Human-Computer Interaction Design Project:
An experience from idea to solution

OVERVIEW

The HCI design project is a term long project performed in design teams of 3-4 students. The application of the project must be universal enough so the student volunteers who act as users will have some experience. It is given as an open ended problem statement to minimize any predispositions to potential designs. The project is intended to take them through each step of the design process:

- Conception of initial idea
- Gather data from users
- Model user data
- Recognize insights about users
- From insights brainstorm design ideas
- Test design ideas with users
- Create hi-fidelity prototypes

REAL USERS

A key aspect of the project is giving the students the opportunity to gather data from real potential users. This helps students develop their skills of data collection: observation and interviewing.

Students in introductory computer science courses are recruited to serve as the potential users of the software. This is an approach similar to the way upper division psychology courses teach empirical research methodology by soliciting voluntary subjects from lower division courses. The student volunteers are offered extra credit for participation

The use of volunteers provides the design team with data from potential users to develop, validate, and refine their designs.

This affords the students a learning experience of interviewing potential, non-technical users and collecting data as the basis for design. It helps student develop data collection skills of observation and interviewing. It also provides them a rare opportunity to see how insights in to the way people work can effect the usability of a design.

TEAM INSTRUCTIONS

- Each team member must interview 2 students from the CS 140 courses, and prototype test with 1 student.
- Each team member will hand-in a videotape with the interviews and a paper prototyping session.
- At the end of the project all artifacts must be handed-in. This includes work models, consolidated models, and paper prototypes.
- Multiple teams have been assigned to this project to get as many fresh ideas as possible. Each team must keep the details of their design reasonably secret so the different designs do not start to resemble each other.

AN EXAMPLE PROJECT

Day Managers, Inc. is a company that specializes in personal and enterprise wide organizers and scheduling systems. The company has been hired by SIUE to help solve a difficult problem of student advisement. The University would like to have a system that would help students and advisors create a semester course schedule.

As a member of Day Trippers' Design Department, management has asked you to create a prototype of an academic schedule maker, **eAdvisor**, that could be used by students and faculty advisors.

The initial meetings with University representatives revealed a number of concerns that need to be addressed:

- Many students try to schedule courses around certain times of the day (some prefer morning courses and others prefer afternoon/ evening courses).
- Many students work, so they have to develop a course schedule that fits the needs of their work schedules.
- Many students/advisors do not know what classes fulfill the general education requirements
- Students/advisors do not recall what courses they need finish their degree
- Students/advisors need to know the prerequisites to courses
- The titles of courses are not descriptive enough to know what the course is about.
- One of the main difficulties in creating a schedule is resolving time conflicts between course sections.

PROJECT MILESTONES

Milestone #1:	Milestone #2:	Milestone #3:

1. Taped interviews
2. Field Notes for each interview
3. Work models for each interview
4. Consolidated models: flow, sequence, & artifact
5. Affinity Diagram
	1. Based on design ideas create a paper prototype
	2. Test paper prototype with users
	  • Run one paper prototype session for each team member.
	  • Do iterative refinement. You will report changes in your final milestone.
	  • Video tape your paper prototyping sessions.
		1. High Fidelity Prototype.
		  • Black-boxed functionality must have a few hard coded examples.
		2. 20 minute presentation.
		  • Must include a demonstration, indicate how parts of your application relate to your user models, indicate changes that were made as a result of the paper prototype sessions, and indicate details that relate to the design elements presented in class.