EECS Network (Wired)

- Goals included increasing redundancy, reliability and bandwidth. Reduce complexity.
- Replaced all network hardware
- Changed vendors from Nortel and Cisco to Extreme Networks.
- Most of project completed over summer.
- All cross-connect cables changed also.

Current EECS Net

- Completely switched Ethernet infrastructure.
- 10/100 Mbit delivered to all users over Cat 5 UTP.
- Load shared redundant gigabit risers over multimode fiber.
- Currently using layer 3 switches from Extreme Networks

Hardware

- Extreme Alpine Edge switches (64 Gigabit non blocking switch fabric) Mostly L2 only.
Wireless Networking

- First Generation Production WLAN
- Based on AT&T, Avaya, Agere, Proxim Orinoco AP-1000 Product 802.11b Only
- MAC Based Radius Authentication
- WEP Encryption
- Lacked scalability, ability to support 11a, newer encryption and authentication

Current Infrastructure

- “Switch” Based with “Thin” Access Points from wireless startup Airespace
- A True Enterprise Class Platform
- Supports 11b and 11a (11g too but who cares ?)
- Support for WEP, WPA, 802.1x and Web Authentication over SSL
Current Infrastructure Cont.

- Support for multiple WLANs using the same radios in a VLAN like model
- APs can connect to multiple switches offering redundancy
- Currently supporting a production 11b WLAN, a Guest 11b WLAN and a “beta” 11a WLAN
- Coverage in all of Cory & Soda, some HMMB and Euclid Cafes

Wireless Futures in EECS

- Transition from Wireless Switch to AP communication from L2 to L3
  Support EECS Wireless services in remote areas
- Investigate the delivery of “AirBears” over the EECS Airespace infrastructure

Wireless Lessons Learned

- Still a relatively young technology
- Encryption in the client is more complex to configure
- Not all wireless cards are created equal!
- 802.11 client has too much control
- Zero config clients are more trouble than they are worth
- Academic enterprise is likely more difficult than corporate

Thank You