Individual Assignment 5: Pilot Usability Study

Date Assigned: Monday, April 8, 2013
Date Due: Monday, April 17, 2013
Points: 45 pts

Overview

The goal of this assignment is to learn how to perform a simple usability test and to incorporate the results of the test into design changes in your prototype. In the real-world, this kind of "pilot" study would be used to redesign your experiment before running the study with a larger pool of participants. **This assignment will be performed individually, with each group member contributing their own *unique* assessment with a unique user**.

Prototype

You will be performing this test using the latest version of your interactive (high-fidelity) prototype. As you are working on the pilot study you should also be working to add more functionality to your prototype based on the feedback you will receive on your interactive prototype on Wednesday. I expect you to describe all the functionality you have implemented and/or improved since submitting your interactive prototype.

Participants

Each group member will need to find one *unique* participant (i.e., volunteers who are not in this class and who aren't used by another member of your group) to work through your benchmark tasks. Remember, it must be voluntary. You should get the participants to sign an informed consent form and obtain other demographic information (e.g., age, sex, education level, major, experience with your type of tasks and application, etc.) Its best to use subjects who didn't participate in your lo-fidelity tests, but they are acceptable if you can't find others.

Benchmark Tasks

Your test will use three tasks. They should include 1 easy task, 1 medium task, and 1 difficult task. These tasks should give good coverage of your interface; if they don't then this is a good chance to redesign your tasks.

Measures and Observations

Although it will be hard to get statistically significant bottom-line data with only one participant and a rough prototype, you should measure some important dependent variables to get a feel for how it is done (i.e., task time, # of errors, etc.). You can also compare these with the measures recorded by your other group members.

You should *concentrate on process data*. For example, you should instruct your participant to think aloud. You should make a log of critical incidents (both positive and negative events). For example, the

user might make a mistake and you notice it or they might see something they like and say "cool". Set up a clock that only the observers can see (one or more of you should observe), and write down a log containing the time and what happened at that time when a critical incident occurred.

If you happen to have access to a video camera, it is fine to use it (but make sure your subjects consent) -- note the time that you start taping so that you can find your critical incidents later on tape.

Procedure

You will give the participant a short demo of the system. Do not show them exactly how to perform your tasks. Just show how the system works in general and give an example of something specific that is different enough from your benchmark tasks. You should *write-up a script of your demo* and follow the same script with each participant.

The participant will then be given task directions for the first task that tells them what they are trying to achieve, **not** how to do it. When they are finished, you will give them the directions for the next task and so on. Each participant will perform all 3 tasks. You will want to keep the data separate for each task and participant.

Results

You must report your results (values of dependent variables, summary statistics, and summaries of the process data) and in the "Discussion" section you should draw some conclusions with respect to your interface prototype. You should also say how your system should change if those results hold with a larger user population. This should be the *most important* part of the write-up. We want to understand how you would fix your system as a result of what you observed.

Write-Up

This is an individual assignment and **each group member will need to submit their own unique writeup**. This should be turned in on paper and on the website, should follow this outline with separate sections for the top-level items (number of pages per section are approximate). It should be about 5 pages, plus appendices and sketches that describe what you did.

- **Introduction (5 points)**
    - Introduce the system being evaluated (1 paragraph)
    - State the purpose and rationale of the experiment (1 paragraph)
- **Implementation and Improvements(5 points)**
    - Describe all the functionality you have implemented and/or improved since submitting your interactive prototype (1 page).
- **Method (10 points)**
    - Participant (who -- demographics -- and how were they selected) (1 paragraph)
    - Apparatus (describe the equipment you used and where) (1 paragraph)
    - Tasks (1/2 page) [you should have this already from previous assignments, but you may wish to revise it] describe each task and what you looked for when those tasks were performed

    - Procedure (1 page) describe what you did and how
- **Test Measures (5 points)**
    - Describe what you measured and why (1/2 page)
- **Results (10 points)**
    - Results of the tests (1 page)
- **Discussion (5 points)**
    - What you learned from the pilot run (1 page) what you might change for the "real" experiment? what you might change in your interface from these results alone? If you'd like, you may include results and assumptions from other group members' tests here as well.
- **Appendices (5 points)**
    - Materials (all things you read --- demo script, instructions -- or handed to the participant -- task instructions)
    - Raw data (i.e., entire merged critical incident logs)

Turn in a hard copy of this assignment at the beginning of class on the day that it is due. Add this document to your project website.