Experience Centered Observational Study in a Medical Setting

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My research is concerned with the design and development of technologies to support asynchronous co-located collaboration which is a largely unexplored area in Human-Computer Interaction. I have chosen the nurses' shift change in a local hospital to be the specific setting to investigate how the flow of critical medical information can be supported by technology. I will conduct an observational study over approximately eight months to investigate how information is communicated between shifts. Through the observational study, I will investigate the work practices currently taking place in the nurses' work environment: how their work is organized, how it is carried out, how it is managed, what intermediary artefacts are used, how it can be supported by technology, what problems do nurses face during the information flow, and how they cope with the breakdown of information flow. The ultimate goal is to design a groupware prototype to support the information sharing processes.

Currently, coordination artefacts used for the collaborative shift change activities in the target setting are mainly whiteboards, patient records and personal notes. The specifics of the information exchange activities undertaken are largely unknown as to how exactly the information is shared and how effective the current processes are to support the collaborative work.

The observational study will involve observing nurses inside the shift room and in and around the computer stations, as well as in and around the main nurse station, disseminating/gathering patient information to/from large white boards, computer printouts and/or personal notes during the shift change. We will also observe how reporting to the patient-care manager/charge nurse is conducted; this may take place in/around the main nurse station, the office, or the computer stations. The study aims to see how information is communicated, as well as what and how artifacts are used for the communication. Short informal interviews and questionnaires will be conducted to collect participants' experiences of the current system from their perspective and their opinion for improvements.

Different models and theoretical approaches can be employed to investigate such information flow: product-centered, user-centered and interaction-centered models [2]. I found the interaction-centered approach most valuable and relevant to my research. I believe that understanding users, artifacts, contexts and nature of their interactions as well as the resulting experiences in terms of the physical, sensual, cognitive, emotional and aesthetic qualities [1] are important to inform design for technological support, beyond usability.

The study is expected to be conducted between Jan and Aug of 2006. Currently I am considering and designing the methodology and approach for the study. As understanding experience is complex and designing for experiences are even more complex [1], the study schedule will be strongly influenced by the complexity of information collected and the subsequent qualitative analysis.

While being familiar with the more conventional user- and task-oriented approaches, I am particularly interested in this experience-centered approach as it offers a holistic view to inform design decisions. Therefore, I hope to attend this workshop as a non-presenting attendee to acquire and discuss various theories, methods and practices in experience-centered design. I also hope that this opportunity would allow me to broaden my overall knowledge in this relatively novel approach to help with my PhD research work. Meanwhile, I would like to contribute and reflect my experience in employing this approach in my observational study within an information-critical medical setting as well as to actively partake in the research and practice of this approach.

[1] Forlizzi, J. and Battarbee K. (2004). Aesthetics, ephemerality and experience: Undertanding Experience. In Proceedings of Designing Interactive Systems 2004, pp. 261-268.

[2] Forlizzi, J. and Ford, S. (2000). The Building Blocks of Experience: An Early Framework For Interaction Designers. In Proceedings of Designing Interactive Systems 2000, pp. 419-423.