Testing More Than ALT Text- Techniques for Testing Usability and Accessibility

Presentation Format:
Presentation

Targeted Audience:
Intermediate or Advanced

Presentation strategy:
Overview of concept, philosophy, or methodology

Topic Category:
Usability method implementation or adaptation

Length of Presentation:
90 minutes

System, Product, or Project Focus:
Web
Other: assistive technology

Keywords:
Combining methods
Contextual inquiry
Disability

Learning objectives:
To successfully collect usability information with people who use assistive technology, it requires some non-traditional planning and facilitation techniques. Attendees will learn practical tips about how to manage, plan, recruit for, facilitate, and follow up on usability sessions with users with disabilities.

How presentation will be conducted:
The presenter will begin with a brief overview of the research project that helped her to draw the conclusions about this usability method. The rest of the findings and recommendations for facilitating these studies will be presented through examples, videos, exercises, and moderated audience discussions.

Abstract (50 words):
Collecting information about Web usability for people who use assistive technology requires some non-traditional techniques. Based on more than one hundred usability sessions and other experiences with participants who have disabilities, this presentation will provide insight and practical tips about how to manage, plan, recruit for, facilitate, and follow up on this type of study.

DETAILED DESCRIPTION OF CONTENT, WITH SESSION TIMELINE

(10 minutes) Brief discussion research project

From May to September, 2001, the author planned and managed an intercontinental research study, with a team of eight usability specialists. The study topic was Web design for people who are blind, have low vision, or who have motor skill disabilities. Many organizations have produced very good information about how to code better websites for people with disabilities. However, there is less research about the how severe the usability issues are. The primary goals of the research were to learn about how big the accessibility usability issues are, where the problems lie, how to fix them, and how much more difficult the Web is for people with low vision and no vision than it is for people who are sighted.

The research was conducted in three major parts, qualitative in the US, qualitative in Japan, and quantitative in the US. The qualitative research was exploratory in nature, occurring in the field, employing the think out loud technique. To collect statistics for comparison, three user types were included in the quantitative research, with explicit tasks, strictly scripted sessions for facilitators including data measurement criteria, and written questionnaires for the users' subjective ratings.

In doing this study, in addition to previous work with users with disabilities, the author learned much about how to make sessions with assistive technology and the Web run smoothly while collecting the most accurate data. (These insights will be the topic of the rest of the presentation.)

(10 minutes) Solicit input from the audience about their experiences with assistive technology and their own research projects.

Also, probe about what kinds of accessibility projects people hope to do in the future.

(60 minutes) Method examples, recommendations, and discussion for how to successfully usability test websites for accessibility.

The general cycle will be: 1) Presentation; 2) Play videos of sessions, audio files, and demonstrate website examples; 3) Moderated discussion with audience; 4) Exercises/ practice how to deal with some of the more challenging situations we encountered.

Some of the topics to be covered using this format include the following:

- Even topics as basic as trust, consent forms, and paying an honorarium have their own particular challenges when usability testing for accessibility. For example, people who are blind cannot scan through long printed consent form as sighted users can. The facilitator must read them out loud if they do not anticipate this before they arrive one site. Reading long consent forms out loud is tedious for everyone. It's better to email it to the users first, but you must do it in such a way that it does not scare them off. (Of course, the best situation would be to convince your lawyer to write a much shorter, and more simple consent form.)

- Taping video and audio during usability sessions with participant who cannot see is different from taping participants who can see. We will discuss the importance of ethics and consideration, lighting issues with people who are blind, and eliminating distractions that can occur when using video with participants with low vision and no vision.

- It's important to have some understanding screen readers, screen magnifiers, and Braille displays before going to a session where participants are using these assistive technologies. Also, keyguards and other motor skill assistive devices will be discussed. These devices are foreign to some usability specialists, but they are not very difficult to understand. (The presenter will give references to free download samples, will briefly discuss the devices, show some examples, play some audio files and video, and solicit discussion form the audience.)

- Going on site- it's better than using a lab in this case. I combined some of the lessons learned from field studies and traditional lab testing to best conduct these studies. The main reason going on site is better, even though these are not really contextual inquiry sessions since tasks were given, is that assistive technology is very personal. There are many settings and preferences. It's not like giving a person a different mouse or keyboard in a lab. Going on site allows you to eliminate the probable issues that will arise when the participant is asked to use a device they are not familiar with or that they have not customized. Of course, other issues arise when conducting a usability evaluation onsite, such as:

  - broken or slow internet connections
  - major and minor interruptions
  - old or broken computer monitors (people using screen readers don't have a need for computer monitors excepts when sighted people help them install/ troubleshoot)
  - poor lighting and uncomfortable or obstructed observation

  (The presenter will give some tips and ask for feedback about how to deal with issues such as these.)
- Writing tasks and questionnaire instruments can also present some new challenges. For example, they need to be read out loud, and done so consistently between sessions. They need to be memorable and realistic. People who are blind or with low vision cannot refer back to them as easily as sighted participants.

- Some of the facilitation cues that experienced specialists give users to get them to talk or give reinforcement without leading them must change. You cannot rely in the typical visual cues you might frequently use during sessions. (The presenter will show some videos of real sessions and ask the audience to discuss and act out some cues they might give in several different situations during sessions.)

- Recruiting can be very difficult and more time-consuming than usual. The presenter will give some tips for methods for recruiting through organizations, etc. She will also give some idea for a timetable for scheduling participants. (The presenter will solicit ideas from the audience for ways to recruit users with disabilities, and ideas for building trust to visit them in their homes or offices.)

- Like in any usability study, it is very important to monitor the participant's fatigue level during a study. These studies are no different. We will discuss why we think two hours is the most time you can spend doing a study like this, including pre-test preparation and post questions.

(10 minutes) Final questions and comments

While there will be much opportunity for discussion throughout, the presenter will allocate the last ten minutes for discussion and follow-up questions. (If there are no questions, the presenter will solicit ideas from the audience for ways to better test websites with participants with cognitive or auditory disabilities.)

DESCRIPTION OF MATERIALS (HANDOUTS)

The presentation slides will thoroughly reflect the presentation and exercises. I might also give away a handbook, produced by a different organization, about disability etiquette.

Part of this presentation was presented during a full-day seminar about designing the Web for accessibility, in London and Washington DC, Oct/Nov. 2001. It was well received. This presentation has been modified for the UPA audience in two ways: 1) It delves deeper into usability techniques, and 2) assumes the audience has some level of knowledge about what usability is, and how to conduct a very basic study.