LEGO Robot Contest Spring 2008

An assignment due Monday, January 28

I would like each of you to email me at least five suggestions for the LEGO competition by Monday, January 28. The competition, as in previous years, will involve each robot tracking a black tape "maze" on the whiteboard surface. However, like the last several years, I would like to have a competition in which all robots are competing at the same time.

Below is a list of the previous events:

- 1996 — Robots traveled a maze and stopped three inches from a barrier at the end of the maze.
- 1997 — Robots traveled a maze and deposited a ping-pong ball into a box at the end of the maze (this is similar to the mid- and high-school "ROBO-RAVE").
- 1998 — Robots scooped up "M & M" candies, traveled a maze, and dropped them off in a receptacle at the end of the maze, repeating until exhausted.
- 1999 — Robot traveled a maze, acquiring "teeny beanie-babies" along the way.
- 2000 — Robots traveled a maze, identifying and extinguishing burning candles along the way (this was the advanced high-school "ROBO-RAVE" event last year).
- 2001 — Robots picked up a marshmallow, traveled a maze and met their teammate robot, at which point the marshmallow was transferred to the teammate robot, which then traveled a maze and dropped the marshmallow. A relay race...
- 2002 — All robots traveling a course marked by tape, searching for and deflating balloons along the way.
- 2003 — All robots traveled a tape "maze" to a large water tank, then they had to fill a container with "medicine," then transport to the medicine to a "sick patient."
- 2006 — All robots traveled a tape "maze" to a LEGO "person" which they had to rescue and drop off at a prescribed point.
- 2007 — The robots had to follow a maze to a "bowling alley" where they had to bowl using a miniature bowling set.

Some guidelines

- Please read Appendix F in our text for suggestions and Fred Martin's opinion (and mine) on robot destruction.
- Keep in mind the tradeoff between a competition that is too challenging (*e.g.* real-time visual tracking) or too simple (just following a maze). The LEGO robots which we'll build can't do anything *too* difficult.
- Again, it is usually more interesting if all four robots are competing at the same time.