

Project Proposal

Due: Tuesday, October 2, 2007

Overview

Your assignment is to propose an idea that will form the basis of a course project for this quarter. You will observe the need for good human-centered design in interactive computer systems and analyze problems that you encounter. This is an **individual** assignment.

Project Requirements

The theme for this quarter is **mobile computing** using the following technologies and domains: **location-enhanced computing, activity-based computing (to more broadly support our personal lives), ubiquitous RFID, environmental friendliness, and computing for the developing world**. At the minimum, your project *will* involve either a ubiquitous computing device (cell phone, speech UI, etc.) or a web-based interface accessed through some type of mobile browser (no need to detail that here). We encourage you expand upon your application or service to include new or different interaction techniques and technology platforms.

Focus on improving or creating a *specific* application or service that addresses the issues of an actual user community. Remember, you must be able to design and evaluate this project within the timeframe of this course.

Deliverable

You will submit an essay of *no more than 2 pages* of text (pictures are free). Your essay should follow the outline below and will be graded using the writing guidelines detailed on the back of this handout.

1. Problem or Idea (short paragraph)
2. Analysis of Problem
3. Suggested Solution
4. Experiment:
 1. Independent Variables
 2. Dependent Variables
 3. Participants
 4. Method
 5. Results and Discussion

More on back...

Writing Guidelines

Creativity (3 pts)

The proposal should try to address a practical problem with a novel use of technology or present a new or enhanced work practice enabled by technology.

Writing (3 pts)

The writing must clearly present the important facts and be terse and concise- the nitty-gritty details aren't needed at this point. The organization should follow the outline, with the conclusions in each section leading into the next in a logical manner.

Problem or Idea (3 pts)

The problem description should be short and specific about the high-level goals of the project. It states what the problem is and why it is a problem or describes a new idea and why it will enhance an existing application or work practice. It should also drop a hint at the proposed solution of the problem.

Analysis of Problem (3 pts)

The analysis section should give more background for the problem or new idea. It doesn't just focus on the negative aspects of the current situation, but also identifies some positive aspects that may be beneficial to retain. A few salient examples from existing systems or work practices should be used to support those claims.

Suggested Improvements (3 pts)

Here the proposal should propose specific changes to solve the problems or implement the new ideas described earlier and briefly explain why it is believed they will work.

Experiment (3 pts)

This section should describe an experiment that would test whether or not the changes you suggest actually solve the problem you describe or improve people's lives. It should not only describe the preferred outcome of the experiment but also consider possible negative results.

This section should include brief descriptions of what you would *vary* (**independent variables**), what you would *measure* (**dependent variables**), the types of people you would use as **participants** in the experiment, the *tasks* you would ask those people to perform (**method**), and predictions of the **results** you would get and what those results would mean if you got them (**discussion**).

Since there are no psychology pre-requisites for this course, it is not expected that you know everything about experimental design. However, a lot of experimental design is just common sense, so do the best you can. Experimental design will be taught later in the quarter, so you will know more about this by the end of the class.