Underwater “Tire” Robot

Software Team

Faculty Sponsor
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Client
Dr. Stephen Wood

Project Goal

- Develop software for an autonomous underwater vehicle capable of navigating and surviving with minimal to no human control
- Collect and synchronize large quantities of sensor data from multiple different sources and organize it into an onboard database
- Transmit collected data back via satellite uplink

Technical Challenges

- Develop the AI for the master controller
- Learn and implement the Mission Oriented Operating System(MOOS)
- Managing and formatting I/O data for multiple different hardware systems

Milestone 1

- Collect hardware I/O formats and provide examples
- Work with and demo MOOS example applications
- Requirement Document
- Design Document
- Test Plan

Milestone 2

- GPS Nav simulation
- AUV dead reckoning simulation
- Simulate motor controls

Milestone 3

- Simulate Sensor input
- Simulate collision avoidance system
- Simulate data transmission