

Accessibility Lab

Note that this lab is due to a student project developed by Mike Winterberg, Johannes Kienzle and Dan Snyder. Updated by Nicolas Artman 10/2/09.

Purpose:

Our society places the responsibility of caring for the less fortunate, at least in part, on its own shoulders. We have governmental programs designed to help those with all forms of disability, be it financial, physical, mental, or otherwise. We have laws that regulate what businesses can and must do in order to allow access to what they offer for all people, and this includes our industry. What special needs arise in accessing software or web-pages? What responsibilities do we as designers have to make our work accessible?

Procedure:

Part 1: The World Wide Web Consortium - Answer as a group

1. What is the W3C? When was it founded, and for what purpose?
2. What is the Web Accessibility Initiative (WAI)? What are the key issues of completing this task?

Part 2: Accessibility and the Code of Ethics - Answer individually

Imagine the following scenario:

You are working on a software project for a big company. The project is nearing completion and you realize that the software is extremely difficult to use by visually impaired people. You know your project manager will say that the budget does not allow working on accessibility features.

According to the Software Engineering Code of Ethics, explain briefly what you could and should do.

Part 3: Accessibility in the Real World - Answer as a group

1. Visit at least 2 different commercial websites rate them using the "Accessibility Template for Websites" (available on the website).
2. Choose two software applications (either from the list in Appendix B or another accessibility-related application) and rate using the "Accessibility Template for Software".

Part 4: Applied Accessibility - Do as a group

Note: Be certain to leave an appropriate amount of group time for this part!

1. Choose a software application that reads web-pages (such as the free built in screen reader in Mac OS X or a trial of IBM's page reader). Choose a member of your group to be your "accessibility tester" and have him or her blindfolded.
2. Decide a simple task for your tester to complete (i.e. look-up movie times for San Luis Obispo, find a certain book and add it to your shopping cart on Amazon, etc.)
3. Have the tester use the chosen application to attempt the task.
4. Repeat for every member of the group. You can use the same application and task for each student, or have a unique set for everyone.
5. Write a brief paragraph or two answering the following questions:
 - a. How easy was the program to use as a disabled person?
 - b. What did the program lack?

Part 5: Conclusion - Answer as a group (about a paragraph)

- Assess the current state of accessibility. Are the current guidelines enough? Should more be done to help those with disabilities?
- What does this issue of accessibility mean to you as a developer and as a member of society?

2. Prepare a 3 to 5 minute presentation for the class. This presentation should focus on your experiences with using the software as a tester, in addition to any unique experiences group members might have had with this issue. Your presentation should conclude with your group's answer to this question: "Why does accessibility matter to software engineers?"

Appendix A:

Online Resources Concerning Accessibility:

- Web Content Accessibility Guidelines 2.0 Working Draft
<<http://www.w3.org/TR/WCAG20/>>
- IBM Developer Guidelines to Software Accessibility
<<http://www-3.ibm.com/able/guidelines/software/accesssoftware.html>>
- Software Engineering Code of Ethics (especially 1.07)
- Rehabilitation Act (Section 508)
<<http://www.section508.gov/index.cfm?FuseAction=Content&ID=11>>
- American Disabilities Act – Applying the ADA to the Internet
<http://www.icdri.org/CynthiaW/applying_the_ada_to_the_internet.htm>
- Macromedia Flash and Accessibility
< <http://www.macromedia.com/resources/accessibility/flash8/>>

Appendix B:

Examples of Accessibility Tools:

- Windows XP Accessibility Tools
 - Magnifier
 - Narrator
 - MouseKeys
- Microsoft Accessibility Tools
<<http://www.microsoft.com/enable/guides/default.aspx>>
- IBM Home Page Reader
<http://www-306.ibm.com/able/solution_offerings/hpr.html>
- Elinks (Linux only!)
<<http://elinks.or.cz/>>
- Lynx
<<http://lynx.isc.org/release/>>
- Xpress It!
<<http://www.conchbbs.com/xpress-it.shtml>>
- Window-Eyes
<<http://www.gwmicro.com>>