TEAM 11: AMPHIBOT

Heather Kloet, Kaitlyn Weinstein, Monica Wood
Team 11: Amphibot

Monica Wood (EE), Kaitlyn Weinstein (ME), Heather Kloet (EE)
Redefined Scope

- **Problem:** Need to find small, metallic objects in marshes and shallow black water
- **Situations:** crimes, lost valuables, car wrecks
- **Customer:** boating enthusiasts, fishermen, treasure hunters, sheriff departments
Obstacles

- Overcome
  - Scope too large

- Remaining
  - Building Method
  - Interfacing Components
  - Metal Detector

Mechanical

- Locomotion
  - Track System
    - Good for multiple terrains
  - Elongated Treads
  - 2 motors
    - Reversible
Mechanical

- Buoyancy
  - Foam
  - Sled-like bottom

- Structure
  - Aluminum Frame
  - Plastic Cover

http://www.uscomposites.com/foam.html
Electronics

- Raspberry Pi controlled sensors
  - GPS location and tracking
  - Sonar- Pinger or Side-Scan
  - Webcam
  - Metal-Detector
  - Humidity and Temperature Sensor

http://opensource.com/life/14/3/favorite-raspberry-pi-projects
Software

- Wireless Communication
  - Ethernet for testing
  - Wifi – Raspberry Pi Dongle
- GUI Interface
  - Visual Studio C#
- Motor Control
  - Arrow buttons

http://opensource.com/life/14/3/favorite-raspberry-pi-projects
Design Norms

- Delightful Harmony
  - User Friendly
- Caring
  - Eliminates unpleasant tasks
- Trust
  - Dependable product

http://www.sciway.net/sc-photos/berkeley-county/cypress-gardens.html
Accomplishments

- Draft PPFS
- Industrial Consultant Meeting
- Meeting with Professor Tubergen
- Website
- Experimented with Raspberry Pi
- Obtained Materials
Obtained Resources

- Raspberry Pi
- GPS
- Humidity Sensor
- Webcam
Future Plans

- Final PPFS
- Testing GPS and Webcam
- Structural Analysis
- Order Motors
Questions?