İstanbul Technical University Robot Olimpics 2018

Color Selecting Category Rules

Definition of the Task:

- In this category, robots must cary the cubes to correctly colored areas.

Success Criteria:

- In this category, success criteria is to carry at least one prism to the correct place.

Robot Specification:

1) There is no weight and size limit for robots.

Competition:

2) Every robot competes on its own turn.

3) Every robot has 2 chances to compete. The higher score will be considered.

4) Robots have 5 minutes to compete for each chances.

5) Robots must distinguish the color of the prisms and the colored areas.

6) The track consists of two parts. In the gathering robots must take the prisms from the colored areas. In the leaving area, robots must leave the prisms to the matching colored areas.

7) Colored areas and the prisms have the same color. In the leaving area order of the colored regions is mixed.

8) Robots may start anywhere in black region.

9) Robots may carry or drag a prisms.

10) Robots may carry more than one prism at a time.

11) Competitors can use a starting apparatus to align their robots before starting.

12) Samples of the prisms and the colored regions will be in the technical room before the competition.

Track Specification:

13) Gathering area consists of 7 regions with 5 colours but leaving area 9 regions with 7 colours.

14) The competition area is the area with black background and other colors (green, red, etc.).

15) There will be 7 prisms with 5 different colours.

16) Prisms are 3cm x 3cm x 6cm. The 3cmx3cm part of the prism is in contact with the ground.

17) Gathering and leaving areas are 30cm x 30cm.

18) There will be white line on the trach as a reference. Its width is 1.8 cm.

19) The walls of the track are black and white MDF. The walls have a height of 10 cm and a thickness of 1.8 cm.

20) All prisms will be in the middle of the rooms.

21) Prisms are about 30-40 gr weight.

Scoring:

22) Scoring will start when the robot gets off the track.

23) In order to get the points, the cube must completely contact the correctly colored area.

24) The number of prisms not in the leaving area will be multiplied with +100 during scoring.

25) The number of prisms in the gathering area will be multiplied with +200 during scoring.

26) It is -50 points to place a cube outside of the competition area.

27) Robots with higher score will have higher ranks.

28) If the robots have the same score, time will be taken into consideration.
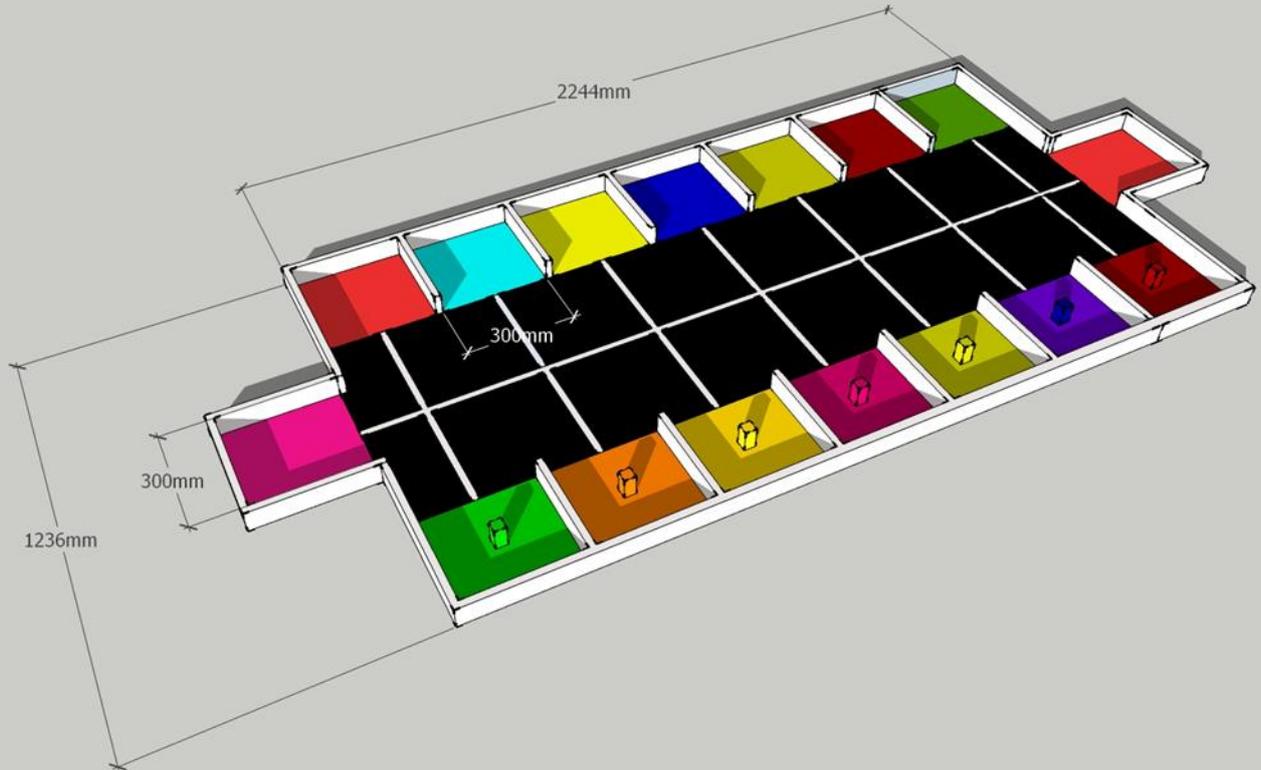
* The places of colors are examples. It <u>does not </u>represent the places in the competition.