

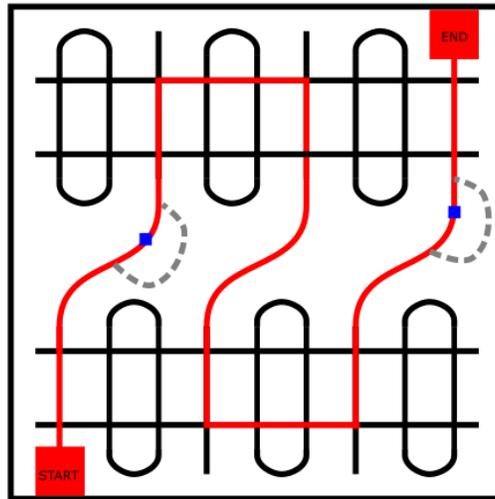
Name of Event:	Programmable Line Tracing
Robot per team:	1 robot
Robot Size:	A maximum of 20cm by 20cm by 20cm size is allowed throughout the whole run.
Robot Weight:	No limit
Arena Specifications:	3m x 3m (approx.)
No. of Player/s	1 player per team
Robot Control:	Fully Autonomous
Event Summary:	Participants are required to build an autonomous, self-contained mobile line tracing robot that is able to follow a black line on a white surface at the fastest time possible from the start line to the end line, following the proper designated route of the track specified by the referees.

1. Restrictions on Robot Design

- 1.1. Participants will need to take into consideration the design of the track.
- 1.2. Any type of wheeled robot is allowed. Any **INEX** microcontroller is required.
- 1.3. Robots can be using any other parts or sensors that are not programmable logic controllers.
- 1.4. External remote control of any sort wireless or wired is **STRICTLY PROHIBITED**.
- 1.5. Any strong light, example lasers, etc... of any sort that is damaging to human eyes are not allowed.
- 1.6. Robots shall not damage the race track in any way, deliberate or not.
- 1.7. Robots are not allowed to secure themselves in any way to any part of the race track including the edges or outside of the race track.
- 1.8. Robots shall not cause any danger to the race track & surroundings in any way whatsoever.
- 1.9. Robots will need to protect their sensors if necessary from any outside interferences.

2.2. Line Tracing with Obstacle Avoidance (Second option)

- 2.2.1. This game consists of different lines and objects.
- 2.2.2. The robot must detect the objects (obstacle) and avoid bumping into them. The robot can move an arc to avoid bumping the obstacle.
- 2.2.3. If the robot touched or bumped the obstacle, end of the game.
- 2.2.4. Score will be based on the TOTAL time when the robot reached the Finish / End line.



Sample Map: Line Tracing with Obstacle Avoidance (Path 1)

2.3. Line Tracing with pick and drop (Third option)

- 2.3.1. This game consists of different lines and objects.
- 2.3.2. The robot is supposed to follow the black line as fast as possible from the Starting line to the Finishing / End line.
- 2.3.3. The robot must detect and pick (or push) the object and place it to the designated areas.
- 2.3.4. Location of the objects and designated areas will be identified on the day of the contest.
- 2.3.5. For every object properly placed on the designated area is equivalent to 5 points.
- 2.3.6. Score will be based on the TOTAL POINTS. When the score is equal, the fastest robot wins.

