

6.813/6.831 • User Interface Design and Implementation

Massachusetts Institute of Technology

Department of Electrical Engineering and Computer Science

Spring Semester, 2011

RS2: Data Collection

Due Session 17

This problem set is for the graduate 6.831 class only.

This problem set is the second in series (RS1, RS2, RS3) about reproducing a controlled experiment from a published paper. In this problem set, you will run the experiment on some people and collect data.

Human Subjects Training (25%)

Before running users, you should take and pass the Human Subjects Training course offered by MIT's Committee on the Use of Humans as Experimental Subjects:

- Human Subjects Training (Training unavailable for OCW users)

The course is an online course. When you register for the course, the curriculum you should choose is **Social and Behavioral Research**. The course material consists of about 15 web pages, each followed by a short quiz about what you've read. You must score at least 90% overall to pass, but you can repeat any module and retake its quiz if necessary. Once you have passed the course, you will get a certificate of completion.

We're requiring you to take this online course for two reasons. First, its content is relevant to this class and important to anyone doing user testing. Second, MIT requires all researchers involved in experiments with human subjects to pass this online course. So you will come out of this class already certified to do user studies in your graduate research.

If you had previously passed the training course, you don't need to take it again. Just hand in your certificate of completion or some other evidence that you passed. The training site includes a list of all

people who have passed the course, so if you're not sure whether you've done it, you can scan that list for your name and date of completion.

Print your completion report by clicking Print from the CITI Main Menu page, and save it to a **PDF file**. Include this PDF file when you submit on Stellar. If you don't have a printer driver that can generate PDF, there is free software for printing documents out to PDF.

Data Collection (75%)

Conduct a within-subjects controlled experiment of either ephemeral adaptation or bubble cursors, using the study infrastructure you built for RS1. (If you were unable to get your RS1 implementation working, contact the teaching staff.)

Your experiment should have 12 participants. Recruit your 6.813/6.831 classmates as much as possible. Follow the protocol of Experiment 2 in the paper that you're replicating. Note that you only have two conditions (one control and one experimental condition) where the experiments in the papers had three, so your sessions should be shorter (roughly 30-60 minutes). Be sure to randomly assign your participants to conditions (e.g. orderings of tasks).

Collect your raw data in a clearly labeled spreadsheet, showing conditions (values of independent variables) and results (measured dependent variables, i.e. time). The published ephemeral adaptation experiment also collected subjective preferences, but you don't have to do that part. You also don't have to run statistical tests, generate graphs, or compute summary statistics for now -- RS3 will do that.

What to Hand In

Submit the following as **PDF files**:

- your completion report for human subjects training
- a well-formatted and clearly labeled PDF printout of your spreadsheet's raw data.
- a list of the people you discussed this assignment with (you can put this at the top of your spreadsheet). This is an individual assignment, so be aware of the course's collaboration policy.

Grading

This assignment will be judged on whether you did all the parts and presented them in a way that was

easy to determine that you did them.

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