

Assignment 3

Programming Usable Interfaces - Spring 2009

Assigned: 19 Mar

Due: See below

Iteratively Design and User Test a Photocopier

This goal of this assignment is to give you a first taste of iterative design driven by user testing.

Dates

First iteration and first implementation due: noon 26 Mar

Final version & full report due: noon 16 Apr

Your Assignment

You will do iterative refinement of a photocopier whose entire user interface is a 320 (wide) by 180 (high), black & white pixel touch sensitive display (which you will imitate with a mouse during your testing). In other words, you must have a Flex application that is that size, and you can only use black and white elements. (The browser title bar is not part of the pixels of your copier). You must go through at least three rounds of iterations, the first one with 3x5 cards, and at least two more with Flex. You must test at least 2 users (but preferably 4) for each iteration, with different users in every iteration. For your report of each user test, you should prepare User Action Reports of the critical incidents (both good and bad). See the template for the UAR reports on the course website.

Note that if you observe the same problem with multiple users, you can just write it up once, and have multiple references. I don't want you to spend a lot of time writing up the reports, so aim to be concise.

For your final report, you must also include a detailed description of the changes made in each iteration, as a result of the user testing. What did you learn as a result of the user testing? What did you redesign?

The program should support users being able to:

- Set the lightness/darkness of the copies
- Choose the # of copies (up to 50)
- Choose 1 sided -> 2 sided, 1 sided -> 1 sided, 2 sided -> 1 sided, or 2 sided -> 2 sided
- Choose whether or not to collate
- Specify a magnification or shrinking factor (percentage)
- Select which paper source to use. Lets assume the copier has 3 paper bins, called "A", "B" and "C".
- Provide the ability to have a special cover sheet on multi-page collated runs, where the cover sheet comes from a different bin. For example, there might be colored paper in one bin, and regular paper in another, and the user should be able to specify that the first page of each set should be copied from a different bin.
- Have a START button to begin copying
- Have a STOP button to cancel a copy job while it's running
- Have an account code to bill (let's all use 5150, and you should tell your users that is their account #)

When the user finally triggers the copying to begin, you should pop up a message (it can be any size you want; it's for grading, and feedback to the user of what they did) telling what the copier has started doing, as in:

"NOW making 32 copies, darkness=0.7, 1->2 sided, collated, not stapled"

That's so we can tell your program correctly gathered the right information (and the users in your user test can see what they did). Try to get as many different and diverse users as possible during your test. Do not test on engineers or computer scientists, and avoid people involved in higher education. Good places to find users might be malls or coffee shops.

Turning in

At the half-way point you must hand in hard copy of your task script (what you asked the users to do, and the instructions you are giving the users), an envelope containing your 3x5 cards (or else you can turn in a photo-copy of the cards if you want to keep the originals), the UARs from your first iteration (or from all your iterations, if you have finished more than one!), and a .zip file of your first implementation.

For the final submission you must hand your final Flex program, and your complete user test report (including what you already handed in at the half way point). The final report will contain UARs for all user tests, and the complete summary of the changes you made along the way. The program and reports should be sent via email as a single zip file called firstname-lastname-copier.zip.

Grading

- Assignments turned in late will lose one letter grade per class period late.
- The goal of the assignment is to learn how to do an informal user test, and how to quickly iterate a design based on user feedback. The goal of the assignment is not to produce a great design (this is about process, not final artifact).
- Starting early is essential; you need time to do the tests, and to make changes to your design/program in between the rounds of tests.

Cheating

Apparently, there have been issues with people faking user tests in past years. This year, I have reduced the number of required user tests, so hopefully this won't be an issue. Faking a user test is considered equivalent to copying someone else's answers, and will result in appropriate disciplinary actions.