MAZE SOLVING COMPETITION RULES

1. Introduction

This document outlines the rules for the maze robot competition.

2. Description of the Competition

One operator and four helpers can be registered for each robot (there can be a maximum of 5 team members in total). However, only one operator is allowed to guide the robot during the encounter. The area where the matches are held is called "Runway". Robots in the labyrinth solving category will complete the competition by starting from the starting point of the track consisting of black floor and white walls, finding the exit area and exiting as soon as possible. Each contestant invited to the Track for the competition accepts the competition rules and winning conditions and must participate in the competition using only autonomous robots made or programmed by himself. The robots are placed by the competitors on the track at the starting point determined by the referee. The competition consists of three rounds. By ranking the robots, the time to complete the track and penalty times are calculated in each round. The winning robots are announced by the referees.

2.1. Fixture

The competition format is determined by the tournament organizers depending on the number of participants. Teams have 3 rounds of 3 minutes each to complete the competition. After all teams participating in the competition complete their 1st Round qualifications, the 2nd and 3rd rounds are held respectively.

2.2. Classification and Rating

Fibonacci International Robot Olympiad Maze solving competitions take care to classify and grade students by taking into account education levels and age groups. It can be divided into 5 basic groups: kindergarten (0-6), primary school (6-10), secondary school (10-14), high school (14-18) and university (18+). The age group and education level of the team is determined by the age or education level of the oldest member of the team. It is the responsibility of the team **mentor to ensure that teams are registered in the correct age category .** If during the competition it is determined that the team is registered in the wrong age category, the robot of this team will be **disqualified from the competition** .

Note: Teams in the younger age group are allowed to compete in the older age group. The organizers reserve the right to check the age of contestants during the competition. In case of violation, the robot of the team that violated the rules will be **disqualified** .

3. Competition Field Description (Track)

The walls of the labyrinth will be made of white wood with a height of 5-12 cm and a thickness of 5-18 mm. The floor is made of black matte wood and the walls are made of white matte wood. The maze matrix consists of 10 x 10 squares and the size of each unit square is 18 cm x 18 cm. The starting and finishing points are 18 cm x 18 cm in size and are inside the track matrix. The starting point can be found in the 1st row of the matrix, the end point can be found in the 10th row of the matrix and in any cell. At the end point, there is a white area measuring 10 cm x 10 cm. The margin of error for the stated dimensions is 5%. Labyrinth; Dead ends may contain closed cells that robots cannot enter. Changes can be made to the course walls in the 2nd and final stage of the competition. Paint, tape, etc. on the floor and walls of the track. There may be problems caused by such factors . The inner and outer corners of the runway walls and their joints may not be covered, so there may be marks or lines.

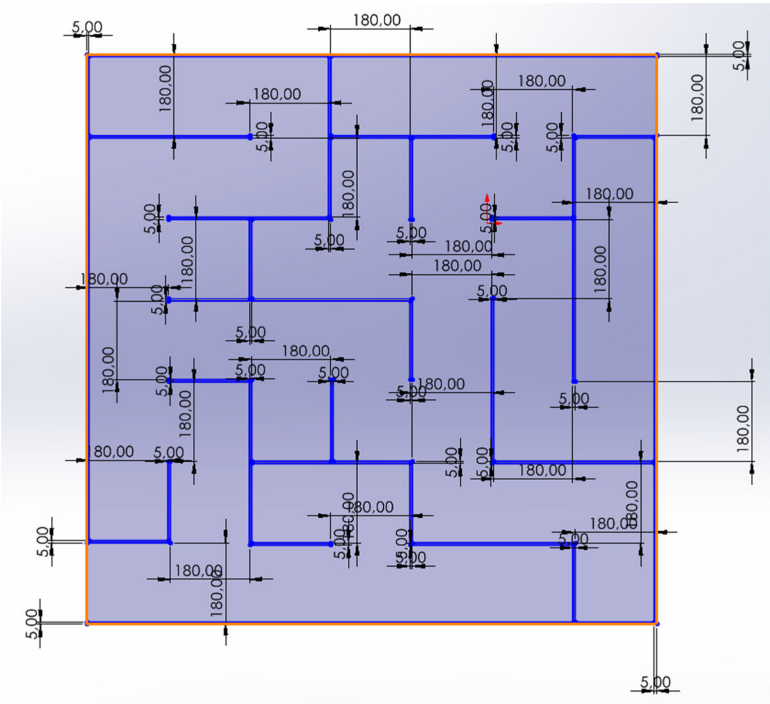

Figure 1: Runway Dimensions

Class	Height	Dimensions	court material
Maze Solver	12cm	200cm x 200cm	Wood/Plastic

Table 1: Maze Solver Parameters

3.1. starting area

Robots are initially placed in the area indicated by the referee, starting from the area specified as Row 1, as in Figure 2. It can be started from the square on the 1st line that the referee randomly specified before the competition starts.

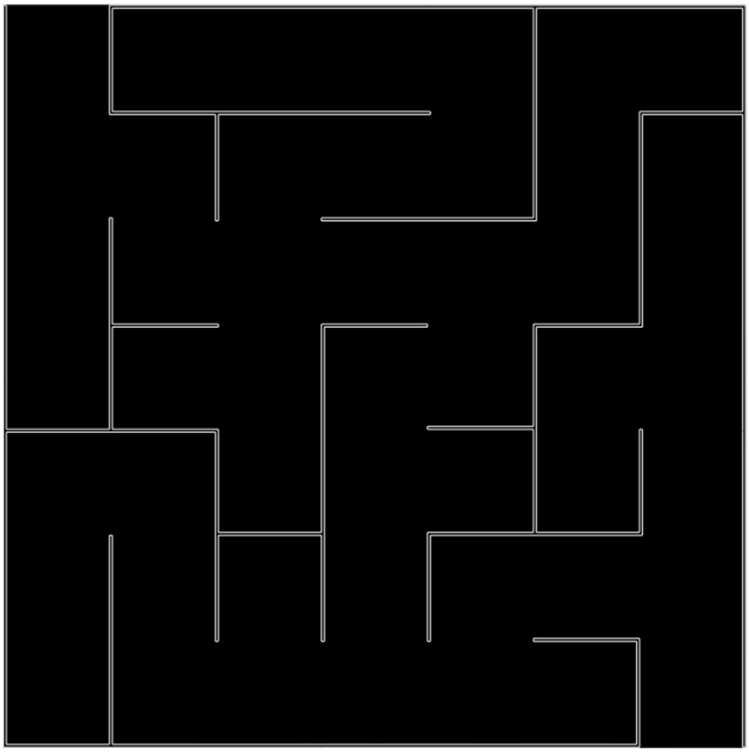

Figure 2: Starting positions of robots

4. Robot

4.1 The maximum width and height of Maze Solving robots is 18cm (180mm), Its weight must be no more than 1000g. There is no height limit, but the width and height values of the robots at every height must comply with this rule.

Class	Weight	Length*	Width*	Height*
Maze Solver	1000g	18cm	18cm	There Are No Limits

Table 2: Size and Weight Limitations

4.2 There are no restrictions on the sensors that robots will use to detect the floor and walls .

4.3 Each competitor must make his/her design taking into account the characteristics of the track.

4.4 It is essential that robots try to find their way out autonomously. For this reason, when the round starts for any team, it is prohibited to provide wireless remote access or wired control to all robots, including other robots. If it is detected that the labyrinth has been memorized or the robot has been programmed after the round has started, the team owning the robot will be disqualified.

5. Match Rules

5.1 Competitors are not given breaks, maintenance or repair time during the competition. They will have enough time for these procedures between tours.

5.2 Competitors cannot test or install programs on their robots during the competition. The team that attempts to make any adjustments, tests or programs on the robot during the race despite the warnings will be disqualified.

5.3 The robot cannot leave permanent marks or damage the road during or after movement on the road. If the referees decide that the robot has damaged the track, the robot will be removed from the track and the team will be disqualified. The referee committee is authorized to decide on the cleanliness, order and suitability of the maze for competition.

5.4 The organization reserves the right to make changes in field dimensions and field designs. Any changes made will be notified to the teams by the referee beforehand or during the competition calibration time.

5.5 Each competitor has a total of 3 minutes for each round and this time will not be stopped throughout the competition. The shortest time recorded in the tours made within this period is evaluated.

5.6 Each competitor has a total of 3 intervention rights. A 10-second penalty point is added for any intervention to the robot. A maximum of 30 seconds penalty points are added to the total.

5.7 Between two rounds, the competitor has the right to change parts, delete wheels and make tactical adjustments.

5.8 Robots race in turns. The order in which the robots will compete is determined and announced by the referee committee.

6. Objections

The juries' decisions are final and not subject to subsequent review. If a solution cannot be reached with the juries, objections must be submitted immediately to the Fibonacci International Robot Olympiad Chief Referee. Complaints made after this point will not be accepted. In case of disagreement or disagreement, the final decision will be made by the Juries and/or organizers.

Note: Rude behavior will not be tolerated. A team that does not respect the decisions of the judges, referees or referees may be disqualified by the referee and/or event organizers.

6.1 Competitors cannot raise objections due to field factors after the round has started. These factors are eliminated by the referees with warnings made before the round.

6.2 The competitor may make a verbal objection to the referee for the result of a round after that round. When the next round begins, the contestant loses his right to verbal objection.

6.2.1 The contestant may present the evidence he/she has to the referee within the scope of the objection. The referee can decide according to his own logic when there is a situation outside the rules.

6.2.2 After the rounds are over, the contestant may submit a written objection to the verbal objection decision until the next round begins. This objection must be written and submitted to the chief referee in the form of a petition .

6.2.3 The chief referee makes final decisions on the objections made. Decisions cannot be appealed again.

6.3 Competitors who do not comply with the referees' warnings or disrupt the course of the competition will be disqualified.

6.4 Fibonacci robot competition reserves the right to make any changes it deems necessary in the rules.

7. Marking Robots

Robots must be checked by the referees before the tournament and their number labels (Robot Number / Team Their IDs should be labeled with). These stickers are provided by the competition organizers. The sticker cannot be placed on the robot or any other component that could interfere with the operation of the opponent's sensors . Before each new tour, robots must undergo technical control again.

8. Changes and Cancellations to the Rules

Changes and cancellations in the specifications are made by the main organizer of the competition in accordance with the regulations of the competition organizing committee.

9. Security Measures of the Competition

Class	Glove	Glasses
Maze Solver	Not necessary	not necessary

Table 3: Security Requirements

9.1 Competitors will not be allowed into the competition area with any electronic device (e.g. phone, tablet, RF remote control).

9.2 It is extremely dangerous to interfere with robots on the field without stopping the tour. Competitors who intervene despite this will be disqualified.

9.3 Robots with swollen batteries or leaked fluids cannot be raced. If dangerous situations such as short-circuiting or smoke are detected in a robot during the tour, the competition will be stopped and the robot will be disqualified.

10. Disclaimer

Competitors in the Maze Solver Category must work carefully and take the necessary precautions at every stage of the competition. Despite this, Fibonacci International Robot Olympiad Organizers disclaim all liability for any material damage or injury that may occur .