

Low-fi Prototyping & Pilot Usability Testing (Group)

Due: Friday, October 24, 2014 (talk due in Studio / write-up due at 11:59 PM)

Overview

The goal of this assignment is to learn how to use low-fi prototyping in the early stages of UI design. You will first build a low-fi prototype and then perform a simple usability test. You will incorporate the results of the test into design changes in your prototype for the next assignment.

Requirements

Now that you have had a chance to work with your teammates and develop your project idea, create a team *mission statement* that describes your high level goal for the project.

Your low-fi test will use the three (3) or more tasks that you turned into scenarios in the last two assignments (unless we ask that you change them). These benchmark tasks should include 1 simple task, 1 moderate task, and 1 complex task. These tasks should give good coverage of your interface.

Design and construct your low-fidelity prototype. Use the techniques described in the Snyder chapter as a guideline. Your low-fi prototype will be made on paper (if you'd like to use POP or Balsamiq let us know in advance to make sure these tools are appropriate to your project).

You will find *at least three (3) participants* to work through your tasks. You should not use friends or class members. Nor should you use people who have been exposed to your project. The type of people you use should be based on your contextual inquiry. Remember it must be voluntary. You should get them to sign a consent form ensuring their confidentiality (see an example at <http://hci.stanford.edu/courses/cs147/2014/au/assignments/consent-form.html>).

Testing Procedure

Have one of your teammates demo the system to show the participant how they would interact with your prototyped system. Do not show your participants 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 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. Keep each task on a separate card or sheet of paper.

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. Later you should prioritize these events and assign severity ratings to the problems (use the ratings of 0=no problem, 1=cosmetic problem only, 2= minor usability problem, 3=major usability problem, 4=usability catastrophe).

Each participant will perform all 3 tasks. Keep the data separate for each task and participant. Keep participant names confidential in your logs (use the "participant number" from the consent form in all other data).

Deliverables

You will write up your design, experiment, and results, and *share the report with your CA*, and one member of your team will make an in-class presentation during Studio.

Written Report

We recommend your report be *no more than 3 pages* of text (images are free). Your report should follow the outline below and will be graded using the guidelines detailed on the next page.

1. Title, each team member's name & role
2. Introduction and Mission Statement ($\frac{1}{4}$ page)
3. Prototype description, with images of each screen used by your tasks and a picture of the entire system ($\frac{1}{2}$ page)
4. Method ($\frac{3}{4}$ -1 page)
 1. Participants: demographics, how recruited/compensated
 2. Environment
 3. Tasks
 4. Procedure
 5. Test Measures
5. Results ($\frac{1}{2}$ page)
6. Discussion ($\frac{3}{4}$ page)
7. Appendices (as many pages as necessary - link from text into the appendices)
 1. include all forms handed out to participants
 2. include raw data (cleaned up and readable)
 3. include any extra figures that don't fit in the body

Hint: put images inline (i.e., where they belong in the text) along with a caption and figure number (reference the figure number in the body of the report).

Here are four good reports to check out from prior classes: [What's Happening](#), [TripMe](#), [TaskMan](#), and [UpLift](#) (note these will be longer since they had a higher page guideline).

Class Presentation

One member of your team will present your project in class during a nine-minute presentation. See the grading guidelines for information on how to structure your talk. Practice in advance! You must make the slides available for download on your (eventual) web site. Look at the final presentations from the [UW version of this class in 2013](#) to see what good slides look like.

Writing and Experimentation Guidelines

Introduction and Mission Statement (10 pts)

Briefly introduce the system being evaluated, and state the purpose and rationale behind the experiment. Then, present your *mission statement*. As described in [*The Discipline of Teams*](#) reading, the mission statement should represent the common purpose and goal of the project. Each member of the team should agree on and be committed to achieving the mission statement.

Prototype (20 pts)

Describe your prototype. What are the main pieces of functionality? What are the key interaction ideas (i.e., are they key ways to use it? Touch input to move through visual screens? Speech input? VR?) How does the user operate it? Reference sketches of the interface screens in your description (scan them in/photograph – make sure they are readable). Finally, take one picture of the entire paper-based system with all of its elements laid out.

Method (20 pts)

Describe the participants in the experiment, how they were selected, and any compensation they received. Also describe the testing environment and how the prototype and any other equipment were set up. Include images.

Describe some details of your testing procedure. This should include the experimental roles of each member of the team. To prepare for the experiment, you should assign team members to the different tasks (i.e., computer, facilitator, etc.) and practice with someone playing the participant.

The test measures detail what you looked for or measured during the experiment. You should concentrate on process data (i.e., what is happening in the big picture) in addition to bottom-line data (i.e., time or # of errors).

Results (20 pts)

Summarize the results of the experiment from your process data.

Discussion (20 pts)

Discuss your results. What did you learn from the experiment? How will the results change the design of your interface? Was there anything that the experiment could *not* reveal?

Appendix (10 pts)

The appendix should include copies of *all* materials involved in the experiment. This includes your consent form, demo script, and any instructions or task descriptions you handed out or read out loud to your participants.

Finally, it should include *all* the raw process data you gathered during the experiment. Clean it up to make it easy to read. Merge the logged critical incidents logged and list them here.

The appendix materials and screenshots do not count in your 3-page total.

Presentation Guidelines

The presentation grading will be broken into two components: the individual grade of the presenter and a group grade for the presentation of the study results & initial UI design ideas. Note that you should use images liberally and try to keep the text on the slides brief (and use large fonts – no less than 20 pt anywhere). The grades for each of these components are explained in more detail below.

Presenter's grades (NAME: _____)

- Suggested Organization
 - ___ Overview of talk (1 slide) – don't read this, *tell it like a story*
 - ___ Team mission statement (1 slide)
 - ___ 3 representative tasks (1-3 slides)
 - ___ Lo-fi prototype structure (1 slide – mainly images)
 - ___ 3 scenarios shown carrying out each task w/ lo-fi (1 slide + animation/task)
 - ___ Experimental method (1 slide)
 - ___ Experimental results (1-3 slide) (w/ images to describe)
 - ___ Suggested UI changes (1-3 slides)
 - ___ Summary of talk (1 slide)
- Presentation
 - ___ Use slides. Ensure that the presentation shows appropriate preparation, and that visual aids are effective, properly prepared, and properly employed. Make sure that people at the back of the room can see your slides.
 - ___ Cover the required scope within the 9 minute time period (there will be 1 extra minute for questions). Practice & time your presentation in advance. We will cut you off if you go over and you will not be able to gain points for missed material.
 - ___ Ensure the presenter makes eye contact and projects well.

Group grade (GROUP NAME: _____)

- Mission Statement
 - ___ Was the mission compelling and achievable?
- Representative Tasks & Scenarios
 - ___ Did they provide coverage of the functionality?
 - ___ Where the tasks too easy or too hard?
- Lo-fi Prototype
 - ___ Was the interface novel and creative?
 - ___ Was it appropriate for the supported tasks?
 - ___ Did it follow from sound reasoning?
 - ___ Were appropriate low-fi techniques/style used?
- Experiment
 - ___ Was the experiment carried out in a sound manner?
 - ___ Were the results given in sufficient detail to understand what occurred?
 - ___ Were the suggested UI improvements sound & follow from the results?