Robot Operating System

Lab 2: the “mirror arm” node

1 Goals

Program a node that can move the left arm of the Baxter robot in a symmetric way with respect to the motion of the right arm (symmetry with respect to the sagittal plane of the robot). The node should be usable in position mode (the joint positions of the master arm are “ copied to ” the slave arm) or in velocity mode (the joint velocities of the master arm are “ copied to ” the slave arm).

2 Information

To create the control loop you must get the current *state* of the right arm and send *commands* to the left arm. To not hesitate to use RViz to compare the frames, some of the joints need to get the negative value of the other arm.

2.1 Tasks

- Identify the topics that the node should subscribe and publish to.
- Create a ROS package (`catkin create pkg <name> --catkin-deps <dependencies>`) with dependencies on `baxter_core_msgs`, `sensor_msgs` and `ecn_common`
- Draw the expected graph of the application.
- Program the node in C++ and/or Python

Once the package is created, feel free to use the provided `lab2_mirror.cpp` file as a template for the node code.