

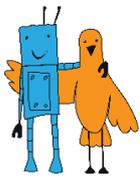


“LEGGED ROBOTS MARATHON” CONTEST RULES

Version 2.0 dated July 20, 2017.

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1. General provisions

1.1. Task description

The robot must cover a distance on the assigned trajectory in the best (minimum) time.

2. Field and line specifications

The field represents the flat surface of a white cast banner with a drawn on it black line indicating the trajectory.

The following requirements apply to the line:

colour is black;

length is no less than 11 m;

width is 50 mm;

minimum curvature radius is 30 mm.

3. Robot specifications

The robot must be fully autonomous.

Before the attempt starts the following requirements apply to the robot:

length is no more than 40 cm;

width is no more than 40 cm;

height is not restricted;

weight is no more than 3 kg.

There are no restrictions on the robot dimensions during the robot's movement.

The robot must contain controller and power supply.

The robot must have at least one leg. The number of robot legs is not limited.

Each leg should contain at least two joints and demonstrate the relative motion between the joints for a walk.

The robot should touch the surface of the field only with legs.

The robot can follow along the line by step, jogging, jumping, or any other non-wheel way of movement.

The contact of any limbs with the field using wheels is prohibited.

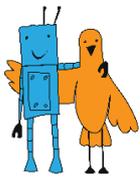
At any time, each foot of the robot cannot be higher than the related attachment point.

Joints of the robot should include means of controlled movement for the walking, jogging and/or jumping.

Here are some examples of designs that are not legs:

whirling spoked wheels or wheels with other radially sticking out elements for creation of a semblance of legs;

traction straps with spikes or roller chain with "feet", fixed in any direction;



“leg” with fulcrum which does not performing reciprocating movements and just rotates around a point which is fixed relative to the robot’ corpus;

“leg” with fulcrum which does not performing any movements relative to the robot’ corpus.

4. Procedure of the competition

Just before the attempt starts the robot must toe the starting line so that any of the robot's parts and/or its projecture do not cross this line.

In the competition, the robot starts and finishes at the same starting position.

Each team is given no less than two attempts. The exact number of attempts will be determined by jury on the day of the competition. The best time result of attempts is counted.

The time of attempt is counted from the moment the robot crosses the starting line until it crosses the finish line.

The robot crosses the line when its front part (or projecture) touches or crosses the line.

The time of attempts shall be recorded by an electronic gate system or by the referee with a stopwatch, depending on availability of equipment.

4.1. Ineligibility conditions

In the following cases the robot will be disqualified:

the robot is non-autonomous (the human is in control of the robot);

during the attempt the participant has touched the field or the robot;

the robot is out of the field (any fulcrum has touched the surface out of the field);

the robot has touched the field by any of its part but not by leg;

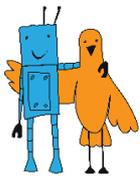
the robot is out of the line for more than five second;

the robot has lost the line and found the line in the point which is farther than the point where the robot lost it.

The robot is considered to be out of the line when none of its part or projecture is on the line.

5. Procedure to determine the winner

The winner will be the team whose robot has spent the minimum time for covering a distance.



6. Revision History

№	Doc. No.	Date	Note	Previous version	Update version
1	2	3	4	5	6
1	1.1	04.11.16	Section changed	1.5	
2			Section changed	4.2.1.2.	
3	2.0	20.07.17	Entire text changed		
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