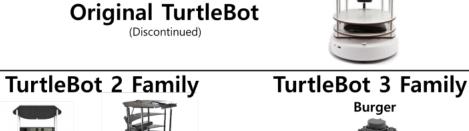
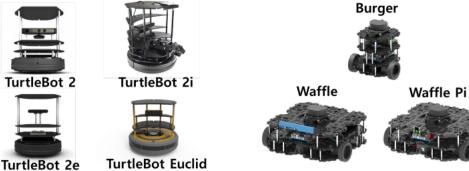
ROS Workshop - Tutorial 5 - Turtlebot3 Simulator ME 4140 - Introduction to Robotics - Fall 2020





1. Update your linux system before you get started.

sudo apt update

2. Install the necessary nodes into your ROS system. This tutorial comes from here. turtlebot3

 $\verb"sudo" apt" install "ros-melodic-turtlebot3"$

 $turtlebot 3_simulations$

sudo apt install ros-melodic-turtlebot3-simulations

turtlebot3 gazebo

sudo apt install ros-melodic-turtlebot3-gazebo

3. Test the simulator. First set the environment variable TURTLEBOT_MODEL. Add this line to the .bashrc script so you do not have to do it for each terminal.

export TURTLEBOT3_MODEL=burger

Then turn on the simulator.

roslaunch turtlebot3_gazebo turtlebot3_world.launch

You should see the gazebo window open containing your robot. Test that the keyboard drives the robot. This may take some time.

roslaunch turtlebot3_teleop_turtlebot3_teleop_key.launch

4. Now turn on the node to produce robot data in the simulated world.

roslaunch turtlebot3_gazebo turtlebot3_simulation.launch

Open RVIZ to view the data. This is a very useful tool.

roslaunch turtlebot3_gazebo turtlebot3_gazebo_rviz.launch

5. Next we are going to learn about SLAM and GMAPPING! Please see the tutorial referenced above if you are ready to proceed.