



DARPA Grand Challenge

Frequently Asked Questions

General

July 10, 2006

1. What is DARPA?

The Defense Advanced Research Projects Agency (DARPA) is the central research and development organization for the Department of Defense (DoD). The agency manages and directs selected basic and applied research and development projects for DoD, and pursues research and technology where risk and payoff are both very high and where success may provide dramatic advances for traditional military roles and missions. DARPA's reputation for technical excellence stems from its determination to seek out the best solutions to problems through forward-looking investments in research and technologies.

2. What is the DARPA Grand Challenge?

The DARPA Grand Challenge was initiated to mobilize the technical community to accelerate research and development in critical national security technology areas.

The Grand Challenge brings together individuals from industry, the R&D community, universities, and inventors with the motivation of a technological challenge and a cash prize. Many of these organizations have never before been involved with defense work, and their participation is helping the men and women in our armed forces. The event attracts the most capable and innovative companies, institutions, and entrepreneurs in America.

The current Grand Challenge is an effort to draw attention to the technology issues associated with autonomous vehicles and to generate breakthroughs in performance. DARPA's mission is to develop transformational technologies to give our armed forces a decisive edge. Autonomous ground vehicles could revolutionize ground warfare by performing hazardous battlefield functions that currently place our troops in harm's way.

In recent years, Congress and the Department of Defense have envisioned unmanned vehicles teamed with people to create efficient, integrated, agile and cost-effective forces that will reduce the risk to American life. The Grand Challenge was initiated in support of this vision, with the goal of demonstrating a fully autonomous vehicle able to complete a challenging desert course in less than 10 hours. The first Grand Challenge finished in the Mojave Desert in March 2004 without a winner. At the second Grand Challenge held in Primm, Nevada on October 8, 2005, the Stanford Racing Team won the \$2 million prize by successfully completing 132-mile desert course in just 6 hours, 53 minutes and 58 seconds.

The third event in the DARPA Grand Challenge series, the Urban Challenge, was initiated in May 2006 to demonstrate the ability of an autonomous vehicle to operate safely in an urban environment. Operation on an urban course provides an ideal test environment for operational safety, bringing autonomous vehicles in close proximity in a complex, dynamic setting. Successful operation in this environment will bring autonomous ground vehicle technology one step closer to practical realization.