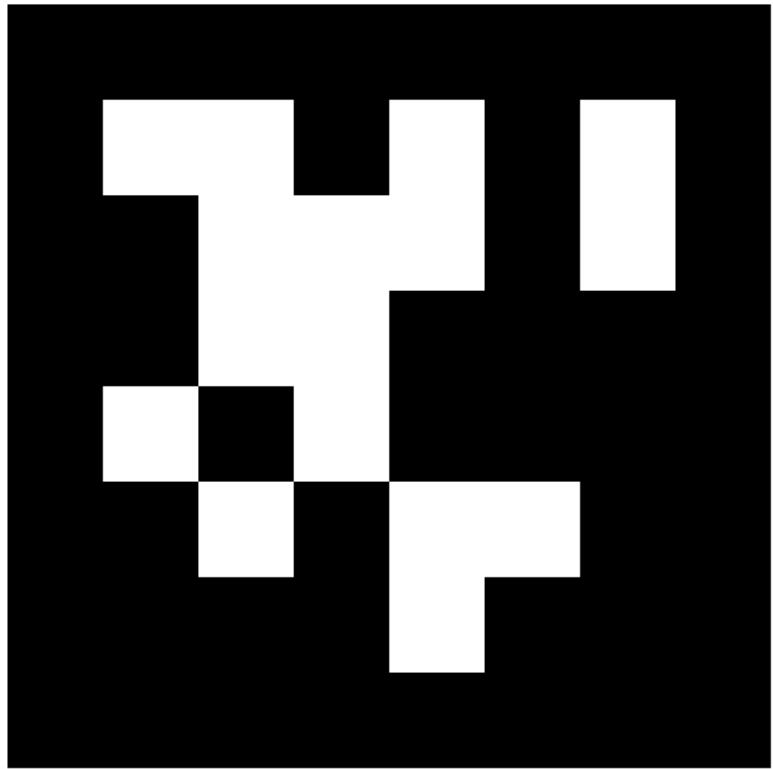
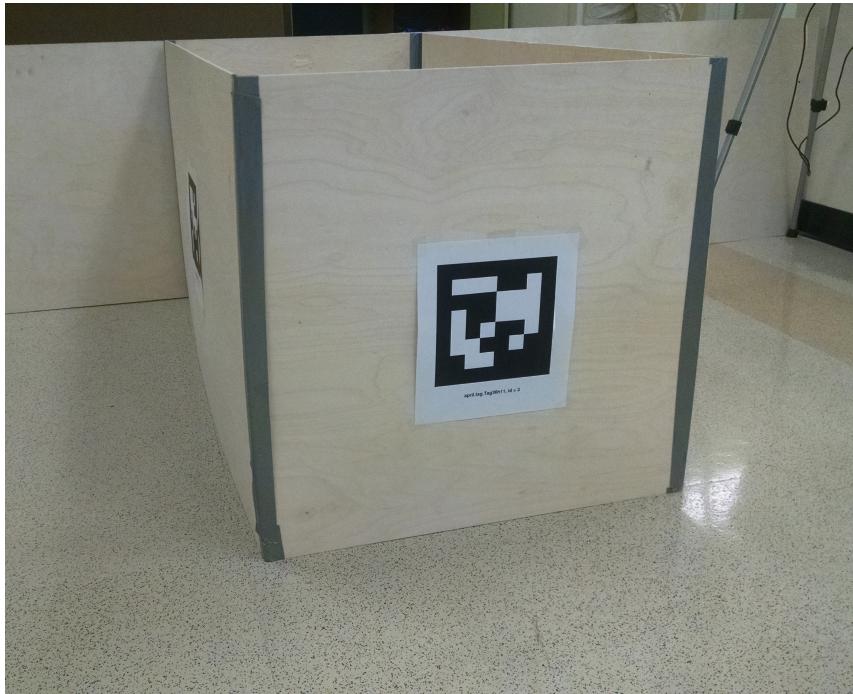


AA274 Final Project - Mars

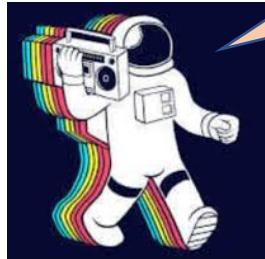


Alien Artifact



april.tag.Tag36h11, id = 0

Your Mission

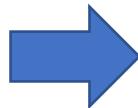


mission = [3, 6, 1, 3, 0]

Mission director: explore the environment until you've located all mission objectives, then visit them all in order.

1. Explore

Traverse environment
until tags [0, 1, 3, 6]
have been seen

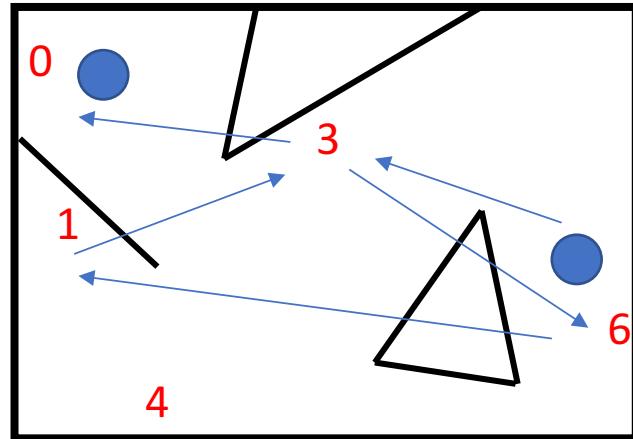


2. Execute

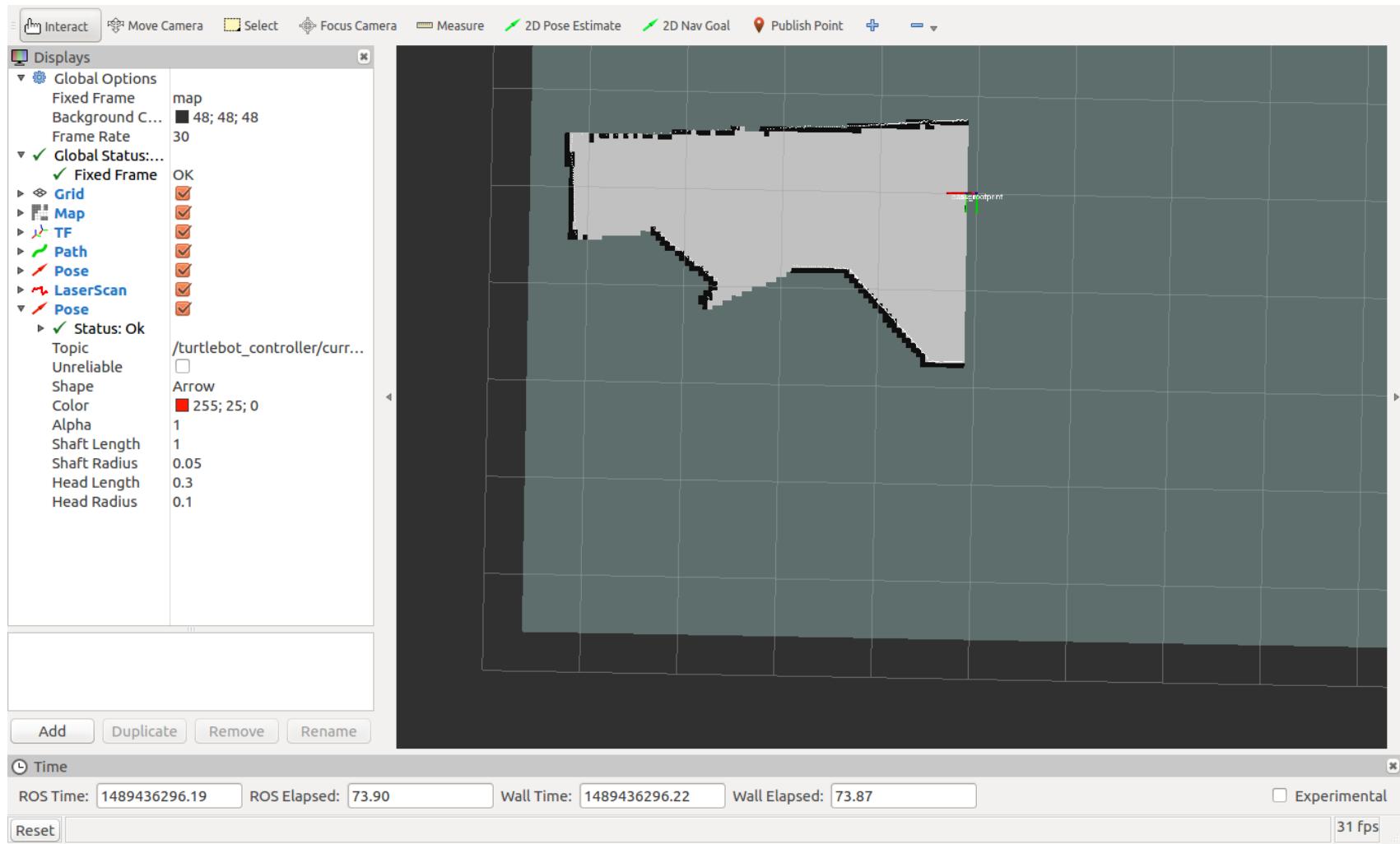
Travel from
 $3 \rightarrow 6 \rightarrow 1 \rightarrow 3 \rightarrow 0$

a) Human-directed
exploration

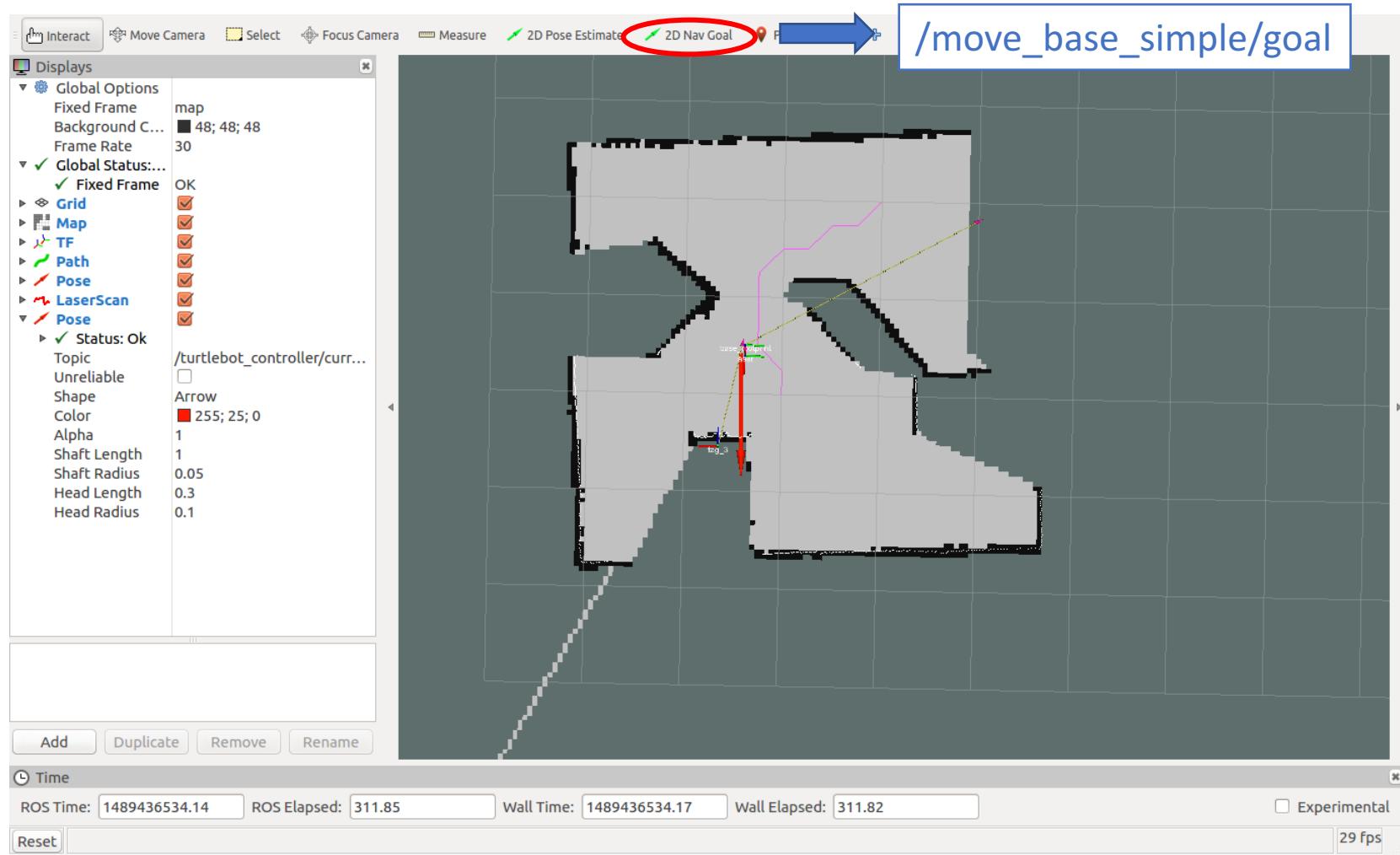
b) Fully autonomous
exploration



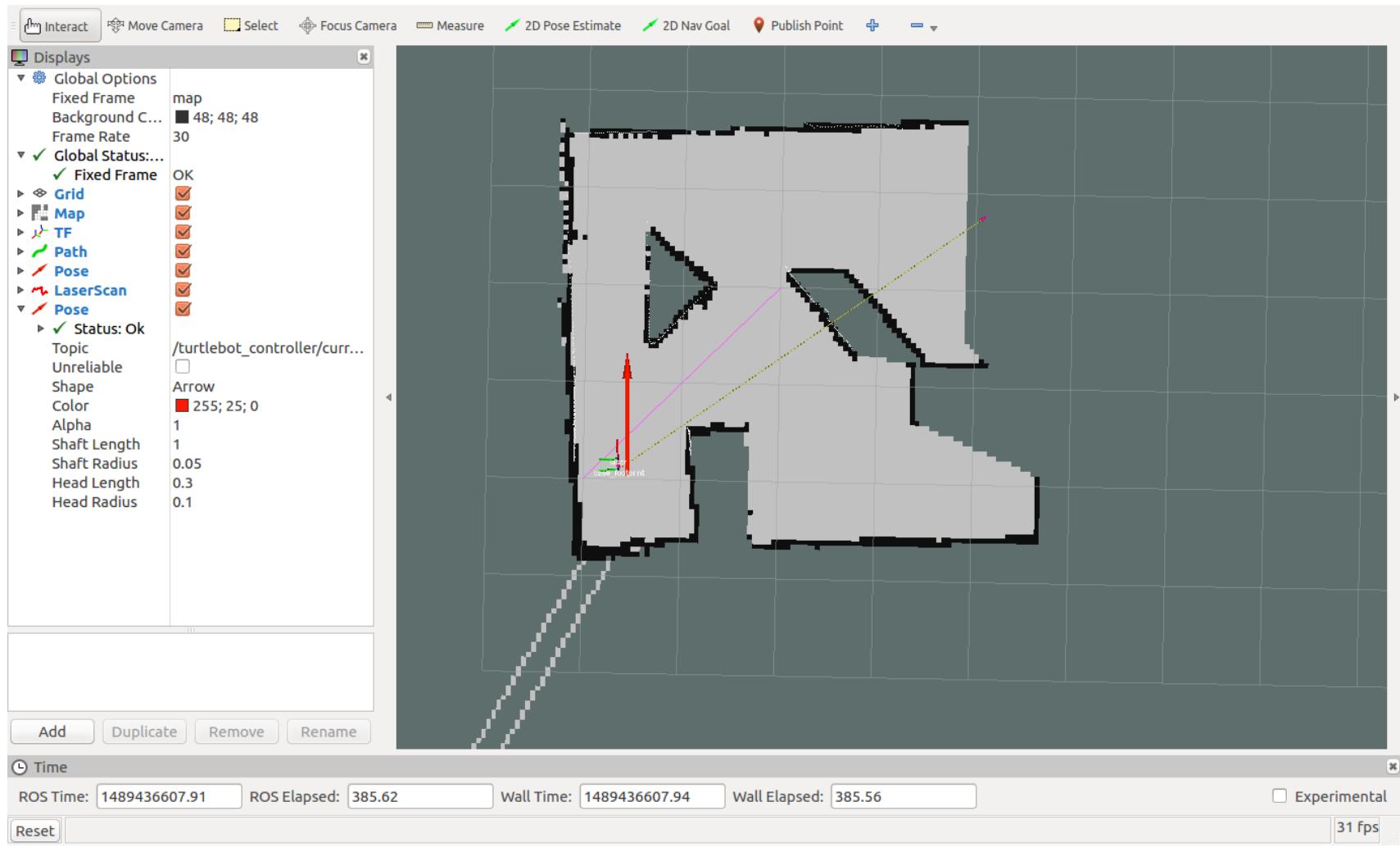
Startup



Human-Directed Exploration



Human-Directed Exploration



ROS specification

1. Turtlebot running roscore, gmapping onboard
2. TA laptop: publishes mission specification ([3, 6, 1, 3, 0]) as Int32MultiArray message to [/mission](#)
3. Team laptop (code/sim env published later today):
 - Supervisor: **state machine for mission phase**, keeps track of navigation goals
 - Navigator: **Implementation of A*** for path planning
 - Controller: **Path-tracking controller**
4. Extras (just for the tryhards, not necessary)
 - Autonomous exploration phase
 - Kinodynamic motion planning