

MECHANICAL ENGINEERING DEPARTMENT
ME/IE 8773-8774

**Large-Scale Distributed Collaboration in
Space Mission Design: Challenges and Opportunities**

by

Dr. Gloria Mark
Associate Professor, Interactive & Collaborative Technology
Department of Informatics
University of California, Irvine
Irvine, CA 92697-3425

Wednesday, September 13, 2006

3:30-5:00 p.m.

Room 1130 ME

Coffee and cookies will be available at 3:15 p.m. in Room 1130 ME before the seminar

ABSTRACT — A major problem facing almost all international corporations is how to get large teams of designers to work together effectively when they are scattered around the globe. I will describe how the technology used to support communication can impact effectiveness in large-scale distributed engineering collaborations. Based on a three-year field study of space mission design, I describe how a change in communication infrastructure changed the interactions between groups of designers at different sites. The introduction of a voice system changed the pattern of communications between sites to more closely resemble those at a single site, which tend to be very effective. This enabled team members to engage in far more spontaneous and informal discussions between sites. This work demonstrates that communication infrastructure can dramatically change the nature and effectiveness of large-scale, distributed collaborations which characterize the new style of teams emerging in modern, globally distributed organizations.

BIO — **Dr. Gloria Mark** is an Associate Professor in the Department of Informatics, University of California, Irvine. After receiving her Ph.D. in Psychology from Columbia University in 1991, she worked as a Research Scientist at the Electronic Data Systems Capture Lab and later, the German National Research Center for Information Technology (GMD), in Bonn, Germany. Her research focuses on computer-supported cooperative work, the interaction of collaboration and technology use. Her current projects include studying worklife and technology use in the network-centric organization, multi-tasking of information workers, communities in the workplace, and a large-scale distributed medical collaboratory. Dr. Mark has examined the usability of a number of cutting-edge collaborative technologies when they were first introduced, including a collaborative hypermedia authoring system, an electronic shared workspace, an application-sharing system, and collaborative information visualization systems. Her publications appear in the fields of Computer Supported Cooperative Work and Human-Computer Interaction. She is currently the program co-chair for the ACM CSCW'06 conference and is on the editorial board of Computer Supported Cooperative Work: The Journal of Collaborative Computing, and e-Service Qu@rterly. Dr. Mark was awarded a Fulbright scholarship in 2006 for conducting research at the Humboldt University in Berlin.

Informal Faculty Luncheon: Wednesday, September 13, 2006, 12:00 noon. Meet in 1100 ME and walk to lunch with other faculty. Prof. Gloria Mark will be able to attend.