Research Issues

• Mediated Communication
  - Human or software

• Coordination of Talk and Action; Convention

• Detailed Cognitive Models of Human Computer-Mediated Collaboration
  - Also models of human to software agent
  - Distribution of knowledge/tasks/representation

• Principled Methods and Tools for:
  - Studying, Modeling, Evaluating, and Building Systems

• Agents
  - Goal/Plan/Context Recognition; Design; Agents on a short leash

• Networking within a community of experts
“Promising” Technology Opportunities for Mediating the Collaboration (that require more scientific study)

- Whiteboard; Chat Rooms; Instant Messaging; Web; Speech Technology; Eye Tracking; Auditory Display
  - How and when to use
- EWall; Graphs as Communication; Coordinating Representations
- Ubiquitous Computing; Mobile Technology; Aware Environments
Significant Underlying Science-Based Theory

• Joint Activity; Common ground (Clark & Brennan)
• Secondary Structures; Convention (Alterman)
• Distributed Cognition (Hutchins, Kirsh)
• Shared plans (Grosz & Kraus; Bratman)
• Conversational Analysis (Goodwin)
• CSCW (Whitaker)
• CSCL (Greeno, Roschelle)
• Cognitive Modeling (Anderson)