

# Comprehensive Accessibility Review Protocol for PC

This is the protocol for more in-depth accessibility testing. It contains three accessibility test protocols for Fluid: Internet Explorer 7 with the AIS Toolbar Extension, the JAWS Screen Reader and the Web Accessibility Checker tool. A form for entering results and a completed form for reference are contained in Attachments.

## Background

This is a combination protocol for testing accessibility and, to a limited degree, functionality, using a PC. A parallel review for evaluating accessibility with a Mac can be found in the [Mac Accessibility Protocol](#) using the Firefox browser and the Firefox Accessibility Extension. In particular, this protocol will enable you to evaluate Fluid components and tools for: compliance with [WCAG 2.0 Priority Two](#), accessibility-related functionality, and usability with the JAWS screen reader.

There are three steps:

- [Step 1: Evaluate Markup](#)
- [Step 2: Evaluate with JAWS](#)
- [Step 3: Validate Compliance](#)

## Tools

Four tools will be used: Internet Explorer 7.0, the AIS Toolbar Extension (installed on Internet Explorer), the Web Accessibility Checker tool from University of Toronto, and the demo for JAWS.

Results should be entered into a spreadsheet (see Attachments) to facilitate developer repair and subsequent QA.

## Set-up Computer for testing

This is to review accessibility using a PC. Nearly all persons with disabilities use the PC format with Internet Explorer because of widespread adoption of the MSAA protocol developed by Microsoft. If you want to review accessibility using a Macintosh, see this [parallel protocol for macs](#), but note: JAWS and Window-Eyes are available only for the PC, so you will have to either use a plug-in for Firefox (Fangs) to simulate JAWS output or use a PC.

1. [Add Internet Explorer 7.0](#).
2. [Add the AIS Toolbar Beta 2.0](#). Note: You must first remove any earlier versions of the AIS toolbar before installing Beta 2.0. Also, if you prefer to use IE 6.0, you can [add the prior version of AIS Toolbar](#).
3. [Add the demo for JAWS](#).
4. Bookmark the address for the ATRC Web Accessibility Checker Tool (aka aChecker)(<http://checker.atrc.utoronto.ca/index.html>).
  - Go to aChecker.
  - See if Guideline is WCAG 2.0 L2. If not, click "change guideline" and reset it.

## Step 1: Evaluate Page for Appropriate Markup

This is a manual check for appropriate accessibility elements, and does not involve reviewing html or CSS code (which can be fairly technical). Code based review is presented in Step IV.

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."
  - Check for 1) redundant link content (link names), 2) descriptive link content and 3) explanatory titles (when necessary). There should be no redundant links, links should have text that is self-explanatory, and when it is not self-explanatory, should have expanded text in the title attribute. Write your findings in the spreadsheet under "Links." Close the window.
3. From within the "Doc Info" tool, select "Metadata Information."
  - Check for information under 1) Description, such as the purpose and key elements of the page, and 2) Keywords, describing the content and functionality of the page.
4. Go back to the AIS tool bar, click on the Structure icon, and select "Headings."
  - Check for: 1) meaningful heading labels, 2) an accurate hierarchy (h1, h2, h3, etc.), and 3) a thorough use of headings. Write your findings in the spreadsheet under "Headings."
5. Go back to the Accessibility Extension tool bar, click on the Frames icon, and select "Frame Name/Title"
  - Check that frame titles are 1) unique and meaningful. Write your findings in the spreadsheet under "Frame Titles."
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."
  - Check that 1) the page is readable, 2) images have been replaced by meaningful text and 3) reading order makes sense. Write your findings in the spreadsheet under "Stylesheets/Linearization."
7. Go to the lower right hand corner of Internet Explorer and change the page size to 400%.
  - Check that 1) text remains readable, and 2) that areas of the application do not overlap. Write your findings in the spreadsheet under "Zoom Text."
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.
  - A dotted box will show you the focal point. As you tab through the application, check for the following: 1) tabbing moves in a logical fashion, 2) key items receive focus, and 3) tabbing does not trigger page actions. Write your findings in the spreadsheet under "Tab Order."
11. Move through the application using your browser and arrow keys.

- Make sure that you can access all text boxes, form inputs, and functions on the page. Write your findings in the spreadsheet under "Functionality".

## Step 2: Evaluate with JAWS

This is a manual review of the usability and accessibility of the page using the JAWS screen reader. Specific keystroke combinations using JAWS commands are shown in parentheses. There are five essential questions that we want to answer when reviewing a tool with JAWS:

- Does the page provide the user with a clear understanding of its purpose?
- Does the page enable the user to accomplish his/her objectives?
- Can the user move logically and easily within the page?
- Is the page fully functional?
- Is content relevant, clear and concise?

We can answer those questions by listening to JAWS as we use the navigation methods frequently used by JAWS users:

1. Open JAWS
2. Open your browser and type in the address you want to check
3. Experience the page using JAWS:
  - Listen to page (ins + down arrow)
    - Is all the content read?
  - Listen to page title (insert + t)
    - Does it describe page content?
  - Tab through links and form inputs (tab)
    - Are they read in an order that makes sense?
  - Scan through headings (h)
    - Does the page have headings?
    - Are the heading levels read?
    - If the page does not have headings, scan through page paragraphs (p)
  - Review link phrases (insert + f7)
    - Do the individual phrases make sense?
  - Review headings (insert +f6)
    - Do the individual headings make sense?
    - Does the hierarchy of headings make sense?
4. 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)
5. Quit JAWS

## Step 3: Validate Compliance with WCAG 2.0 Level 2 Guidelines

This is a review using the Web Accessibility Checker from the University of Toronto. Like other accessibility checkers, some issues can be identified automatically (as in the case of a missing <alt> description in an image file), in other cases, compliance must be ascertained by a manual check by looking at the page and underlying code (as in the case of whether an <alt> description is meaningful). Issues are identified as "Known," "Likely," and "Potential" problems, with the location and suspect code identified. If you are familiar with html you may want to review each issue as you encounter it. If you are going to hand off the results to someone else, you may want to save the issues as complete web pages for their review.

Many issues requiring manual checks will have been addressed by Steps 1 and 2.

1. Load your first 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").
2. 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.