

MIDTERM PROGRESS REPORT

October 19, 2004

Team Leader: Predrag Barac

1. REVISED OBJECTIVES

The purpose of this project is to explore solutions for teaching, research and patient care in the field of medical informatics. Also, we hope to explore the current state of software support for healthcare and develop an effective ecological display. We have limited the scope of this display to apply to clinical aspects rather than managerial aspects involved in medical informatics. In addition we hope to explore the cognitive aspects of clinicians in the decision making process in order to gain a more in-depth perspective in to what will go into an ecological display. We will concentrate on virtual ICUs as a case study to better understand the different components involved in patient care and the different streams of data that clinicians confront when diagnosing and treating patients.

2. SUMMARY OF RESULTS TO DATE

The team has researched and reported on several aspects of medical informatics pertinent to the direction of the project. Further research is necessary in some of following areas:

Trends in Information Science and IT

This area deals with the study of how health data is collected. Currently, computer technology has greatly increased the ability to control inventory, keep electronic medical records, and aid in clinical decision support. Analog-systems are quickly being replaced with digital-based systems. Knowing the current technology available is necessary in creating an ecological display.

Trends in Healthcare

Advancements in technology have greatly improved the tools and systems clinicians and medical practitioners used, and have lowered costs and reduced the time of stay for most patients. However, concerns for privacy in healthcare continue to be voiced by those who are wary of the greater possibility of improper or illegal sharing of patient medical information now that that information has gone digital. This potential weakness must be taken into account and researched further when dealing with patient data.

Virtual ICU

Telemedicine is an up and coming medical field that provides healthcare from a remote location. This includes VICU or Virtual Intensive care unit and will be an area of focus for the project as many aspects in creating an ecological display are present in effective operation and maintenance of a VICU. We must also further investigate the different

components which go into constructing a VICU and the cognitive aspects in diagnosing patients.

Cognitive Work

In order to create an effective ecological display, we must dissect the different cognitive processes that go in to making a diagnosis. Many times human error results in serious medical complications and to reduce this error the team must decide what factors are involved when clinicians are interpreting data and what pitfalls must be avoided.

3. REVISED SCHEDULE OF EVENTS

Date	Event
9/13/04	<i>Set up final report data file on YahooGroups (label repctions)</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>

Current Detailed Schedule of Events:

T- 10/26: Continue Finalizing Report, Second Draft of Report, Add detail. Add to Body

Th-10/28: Website Should be Completed.

T- 11/2: Revise and Continue work on body of report

Th-11/4: Start Powerpoint presentation, Abstract, Poster. Final Rought Draft should be Completed.

T- 11/9: Continue Tasks from Previous Week

Th-11/11: Polish up Final Rough Draft

Remaining Project Tasks:

Research Current Ecological Displays: Oliver, Mehak

Schedule Appoint with ICU professional: Chris

Research vICUs: Cognitive Work: Ricardo, Predrag

Formalize Biblio: Mehak

Task Assignments

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

* () parentheses indicates change made

Barriers and Obstacles:

The group must be more effective in communication between teammates, and must demand accountability, and discuss problems encountered in research and compilation. Greater research into the cognitive aspects in creating an ecological display must be done. More discussion is necessary in creating a viable solution for an ecological display.