

# All-Terrain Maze Robots

## *Legends of the Hidden Temple*

This year's competition each team will be asked to traverse a range of terrain while processing the complexity of a 3D maze. The construction of each robot will pose mechanical, electrical, and programming challenges. The start and finish of the maze will be determined at the beginning of the competition.

### *General Rules for the Robot:*

- The robot may not exceed a **1ft cube** (Yes, this includes wheels)
- The robot is required to have an accessible main kill switch
- Between each round, no physical change in the robot is allowed, only programming

### *The Maze:*

The corridors will be approximately **1ft wide** and walls **1ft high**. The maze start and finish will be indicated by a **colored floor** tile. Points are given based on time to finish. After 3 configurations of "start to finish" the winner will have the lowest total time. The robot may NOT traverse over a wall and may NOT go through a wall. The list of terrain the robot may have to cross is listed below.

- Gravel/pebbles
- Sand
- Mulch
- Rocks
- Speed bumps/ridges
- Bolts and screws
- Ball pit/marbles
- Road spikes /IC

---See the attached final maze outline---

### *Teams:*

Each team is allocated \$400.00 and consists of students at the University of Pittsburgh. A student (of any major) who is willing to actively participate may join a team throughout the year.

### *Tentative Competition Dates:*

Testing/Checkpoint Competition - **January 15<sup>th</sup> 2011 at 2:00pm**

- Simple straight terrain corridor

Final Competition – **TBD**