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# Welcome to the NEST Retreat

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# Who are we?

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- introductions...



# Where are we in the project

- **1.5 of 4 years**
    - got a 1 year head start (Smart Dust, Endeavour)
    - Open Experimental Platform
      - » provide platform and challenge application
      - » rest of the projects provide middleware
  - **Delivered 1000 motes in 14 kits at 0.5**
    - mica + general microtracker
  - **12 Teams demo'd at 1.0**
  - **Demo turning into appln framework**
    - mid-term distributed this month
    - mid-term demo's at 2.0
  - **OEP2 design starts now**
    - frozen over summer
    - roll out over Y3 and 4 for Challenge App
- => need sharp appln requirements to guide design**





# Some of the major steps

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- Mica design and associated architecture
- Microtracker, microweather, micromotor
- TinyOS and its Network stack
- NesC programming environment
- TOSSIM simulation environment
- Closed-loop tracking demo
- Localization + calibration
- Environmental monitoring appln
- TinySEC security
- TinyDB



# in a larger sense

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- **Mote + TinyOS at heart of many other projects**
    - CITRIS
      - » energy monitoring, disaster management
    - SABER
      - » building monitoring
    - Structural response
    - Habitat monitoring
      - » GDI, James Reserve
  - **Platform a de facto standard**
    - unusual arrangement with Crossbow continues to mature
    - >100 groups using it
    - Open Source Community
  - **Wireless sensor “ecosystem” taking off**
    - workshops -> ACM SenSys conference
    - bunch of startups
    - old economy companies jumping in
    - new economy companies waking up
- => This is the time to take stock and consider mid-course corrections**



# Agenda

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- **Team Building**
- **Highlight Talks**
  - nesC
  - TinySec
  - GDI lessons
- **Partner Presentations**
  - Bosch
  - iMote
  - Crossbow
  - Dust Inc
- **Networking**
  - multihop analysis
  - chipcon stack
  - time slotted backbone
- **Execution vehicles**
  - mote chip
  - TOSSim
  - GSK
  - TinyDB
- **Team Building**
- **Mid-Term Demo**
- **Poster + Demo & Wild&Crazy**
- **twds Chal. App.**
  - Security minitask
  - distr. control
  - phases
- **Open Mic**
- **Visitor Feedback**

# Retreat Files / Web Page

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