CIS 443/543 User Interfaces

Over-view of the Assignments and Final Project

The Rosson and Carroll text that we using is oriented toward learning the scenario-based development process, and specific methods for developing and implementing useful and usable software. This motivates a course based on a term-long, fairly complex project. It also encourages a team approach since ten weeks is not enough time to do such a project by yourself. Learning to work in teams also prepares you for real-world industry practice. Each team will be from 2-4 people, either all undergrads or all grads

During the course we will do six design exercises that are steps in the scenario-based software development process. Each step will illustrate particular methods or tools that are useful for that particular stage in developing usable software. By the end of the course, you will turn in a Final Project that is a fully functioning program complete with user documentation and "help".

We will all work on the same software problem: Creating an on-line election system for the November 2004 General election in Oregon. (Note: This is the US Presidential election.) This is a system that would be used by all voters in Oregon and would replace the current mail-in balloting used now. I'll explain more about this problem later.

Here are the six design exercises (10% each of grade):
Exercise #1: Scenario & Requirements Analysis DUE January 20, 2004
Exercise #2: Activity Design DUE January 27, 2004
Exercise #3: Information Design DUE February 3, 2004
Exercise #4: Interaction Design DUE February 10, 2004
Exercise #5: Usability Evaluation: Analytic Methods DUE February 17, 2004
Exercise #6: Usability Evaluation Videotaping DUE March 9, 2004

For each of these exercises your team will be graded on (1) a short presentation, and (2) written materials that demonstrate successful understanding and application of the particular methods for that design step. You will apply these methods to your particular design for the on-line election system. You will need to attend class and read the textbook to do these exercises—and you will need to do them as a team.

Final Project (30% of grade): DUE March 17, 2004 at 8AM, the time of the Final Exam.

This final project will be graded on the overall software implementation. How does this differ in grading from the six design exercises? Each design exercise is a set of methods or techniques and you will be graded on how well you understand and apply them "in the small" to the overall project. For the exercises, you will not be graded on implemented code. The final project will result from many iterative applications of these concepts, and you will be graded on the implemented code and the resulting usability of your project. For the exercises and final project I will provide you will a detailed description of how you will be graded.

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On-Line Elections

This problem is an interesting and exciting area for human-computer interaction. Everyone seems to be using the Web for all kinds of transactions, why not voting? Could it not provide an easier means of getting people to vote and participate more in democracy? For example, voters in Anieres, Switzerland voted on-line in January 2003. See the following article for more information:

<http://www.electricnews.net/news.html?code=9133642>

Responding to the possibility, the state of California did a January 2000 study of on-line elections:

<http://www.ss.ca.gov/executive/ivote/final_report.htm#final-3>

By searching the Web, you will find other examples and discussions.

BUT, on-line voting is not quite as simple as it first appears. The 2000 Presidential election in Florida had a disaster with "hanging chad" and "butterfly ballots". This focused attention on the human factors of the process and technologies for voting. Many people have now proposed and even implemented electronic voting machines — with a great deal of criticisms.

<http://www.salon.com/tech/feature/2003/09/23/bev_harris/index.html>

<http://www.salon.com/tech/feature/2003/09/29/voting_machine_standards/index.html>

<http://www.salon.com/tech/feature/2003/10/15/riverside_voting_machines/index.html>

<http://www.pbs.org/cringely/pulpit/pulpit20031204.html>

For even more of a computer science analysis of these machines, see the Kohno et al. paper found on the CIS 607 Electronic Voting seminar website:

<http://www.cs.uoregon.edu/classes/04W/cis607ev/>

However, to understand the problem more and implement your final project, you will have to understand how people vote in Oregon. The state of Oregon has a website:

<http://www.sos.state.or.us/elections/elechp.htm>

You will also have to find out how elections work in Eugene. (Hint: you will probably have to visit the appropriate government office.) You will also have to talk to people who vote. You will have to think about social issues and the values of democracy. You will have to think about usability and test out your designs. In other words, you will conduct a full scenario-based study in order to produce your final project—just in time for its use in November 2004.

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