Simulation Working Group

TinyOS Technology Exchange IV
4/28/2007
Overview

- Started after discussions at Sensys 06
- Charter:
  - Define models used in TinyOS
  - Establish cross-simulator data formats for interoperability
  - Develop reference implementations
Membership

- Chad Metcalf - Colorado School of Mines
- Dr. Phil Levis - Stanford
- HyungJune Lee - Stanford
- Venkatesh S - CEDT, Indian Institute of Science
- Elaine Cheong - Berkeley
- Junzhao Du - Xidian University
- Konrad Iwanicki - Vrije University
Overall Status

- Of to a slow start
- Three active projects
- Looking for people interested in working a project

Wish-list:
- Telosb support for TOSSIM
- Non TOSSIM membership
Project Status - CPM

- **Name:** Improving wireless simulation through noise modeling
- **Developers:** HyungJune Lee and Phil Levis
- **Motivation:** In a shared spectrum WSNs deal with external RF energy
- **Status:** Implemented and available in TinyOS 2.0.1
Project Status - Power

- **Name:** Power extensions for TOSSIM
- **Developer:** Venkatesh S
- **Motivation:** Energy Monitoring for Mica platforms
- **Status:**
  - MCU (Various power states)
  - Leds
  - Flash/EPROM
  - Radio (CC1000, Rx/Tx, Power Levels)
  - Shooting for a 2.0.2 release
Name: Hybrid simulation
Developer: Chad Metcalf
Motivation: Framework for simulation of tiered networks w/ live testbeds
Status:
- TOSSIM extensions complete
- Tiered sim framework identified
- Shooting for a 2.0.2 release