Antipyretic Antics

1. The aim is to put out all the fires as soon as possible, while avoiding obstacles.
2. Pool will be 10ftx8ft, approximately 6 inches deep
3. Boats will be tested on propulsion strength, maneuvering and fire dowsing capabilities.
4. There will be different fires of different types, but no liquid fuel based fires.

Eligibility

- The team can have maximum of four members. There is no minimum requirement.
- All team members must be students in a college and should present college ID upon participation.
- There can only be one boat per team.

The Machine

- The boats must be electric powered, and assembled by the team themselves. Boats bought from the market or built from a DIY kit available for purchase will be immediately disqualified.
- The teams are allowed to use a single battery of maximum 15 volt on the boats.
- The boat must fit into a box of dimensions 30cmx25cmx25cm at any point in the race.
- The boats must be remote controlled. Any wired boats will be immediately disqualified.
- The remote control can be purchased.
- The teams are responsible to use proper encoders to avoid radio interference.
- Since the arena presents a wide variety of obstacles, the teams are encouraged to decide on which path they are going to take and design the boat around that.

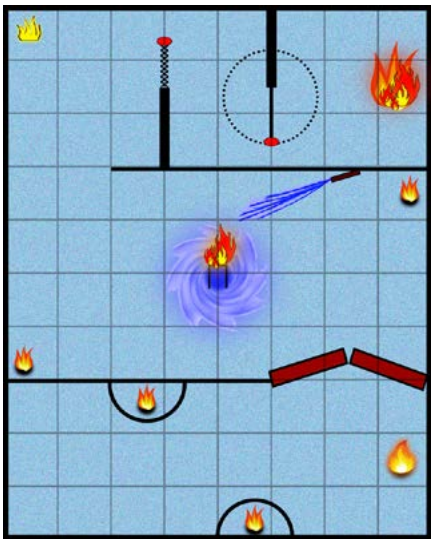
The Arena

Description:

The Arena is divided into three sections, divided by walls.

1. In section one there are three flames. The first flame is a floating candle surrounded only by a floating thermocol barrier. The second flame is a floating candle surrounded by an immovable wooden barrier. The barrier is a 10cm radius circle with the flame at its centre. The third flame is camphor surrounded by the same barrier as the second flame. To get to the next section, the boat must push open a spring loaded door.
2. The second section also contains three flames (4, 5 & 6). Flames 4 and 5 are floating flames, held 10 cm up the water level with hinged supports. The flame at the centre is a bonus flame which does not need to be doused in order to complete the course. It is a camphor flame held 15 cm up with an immovable support. The flame sits at the centre of a vortex.
3. In section three, are two flames. The first is an electric heater. It will be surrounded by a 15 cm radius barrier and will sit 5 cm from the water level. The temperature of the flame is monitored and the dousing

of the flame is signified by the turning on of a green light. To get to the next flame the boat needs to go through two barriers. The first is a gate which opens and closes with a set time period. The door, when closed leaves a 15 cm space between the wall and the end of the door. The second obstacle is a rotating arm. It rotates 7 cm above the water level, at a constant period. When closest to the wall, it leaves less than 1cm of free space between it and the wall. At the end of the course is the final flame.



Teams will hit the track one boat at a time.

- If, for any reason the boat should malfunction and repairs need to be made, the boat can be lifted, repaired and placed at the last flame doused. Any repairs must be done on the spot. The timer will be running during this.
- The boat is not allowed to leave the arena at any point during the race.
- The team members are not allowed to touch their boat or the boat of their opponents once the timer is running (except for lifting the boat).
- There shall be a countdown preceding the start of the race. No participant is allowed to touch the machine during the countdown period.

Judging

- All teams will be given two laps on the track. The track with greater points will be considered.
- As far as possible, the points will be calculated by a microcontroller monitoring the track. But all decisions regarding disqualifications and penalties will be in the hands of the judges.
- Maximum time for completing the race is 10 minutes.
- Total Score = $(600T) - P_1 - P_2 + B_1 + B_2 + B_3$
  - » T = Total time of completion
  - » P_1 = 50 points per flame left burning except for the final flame, P_2 = 100 points if the final flame is left burning.
  - » B_1 = 100 points if the bonus flame is doused, B_2 = 100 points for each flame dowsed except for final flame, B_3 = 150 points if final flame is dowsed.