

INTRODUCTION:

All the technological advances in the world are directed towards the development of superior Artificial Intelligence. All efforts are being made to make intelligent systems so as to further reduce human effort. And when it comes to reducing human effort , robots emerge as the undisputed winners.

Hence it's not surprising that most of the research is being concentrated towards making the current robots more and more intelligent. An example of such a robot is a grid solver.

This event concentrates of the development of such a bot , that can traverse a path with given constraints through a grid.

PROBLEM STATEMENT:

The participants are required to build a grid solver that can traverse the grid to the finish point with a minimum of 5 turns. In the final rounds where eight or less number of teams remain, the minimum number of turns to take will be mentioned on the spot and extra time will be provided to make appropriate changes to the code/path. As an optional bonus, the bots are supposed to stop at a black wall at the end of the track. The competition will be held as a race between 2 teams .

ARENA DESCRIPTION:

- The width of the track will be 3 cm.
- The track will contain only black colour on white base.
- The wall will be black in colour.

BOT DESCRIPTION:

- The maximum dimension of the bot should be $25 \times 25 \times 25 \text{ cm}^3$
- Use of lego kits is prohibited. However development boards can be used.
- The voltage between any 2 points should not exceed 12 volts.
- Bots have to be autonomous with processing on board. Communication with any external processing devices (laptops, etc) is prohibited.

- The bot should be powered by an on-board supply and no external supply will be provided.

RULES:

- There will be a sample arena provided for calibration prior to the event
- The bot should not damage the arena in any manner.
- The bot should not be touched or reoriented in any manner during the race.
- The bot must be submitted after calibration and no changes, in hardware or software are allowed after that.
- The code should be submitted prior to the event for verification.
- The teams are supposed to let the organizers know of the path their bot will be following. An image of the arena will be provided to the teams and the same with the clearly marked path has to be submitted with the bots.

JUDGING CRITERIA:

- There will be three races between two teams. The winner will be declared on the basis of the 'best of three'.
- Appropriate bonuses will be awarded if the bot successfully stops at the black wall (without touching the wall).
- In case both the bots deflect from the path, the most obvious winner will be declared.

ARENA:

