Cal Poly Places First in International RoboGames

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Cal Poly Robotics Club Places First at International RoboGames

SAN LUIS OBISPO – A robot designed and built by Cal Poly students won the Robo-Magellan Competition at the International RoboGames held in San Francisco on June 17.

Dubbed “Spybot,” the robot won the event by autonomously navigating an outdoor course with use of GPS, camera, compass, encoder, and ultrasonic range finder. Spybot completed a nearly perfect last run in just over a minute and a half, clocking in at a record 1:31, substantially lower than the next runner-up time of 2:12.

The total straight-line distance between the course beginning and end was less than 300 feet. However, the route taken by the robots may be significantly longer due to obstacles.

According to Cal Poly team co-leader Tyson Messori, spybot navigated the course using only wheel encoders, a digital compass, and nine sonar sensors, and then honed in on the cone with its camera. Complications resulted from phenomena that was literally out of this world. “Solar flares may have taken out the on-board ETek GPS system,” said Messori.

The winning Robotics Club team members included mechanical engineering seniors Scott Barlow from Corona, Tyson Messori from Ventura, Chi-Yeh (William) Hsu from Mountain View, mechanical engineering graduate student Terry Cooke from Los Osos, and computer engineering senior Patrick McCarty from Simi Valley. Chris Clark, assistant professor in Computer Science, served as faculty advisor to the team.

“I am especially proud of this team because they started the club and contest on a shoestring just over a year ago,” said Tom Mackin, chair of the Mechanical Engineering Department.

Held twice each year, the Robo-Magellan competition reflects the growing importance of autonomous navigation for both military and commercial applications. The contest requires entrants to design and build a robot capable of GPS waypoint navigation, obstacle detection and color tracking.

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