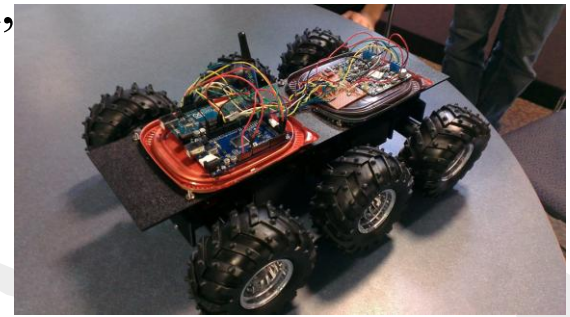
# The Wild Tupper 2

*Team Talk Nerdy To Me*
*CSU*

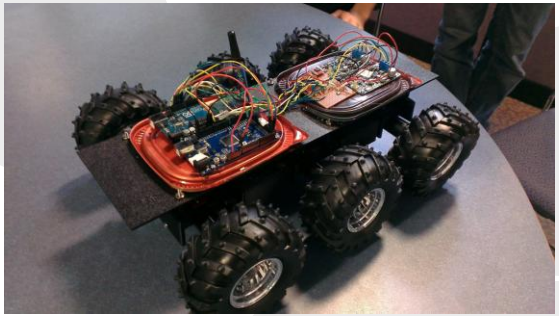
Raxius Bloom, Kelli Demny, Dylan Mcnamara, Taylor Morton, Marshall Rawley

# Introduction

- Based on a preexisting, six-wheel, all-terrain robot
- After analyzing the faults in last year's design, the team made revisions and proposed a more durable and adaptable robot.
- The primary differences in the designs were the motors and the types of sensors



# Improvements



- Improving the suspension design to provide stiffer suspension
- Redesigning the motor housings to fit the new lower torque motors
- Altering and reprinting the design of the chassis
- Using an entirely new electrical and sensor system

# Suspension

- 3D Printing
  - ABS Plastic
  - 35 hours for 21 parts
- Custom Suspension
  - 3 sets of independent twist suspension
  - torsion springs
  - chains

# Sensors

- Wild Tupper 1
  - Sonar
- Infrared
  - Primary Sensor for Obstacle Detection
- Touch
  - Later not implicated

# Electronics & Programming

- Sensors Implementation
- Autonomous Navigation
- Integration

# Testing

- Volleyball courts
- Beacon simulator

# Mechanical Test Run: CSU Volleyball Courts

# Challenges

- Sensor Mounts
  - Touch Sensor Failure
- Circuit Failure
  - Two compasses, 2 touch sensors, one IR sensor, and a transceiver

Space Grant Challenge:

- Power Supply
  - 9.6 V Batteries
- IR Detection
  - Sand Craters

# Competition

# Conclusion

“Best Demonstration of Beacon Navigation”