

# Press Release

Axion Racing is working together with Northrop Grumman and Amphitech to race in the 2005 DARPA Grand Challenge.

Leaders in autonomous vehicle design, military grade inertial navigation systems (INS), and 3D MMW RADAR units have teamed together to race to win in the \$2 Million DARPA Grand Challenge.

- Westlake Village CA, June 3, 2005: Axion Racing, Northrop Grumman, and Amphitech have announced that they will be working together to race in the 2005 DARPA Grand Challenge (DGC). This \$2 Million race between autonomous vehicles will cover approximately 140 miles in the Mohave Desert. The vehicles have to be "smart" enough to avoid both positive and negative obstacles, while maintaining an average speed of almost 25 MPH. Axion Racing qualified sixth for the \$1 Million 2004 DARPA Grand Challenge and with its' latest sensor integration expects to win the pole position for the 2005 Challenge.

- Axion Racing has acquired a Northrop Grumman LN-270 INS to maintain its position between the over 2,500 waypoints that are required from Barstow, CA to Primm, NV. This particular INS unit has the best FOG setup of any LN-270 series, available to the public.



- Amphitech, a Canadian company, recently won an award from the US Navy in regards to its' OASys 3D MMW RADAR system. This gimbaled RADAR unit moves up and down and can see up to 5 miles in front of Axion Racing's autonomous vehicle, Spirit. The Amphitech RADAR is better than any other DGC team's MMW RADAR unit, because of its' fast 3D processing and cutting edge gimbaled vehicle mount.



For Release 9 a.m. EDT, June 03, 2005

- Spirit is a 1994 Jeep Cherokee that sits five comfortably and can hundreds of miles, control or any human interaction. She is a California 2005 street and off-road registered vehicle.
- The Northrop Grumman LN-270 and Amphitech OASys RADAR system specifications are better than any comparable sensor on competitor's vehicles. The ability to constantly know where the vehicle is during multipath errors and to be able to see farthest down the road will enable Spirit to win both the pole position and the DARPA Grand Challenge.
- The fusion of nine different types of sensors includes FLIR cameras, RGB cameras, stereo cameras, RADAR, LADAR, sound, computing, path planning, and mechanical tools. The patent pending Axion Arbitrator is written in Linux and uses artificial intelligence (AI) to allow each sensor to vote on what it thinks is the best path for Spirit. "The fusion of sensors and AI systems allow Spirit to run quicker and more efficient than any of our competitors." said Team Leader Bill Kehaly. "We expect all of the other teams to be eating our dust", he added.



Grand  
passengers  
drive itself  
without remote

## DARPA Grand Challenge

DARPA is responsible for a variety of innovative systems. These include autonomous planes and the Internet. The DARPA Grand Challenge is a field test of fully autonomous (robotic) ground vehicles across rugged desert terrain in the southwestern United States. The U.S. Congress and Department of Defense, who authorize the event, believe the future holds great promise for autonomous vehicles to perform missions that put our men and women in uniform at risk.

The inaugural DARPA Grand Challenge that navigated a 142-mile course through the Mojave Desert. Although none of the

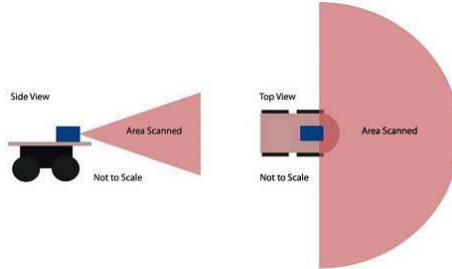


Challenge featured 15 teams that completed the course, the excitement and momentum generated by this first field test encouraged DARPA to plan a second event, scheduled for October 8, 2005. In addition, the prize has been doubled from \$1 million to \$2 million for the vehicle that completes the course the fastest.

## Axion Racing

Axion Racing was started in 2003, initially to run in the 2004 DARPA Grand Challenge. Since that time, the team has developed working relationships with NASA, National Federation of the Blind, and a large East Coast DMV.

Axion Racing is also working with NASA, and Michigan State University, on an autonomous sensor fusion, as they help America go back to the moon by 2013.



By having a working robotic vehicle, Axion Racing is able to present different options to different industries on how best to use these exciting technologies. The team also has a patent pending on a variety of innovative designs that have been developed by its' select group of Engineers.



- END -