

IPRO 372/472 Project Plan

Objective:

Information is essential to the health care industry which is a highly constrained and complex service-driven sector of the U.S. economy. The field of medical informatics has evolved to support healthcare professionals by developing software solutions to manage that information. Solutions for teaching, research and patient care are only a few among a range of applications such as patient record management, hospital scheduling, and reporting. Despite the growth of information technology, the implementation of various applications often shows little regard for the way healthcare professionals work. This IPRO team will explore the current state of software support for healthcare and will culminate efforts to provide conclusions regarding the state of medical informatics. This team will also develop display concepts that demonstrate the principles of effective ecological display design for healthcare.

Background:

Healthcare relies on accurate and timely information in order to safely prevent, treat, and manage individual patient illness. This also affects the unit level in a hospital, influencing decisions such as who will get care, what type, and when. Every clinician needs to synthesize many streams of data to provide care to individual patients. Early IT attempts to manage this circumstance led to the creation of rule-based aids for patient care. This approach failed, largely because data is much more complex and knowledge is much less certain than was needed to develop rules to serve the range of conditions clinicians face. To be useful, those who develop information technology systems need to first understand clinician cognitive work. That will then make it possible for clinicians to effectively use the vast amount of data that is available.

Methodology:

This IPRO team will determine the current state of medical informatics by reviewing reports, articles, and products. This group will also pose questions about needs that have been met and unmet as it is crucial to understand all shortcomings. The group will then form conclusions and address implications of how this field must change. The project team will use rapid prototype techniques to create and evaluate ecological displays.

Expected Results:

IPRO 372 expects to produce a series of ecological displays incorporating graphics and alphanumeric characters based on principles studied during the semester. The displays will demonstrate the results of conducting ethnographic research in the healthcare work domain. The research will derive aspects of cognitive work among

cognitions, map the aspects of cognitive work to display architecture, and express the visual information necessary to support that cognitive work.

Schedule:

Among planned activities for the semester, the project team anticipates the following milestones.

Date	Event
9/13/04	<i>Set up final report data file on YahooGroups (label report sections)</i>
10/19/04	<i>Complete and submit mid-term progress report</i>
10/22/04	<i>Mid-term progress report due</i>
11/18/04	<i>Complete one page abstract, exhibit, web site, PowerPoint presentation</i>
11/29/04	<i>Complete and review presentation: abstract, professional style poster electronic file, and professional exhibit</i>
12/1/04	<i>Presentation: oral presentation electronic file due</i>
12/2/04	<i>Presentation rehearsal</i>
12/3/04	<i>Final project report due</i>
12/3/04	<i>Team information due</i>
12/3/04	<i>Comprehensive deliverables and CD due</i>
12/3/04	<i>IPRO Day Participation</i>

Task Assignments

Task	Principal Responsibilities
Abstract	<i>Alfred, Miguel, Riccardo</i>
Comprehensive Deliverables	<i>TBA</i>
Final Poster	<i>Mehak, Oliver</i>
Final Report	<i>Team compilation</i>
Midterm Progress Report	<i>Miguel, Alfred</i>
Oral Presentation	<i>TBA</i>
Project Plan	<i>Predrag, Oliver</i>
Professional Exhibit	<i>TBA</i>
Team Information	<i>TBA</i>
Web site	<i>TBA</i>

Budget

Funds have been requested in order to cover the possible costs incurred in obtaining manuscripts and research materials, as well as supplies that may be needed for display concept prototypes.

Total Funds Allocated: \$500