Simulator

Setup

The simulator is completely modular and fits into the existing software system as subrepo with virtualized hardware modules. In order to run the simulator you simply need to clone simulator within the robosub repo.

Ex.

- git clone https://www.github.com/PalouseRobosub/robosub.git
- cd robosub
- git clone https://www.github.com/PalouseRobosub/simulator.git

The project must be opened using the experimental Linux Unity Editor

Once installed and you have an account setup, you need to open the folder containing /Assets and /ProjectSettings as a project. The project will generate all of the meta files needed to run the simulator. Once generated, you will have a list of scenes that you can open in the directory view. Opening Competition will pull up the competition scene.

Once the scene is loaded you can dynamically move the submarine around and edit scripts within the project. The software will run normally with Sensor, Thruster, and Camera being run within the engine. Make sure to have the correct IP address set in the broker settings file. Localhost (127.0.0.1) should be used for running isolated personal machines. To verify that the software is talking normally you can run helm and view sensor data or view the broker log to make sure data is being sent.

The control system is currently loaded from the control file within the parent repo. Thrusters currently need to be in order (front, back, left, right, top, bot) for the control system to output correctly. It's best to checkout the simulator branch in robosub to grab a test control system layout where the sub is balanced. Once you run control, the broker, and the simulator you can use messenger to test movement and thruster outputs.