Final Projects
Final Project

• Each lab team will choose a final project
• Email me a short proposal (≤ 1 page) to me for approval
  – Describe requirements (what your project does)
  – Describe equipment needed
• Schedule
  – Can work on project in lab, after Lab 10
  – Design review in lab, week 12
  – Presentations during the last 3-4 days of class
  – Demonstration last week of class in lab, reports due Monday of finals week
Final Project (continued)

• Requirements
  – Use SSMI boards
    • If you really want to use something else, talk to me
  – Must incorporate both software development and hardware interfacing

• Examples of projects
  – See previous projects for this class at http://inside.mines.edu/~whoff/courses/EENG383/projects
Equipment potentially useful for final projects

• Parts in the kits, and what we have used in lab

• Other available parts in the lab
  – Motion detectors (see Lecture 14 and course “Reference Documents”)
  – Solid state relay (to turn on high power AC loads)
  – Current sensor (non-invasive)

• Easily obtainable
  – Microswitches
  – Thermistors, photoresistors
Examples of Projects

- **Security system**
  - Might use a keypad, LCD, speaker, motion sensor, break-beam sensor

- **Some kind of game**
  - Examples: reaction timer game, memory game, “Simon Says” type of game

- **Mobile robot**
  - Easy to put together with Actobotics parts

- **Something with rotating or sliding elements**
  - Examples: crane, elevator, pen plotter, camera dolly

- **Music generation**
  - Sensors could determine what notes are played
  - A digital-to-analog converter is needed for better sound

- **Fancy LED display**
  - Could use the “smart LEDs” from HW3, or an LED matrix

- **Something with remote control**
  - “Xbee” RF modules are pretty easy to use

*These kinds of projects have worked well in the past*