CSCE574 – Robotics
Spring 2014 – Homework 9

Assigned: March 26
Due: April 1

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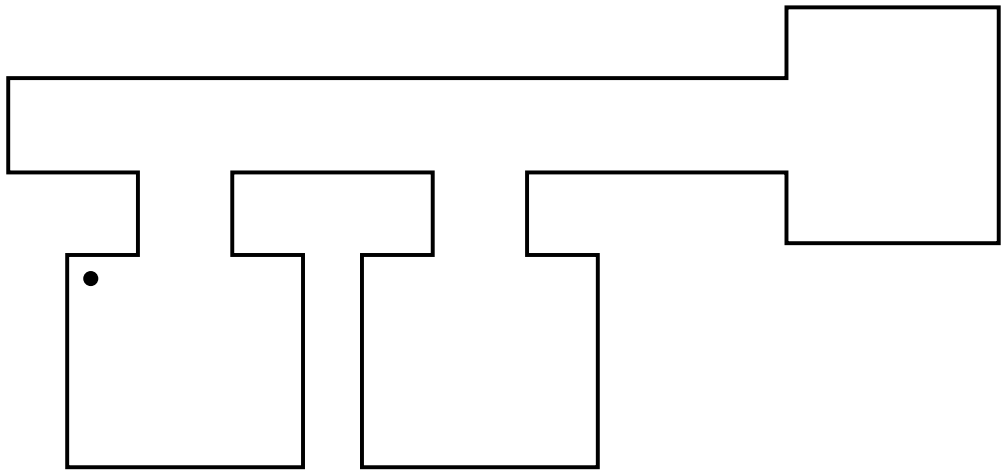
name

A robot, represented below by the small dot, wants to solve the active, global, nondeterministic localization problem we discussed in class. The environment is represented as a polygon, and the robot has a sensor that reports the visibility polygon of its position within the environment and a compass that reports the robot's orientation relative to the environment map.



1. Draw the visibility polygon for the robot's position.

2. Find all of the positions consistent with this initial sensor information. Mark each with a star.

3. Draw a path that would allow the robot to eliminate at least one of these candidates.