Contextual Inquiry, ESM, and Task Analysis (Group)

Due: Tuesday, October 24, 2006

Overview

In this assignment you will use the contextual inquiry and experience sampling methodologies to learn more about the work practices of your target customers. The interviews will help you perform a task analysis of your idea. Finally, you will design rough sketches of your proposed UI.

Requirements

1. Interview at least three target customers (no CSE 490f classmates) using contextual inquiry.
2. Run at least two full days of ESM studies on a mobile phone with at least two additional target customers (again no CSE490f classmates and no overlap with the contextual inquiry).
3. Answer the standard task analysis questions.
4. Analyze new and existing tasks. Describe six tasks in moderate detail that users will perform with your application. There should be two (2) each of easy, moderate, and difficult tasks. Compare and contrast your tasks with any existing tasks.
5. Based on your analysis and tasks, explain your proposed interface. Describe in text and support your description with rough sketches of a few important screens.
6. Choose one each of your easy, moderate, and difficult tasks and develop a scenario for each, for a total of three, that describes how they will be performed using your user interface.

Deliverables

One member of your team will present your project in class during a six minutes PowerPoint-based presentation. Practice in advance! You must make the slides available for download on your web site. Look at the final presentations from this class in 2004 to see what good slides look like.

You will submit two (2) copies of a printed essay of no more than 7 pages of text in class (12 pt. Times or equivalent). You must also put a copy of the essay online. Your essay should follow the outline below and will be graded using the writing guidelines on the next page.

1. Each team member’s name and a URL to an online copy of this essay.
2. Problem and solution overview (short, 1 paragraph)
3. Contextual inquiry interview descriptions and results (1 page)
4. ESM experiment description (questions, timing, etc.) and results (1 page)
5. Task analysis questions (3/4 page)
6. Analysis of new and existing tasks (1 page)
   1. Six (6) tasks your application will support (2 each of easy, moderate, difficult)
7. Interface design (3 pages)
   1. Functionality summary (what you can do with it)
   2. User interface description and sketches (how you use it)
   3. Three (3) scenarios of example tasks with sketches
8. Any additional sketches (online only, not part of page limit)
Writing Guidelines

Problem and solution overview (2 pts)

This overview should be a concise statement of the problem you are tackling and a brief synopsis of your proposed solution.

Contextual inquiry interview descriptions and results (12 pts)

Describe the rationale behind your choice of target CI customers. For each of the three (3) customers, give some details of their background, the environment where you observed their work, and your role as the “apprentice”. Identify tasks and themes that the customers shared in common in their work practices. Then, note anything unique about each interview and comment on the rationale behind these events.

ESM experimental descriptions and results (12 pts)

Describe the rationale behind your choice of target ESM customers. For each of the two (2) customers, give some details of their background. Describe the questions you programmed the ESM tool to use, how often the questions were asked, and any contextual triggering you used. Summarize the resulting data and point out any important results that should be taken into account in your initial tasks or designs. How often did your participants respond? What surprised you? What would you have changed about your questions if you could do it again? What was good and bad about the tool?

Task analysis questions (12 pts)

Answer the standard task analysis questions. Use examples from your interviews or ESM data when applicable.

Analysis of new and existing tasks (12 pts)

Next, you need to analyze the new and existing tasks. These should be real world tasks that have details (e.g., programming the VCR to watch the Simpson's on Tuesday). These tasks should not have any specific relation to the exact interface you will propose next.

Interface design (12 pts)

Give a rationale for your design ideas. This section should clearly indicate the functionality of your artifact and what the user interface will be like (described and sketched – explicitly reference the figures in your text). You should then describe three scenarios of how someone would use it to accomplish three of the tasks above. Scenarios include the steps customers will go through to accomplish the task. You should include “storyboards” of the sequences described in your three scenarios. The solution section should be the bulk of the write-up and take approximately 3 pages.
Presentation Guidelines

The presentation grading will be broken into two components: the individual grade of each of the presenters 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 relatively 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

- Suggested Organization
  - Overview (1 slide)
  - Overall problem & solution (1 slide)
  - Contextual inquiry description & results (2 slides, include images)
  - ESM description & results (2 slides, include images if you have any)
  - 3 representative tasks (1 slide)
  - 3 scenarios showing UI design ideas (1 slide + animation/each – lots of images!)
  - Summary

- 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 6 minute time period (there will be 2 extra minutes for questions). Practice and time your presentation in advance as we will cut you off if you go over and you will not be able to gain points for the material you could not cover.
  - Ensure the presenter makes eye contact and projects well.

Group grade

- Contextual inquiry
  - Was the procedure carried out experimentally sound?
  - Were the results illuminating in terms of the problem being attacked?

- ESM
  - Was the procedure carried out experimentally sound?
  - Were the results illuminating in terms of the problem being attacked?

- Representative Tasks & Scenarios
  - Did they provide coverage of the functionality?
  - Where the tasks too easy or too hard?
  - Did they come out of the CI and ESM?

- User Interface
  - Did the UI ideas have a strong connection to the results of the CI and ESM?
  - Were the ideas presented appropriate for the supported tasks?
  - Were the ideas presented at the proper level of fidelity? (i.e., rough sketches?)