

# PoE Effect on Cable Temperature Variance

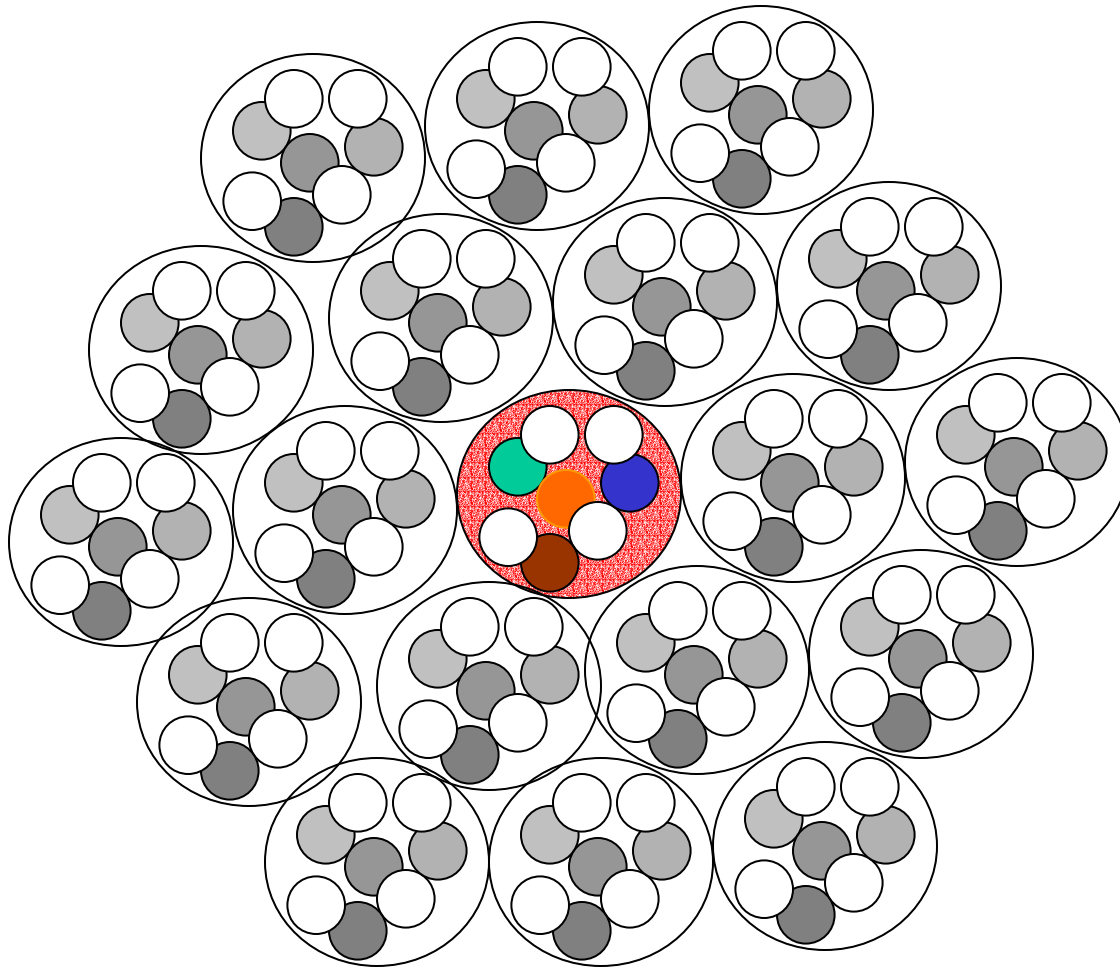
Mike\_S\_McCormack

3Com

# Problem Statement

- PoE will change temperature of cabling over time.
- 802.3an is concerned about insertion loss changes with temperature variation.
- ISO/IEC SC 25/WG 3 does not have answers.

# PoE Problem Visual



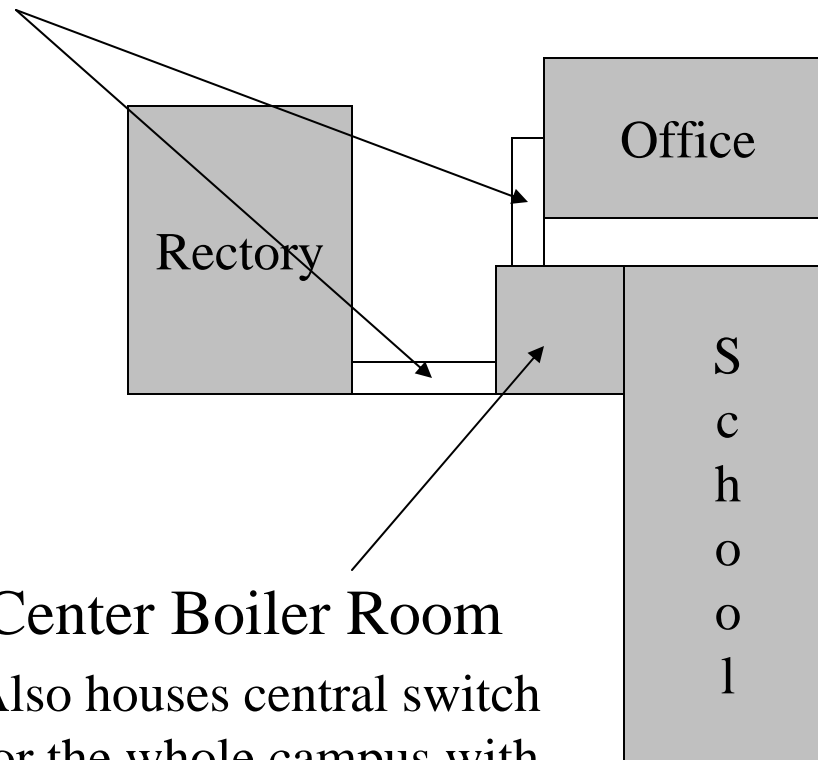
However

# Programmable Thermostat



# Small Campus

Mechanical Tunnels



Center Boiler Room  
Also houses central switch  
for the whole campus with  
1000BASE-T today to each  
building. Radius <50m

# Why a copper campus?

- All runs are indoors – no aerial runs / no lightning.
- Use of GBIC, SFP and uplink modules isolate each link breaking ground loops.
- Radius of runs is relatively short.

# Conclusion

- Work needs to be done on PoE effects
- Other sources of temperature variation are probably greater.