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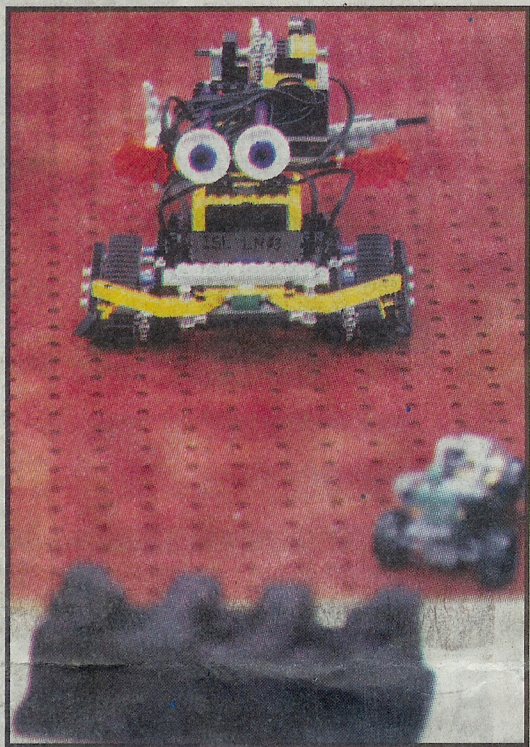
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Girl power

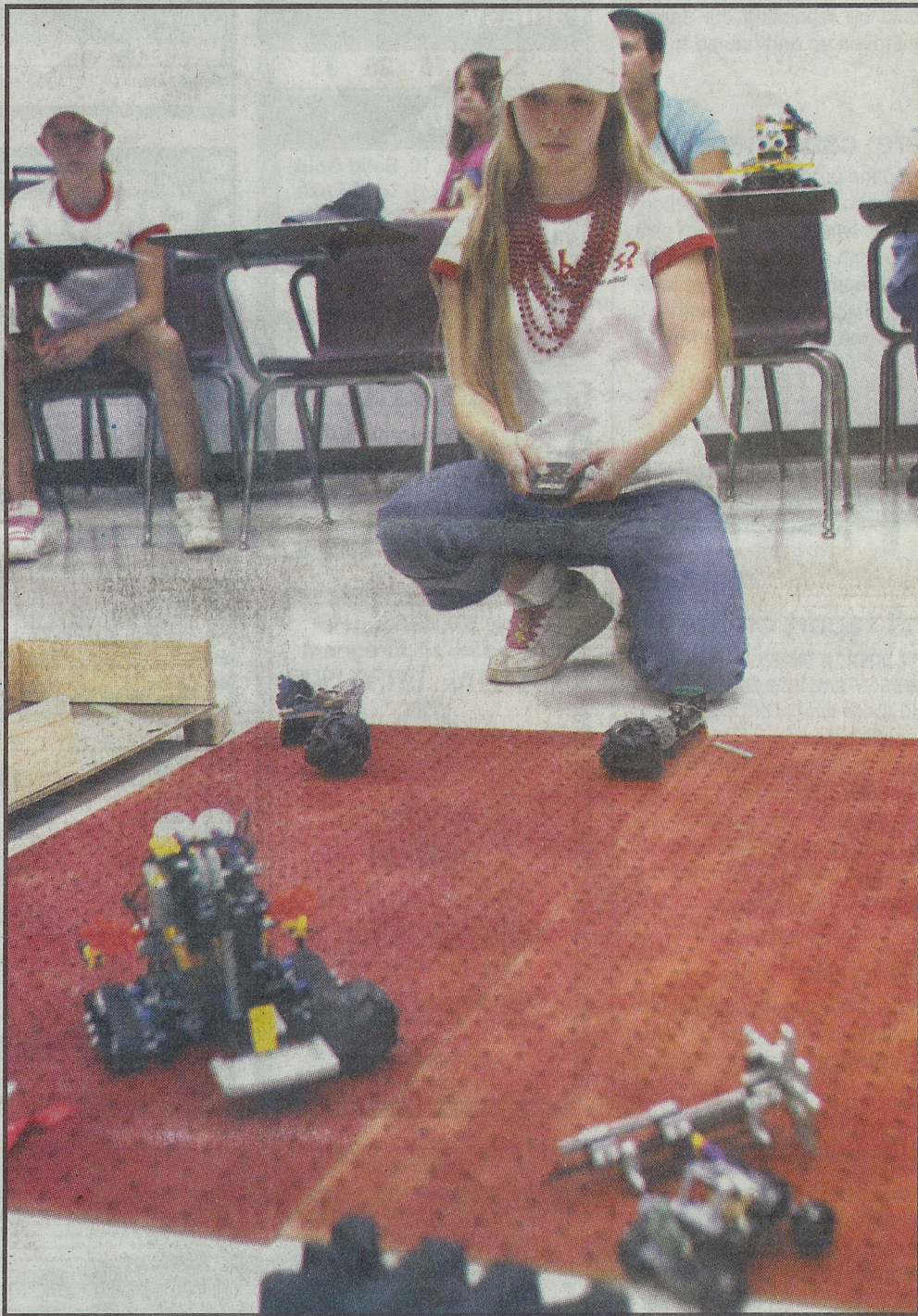
12 teenagers save mock Mars mission

By **ROGER H. AYLWORTH**
Staff Writer

No one really knew if it was human error or mechanical failure, but the Mars mission was on the razor edge of disaster. It was up to a dozen 13-year-old girls to make the remote-control rescue.

Friday, with the help of their Lego robots, intrepid junior high school girls from all over the north state attacked the challenge.

It was the final activity in a week-long summer camp aimed at helping the girls realize "that computers are not just for boys, that engineering is not just for boys, that robots are not just for boys," explained Benjoe Juliano, an asso-



Photos by Glenn Fuentes/Enterprise-Record

Devin McBain operates her remote-control robot during a summer camp for teenage girls at the Intelligent Systems Laboratory in the College of Engineering, Computer Science and Technology at Chico State University. At left is a close-up of a robot.

■ See **ROBOTS**, 12A

ROBOTS: Summer camp encourages girls to

From 1A

ciate professor of computer science at Chico State University.

Juliano, with fellow computer science Associate Professor Renee Renner, led the non-traditional summer camp that is being funded by a grant from the National Science Foundation.

Renner said girls are often not encouraged to investigate careers in the sciences.

In her own case, Renner's first planned career was as an actor, but a talent for numbers and "an interest in problem-solving" led her into computer science in the mid-1980s, a time when even fewer women were in the field.

She admitted being a woman in computers had an advantage. When she attended conferences and professional meetings, just being female made her stand out and meant she was remembered.

Months ago, the two professors began recruiting candidates for the camp, which is scheduled to be the first of three yearly camps, and girls from as far away as Grenada in Siskiyou County signed up.

Hayley Lycan of Grenada, who will be in the eighth grade this fall, admitted a week focused on computers and robotics wasn't the way she wanted to spend a chunk of her summer.

GIRLS WITH ROBOTS —

The first of three summer camps aimed at getting 13-year-old north-state girls interested in science and computers wrapped up Friday at Chico State University with a test: Could robots they had built master a range of complicated tasks?

"My mom wanted me to come to see if I'd like it," she said.

Prior to this experience, Hayley's technical background extended to forays into the Internet, and playing Solitaire and Monopoly on the family computer.

"I expected it to be really boring," she said.

Her career goals didn't include computer technology. "I wanted to be a cosmetologist or a marine biologist," said Hayley. "Then I came (to camp) and it was like, 'Wow! This is really fun!'"

"I just started to think about, like, maybe this is what I want to do," she said.

From the first day of the camp the girls, divided into six teams of two, began working on the project that would take them — at least mentally — to Mars.

Daniel Hirsmuller-Counts, a Chico State computer science student and one of the summer camp "coaches" for the teams, said each set of girls was given

a basic radio-controlled Lego robot kit to assemble and program, all with an eye to the Mars rescue mission.

Before the camp started, the Chico State student coaches all assembled one of the robot kits, to make sure all of the appropriate parts were there, and to get a sense for how long it took to build the kits.

He said most of the coaches, all students in computer science or a related field, took about three hours to construct their robots.

"Some of them (the girls) were done in an hour or two. It was really quite amazing," he said.

However, Renner wanted to make sure nobody got the wrong idea about the girls.

"They sure are not geeks," said the professor. "The girls are just wonderfully excited."

They were also obviously enthralled.

Being 13 is almost a definition for distraction. Getting a dozen 13-year-olds focused and

committed to be like trying not so with

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Each gir student as ing T-shirt Jaureguin, graduate State, expla

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committed to a single task can be like trying to herd cats. But not so with these girls.

After building, personalizing and programming their remote-control robots, all six teams sat in absolute silence in a classroom in O'Connell Hall on the Chico State campus.

Each girl and the university student assistants — all wearing T-shirts that asked "Got bots?" — listened as Felipe Jaureguin, a computer science graduate student at Chico State, explained their mission.

A Mars base had been laid out on the floor, where the first manned mission to the red planet had crash-landed. Important equipment, shelters, radio towers, an oxygen generator, and even a couple of signal beacons were scattered over a landscape that was about four feet on a side. The teams had to use their robots to gather the equipment, clear away boulders, launch a weather balloon, and even rescue a couple of astronauts trapped on "Secret-

Secret Mountain."

After finishing the collection and removal project, each robot was placed in a wooden maze, which it had to navigate with no human help, relying on its own internal programming to make it through.

The teens' parents, friends, grandparents and even Ken Derucher, dean of the College of Engineering, Computer Science and Technology, were on hand to watch the competition.

However, regardless of the amount of time they took, according to Charissa Garcia, another of the Chico State student assistants, all of the girls had already won.

"The first day they came they were quiet, and relatively timid," she said. By Friday they were all dear friends, sharing secrets and acting like 13-year-old girls during their off-task time.

But something else had also changed.

Garcia said at first the girls wanted somebody else to

"show me how to do this. What is the answer?" By Friday the girls were telling their coaches to back off a bit and let the teams work out the challenges.

She said the girls developed an "I can do this" attitude.

"What's so amazing is their comfort level with the robots, with the computers, with their instructors," said Garcia.

For the dean, Friday's competition was not an end but a beginning.

"We are hoping next year to do 30 or 40 girls," said Derucher.

He said he hopes some or all of the girls will go into technical fields, and that they will choose to come to Chico State and his college for their education.

Before the first week was over, he got a hint at least some of his hopes may come to be.

He said two of the junior high girls came to him and asked, "If we come to school here, can you guarantee we can have Benjoe to teach us?"