AutoNaut Status

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Bad weather conditions did not allow us to deploy the vehicle, therefore the sea trial planned for Friday 10th Aug. has been postponed. The sea trial(s) will aim at testing:

Level 1:

- Operator-L1 radio communication via Neptus;
- Monitoring of vehicle status on Neptus (human-readable interface);
- Manual Control;
- L1 Fallback tuning.

Level 2:

- Operator-L2 communication via Neptus;
- L1-L2 serial communication;
- Waypoing tracking (follow reference);
- PIDs tuning;
- Collision Avoidance System.

1 The delta of this week

With the precious help of Tiago, this week:

- we revised entirely the Dune implementation: adjustment of autonaut configuration file, included/excluded useful/useless tasks and tested the new implementation in simulation;

- developed a Neptus plugin to control L1 with one console only. Now all the functionalities of the vehicle can be controlled and enabled/disabled from the same console. The communication with L1 can be monitored as well;

- performed hardware-in-the-loop tests to debug the communication protocols;

- repaired the GLUED implementation on the L2 BBB.

2   Hardware Setup

Works have to be done to improve the AutoNaut setup:

- extend cables from L1 to servos, the HW will be placed in the front compartment.

- sensors are placed on the mast, but no connectors allow cables to reach L1 and L2.

- substitute L1-L2 communication/power cables.

- place the antenna for 433 MHz communication in a better way.

3   Software

Before the next trial:

- complete Neptus plugin and optimize communication interface for both L1 and L2;

- conclude revision of Dune, with the opinions of Maria Costa and Joao Teixeira:

- tentative: retrieve more data from CR6 datalogger to improve vehicle monitoring in Neptus (battery, power, position, subsystems powered,...)