Lightning Presentation 1

Group sdmay20-53
Smart Backpack Sprayer

Standards

- Circuit Design
  - Using Arduino so none needed at this point
- Software Development
  - ISO/IEC 12207
    - Stakeholder needs and requirements
    - Systems/Software requirements
    - Integration
    - Etc
- Digital Design
  - IEEE 1016
    - Data, Architecture, Interface, and Procedural Design

Functional Requirements

- Read sensor data
  - Includes GPS location, rate of application
- Backpack sprayer must communicate with mobile app
- App should analyze data
- Create map of spray amount and time of application

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Economical Requirements

- Initial Budget of $750
- They will probably provide us with what we need
  - Ask them and they will provided
    - Examples:
      - Subscriptions
      - Hardware
      - Software
      - etc.

Non-Functional Requirements

- Portable
  - Size and Weight
- Scalable
- Reliable
- Intuitive to Use

Environmental Requirements

- Waterproof: IP67
- Signal Range: 10m
- Temperature: -25 ~ 100 ℃
- Altitude: 0 ~ 2500m
- Wind Speed: below 25 km/h