ResQlympics

ResQlympics is a competitive event where participant-operated robots navigate an obstacle-filled arena to rescue hostages simulated within a time-critical scenario. Participants must strategize and prioritize which hostages to rescue first, maximizing their efficiency within the time limit.

Prize Pool

First Winner = 25,000/-
Second Winner = 15,000/-
Third winner = 10,000/-

BOT SPECIFICATIONS

- **Size Restrictions**: The robot's dimensions must not exceed 22 cm in length, 15 cm in width, and the height fromthe frame should not be greater than 13cm and the ground clearance should not be greater than 6cm (Overall height should not be greater than 19cm) excluding the gripper but including the tires. A margin of error of ±5% is acceptable.
- **Manual Control Requirement**: All participating teams must use manual control for operating the robot during the competition.
- **Control Mechanism**: Teams must employ a wireless or wired control mechanism. The dimensions of the remote control device are not counted toward the size restrictions imposed on the robot itself.
- -For wired control robots, only one team member is allowed to control the robot. Not allowed to navigate the member who is controlling the robot.

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- – For wireless control robots, teams must consist of two members. One member operates the robot using a remote and stays stationary. The other member assists with navigation and communication, walking around the arena.
- **Onboard Power Supply:** The robot must have an onboard power supply and cannot rely on external power sources during the competition.
- **Control Mechanism Design:** The robot's control mechanism should be designed for operation by a single person, ensuring ease of use and maneuverability.
- **Adherence to Specifications:** Failure to comply with any of the specified regulations will result in immediate disqualification from the competition

POWER SUPPLY

- All participating robots must exclusively rely on an onboard power supply for their operation throughout the competition.
- Teams are allowed to use rechargeable batteries or power cells as the primary power source for the robot.
- The voltage output of the power supply should not exceed 12V to ensure safety and compatibility with the robot's components and control mechanisms.
- The amperage output of the power supply should be within safe operating limits, ensuring optimal performance without compromising safety.
- Teams are permitted to replace or recharge the batteries between competition rounds or during breaks, provided that the robot remains within the specified size restrictions at all times.

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- When recharging batteries, teams must follow proper safety protocols and use appropriate charging equipment to prevent any hazards or accidents.
- Any violation of the power supply rules or attempts to utilize external power sources during the competition will lead to immediate disqualification from the event.

GAMEPLAY

Starting Position:

- All robots start from a designated starting area.
- Participants must carefully observe the arena layout and plan their strategy before initiating their robots.

Game Duration:

- The total gameplay time is 10 minutes. Strategic

Decision-Making:

- Before the official start, participants can take a brief observation period (e.g., 2 minutes) to strategize and plan their robot's path for mine deactivation and hostage rescue.
- Once the game officially starts, participants cannot make further strategic decisions.

Mines and Switches:

- Each switch is capable of deactivating three mines. • Deactivating a mine requires the robot to locate the corresponding switch and activate it for a duration of 2 minutes.
- The switch will have a visual indicator to show its activation status.

Rescuing Hostages:

- Robots must identify and reach hostages placed in different areas of the arena.

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- A rescued hostage should be securely carried by the robot (e.g., attached magnetically) and brought back to the designated rescue zone.

Obstacle Handling:

- Robots must navigate through obstacles without causing damage to the arena, other robots, or hostages.
- Penalties may be incurred(e.g., deduction of time or points) for any violations, including improper handling of hostages.

Robot Interaction:

- Robots are not allowed to intentionally interfere with or damage other participants' robots.
- Any aggressive or unsafe behavior will result in penalties.

Emergency Stop:

- If a robot gets stuck or encounters an obstacle preventing further movement, it may be moved back to the nearest designated checkpoint by the event officials. The robot can resume its operation from that checkpoint, but no extra time will be allotted for the setback. Time will continue to run uninterrupted during this process.
- Participants can request an emergency stop if their robot malfunctions or encounters an issue.
- Time will not be paused during emergency stops.

Rounds:

- The ResQlympics event will span across two days, consisting of two rounds. Teams are required to rescue hostages, and the topperforming teams, demonstrating efficiency by bringing hostages in the shortest time, will qualify for the second round. The second round is scheduled to take place on the 2nd day of the event.

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Winners:

- The participant or team with the highest total points at the end of the event will be declared the winner.