2020 Mercury Robotics Competition Outline

Overview

* The challenge is meant to test the robot’s ability to interface with its surroundings in meaningful ways. There are four goals in the course.
  + Obstacle Avoidance – Successfully navigate an area
* The track will consist of linear passage ways similar to previous years. Excluding the obstacle avoidance section there will be bypass routes available. In other words, there will be no reset penalty for bypassing an obstacle, assuming the handler does not interfere with the robot.

Obstacles

\*Note\* -- Any obstacle may be bypassed for no point gain or loss.

* Obstacle Avoidance
  + Remote Controlled – 1/6 points
  + Autonomous (Known Placement) – 1/3 points
  + Fully Autonomous (full points)
* World Manipulation
  + Possibilities:
    - Drill
    - Pick up/handle
* Object Detection
  + Possibilities:
    - Detect radio freq.
    - Detect magnetic field
    - Detect texture/shape
* Ramp and/or Rough Terrain

Penalties

* Wall contact -5 seconds
* Reset penalty -5 seconds

Scoring