Lecture Topics: 12/6

- Selected OS Hot Topics
  - Cluster computing
  - Power management
  - Mobile computing

Cluster Computing

- Examples:
  - Global Memory Service (GMS)
  - Beowulf
- Why buy a million-dollar supercomputer if you can get the same results from a cluster of cheap PC's?
- May also be better for reliability, upgradeability, *ility
- Type of research: kernel hacking, application rewriting

Power Management

- Examples:
  - Palm Pilot/Milly Watt project
  - CMU Energy-aware project
- The more general problem: resource management
- Can problem be meaningfully solved at OS level?
- Type of research: soldering irons and multimeters, kernel hacking

Mobile Computing

- Examples:
  - Bayou
  - Wearable computing
- Communication paradigm is completely different: contact is intermittent, lossy, and dynamic
- Can we get work done anyway?
- Type of research: laptops and Ricochet modems, fancy eyeglasses and pocket-sized keyboards