IS Department Seminar

Gestural Interaction in Coordinated Practice

Helena Mentis, PhD
Research Fellow at the Cambridge Health Alliance
Harvard Medical School
helena.mentis@gmail.com
http://helenamentis.com

DATE: February 19, 2013
COFFEE: 12:45-1:00
TIME: 1:00-2:00
LOCATION: GITC 1403

ABSTRACT
Natural User Interface technologies such as gesture and voice recognition are offering rich new possibilities for our everyday computing experiences. More than simply intuitive forms of interaction these technologies can provide ways to transform behavioral practices in particular contexts. Within these contexts, there are important challenges in how we take the opportunities provided by NUIs and design them in ways that are attuned to the demands and circumstances of a particular setting. In this talk I will explore these issues in the context of the particular setting of the operating room. I will present a Kinect-based system that uses gesture and voice recognition capabilities to enable clinicians to interact with images during surgery without compromising sterility. I will discuss the iterative design and development of the system moving from our initial understandings, through to a fully working system that is being used in real surgical procedures. Finally I will consider how these systems are being used in practice. Drawing on fieldwork of the system in use, I will highlight how the system offers more that intuitive interaction by creating rich new possibilities for the interpretive and communicative work taking place with these images during surgery.

BIO
Helena Mentis is a research fellow at Harvard Medical School and a research associate in the Interactive Surgical Systems Laboratory (ISSyL) in the department of surgery at the Cambridge Health Alliance. Her research interests span the areas of human-computer interaction, computer supported cooperative work, and biomedical informatics. She specifically focuses on engaging in a translational research approach to align coordinated clinical practices and information technology. Her current work is on the design and coordinated use of interactive surgical systems, specifically in minimally invasive surgical practices. Prior to her position as HMS, she was a postdoc in the Socio-Digital Systems Group at Microsoft Research Cambridge and a research fellow of Corpus Christi College, University of Cambridge. She received a PhD in Information Sciences and Technology from The Pennsylvania State University in 2010, M.S. in Communication from Cornell in 2004, and B.S. in Psychology from Virginia Tech in 2000.