

Final Project Due December 9, 2005

In your group of two, you must design and implement a robotic control system that takes as input a map of the environment, a starting location, and a destination location, and drives the robot from the start to the destination.

During the process, a design specification will be due (November 4th) and, at the end, a written report and oral presentation will be required. The details of these deliverables are in subsequent handouts.

There are a few requirements for this project:

- You must write software to run on Twonky the Robot.
- Your software must neither injure other people nor mar or damage any physical objects.
- Your software must take in, as input, the workspace and the locations of all objects, a starting location and orientation for Twonky, and a destination location for Twonky.
- The software must control Twonky to drive from the start to the destination in the least amount of time possible, while remaining safe.

Many of these requirements are not hard, they are soft. You must make them exact and document your choices. Here are a few things to think about (although the list is not exhaustive).

- How should the workspace be specified?
- What is a suitable interface for the software?
- How should speed and safety be balanced?

The performance will be judged based on the following criteria.

- Creativity/Novelty (30%)
- Performance (50%)
- Code Readability/Maintainability (20%)