Lab 2: ROS Tutorials

Out: Tuesday, 5 February 2013
Due: Thursday, 14 February 2013

Reminder:

A reminder that the NERVE Center opening will be held during class on Tuesday, 12 February. The NERVE Center is at 1001 Pawtucket Blvd (location of the commuter lot – plenty of parking is available or you can take the shuttle to the lot from campus). Attendance is required as part of class. There will be robot demos from a wide variety of companies, including iRobot, QinetiQ, VGo Communications, Harvest Automation, Caliper ID, and Aldebaran.

Overview:

We will be using the Robot Operating System (ROS) to program and control our rover. In this lab, you will complete the tutorials from the ROS web site.

To Do:

First, read the overview of the ROS system: http://www.ros.org/wiki/ROS/Introduction

ROS is installed on the lab (302) machines, but if you want to install it on your personal Ubuntu machine you can follow these instructions: http://www.ros.org/wiki/ROS/Installation

Once you’ve got an installed ROS system, work through the “Beginner Level” ROS Tutorials: http://www.ros.org/wiki/ROS/Tutorials

To Turn In:

1. After completing “Tutorial #6: Understanding ROS Topics,” draw a smiley face with the turtle, take a screen shot of the resulting window, and print it.

2. After completing “Tutorial #15: Writing a Simple Service and Client (Python),” print out a terminal session demonstrating running these ROS nodes.


You must complete each of these items individually. Do not turn in another person’s screen shot. You can not learn what you do not do. However, you should feel free to ask your fellow students for help as you work through these items. Other tutorials can be completed in lab pairs, if desired, as long as you learn enough to make it through the tutorials listed above on your own.