Seattle team wins $900,000 in Space Elevator Games

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This handout photo from NASA shows David Bashford, right, lead of the LaserMotive team, preparing their robotic climber entry in the $2 million Space Elevator Games at the NASA Dryden Flight Research Center at Edwards Air Force Base, Calif., Wednesday, Nov. 4, 2009. After three years without a winner in a NASA-backed competition to develop the science fiction space elevator concept, the team from Seattle on Friday, Nov. 6, 2009 collected $900,000 after its laser-powered robotic machine raced up more than 2,950 feet (nearly 1 kilometer) of cable dangling from a helicopter. (AP Photo/NASA, Tom Tschida)

(AP) -- A Seattle team has collected a $900,000 prize in a NASA-backed competition to develop the concept of an elevator to space - an idea spurred by science fiction novels.

The team's robotic machine raced up more than 2,950 feet of cable dangling from a helicopter.

Powered by a ground-based laser pointed up at the robot's photo voltaic cells that converted the light into electricity, the LaserMotive machine completed one of its climbs in about three minutes and 48 seconds, good for second-place money.

The contest is intended to encourage development of a theory that originated in the 1960s and was popularized by Arthur C. Clarke's 1979 novel "The Fountains of Paradise."

Space elevators are envisioned as a way to reach space without the risk and expense of rockets.

Instead, electrically powered vehicles would run up and down a cable anchored to a ground structure and extending thousands of miles up to a mass in geosynchronous orbit - the kind of orbit communications satellites are placed in to stay over a fixed spot on the Earth.

LaserMotive LLC was presented the check by Andy Petro, program manager of NASA's Centennial Challenges, in a ceremony at Dryden Flight Research Facility on Edwards Air Force Base in the Mojave Desert.

The three-day contest required competitors' vehicles to get to the top, with rewards possible for completing climbs at two levels of speed. LaserMotive could have claimed $2 million if its robot had climbed faster.

The two other teams, KC Space Pirates of Kansas City, Mo., and the University of Saskatchewan's Space Design Team, finished out of the money. Neither of their machines made it to the top.

The fourth Space Elevator Games addressed a baby step in the engineering challenging of the concept, not the larger debates of whether physics, materials technology and economics would ever allow one to be built.

"I think it was an ideal Centennial Challenges competition," Petro said in a telephone interview. "We had students, entrepreneurs and independent inventors. It's a very difficult challenge. It's taken the teams four years for anyone to win."

Thomas Nugent, one of the principals of LaserMotive, said the company believed the contest would demonstrate the concept of "power beaming" - transmitting energy by laser over long distances.

Nugent said there are numerous immediate applications such as providing power to remote areas of military bases or operating electrically powered unmanned aircraft for extended periods.

Nugent said he personally doesn't believe a space elevator would work on Earth but may be practical for the moon or Mars.

"It took a lot of years of hard work by just a great team of people who have understanding families," he said.

On the Net:

• Success in 'space elevator' competition
• NASA Dryden: http://www.nasa.gov/centers/dryden/home/index.html
• Climb videos: http://www.youtube.com/user/SpacewardFoundation

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