CS 3205, S17, Section 002 (Horton) - HCI in SW Development
Project Part 1: Proposal for Possible Project

(version 1.0)

Submission: Submit your write-up as a .pdf file on Collab

Deadline: See the Collab site.
You can submit this up to 24 hours after the normal deadline for a 10% penalty.
Note: You WILL lose 10% if your submission is not a pdf file.

Overview:

For the project you will take a proposed idea for some kind of software application, and then carry out HCI analysis, design and evaluation activities for that proposed application. (You won't actually implement it; the work ends after you build and evaluate several different.) Things to keep in mind:

- The project will be a significant amount of work, and it's best to find an application that excites and interests you.
- It's also very important that your application allows you to explore some interesting HCI problems.
- If the interface or usability issues for your application are simple and straightforward, then you won't have much to do or say and your grade won't be as good as it could have been.

For this first part of the project, each student will individually propose an idea for a project that you and others *might* work on for the rest of the semester. You will describe an idea for a new software application or device. This can be something that's never been developed before, or proposal to provide a significantly interesting and different interface to something that exists.

You should keep in mind the full project requirements when choosing (Parts 2, 3 and 4). In the future assignments you will be:

2. Analyzing the users of your system, the tasks it will carry out, and the appropriate usability criteria.
3. Designing and creating prototypes of several *different* interfaces for one or more aspects of your system (that involves significant interaction by a user).
4. Performing empirical evaluations of your prototypes by having users interact with them while you make observations.

Be careful not to choose a project that will make these later assignments too difficult, but also don't choose one that's simple and straightforward

enough that you can't do these later parts. (E.g., it's a problem if you can't really imagine multiple interfaces that are different enough.) Please come talk to TAs or me TAs if you are unsure about this (or do a private post on Piazza).

You will NOT NECESSARILY end up working on the project you define for this assignment. We will be posting a representative subset of the submissions, and you will be able to choose which project(s) you care to work on. We will then form teams of 4 students with whom you will work on the remaining parts of the project.

Guidelines:

I suspect most project ideas will fit into one of the following categories:

1. New Software / Application: You might choose to define a brand-new software application or device that does not yet exist. In this case, you should provide an overview of the software or device. For these projects, you will have to develop three or four prototypes for Part 3, so it's important that you can imagine some different looking or different styles of interface for your proposed application.

2. Significant new approach for an existing application: You might also choose to select a current device, piece of software, game, equipment, etc. and focus on some major changes in how users interact with it. You will still need to choose something where you can build multiple prototypes for evaluation later. Perhaps some of proposed interfaces might be designed to use innovative hardware, or a mobile or voice interface (but remember you won't be implementing for the project).

3. Novel Interactions: Have an idea for a brand new type of human computer interaction? Don't be afraid to try something daring. Maybe you want to design a way to play guitar by making facial expressions, or selecting files on your computer with gesture controls. Feel free to get creative.

Note about devices and novel things: these are harder to prototype, since you can't "draw" something on a screen or paper that works well as a prototype. Also, at the end real people will have to interact with your prototypes, so they'll need to be in a form that someone can interact with. Talk to the TAs ASAP if you're thinking of choosing a device. If you have a cool idea that doesn't work with the project, you could always choose to explore it for Homework 4.

Also, try to be careful NOT to define too broad of a project. It is preferable to focus on a particular aspect of a system in great depth rather than to prototype an entire system all at once. For example, don't tell me that you are going to "completely redefine the SIS website". Rather, consider choosing a single aspect of SIS such as searching for open classes, and focus deeply on improving the usability of this single feature.

Requirements / Deliverables:

Each person should submit a write up in PDF format on Collab. How long should it be? You will not be graded on the length of your assignment specifically. A pithy, yet exceptionally detailed description in three pages is preferable to a verbose eight-page description. But it has to provide enough detail that we and other students can read it and decide if your proposal is a good project. Your write up should have the following structure:

1. Abstract: Provide a high-level overview of the product you will be focusing on. What does it do? What purpose does it serve? Does it already exist?

2. Problem Definition: Define precisely the scope of the project you are proposing. Exactly what aspects of the system's interface and usability will you be working on? Why is it important to get the usability of this system right?

3. Prototype Brainstorming: What kinds of interfaces might potentially be useful for this system? No need to be super detailed here, just provide some high-level thoughts on possible solutions for designing and / or improving the given product.

4. Expected Results: What usability questions are interesting for this proposed application or device? What results do you expect to present? To minimize frustration? Increase efficiency or user satisfaction? Etc.

Note that a large purpose of this document is to convince the staff and other students that this project is interesting and that it is unclear how best to solve the problem. If you do, then I may choose your proposal as one that you and other students can choose for your project.

Grading:

Grades on this assignment will be assessed as follows:

- Problem Definition (5 pts): Was the problem / system clearly defined and explained? Did you clarify the scope of the project adequately? Did you provide a well thought out set of goals for the project?

- Creativity (2 pts): Is the idea novel, interesting, and/or creative? Is it very unclear how best to design this particular system? Is there a wide range of potential interfaces for this system? Are there interesting usability questions to be answered for this?

- Written Clarity (2 pts): Was the technical writing clear and precise? Was the writing polished?

- Formatting (1 pts): Does the document look professional?

Collaboration rules:

This is an individual assignment, and all work you submit must be completely your own. We do not expect that every student will find something unique, but we do require that you work independently as described here. When you submit, you will pledge that you have followed these collaboration rules.