## **Research News**

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## FLYING ROBOTS: PIONEERING COMPETITION PRODUCES WINNERS, VALUABLE LESSONS -AND PROMISES TO RETURN FOR A SECOND TRY

For robotics teams from five top universities, building unmanned aerial vehicles able to move six metal discs from one side of a volleyball court to another has proved a bit too daunting.

But all 53 participating students left the July 29 competition at Georgia Tech as winners -- of \$10,000 toward their educations and some valuable work experience, said competition organizer Rob Michelson, vice president of the Association for Unmanned Vehicle Systems (AUVS), the event's sponsor.

"The students got a look at reality in the engineering world that you don't get in the classroom,"

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Team members from the University of Texas at Arlington display their unmanned aerial vehicle. The craft, which flew briefly during the competition, was declared the winner. (Gary Meek Photo)

said Michelson, who is also a senior research engineer with the Georgia Tech Research Institute.

The three judges split the prize between all five teams, based on how close they came to the competition's original goal. The top award of \$3,000 went to the University of Texas at Arlington, whose "tail-sitter" lifted off the ground and reached the bin where the discs

were stored before being knocked off balance.

Winning \$2,000 each for meritorious achievement were the University of Dayton (Ohio) and California State Polytechnic University (San Luis Obispo). Both Dayton's helicopter and Cal Poly's hovercraft attempted the task in

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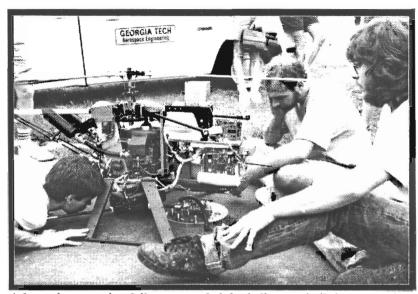
the arena, a volleyball court divided by a three-foot high wooden barrier.

Teams from Georgia Institute of Technology and the Massachusetts Institute of Technology each won \$1,500 for honorable mentions. Lastminute engine failure grounded the Georgia Tech helicopter. MIT demonstrated a hovercraft via remote control, but was unable to fly its helicopter due to sensor failure.

The students are also pioneers. The competition for creating unmanned flying machines that perform tasks without human direction is believed to be the first of its kind. The technology is experimental, and Michelson had not expected all the teams to complete the task.

But team members say the experience was worthwhile.

"I never had a chance to do an entire subsystem," said Andrew Cilia, a Texas electrical engineering graduate



A last-minute engine failure grounded the helicopter built by a team from the Georgia Institute of Technology. (Gary Meek Photo)

student. "At Texas Instruments I usually work on small parts of projects."

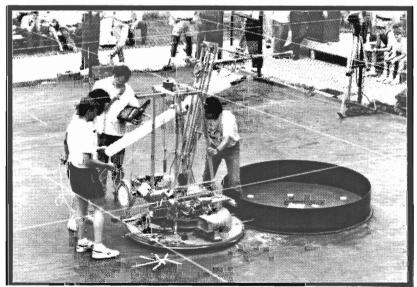
Said Georgia Tech team member Robbie Cowart, aerospace engineering graduate student: "We got to apply the theory and see it work."

The top Texas team will attend the AUVS national symposium in Washington,

D.C. August 13-15 to present its design strategy and to display the vehicle. The AUVS plans to sponsor the competition again in 1992.

Attending the event were between 250 and 300 spectators, including senior members from industry, military and the media.

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A team from California State Polytechnic University adjusts the hovercraft it entered to win a second place award in the first Aerial Robotics Competition. (Gary Meek Photo)

EDITOR'S NOTE: If would you like more information. photographs, color slides or Betacam SP videotape, please contact Pam Rountree or Charles Harmon in the Georgia Tech News Bureau (404-894-2452) or John Toon or Lea McLees in the Georgia Tech Research Communications Office (404-894-3444). An earlier news release describing the goals of the competition is also available.