Transportation & Logistics

Rouse, Gerla, Iftode, Kimbrel,
Lazowska, Meyer, Schooler, Shmoys,
Sproull, Williams, Work

Suggested Discussion Topics

- Smart vehicles & highways
- Optimized package delivery
- Opportunities in food supply chains
- Optimizing transit schedules, parking, congestion
- Dynamic adaptation

Research Topics

- Next Generation Intelligent Trans. Systems
  - Real time data
  - Predictive models – including response to information
  - Historical data
- Evolutional of Intelligent Vehicles
  - Special lanes for different capability vehicles
- Multi-Modal Public Transportation Systems
  - Coordination of series of hops to destination
  - Real time information for users

Research Issues

- Scalability of local demonstrations to widespread use
- Users' privacy desires vs. providers' revenue maximization desires
- Understanding factors affecting use of public transportation and smart cars/highways
  - Convenience, safety, time, efficiency

Specific Ideas

- Supply chain efficiency
  - IT to enable economies of scale at low volumes
- Coordinated transportation service for elderly
- Consolidation of shipping, e.g., post office!
- Smart vehicles capturing pre-accident and accident data
- Immutability of “security theatre”

Big Trades

- Increased system performance encourages greater use which leads to needs for increased performance
  - Tends to undermine sustainability
- Increased convenience requires provision of information that may compromise privacy
  - Once forgone, privacy is difficult to recapture