

SLAM in Eva Robot using FAST SLAM method

The SLAM implemented in Eva Robot is using Fast Slam method which is an advanced version of particle filter implementation of SLAM. The Hector SLAM and Mapping project used in this project uses the same (Rao Blackwellized Particle Filter).

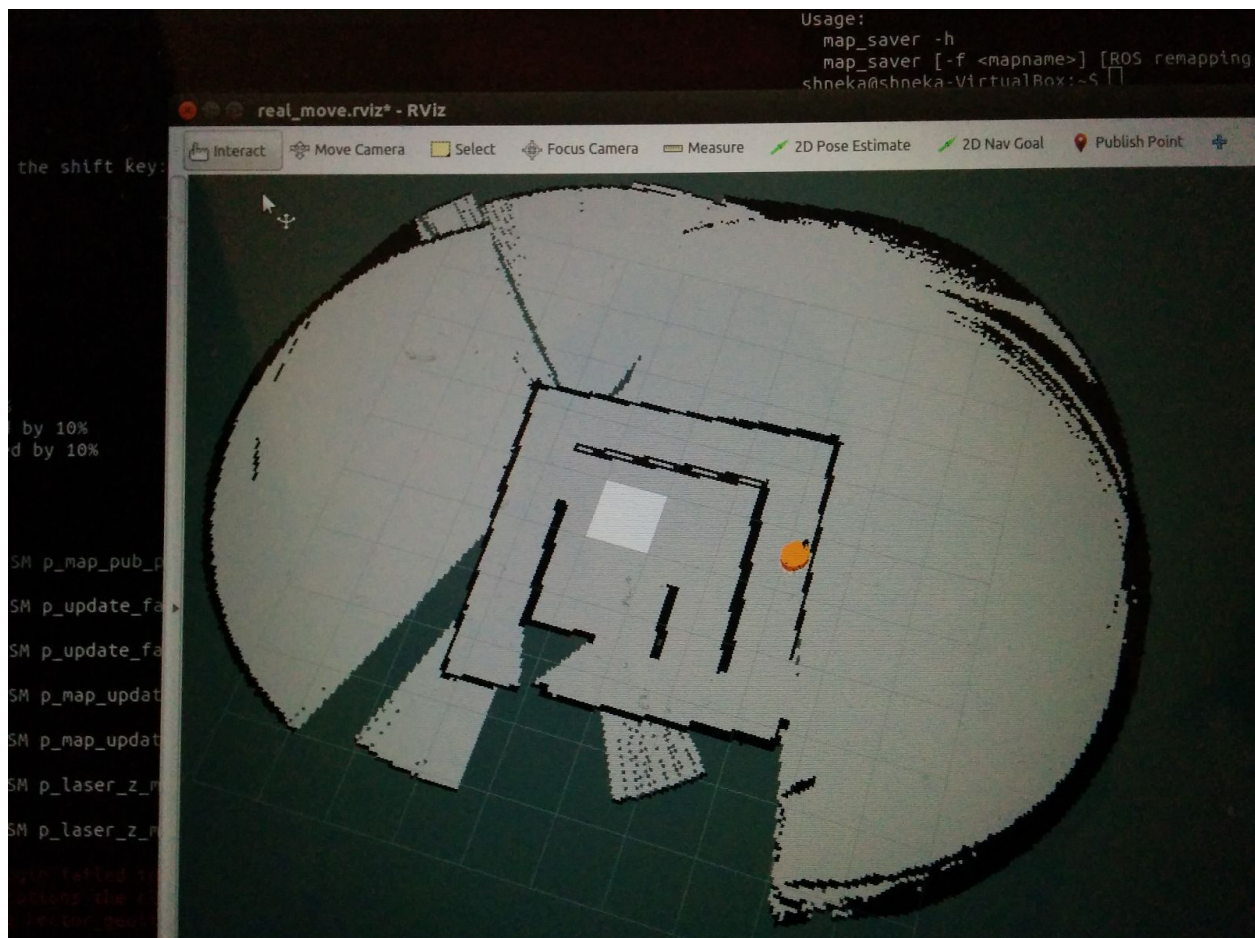
The method used here is to start the robot from a particular point and use teleop input (the direction of motion of the robot is controlled from the keyboard). This helps the robot to explore the surrounding and at the same time create a map of the surrounding. The localization of the robot is also a part of the script.

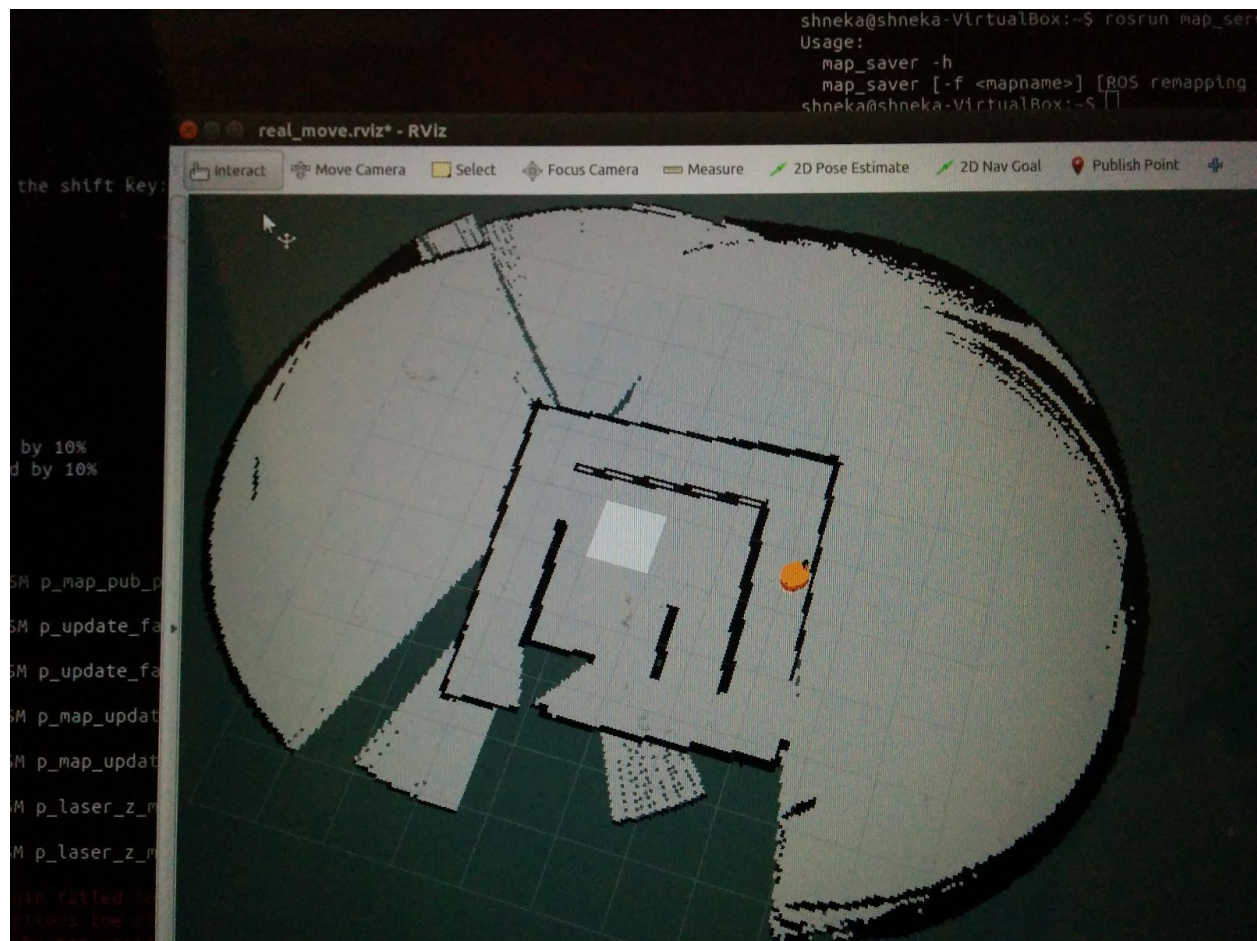
Packages Used:

1. Eva Robot Simulation Package
2. Gazebo Simulation with ROS
3. Hector SLAM Package

The map that is got by using Rviz.

The following is the maps that were generated





The project was run in a virtual machine and hence the video progress is a bit slow.