

Group Assignment 6: Usability Study

Date Assigned: Wednesday, April 17, 2013

Date Due: Wednesday, May 1, 2013

Points: 70 pts

Overview

The goal of this assignment is to learn how to perform a usability test and to incorporate the results of the test into design changes in your prototype.

Prototype

You will be performing this test using the latest version of your interactive (high-fidelity) prototype. This version will have incorporated the changes that you each came up with after the pilot usability study.

Participants

You will need to find six participants to take part in your study. Three of the participants must be people that you do not know and who have not taken part in any of your previous studies. 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.) It is best if the testers of your system are also your target users. For example, they need to have a certain level of experience with Android.

Testing Procedure

This will be very similar to your low-fidelity prototyping.

Have one of your teammates demo the system to show each participant how they would interact with your prototyped system to complete a simple task (don't use one of your three tasks in this initial explanation). Show participants how the system works in general.

You should write up a script of your demonstration and follow the same script with each participant. Once you have shown participants the demo, give them the first task. **Tell them what they must achieve, but do not explain how to perform the task.** When they are finished, you will give them the next task and so on.

During the experiment, you should make a log of critical incidents (both positive and negative events). For example, the user might make a mistake or they might see something they like and say, "cool". Write it down along with a description of what was going on. Collect all the incidents first (all observers do this). Then go over them again as a group to assign severity ratings. The ratings scale looks like this:

1. I don't agree this is a usability problem.
2. Cosmetic problem

3. Minor usability problem
4. Major usability problem: important to fix
5. Usability catastrophe: imperative to fix

Each participant will perform all 3 tasks. You will want to keep the data separate for each task and participant.

Measures and Observations

You should measure some important dependent variables to get a feel for how it is done (i.e., task time, # of errors, etc.). You must decide on these variables before testing begins.

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.

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. I want to understand how you would fix your system as a result of what you observed.

Write-Up

The write-up 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.

- Each team member's name and role in this assignment (5 points)
- **Introduction (5 points)**
 - Introduce the system being evaluated (1 paragraph)
 - State the purpose and rationale of the experiment (1 paragraph)
- **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 (20 points)**
 - Results of the tests (2-3 pages)
- **Discussion (20 points)**

- What would you change in your interface from these results alone?
- What would you change about the testing process?
- If you had more time, more money, more resources, what additional testing would you perform?
- **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)

Group Member Evaluation

Each individual member of the group must turn in an evaluation of the other members of the group. The evaluation should list each team member's role for this portion of the project, what they contributed for this portion of the project, and an evaluation of their performance (did they do their fair share, show up to meetings on time, complete tasks on time, etc.). You must also distribute 12 points amongst each member of the group based on how much that they contributed to this portion of the project. For example, A: 3, B: 2, C: 5, D: 2, where I perceived that person C did the most work.

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.