

AUV Meeting Minutes

September 13, 2023

Members Present: Nick Eoff, William Buhrig, Matt Lavery, Tom Herly, Colin Sizemore

Main Discussion: Sealing & Coding Plan for AUV

Takeaways: Research Epoxies, Develop better Block Diagrams, Lead Shot for obtaining Buoyancy

Transcript;

AUV Meeting with Dr. Kaipa and Dr. Cong-Wei We discussed our goals and plan for the rest of the semester. We decided that we will focus on achieving four main goals: Waterproofing, Raspberry Pi Coding, buoyancy, and remote transmission. The details of our discussion are summarized below. Waterproofing: we identified that water entry occurs at the top part of the AUV where the O-ring sits. We planned to install a thicker O-ring as well as apply lubricant to seal that area from water entry. We also identified that water entry may occur on the sides of the AUV where the thrusters are attached to the main body. We discussed ways to seal those areas, although we didn't come to any definite conclusions. Raspberry Pi Coding: we planned to install a Raspberry Pi controller to interface between a human input device (a game controller or joystick) and the thrusters. We will use Python code to translate the input from the human input device to the controller. Buoyancy: To achieve neutral buoyancy, we planned to install weights directly inside of the AUV, rather than hanging them on the outside. This will require placing the weights in such a way that the AUV does not become lopsided. Lead shot was discussed as a possible material for the weight. Remote transmission: We plan to connect the AUV by cable to a module that is floating above the water surface. The module then will receive human input via remote control. Furthermore, we will be testing the AUV in a swimming pool.