Version 2.1 d/d 11.08.2014

ROBOFINIST

Labyrinth

1. General provisions

1.1. Field

- 1.1.1. Range color white.
- 1.1.2. Line color black.
- 1.1.3. Start zone color red.
- 1.1.4. Finish zone color green.
- 1.1.5. Width 50 mm.

2. Requirement to Robots

2.1. Main specifications

- 2.1.1. The robot size at the start must not exceed 25 x 25 cm.
- 2.1.2. The robot height must not exceed 25 cm.
- 2.1.3. In the process of motion, the robot sizes may change.
- 2.1.4. The robot weight is unlimited.
- 2.1.5. The robot must be fully self-sustained.

3. Game

3.1. Objective of game

- 3.1.1. 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 2 minutes.
- 3.1.3. The walls are re-positioned before each attempt of all the robots.

3.2. Start

- 3.2.1. Attempts begin only after the last robot has been submitted into quarantine¹.
- 3.2.2. Before each attempt, the team is given² 5 minutes to launch the robot in the labyrinth survey mode³.
- 3.2.3. At the moment off start, the robot shall be fully within the start zone.
- 3.2.4. Immediately before start, each team randomly determines the robot front orientation as of the program launch moment.
- 3.2.5. 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.
- 3.2.6. During the contest, the participants are prohibited to touch the robot body or the range.

3.3. Finish

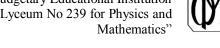
- 3.3.1. The assignment completion is over by the referee's command at the moment when the robot is fully within the finish zone.
- 3.3.2. By the referee's decision, the attempt may be over ahead of time.

¹ Robots placed into quarantine can not be modified or altered (inclusive of software download or battery replacement)

² The team has the right to renounce such time.

³ The labyrinth survey must not be in conflict with Clause 2.1.5. Entry of any data at the moment referred to is prohibited.

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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 failed to leave the cell within 30 sec.
 - 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.** Each team has no more than 2 attempts (their exact number to be determined by the jury on the competition date).
- **4.2.** Points are scored for passing through the labyrinth from the following formula:

Points = (*short-cut* way length — *minimum* number of accessible cells separating the robot from the finish) \times 10 + (120 – (attempt time⁴))

- **4.3.** The best time among the attempts counts.
- **4.4.** The team whose robot has scored the maximum points is declared the category winner.

⁴ The attempt time must not exceed 120 sec.