

Contextual Inquiry, ESM, and Task Analysis (Group)

Due: Thursday, October 18, 2007

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 440 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 CSE440 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. Remember tasks do not say how to carryout the activity.
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 the class web site**. Look at the final presentations from this class in 2006 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 font 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, survey trigger technique, etc.) and results (1 page)
5. Task analysis questions (3/4 page)
6. Analysis of new and existing tasks (1 page)
 - Six (6) tasks your application will support (2 each of easy, moderate, difficult)
7. Interface design (3 pages)
 - Functionality summary (*what* you can do with it)
 - User interface description and sketches (*how* you use it)
 - Three (3) scenarios of example tasks with sketches
8. Additional sketches or appendices with raw questions/data (not part of page limit)

Writing Guidelines

Problem and solution overview & overall writing quality (10 pts)

This overview should be a concise statement of the problem you are tackling and a brief synopsis of your proposed solution. Check your essay for grammar errors and make sure it is easy to read.

Contextual inquiry interview descriptions and results (20 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 (20 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 (15 pts)

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

Analysis of new and existing tasks (15 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 (20 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. See last year's final presentations.

Presenter's grades (NAME: _____)

- 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.
 - ___ Ensure the presenter projects their voice well.

Group grade (GROUP NAME: _____)

- 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?)