# Robothub

**Short description**

Robothub listens to all messages on the robotcommands topic and sends it to the right receiver depending on the requested output target. The option are: serial to the basestation to command the real robots, grsim multi robot simulation and gazebo single robot simulation.

**Executables**

* Main
* Input\_example: utility to send testing commands to gazebo, it is replaced by roboteam\_input keyboard\_controller, in combination with robothub main.

**Dependencies**

* QtNetwork
* Make sure ModemManager has been eradicated from your Ubuntu installation. otherwise, upon serial connection, it will dump about 30 characters of random bytes into the connection, screwing up the connection. ModemManager is a program/service of some sort. <http://askubuntu.com/questions/216114/how-can-i-remove-modem-manager-from-boot> sudo apt-get purge modemmanager + reboot or something should do the trick

**Globals**

* -

**Params**

* Robot\_output\_target: determines to which output the robot commands are written. Options are: serial, grsim and gazebo.

**Input topics**

* Robotcommands

**Output topics**

* Serial write to basestation
* Udpsocket to Grsim
* Rostopic: gazebo\_listener/motorsignals

**Details**

For output to the real robots a serial port to the physical basestation is used. The message is correctly formatted and sent. An acknowledgement of receiving the package at the basestation is expected. Output to the GrSim multi robot simulation program is done via an udpsocket. The command is converted to the correct format and send without expecting an acknowledgement. Outputting to the Gazebo single robot simulation program is done by calculating and sending individual wheel speeds over the rostopic: gazebo\_listner/motorsignals.