appropriate Nesting – Failed to open the drop-down
      ii. Right-click on one of the elements → "Show in Tags Panel"
      iii. Right-Click the tag →"Properties" and adjust the tag type appropriately
         1. Usually this is a heading level skip problem. You should not skip a heading level. For example if you have H1, do not have H3 until H2 has been used.
   f. Reading Order
      i. This needs to be manually checked
      ii. Click "Reading order" under the "Prepare for accessibility menu
      iii. Click "Show Order Panel"
      iv. You can click and drag each item to make sure a screen reader will read it in the correct order.
   g. Annotations
      i. Annotations to pdfs should be tagged as annotations.
      ii. Click on the "Tags menu" on the accessibility panel 🏷
      iii. Find the tag that corresponds to the annotation, right click on the current tag →properties → change type to annotation.
6. Rerun the accessibility check to make sure all issues have been addressed.
7. If you are unable to make the PDF accessible for whatever reason, you may alternatively include the information in HTML alongside the annotated example. See this Portfolio CommKit (https://mitcommlab.mit.edu/aeroastro/commkit/portfolios) for an example.
8. Make sure you save the document before closing it.

4. Multimedia

4a. Images

- All images that are not just decorative must have alt text that describes the visual information of the image.
    - Alt text should be kept short: 1-2 sentences.
    - Alt text should be specific to the context of the image and the intended message. (If you reuse the same image in a different context, adapt the alt text.)
- Alt text does not provide the same information as a caption. To write alt text, think about what visual information is missing if you could only read the caption without seeing the image. This visual information goes in the alt text.
- For complex scientific images, such as graphs where the specific data points and trends are important, you may need to provide a separate in-depth description for each image called a "Long Description." This should be an HTML page or accessible PDF that is linked in a place someone would encounter when encountering the image with a screen reader.
- Images should have high-contrast and be accessible to people with different types of color blindness.
    - An app such as Chromatic Vision Simulator is useful for checking this
- Here is a resource on writing good alt text (https://accessibility.huit.harvard.edu/describe-content-images). More can be found in the Accessible Communication CommKit (https://mitcommlab.mit.edu/aeroastro/commkit/accessible-communication).

4b. Videos

- Videos must have accurate captions. (This is an important legal requirement, as highlighted by the now settled lawsuit against MIT and Harvard)
    - Automatically generated captions are not accurate enough. You can use them as a start, but must review and edit them to make sure the text and punctuation are correct.
    - If it is not visually obvious who is speaking, the speaker should be listed in the caption prior to what they say.
    - Important non-verbal sounds should be captioned.
    - Do not edit captions for grammar. They should reflect what the person said and how it was said.
    - Filler words like "um" can be removed only if they do not have any other meaning.
    - If there is no audio, "no audio" should be displayed as the caption
    - When possible, provide some space at the bottom of a video frame when it is recorded, that does not contain any important visual information, for captions to be placed.
        - This is to avoid blocking important information or having the captions jump around the screen like in many TV shows.

Webpage Audit Table

Description	Excellent	Good	Needs some improvement	Needs a lot of improve-ment *or* N/A	Notes
Hyperlinks are contained within descriptive text					
Links clearly identifiable					
Images contain alt text					
Appropriate header levels are used					
Fonts and text block formatting is legible					
High color contrast for text and graphics					
Video and audio contain accurate captions					
PDFs are formatted to be accessible					
Information in graphics is also available through alt text, descriptive text, or the main body of the website					
Other notes from running the accessibility checker					