Design contest challenges profs & students

By Gordon Haff

The annual contest in 2.70, Introduction to Design, is once again approaching. This year's contest is called "Thing of the Mountain." The object is "to design and build a device which wins a series of contests in each of which it must 'outclimb' an opponent device on a specified sand mountain."

The 2.70 design contest was first conceived of in 1975 by the present Head of the Mechanical Engineering Department, Profes-
sor Herbert Richardson, who taught the course that year. He gave the students a "creativity kit" and told them to make something useful. However, according to Professor Woodie Flowers who assisted as a graduate student that year and has been teaching the course since 1974, "the students spent so much time figuring out what to do that they got very little done."

In 1975, a more rigidly structured contest was devised. It consisted of building a device to reach the bottom of a sloped wooden ramp in exactly three minutes. The scoring entry's distance was off by only half of one percent of the length of the ramp. Flowers noted that there are more students enrolled in the class today that a three-minute time for each contestant would be unfairable.

Concluding the annual project is a long, drawn-out procedure. Flowers and the nine other faculty members involved in the course this fall started discussing possibilities for the contest about eight months ago. The discussion focused on feasibility and how a particular contest will allow a variety of different designs. As the summer went on and even after the term began, they made minor rule modifications, which, while insignificant to the contest as a whole, might be crucial to an individual's design.

The materials in the "kit" from which the project must be built are varied and, in many cases, rather unique. Flowers said that the staff "tries to provide materials which allow the most reasonable solutions, materials which can be made into wheels, axles, etc."

Sometimes the contest is shaped by kit materials. This year, through Dr. Richard Chen, one of Dr. Edwin Land's assistants and a former member of the MIT staff, the Polaroid Corporation donated motors from their SX-70 camera to be used as power sources for the "Thing." The motors were also donated to Princeton which is running a similar contest this year.

Flowers considers the project to be the most important part of any design course. He said, "I regard the first project in 2.70 as a microcosm of the engineering design process. The student is forced to do the best he can in a short amount of time using limited resources. He is then evaluated in a very real manner." He added that "grading doesn't follow how well one does in the contest, only how much work he put into it."

Since MIT started the contest seven years ago, the idea has been picked up by some other schools. A film was made of 2.70's '78 'Tug-
ger' contest last year and, according to Flowers, many schools have expressed an interest in developing a similar program. However, he added that he did not know of any school which has any courses with a significant amount of physical design work.

Corey Chaplin '79 prepares his "thing" for next Tuesday's "Thing of the Mountain" contest elimination round. The final competition will be held Thursday at noon in Room 26-100.

The first round of this year's contest will be held next Tuesday at noon in Room 26-100.

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