Distributed File Systems

- File systems for mobile computing
- File systems that store replicas at multiple sites for reliability
- Using active network techniques to support replicated file systems
- File systems that incorporate rollback capabilities
- File systems providing security in distributed environments
- Scalable peer file sharing services

Distributed OS Security Services

- Authentication services
- Methods of securely attaching information about provenance of data
- Secure distributed logging
- Support for distributed intrusion detection systems
- Distributed firewalls

Electronic Commerce Support Systems

- Support for electronic commerce on widely dispersed machines
  - Distributed “electronic stores,” for example
- Distributed notary services for electronic commerce

NOW Systems

- Building NOWs based on using spare cycles
- Mobile NOW systems
- Building interesting services on a NOW

Supporting Experimentation

- Hard to test networks or distributed system at high scale
- Can we use techniques used in systems that parallelize large tasks over volunteer machines?
- How to make that general?

Ubiquitous Computing

- What is the proper set of distributed OS services in ubiquitous computing?
- What about OS services for sensor nets?
- Data migration services for ubiquitous computing
- Naming services for ubiquitous computing

Mobile Computing

- Consensus or voting algorithms that work well in mobile environments
- Resource discovery services for mobile computers
- Distributed operating system services for personal area networks