



Moodle Accessibility Workshop

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Background

- **Two protocols:**
 - Simple evaluation protocol
 - Comprehensive evaluation protocol
- **Simple is like heuristic review**
 - Valuable for building understanding
 - Great first pass or when time is short
- **Comprehensive is like cognitive walkthrough on steroids**
 - Valuable for in-depth training
 - Complement to user-testing
 - For compliance checking

Method

- **Hands-on practice using both protocols**
- **Will include these tools:**
 - AIS Accessibility Toolbar (PC)
 - JAWS Demo
 - aChecker
 - Fangs
- **Will not be in-depth review of compliance checking against WCAG criteria**

Review Page

(<http://www.fsc.yorku.ca/fluid/moodle/>)

The screenshot shows a Mozilla Firefox browser window with the following elements:

- Browser Title Bar:** Fluid - Moodle Project - Mozilla Firefox
- Menu Bar:** File, Edit, View, History, Bookmarks, Tools, Accessibility, Help, del.icio.us
- Address Bar:** file:///C:/Documents%20and%20Settings/elledge/My
- Search Bar:** Google
- Navigation Bar:** Getting Started, Latest Headlines, Fluid - Moodle Project: ..., UX Accessibility Worki..., Wisconsin Coordinatin...
- Page Title:** Fluid - Moodle Project
- User Information:** You are logged in as Mike Elledge (Logout) English (en)
- Course Categories:**
 - Fluid usability test courses 5
 - Miscellaneous
- Search:** Search courses: Go
- Calendar:** October 2007

Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				
- Footer:** You are logged in as Mike Elledge (Logout) moodle

Simple Assessment

- **Step 1**: Assess layout, structure and content of page
- **Step 2**: Adjust layout
- **Step 3**: Navigate through the page
- **Step 4**: Check for alternative text

Step 1: Assess Layout

- **Is the page structured into logical sections?**
- **Are those sections clearly labeled, and is their function apparent?**
 - Do paragraphs, sections, and tables have meaningful headings?
 - Is the information in forms grouped in relevant "clumps"?
- **Is site content helpful to users of assistive technology?**
 - Can headings, captions and links be understood independently of their surrounding context?
 - Does sentence structure follow writing conventions in a consistent way?
- **Are there sufficient non-visual cues to convey the overall structure? (I.e., Are there sufficient text and/or explanations on the page to understand its purpose and functionality without relying on graphic elements).**
- **Are there sufficient visual cues to support page content?**
- **Are the most important information and navigational elements prioritized high on the page?**
- **Is navigation consistent from page to page? Is the structure of content consistent from page to page?**

Step 2: Adjust Layout

- **Is all the text still visible? Does it overlap?**
- **Does visual context break down at large text sizes?**
- **Are headers, labels, and visual cues still correctly associated with their content?**
- **Do columns shift or realign correctly?**

Step 3: Navigate Page

- **Do all links and controls receive focus as you tab through the page?**
- **Can all controls be activated with the Enter or Space keys?**
 - Is movement possible using arrow keys within the object (for example, to move around cells within a table, or within a form)?
- **Does tabbing follow a logical sequence through the page?**
- **Is content easily accessible and not secondary to navigational "chrome"? Are navigation and content formats consistent from page to page?**
- **Are there any areas where you get stuck and have to use the mouse?**
- **Are shortcuts or skip links provided to make keyboard access quicker? Are they visible and clear?**

Step 4: Alternative Text

- **Check for alternative text by placing your cursor over a descriptive image**
 - Does a text box pop up?
 - Is the description in the text box meaningful?
- **Look over the links on the page**
 - Do they make sense on their own (i.e., without visual context)?
 - If they would benefit from additional text, does a text box appear to present it?

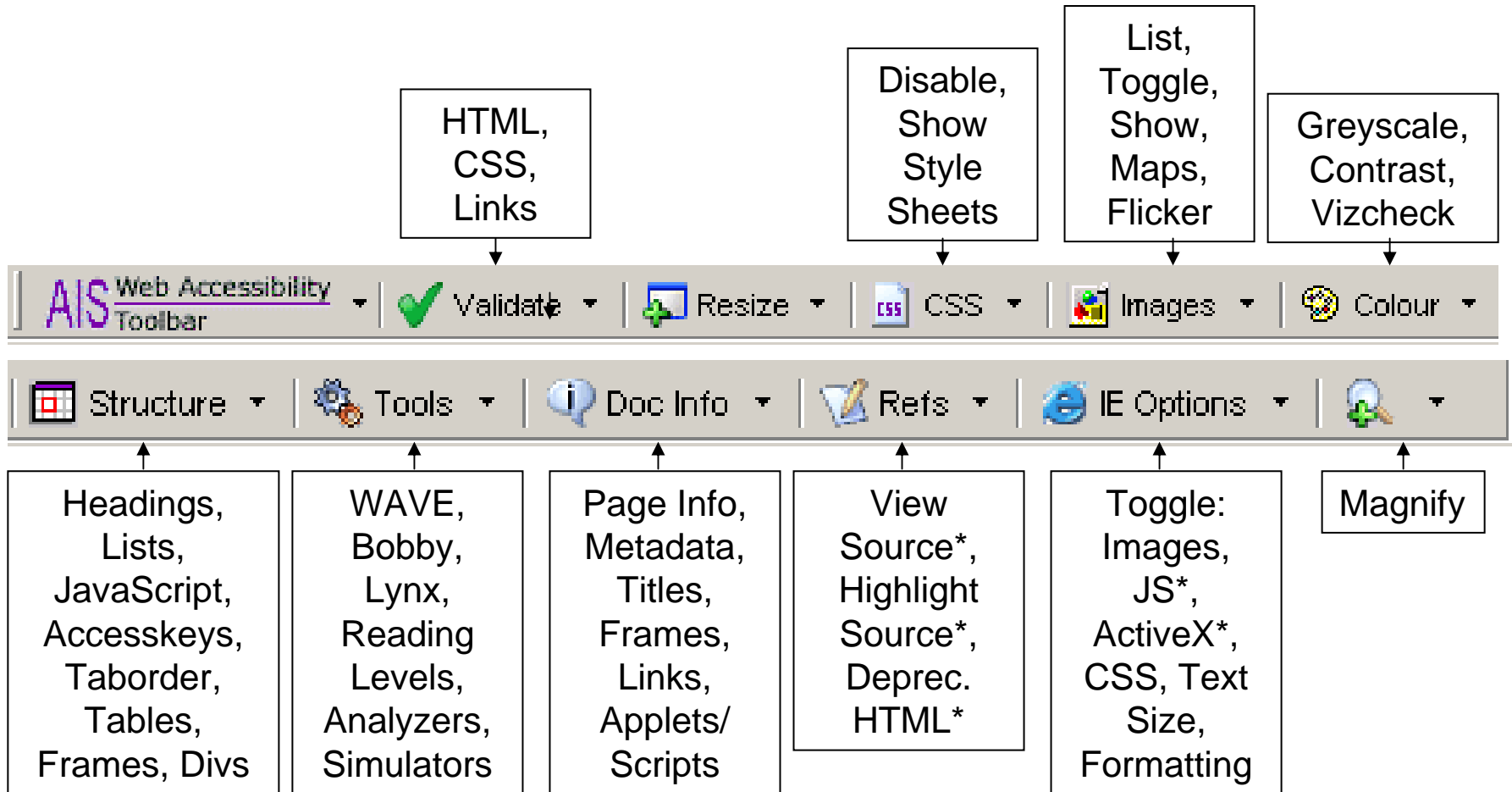
Comprehensive Assessment

- Step 1: Check for appropriate mark-up
- Step 2: JAWS Review
- Step 3: Check compliance

Step 1: Check Mark-up

1. Click on your tool and its first page will appear.
2. Go to the AIS toolbar, click on the "Doc Info" icon and select "List Links."
3. From within the "Doc Info" tool, select "Metadata Information."
4. Go back to the AIS tool bar, click on the Structure icon, and select "Headings."
5. Go back to the Accessibility Extension tool bar, click on the Frames icon, and select "Frame Name/Title"
6. Go back to the AIS tool bar, click on the Tables icon and select "Linearize."
Click on the CSS icon, and select "Disable CSS" and "Disable in-line styles."
Click on the Images icon and select "Remove Images."
7. Go to the lower right hand corner of Internet Explorer and change the page size to 400%.
8. Press "Zoom Out" four times to restore page to normal size. Press the refresh button to restore page appearance.
9. Go back to the AIS tool bar, click on the Color icon
10. Go back to the browser, and tab through the application.
11. Move through the application using your browser and arrow keys.

AIS Web Accessibility Toolbar



Accessibility Checklist--Example

Subject	Status	Recommendations
Images	OK	Images presenting meaningful content have <alt> and/or <longdesc> elements containing useful descriptions. Non-essential images have null tags (“”).
Links	OK	Links have unique and meaningful descriptions. Where text descriptions are redundant, title attributes provide differentiation.
Headings	OK	Headings appear in a logical hierarchy, have meaningful labels and there are no levels missing.
Accesskeys	OK	Accesskeys are present and functional.
Page Title	OK	Page title is descriptive and unique.
Tab Order	OK	Tabbing takes you through document in a logical order.
Functionality	OK	Tabbing takes you through document without triggering action. Controls work using only keyboard.
Style Sheets/ Linearization	OK	Document is useable, readable and sensible with style sheets turned off.
Colors	OK	Sufficient contrast between foreground and background colors; content not differentiated by color alone
Text Zoom	OK	Page is readable and functional at 4X magnification.
WAVE Review	OK	Page contains 0 accessibility errors and 10 warnings are accounted for.
W3C Validation	OK	Page is XHTML 1.0 Transitional compliant.

Step 2: JAWS Review

- **Listen for:**
 - Navigation scheme
 - Page structure
 - Sentence formatting

JAWS Demo I

- **Experience the UAC site using JAWS:**
 - Listen to page (ins + down arrow)
 - Check page title (insert + t)
 - Tab through links and link phrases (tab)
 - Scan through headings (h)
 - Search for item (ctrl + f, type “item”)
 - Review link phrases (insert + f7)
 - Review headings (insert +f6)
 - Go to different pages

JAWS Demo II

- **Review page functionality**
 - Links
 - Does each link work? (enter)
 - Does each link phrase match the destination page title?
 - Forms
 - Are form labels announced with input boxes or operations? (enter)
 - Do the forms work? Can items be entered and the form be submitted?
 - Tables
 - Are table captions and/or summaries read?
 - Are column and row headings read when moving between column or row cells? (down or up arrows)
 - Are column and row headings read for the current cell? (alt + control + numeric keypad number 5)
- **Quit JAWS**

Step 3: Compliance

- **Load your page (example: <http://www.fsc.yorku.ca/fluid/moodle/>). Copy the address, then save the page as a complete webpage into a file folder with a descriptive name (such as "Home Page").**
- **Open aChecker.**
 - Click the "Browse" button for the Local File box at the top of the page. Choose your saved file. Press the "Check It" button.
 - Review results. Click "sort by accessibility guideline" if it is highlighted. Save as "Webpage, complete" with a descriptive title (such as "Report Summary - Home").
 - Click on each guideline listed and save the resulting page including the Guideline in the title (such as "1.1-Home.html"). At this point you may choose to review each issue and determine its status.
 - Write down the results.
 - Repeat for the pages you want to test.

aChecker Output--Summary

Report Summary - ATRC Web Checker - Mozilla Firefox

File Edit View History Bookmarks Tools Accessibility Help delicio.us

file:///C:/Documents%20and%20Settings/elledge/My%20Documents/t

Getting Started Latest Headlines Fluid - Moodle Project: ... UX Accessibility Worki... Wisconsin Coordinatin... Kill Ugly Radio: Gilles F...

Navigation Text Equivalents Scripting Style Validators Tools Keyboard Options Zoom In 100% Zoom Out

ATRC Web Accessibility Checker Version 0.8.9

Web Page:

Local File:

Guideline: WCAG 2.0 L2 (change guideline) **Report: C:\Documents and Settings\elledge\My Documents\My Files\FLUID\York Demo\Fluid - Moodle Project.htm**

Status: **FAIL WCAG 2.0 L2** Problems: 2 known, 1 likely, 48 potential. Decisions: 0.

The table below shows the accessibility problems in your document sorted by accessibility guideline (sort by HTML group). Select any link in the table to view those problems or [view all the problems](#).

All Problems By Accessibility Guideline			
Guideline	Known	Likely	Potential
1.1 Provide text alternatives for all non-text content	1	0	0
1.3 Ensure that information and structure can be separated from presentation	1	1	17
1.4 Make it easy to distinguish foreground information from its background	0	0	2
2.4 Provide mechanisms to help users find content, orient themselves within it, and navigate through it	0	0	17
2.5 Help users avoid mistakes and make it easy to correct mistakes that do occur	0	0	8
3.2 Make the placement and functionality of content predictable	0	0	4

Checker AA

Done

aChecker Output—Item Detail

Problem List - ATRC Web Checker - Mozilla Firefox

File Edit View History Bookmarks Tools Accessibility Help delicio.us

file:///C:/Documents%20and%20Settings/elledge/M

Getting Started Latest Headlines Fluid - Moodle Project: ... UX Accessibility Worki... Wisconsin Coordinatin...

Navigation Text Equivalents Scripting Style Validators Tools Keyboard Options Zoom In 100%

ATRC Web Accessibility Checker Version 0.8.9

Web Page:

Local File:

Guideline: WCAG 2.0 L2 (change guideline)

Report Details: C:\Documents and Settings\elledge\My Documents\My Files\FLUID\York Demo\Fluid - Moodle Project.htm

All Problems In Group: 1.1 Provide text alternatives for all non-text content

Type	Line	Problem	Test	Element
!	136	input element has alt attribute.	238	input

Checker AA

Done

Fangs (Macintosh)

- **Read the output to yourself. As you read through it, imagine whether it provides enough information for someone to understand:**
 - The purpose of the page: Is the title descriptive of what follows?
 - The layout of the page: Is the navigation section obvious? Are the navigation links clear? Can you tell where navigation ends and content begins? Can you skip the navigation section? Does the page have a logical flow of features and information?
 - The elements of the page: Do the links have meaningful phrases (check the Links list in Fangs)? Do the forms make sense?
 - The content of the page: Do headings identify sections of the page? Are their levels appropriate and consistent (check the Headings list in Fangs)? Do data tables have summaries that describe their purpose and content? Is related information grouped by headings, lists, tables or forms?

Fangs Output

chrome://fangs - Fangs: Fluid - Moodle Project (http://www.fsc.yorku.ca/fluid/moodle...)

File Edit View History Bookmarks Tools Accessibility Help delicio.us

Fangs output for: Fluid - Moodle Project

Reload Settings Help and tutorial ?

Screen reader output Headings list Links list

Page has three headings and thirteen links Fluid dash Moodle Project dash Internet Explorer

Heading level one
Fluid dash Moodle Project You are logged in as Link Mike Elledge left paren Link Logout right paren Language colon Combo box English left paren en right paren Summary colon layout Table with two columns and nine rows

Heading level two
Course categories Table with two columns and one row Link Fluid usability test courses five Table end Table with two columns and one row Link Miscellaneous Table end Search courses colon Edit Go button For information regarding the fluid project, please view URL below colon http colon slash slash fluidproject.org This page link Skip Calendar This page link Graphic Show or hide block

Heading level two
Calendar Link Previous month Link October two thousand seven Link Next month Summary colon Data table, October two thousand seven Calendar Table with seven columns and six rows Mon Tue Wed Thu Fri Sat Sun one two three four five six seven eight nine ten eleven twelve thirteen fourteen fifteen sixteen seventeen eighteen nineteen twenty twenty-one twenty-two twenty-three twenty-four twenty-five twenty-six twenty-seven twenty-eight Today Monday, twenty-nine October This page link twenty-nine thirty thirty-one Table end Table end You are logged in as Link Mike Elledge left paren Link Logout right paren Link Graphic moodlelogo

Reference Pages

- **Simple Accessibility Evaluation:**
<http://wiki.fluidproject.org/x/SQ4a>
- **Comprehensive Accessibility Evaluation**
 - For the PC: <http://wiki.fluidproject.org/x/Sg4a>
 - For the Mac: <http://wiki.fluidproject.org/x/og0a>

Tool URLs

- **Simple Evaluation Tools—IE or Firefox browser**
- **Comprehensive Evaluation Tools**
 - Macintosh:
 - Firefox 2.x (<http://www.mozilla.com/en-US/firefox/>)
 - Accessibility Evaluation Toolbar extension (<https://addons.mozilla.org/en-US/firefox/addon/1891>)
 - Fangs extension (<http://fangs.sourceforge.net/fangs.xpi>)
 - PCs:
 - Internet Explorer 7 (<http://www.microsoft.com/windows/downloads/ie/getitnow.msp>)
 - The AIS Accessibility Toolbar Beta 2.0 (<http://www.paciellogroup.com/resources/wat-ie-about.html>)
 - JAWS Demo (http://www.freedomscientific.com/fs_downloads/jaws.asp)

Questions?