

CIS 443/543 User Interfaces

Exercise #1

(Team-work: Presentation, Handed-in, Graded)

Due: Tuesday, Jan. 20 at 10am

Introduction and Motivation

We will all work on the same software problem during the course of this class: Creating an on-line election system for the November 2004 General election in Lane County, 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.

The Rosson and Carroll text is oriented toward learning the scenario-based development process. The first step in the development process is called *requirements analysis*. Its purpose is to study and understand the problem situation. Methods such as interviews with clients and other users (the stakeholders), field study observations of the current situation, and brainstorming among users and developers can be used. The output of this phase is a set of problem scenarios - stories that convey important characteristics of the users, the typical and critical tasks they engage in, the tools they use, and their social context as they exist currently. Features in the current situation are analyzed and used to call out features of the proposed situation. This helps move the design team and scenario content from analysis to design. Note the text website has several case studies illustrating requirements analysis <http://ucs.cs.vt.edu/default.asp?button=2>

To produce your requirements analysis, you must study the existing Oregon (Lane County) election system. To gather information you should review existing documents and artifacts, and conduct at least one field study as is done in Chapter 2 of Rosson and Carroll. For example, prepare an interviewing guide in advance of your interviews. CAUTION: your “users” should not be from this class. Everyone in the group should be involved in the collection of the requirements analysis data. Perhaps different group members could interview different stakeholders. This way each class of users will have at least one advocate.

Summarize the data by writing the root concept (R&C Table 2.2.), stakeholder profiles (R&C Table 2.3), tasks done by stakeholders (R&C Table 2.4), hierarchical task analysis (R&C Figure 2.7) and problem scenarios (R&C Figure 2.13 and R&C Table 1.2). Try to incorporate each of the stakeholders in at least one scenario. The stakeholder profiles and their tasks should follow the form of those in the book, and should discuss the activities, the artifacts, and the people involved. Conduct a hierarchical task analysis on at least one task. Explain how each of the artifacts currently used for the activities are used in the context of accomplishing goals and tasks. The problem scenarios should be similar to the scenarios in the book capturing real users in the context of doing real tasks.

TURN-OVER

Assignment

1. Read Chapters 1 & 2 in the Rosson and Carroll text.
2. Using the on-line election problem, prepare a team presentation and written report.

Presentation (5-10 minutes/group)

1. Describe the specific field studies you did for requirements analysis. (1 minute)
2. Describe the *root concept*. (2 minutes) Include the following:
 - a. high-level vision: problem statement and proposed solution
 - b. basic rationale
 - c. stakeholder groups & how they will benefit
 - d. starting assumptions
3. Profile the stakeholders. Include their background, expectations, preferences, and relationships. (2 minutes)
4. Describe the tasks carried out by one group of stakeholders. (2 minutes)
5. Describe one problem scenario based on real Oregon voting. (3 minutes) Include:
 - a. the setting
 - b. the people involved
 - c. task goals, expectations, plans and actions of the people
 - d. events created by the environment
 - e. artifacts, technology, and systems involved (resources)

Written Report (8 pages)

1. Describe the specific field studies you did for requirements analysis. (1 page)
2. Describe the *root concept*. (1 page)
3. Profile the stakeholders. (1 page)
4. Describe all the tasks done by all stakeholders. (2 pages)
5. Describe one task from 4. above as a hierarchical task analysis. (1 page)
6. Describe four problem scenarios based on real Oregon voting. (2 pages)
7. Each member fills out a Group Membership Evaluation (GME)

Grading

You will be graded on (1) completing all the parts of the assignment, (2) correctly applying the methods and techniques, (3) having the content make sense and be representative of the real world, and (4) the quality of your presentation and writing—communicating ideas clearly, concisely, completely, and correctly (spelling and grammar).

See the Grading Sheet for Exercise #1.