**MOTIVATION**

1. Current building energy consumption is not sustainable, but *pervasive computing* can help.
2. Power draw and maintenance concerns (i.e., recharging) prevent large-scale, long-term deployments.
3. Due to typical node synchronization methods, energy storage dominates node volume and dictates node lifetime.

**PROPOSAL**

**Decouple Synchronization from Communication**

- Outsource synchronization to external infrastructure
- Approach: Use visual light as a wake-up channel for synchronization

**VISION**

On Room.Exited by Person as P:
If Room.Occupancy is 0:
    Projector.Off()
    Lights.Off()
    Room.BVAC.UnMix(P.PreferredTemp)

**TIMELINE**

- Building-scale test deployment
- Multi-hop networking demonstration
- Smart bulb network
- Energy harvesting node with optical wake-up

**DESIGNED BY**

Brad Campbell and Andrew Robinson.

**GITHUB**

- github.com/ab500/linux-cc2520-driver
- github.com/bradjc/raspberrypi-cc2520

**CONTROL SYSTEM**

- Designed by Brad Campbell and Andrew Robinson.
- github.com/ab500/linux-cc2520-driver
- github.com/bradjc/raspberrypi-cc2520