

EE380 Robo Maze

Robo Maze Rules

1. Rank is determined by the shortest time from start to finish without interference. (Note: all robots that reach the finish will out rank ones that do not.)
2. In the event a robot does not make it to the finish line, rank will be determined by distance from the finish line (shorter = better rank).
3. Distance will be measured in units of "steps" from the finish line and is demonstrated on the attached maze map.
4. Final position is determined by position at end of the maze run (not necessarily the shortest distance achieved by the robot).
5. Robots that terminate with the same final distance will then be ranked by the time to reach the final distance.
6. A maze run will be terminated if a robot cannot move for 10 seconds.
7. Maze runs are limited to 5 minute (before the addition of the penalties).
8. Robots that have not reached the finish in the 5 minute time limit will be scored based on the position of the robot at the end of the 5 minutes.
9. A one minute time penalty will be added to robots that trigger the "Trap" sensor.
10. If a robot becomes stuck (cannot move) for 5 seconds students may rotate the robot into a new direction (rotate only, NO translational movement). This can be done a maximum of 3 times during a maze run and a 1 minute penalty will be added each time the robot is touched.

Guidelines

1. The maze is designed to be completed by following walls on the right OR left of the robot.
2. White lines will be added to the black maze floor. Lines indicate the most direct path to the finish.
3. LED "road signs" are added at some of the "T" intersections and indicate the most direct path to the finish.
4. The maze contains a "Trap." The trap will light up to indicate if a robot comes too near the trap. If the light illuminates a 1 minute penalty will be added to the final time. The trap is preceded by 3 equally spaced lines (0.75 inch white lines separated by 0.75 inches) completely across the path.

