Smart Room Project

Juan Bazurto
Richard Pellosie
Mike Puntolillo
The goal of this project is to develop a software and hardware system to create a Smart Room. This room should behave rationally and be able to be controlled from a mobile application or IR Remote control.
Features

- Automatic Lights
- Automatic Fans
- Alarm System
- Mobile Application
Implementation

- **Automatic Lights**
  - Motion Sensor
  - Photoresistor (Light Sensor)
  - Relay

- **Automatic Fans**
  - Motion Sensor
  - Temperature/Humidity Sensor
  - Relay
Implementation (Cont'd)

- Alarm
  - Motion Sensor
  - Software Controlled
"Arduino is an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software."

An arduino microcontroller will be used to bridge the gap between the software and hardware.
Control Interfaces

- **Android App**
  - Robust remote GUI
  - Store custom settings
  - Manually control components

- **IR Remote**
  - Manually control components
  - Chicks dig it ;)


Target Customers

Enterprise/Businesses
- Automatically controlled work environment
  - Minimizes maintenance
- Mobile control for staff

Personal
- Centralized control for entire home
- Parental Settings
Development Cycles

Deliverable 1:
- Lights and fans controlled through Arduino
- Android App Interface Mockup

Deliverable 2:
- Complete IR Remote functionality
- Incomplete Alarm implementation
- Minor Android functionality
Individual Roles

Juan Bazurto
Android Application Designer

Richard Pellosie
Network and Communication Developer

Michael Puntolillo
Microcontroller and Circuit Architect
Development Philosophy

- Modular Development
- System Integration Testing
Retrospective

- Different Hardware Platform
  - Intermittent faults
- C++ instead of Python
  - Threading
  - Final Product vs. Prototyping
Questions?