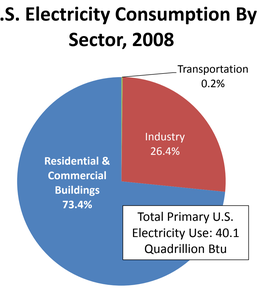
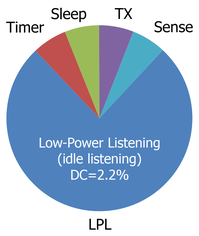
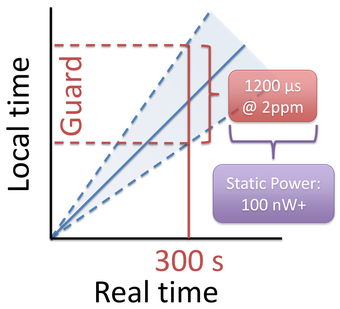
MOTIVATION

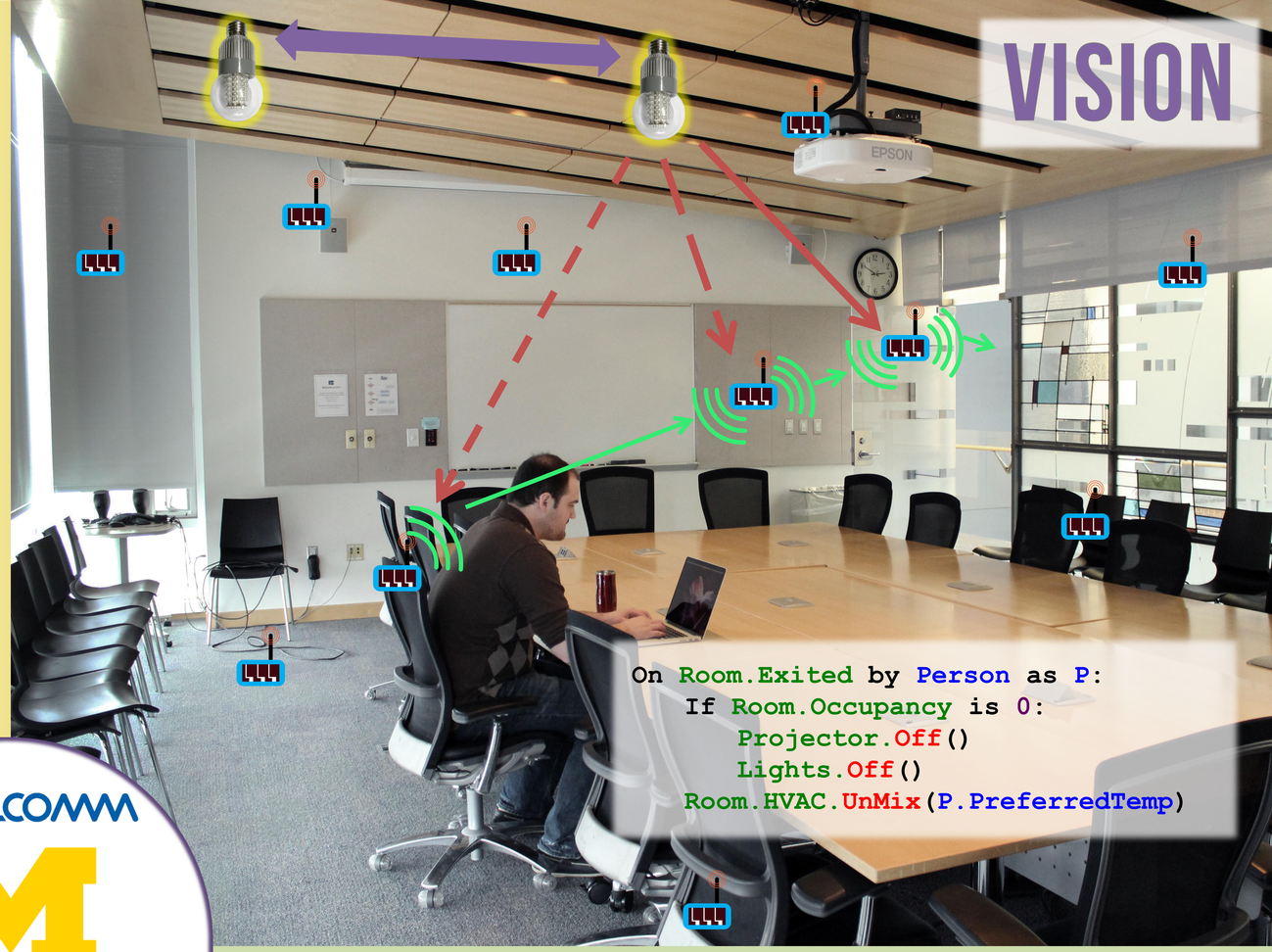
1. Current building energy consumption is not sustainable, but *pervasive computing* can help.
2. Power draw and maintenance concerns (i.e. recharging) prevent large-scale, long-term deployments.
3. Due to typical node synchronization methods, energy storage dominates node volume and dictates node lifetime.



Department of Energy, 2009







QUALCOMM

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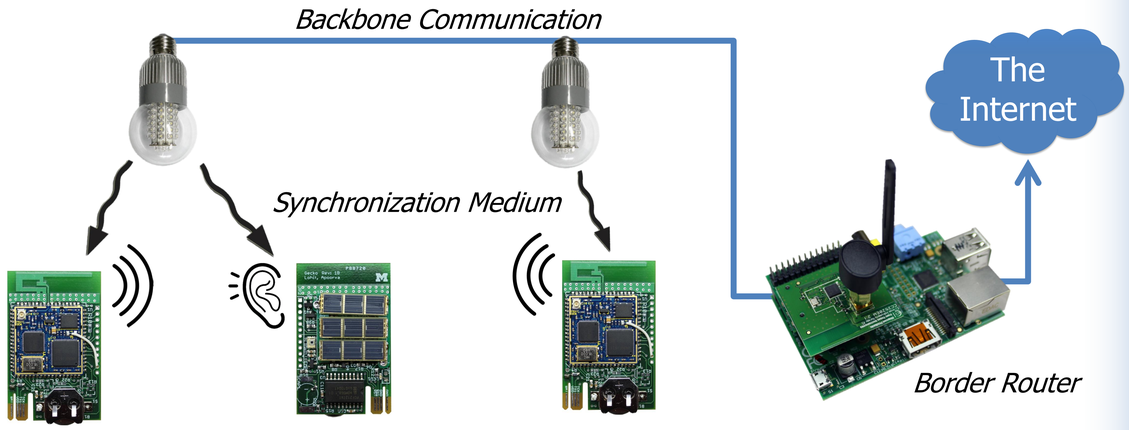
Brad Campbell
Pat Pannuto

March 21, 2013

PROPOSAL

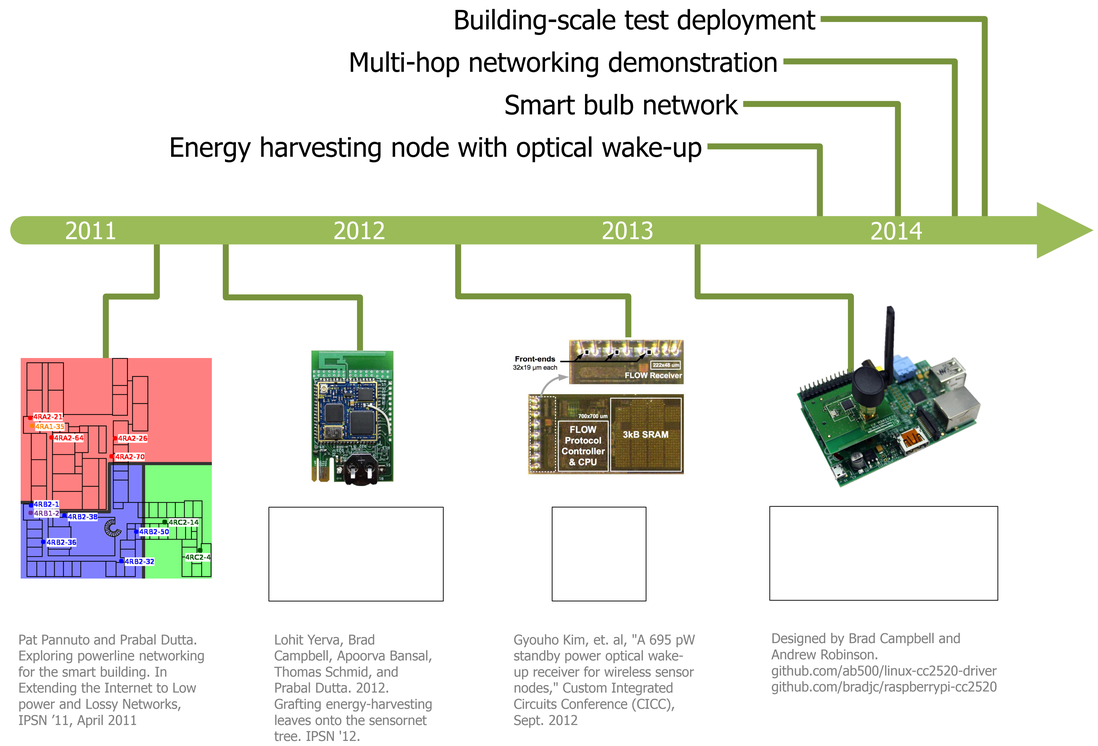
Decouple Synchronization from Communication

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



*Enables nodes with **480x** lower idle power*

TIMELINE



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