2018 WITT SCIENCE AND TECHNOLOGY FAIR

SPECIAL CATEGORY: ROBOT MAZE CHALLENGE

This entry involves a scratch-built robot, the purchase of a kit to assemble, or the purchase of a ready-made pre-assembled robot.

YOUR MISSION: The Robinson family is lost in space, stranded on a strange new planet after their spaceship, the Jupiter 2, has crash-landed. Two of the children, Will and Penny Robinson, have gone out to survey the crash site, but have not returned.

Send your robot to rescue the Robinsons!

The robots that navigate the maze to find the Robinsons in the best time will win monetary prizes.

- The example maze will be published on the Focus Consultancy website   www.Focus-consultancy.co.nz
  You may use this for practice.
- Robots must be fully built and tested before the competition.
- The robot shall be self-contained and autonomous (**no** remote controls).
- The robot will start when a button on its body is pressed to begin movement after a 5 second delay.
- The robot shall not leave any part of its body behind while in the ring.
- The robot shall not jump over, fly over, climb, scratch, cut, burn, mark, damage, or destroy the maze.
- MiniBots: shall not be larger, either in length or in width, than 10 centimetres. Mass (with batteries) 500 grams maximum.
- MegaBots: shall not be larger, either in length or in width, than 20 centimetres. Mass (with batteries) 3 kg. maximum.
- There are no restrictions on the height of a MiniBot or MegaBot.

I'm off to get my registration form in!

Maze procedures and rules

1. Register at the desk in the La Mer Lounge and collect the ID sticker. Stick it on your robot.
2. Show your robot to the registration person. Robots must be in working order.
3. Find a seat and be seated. Maze attempts will be strictly by number
4. Each participant will be guaranteed ONE attempt at the maze.
5. The robots that navigate the maze to find the Robinsons in the best time will win monetary prizes.
6. Course Time: time is measured from the time the robot crosses the starting line until the time it crosses the finish line. A robot is deemed to have crossed the line when the forward most wheel, track, or leg of the robot contacts or crosses over the line.
7. Time Limit: a maximum of 3 minutes is allowed for a robot to complete the course. A robot that cannot complete the course in the allotted time shall be disqualified.
8. Autonomous Control: once a robot has crossed the starting line it must remain fully autonomous, or it will be disqualified.
9. Arena Edges: a robot that wanders off of the arena surface will be disqualified. A robot shall be deemed to have left the arena when any wheel, leg, or track has moved completely off the arena surface.
10. Losing the Line: any robot that loses the line course must reacquire the line at the point where it was lost, or at any earlier (e.g. already traversed) point.
11. Second Attempt: any robot that loses the line course and fails to reacquire it will be allowed a single reattempt. The robot must start the course again from the beginning, and if it loses the line course on its second attempt it will be disqualified.
12. Referees/Judges decisions are final and no correspondence will be entered into.

- Robots must have enough power and stamina to compete for potentially 12 to 36 minutes throughout the tournament. Please consider battery accessibility and robot design.

- During an attempt in the maze no changes in programming or construction of the robot are allowed.

- A robot may not in any way deform the maze. Robots are not allowed to use any flying components or projectiles.

- The Referees and/or Judges will disqualify any robot whose strategy or operation is considered too dangerous.

- Referees/Judges decisions are final and no correspondence will be entered into.