



Segway Race

1. General provisions

1.1. Field

- 1.1.1. Range color — white.
- 1.1.2. Line color — black
- 1.1.3. Width — 50 mm.
- 1.1.4. Maximum line curvature radius – 300 mm.

2. Requirement to Robots

2.1. Main specifications

- 2.1.1. The robot size at the start must not exceed 40 x 40 cm.
- 2.1.2. In the process of motion, the robot sizes may change.
- 2.1.3. The robot height must not exceed 40 cm.
- 2.1.4. The robot weight is unlimited.
- 2.1.5. The robot must be fully self-sustained.¹
- 2.1.6. During movement along the track, the robot must have at least two bearing points.

3. Game

3.1. Objective of game

- 3.1.1. Following the black line, the robot must get from the start zone to the finish zone within the shortest time possible.
- 3.1.2. The assignment completion time must not exceed 3 minutes.

3.2. Start

- 3.2.1. The operator may independently choose one of the two starting spots.
- 3.2.2. At the start, all the robot bearing points must be within the start zone.²
- 3.2.3. The robot must be manually activated or initiated at the contest start by the referee’s signal; after that the robot work is not to be interfered with. Remote control and issue of any commands for the robot are prohibited.
- 3.2.4. During the contest the participants are prohibited to touch the robot body or the range.

3.3. Finish

- 3.3.1. Assignment completion is terminated by the referee’s signal after any bearing point of the robot has crossed the finish line.
- 3.3.2. By the referee’s decision, the attempt may be over ahead of time.

3.4. Assignment completion discontinuation

- 3.4.1. The assignment completion may be interrupted (with time stopped) in the following cases:
 - If any member of the team has touched the robot body.
 - If the robot has lost the line for more than 5 sec³.

¹ Only if the robot participates in the “Self-sustained Control” category. For more detailed description see Clause 4.1

² Sensor can transgress the start zone at the start unless they represent a bearing point.

³ Departure from the line is deemed to occur when the line is not between the robot’s bearing points.



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- If the robot has lost balance.
- If the finish condition has been satisfied (see Clause 3.3.).
- If the competition procedural rules have been violated.
- If the time allocated for completion of the assignment has expired.

4. Winner nomination rules

4.1. All the robots are classified into 2 categories:

- Robots with self-sustained control;
- Manually controlled robots.

4.2. In each category, the winner is nominated independent of the other two categories.

4.3. Each team has no more than 2 attempts (their exact number to be determined by the jury on the competition date).

4.4. Points are scored for passing different elements⁴:

- 4.4.1. For passing a straight section without a slide — 10 points.
- 4.4.2. For passing a corner — 20 points;
- 4.4.3. For passing a straight section with a slide — 50 points.

4.5. The best time among the attempts counts.

4.6. The team whose robot has scored the maximum points is declared the category winner. In case of points equality, the second attempt counts⁵. In case of second results equality, the distance covering time in the best attempt counts. In case of the latter parameter equality, the distance covering time in the second attempt counts⁶.

⁴ The track element is deemed successfully passed if the robot, without satisfying the conditions set forth in Clause 3.4.1, proceeded to passing the next element.

⁵ In case the number of attempts is in excess of two, one further compares the best results (the third best result, the fourth best result etc) until the last one.

⁶ In case the number of attempts is in excess of two, see the previous footnote.