Robots

computers to analyze data. Then the Unmanned Grounded Vehicle — anything from a car to a tank — determines what direction is free from obstacles, and reacts accordingly. If a car is in the way, it automatically stops.

"These teams are going where no one has gone before. This is really state of the art," said Jerry Lane, co-founder of the event. Lane also works for the Tank Automotive Command, one of seven event sponsors.

TACOM has a special interest in the robots, in as much that the UGVs are a sort of preview to future military technology.

While UGVs are already used for programs like NASA's Pathfinder, which explored the surface of Mars last year, the vehicles can also be used in battle, checking out enemy territory without endangering any soldiers.

"(These are) technologies that probably will be applied later for commercial use," said spectator Bill Fiorani, a worker at the National Automotive Center.

Computer seeing-eye programs like these are used for collision avoidance, adaptive cruise control and to wake up drowsy drivers, said Jim Overhalt, an event co-founder who also works for NAC.

"What this technology is really trying to do is make cars safe," said Dean Haynie, a mechanical engineering graduate student at Virginia Tech.

Haynie designed the vehicle for his graduate thesis, and his team won first place in the IGRC design competition.

"It can try to assist the user, not just drive the car," he said.

Teams of engineering, computer science, and even psychology students from around the United States, Canada and Japan created autonomous, self-maneuvering robots for the competition from wheelchairs, four-wheelers, even golf carts.

After a trial race begins, the creators aren't allowed to touch their creations in any way. According to the technology on board, it should be able to cope with the track by itself.

Charles Reinholtz, faculty adviser for Virginia Tech, compared the race to leaving a child on the first day of kindergarten.

"You turn the vehicle on, and just let it go," he said.

"They're intelligent vehicles," Agnew said. "These are very bright kids that built these vehicles. They're the cream of the crop."

Away from the hub of the competition is a rectangular tent where some competitors have slept for the past two nights.

"Many of the students have spent the last 48 hours, nonstop, in there," said Candy McLellan, event organizer, pointing to the red and white tent.

Inside, students are still working on their vehicles. They're still typing away at the keys, drilling bits and buttons on their creations.

Caffeine pills on the tables in their makeshift engineering laboratory.

"We didn't sleep last night. We were up all night," said Brian Atkinson, faculty sponsor for the University of Colorado at Denver team.

The event was first held in 1993, founded by Oakland University's Lane, Overhal, and the late Paul Lescoe, who died of a prolonged illness just last year.

Before the competition began Monday morning, a dedication ceremony was held in honor of Lescoe.