HOW-TO TEST YOUR WEBSITE AND APPLICATIONS
EASY WAYS TO SPOT ACCESSIBILITY PROBLEMS

Tim Offenstein – Sept. 30, 2025

GREETINGS!

- Retired in October 2020 but couldn't give it up!

- *Past:* Lead Information Design Specialist, founder of IT Accessibility Liaisons, co-author of the Campus Accessibility Policy, UIUC Webmaster Godfather.

- *Present:* Extra Help! Doing accessibility review of UIUC campus websites and applications, like the Library's suite of applications.

- Thanks to Nicole Swanson for the invitation.

AM I ACCESSIBLE?

- Are there problems with my web site?

- What are some ways I can find out quick?

- What are some good tools that will help?

- Can I trust what the tool says?

MANUAL & AUTOMATED

- Both are important

- Automated catches about 40 to 60% of the issues

- Manual catches human interaction errors

- Logic errors – does this make sense?

- User interface – is this easy or hard to use?

STEP 1
WHAT DO YOU SEE?

- Are things organized for good eye flow?

- Links – Read More…, Click here, URL links

- Consistent navigation

- Strong contrasting colors

- Readable type

STEP 2
USE YOUR INDEX FINGER!

Start with the Keyboard and the TAB key

- TAB to go forward

- Shift+TAB to go back

- Return/Enter key to activate

- Space Bar to select

- Arrow keys to move within a popup window

- ESC key to exit a window

WHAT DOES THIS TELL US?

- Visual focus – can you see where you're at on the page?
- Focus order – is it logical?
- Interaction – can you work with the web page? Open/close windows, etc.
- Form controls – can you fill out a form, activate the buttons, select checkboxes?
- Videos – can you start, pause, control the video?
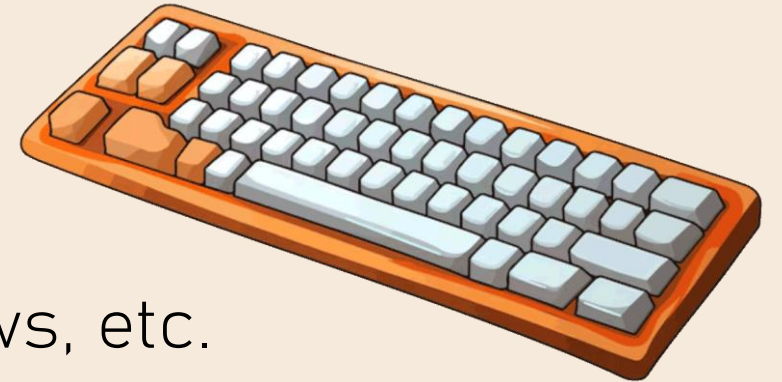
DRAWBACKS

- Tab key only shows you things like links (focusable)

- Difficult to do if Visual Focus is weak or missing (depends on Browser)

- Does not create the same interaction as users with assistive technology

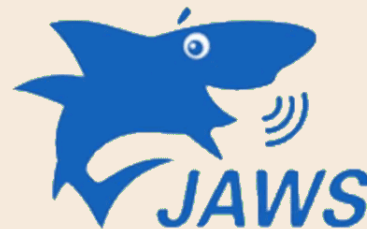- Majority of screen reader users rely on HEADERS and LANDMARKS to navigate the page

TAKE A LOOK

A WORD ABOUT SCREEN READING SOFTWARE (1 OF 3)

JAWS, NVDA, VoiceOver

- JAWS (Job Access With Speech) – 55% market share, Windows only, free 40-minute trial

- NVDA (NonVisual Digital Access) – 30% market share, Windows only, free

- VoiceOver – Mac product, integrated into OS/iOS

- Learning curve on any screen reader is not trivial

- Screen Readers provide a lot of helpful navigation tools/lists

- Different then page readers

- JAWS has several hundred keyboard commands

- NVDA – open source, easiest to use

- VoiceOver – lots of helps, reasonably easy to use.

Mobile Screen Readers

- VoiceOver for iOS

  - Easy access through settings – Triple click

- TalkBack for Android

  - Hold Volume key for 3 seconds

- Quickly shows whether or not your site is accessible

# STEP 4
AUTOMATED TOOLS

- Authored by humans

- Subject to interpretation of WCAG

- Can miss major errors

- These are just the FREE tools

- This review is NOT exhaustive

- Many are hooks to get you to sign up for their service

BOOKMARKLETS

- Available Bookmarklets

- Easy to install, just click and drag to your Bookmarks bar

- Doesn't work on sites behind a firewall

- accessibility-bookmarklets.org/
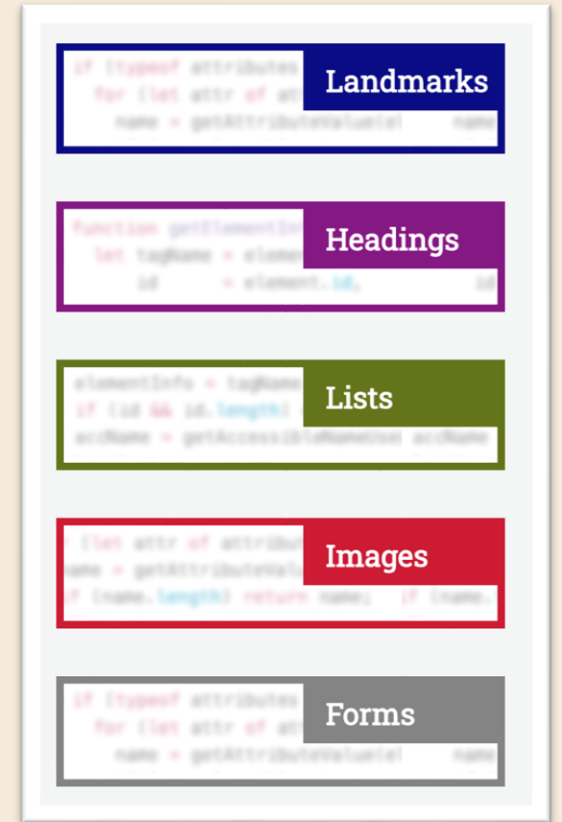
Study: Civil organizing persisted during Syrian civil war [h1]

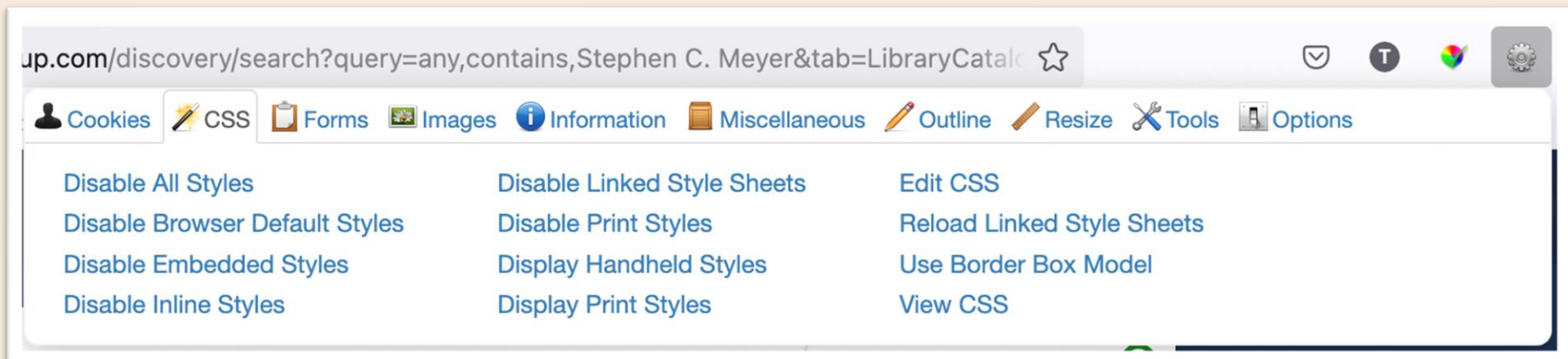JANUARY 22, 2025 8:00 AM | BY PHIL CICIORA | BUSINESS AND LAW EDITOR | Humanities | Research news

Web Developer

Adds a toolbar button with various web developer tools.

- Excellent tool for displaying what's behind the scenes

- Availability varies per browser

- **chrispederick.com/work/web-developer/**

COLOUR CONTRAST ANALYSER

- Stand alone application

- Shows the precise contrast ratios

- Shows type-size violations

- References specific WCAG 2.1 AA and

  AAA Success Criteria

- www.tpgi.com/color-contrast-checker/

WAVE
web accessibility evaluation tool

- One of the original accessibility tools

- Overlays page with lots of icons

- Flags everything, whether it's a violation or not

- Lots of False-Positives

- Not recommended

- wave.webaim.org/

ANDI

Tutorial   Modules   Alerts   FAQ   Developer Tips   Install

- Developed by Social Security Administration to encourage compliance with Sect. 508.

- Interface overlays the page

- www.ssa.gov/accessibility/andi/help/install.html

ANDI

Tutorial   Modules   Alerts   FAQ   Developer Tips   Install

- Does a nice job highlighting focusable elements

- Modules has a TABLE highlighter which is handy
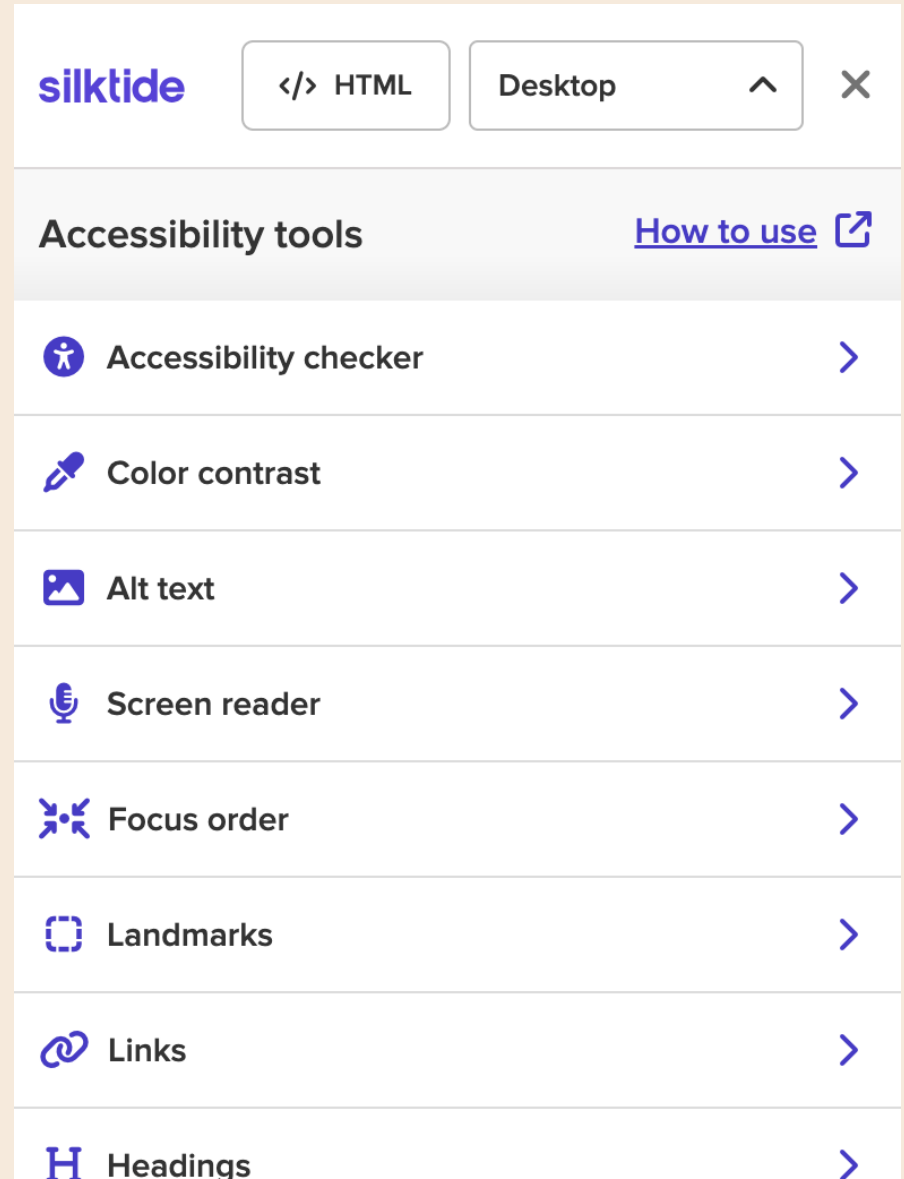
- Developer Tips has a lot of good information.

SILKTIDE

- Add as an extension

- Provides a wide array of tools

- Highlights issues and gives

  good explanations

- https://silktide.com/

silktide

</> HTML   Desktop

Accessibility tools

How to use ↗

- Accessibility checker   >
- Color contrast   >
- Alt text   >
- Screen reader   >
- Focus order   >
- Landmarks   >
- Links   >
- Headings   >

ARC Toolkit
Version: 5.7.6

- Effective display and description of the issues

- Highlights where the issues are found

- chromewebstore.google.com/search/ARC%20Toolkit

Search anything

D-SELECT ERR   that contain r MD-SELECT ERR   anywhe MD-SELECT ERR

axe DevTools v4.101.0

- U of I has a license to this tool
- Load as an extension
- Cumbersome to get to

Elements   Console   Recorder   >

Sources
Network
Performance
Memory
Application
Security
Lighthouse
ARC Toolkit
axe DevTools

OCTYPE html>
ml lang="en"> scroll
head> ··· </head>
body> == $0
 <a class="skip-main alert-info" href="#m

 <div id="li-admin-navbar"> ··· </div>
 <div id="default-dataset-modal" class="m
 role="dialog"> ··· </div>
 <div class="container" id="main"> ··· </di
 <footer class="footer mt-10 py-2"> ··· </f
 <script src="https://code.jquery.com/jqu
 "sha256-9/aliU8dGd2tb60SsuzixeV4y/faTggFtohetphbbi0=" crosso
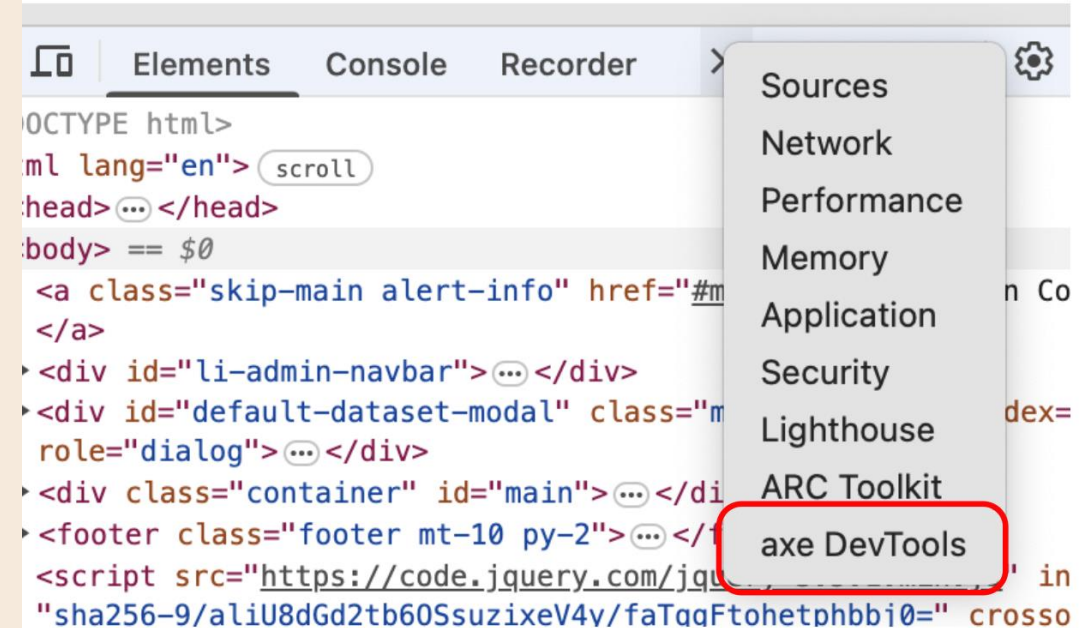
axe DevTools v4.101.0

- Intuitive interface

- Robust evaluation

- Good explanations of violations found

- Developed at University of Illinois Urbana-Champaign

- Jon Gunderson & Nick Hoyt

- Works only in Firefox

- Install through Mozilla's Add-ons

- ainspector.disability.illinois.edu/

- Updates automatically

- Good connection to related WCAG Success Criteria

- Gives excellent summation of the issues.

- Highlights where the violation can be found

- Technically oriented

- Strong support of ARIA

Rule Results

Element	Result	Pos	Action
h1.accessibl...	V	121	Move h1 element into an appropriat...
span.md-he...	V	276	Move span element into an appropr...
p	V	278	Move p element into an appropriate ...
li	V	281	Move li element into an appropriat...
li	V	282	Move li element into an appropriat...
li	V	283	Move li element into an appropriat...
li	V	284	Move li element into an appropriat...
li	V	285	Move li element into an appropriat...

All items ▾   that contain my query words ▾   any

What am I searching?

The Library Catalog is our discovery search tool for

- Books (electronic and print)
- Journals, magazines, and newspapers
- DVDs, CDs, and scores

WRAP UP

- Automated checkers are fallible

- They have their strengths and weaknesses

- Great way to get a quick overview

- Helps you communicate better with your audiences

COMMENTS/QUESTIONS/FEEDBACK?