



News Release

Defense Advanced Research Projects Agency

3701 North Fairfax Drive
Arlington, VA 22203-1714

IMMEDIATE RELEASE

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DARPA CELEBRATES 50TH ANNIVERSARY

The Defense Advanced Research Projects Agency (DARPA) was established 50 years ago today, on February 7, 1958. The agency was the Administration's response to the Soviet Union launch of Sputnik the previous fall, a launch that surprised and embarrassed the United States as the Soviets became the first to successfully launch a satellite into space.

DARPA was charged with directing and performing "certain advanced research and development projects," with the primary mission of ensuring that the United States would never again be surprised by another nation's technological advancement. This mission has evolved over time. Today, DARPA's mission is to prevent technological surprise for the United States and to create technological surprise for adversaries.

In the agency's 50-year history, there are numerous examples of DARPA successfully accomplishing its mission.

"DARPA started the Saturn rocket engine program that gave the United States the ability to go to the Moon less than 10 years later. DARPA also started satellite projects such as Discoverer and Corona, classified programs that kept Presidents informed on Soviet activities for years," notes DARPA's current Director, Dr. Tony Tether.

He goes on to list other notable DARPA achievements. "Everyone has heard of the ARPANET, a 1960s idea that originally had only a few connections. It led to the Internet, now approaching billions of connections," says Tether. "Or stealth airplanes, such as Have Blue, which fundamentally changed air warfare, and the Predator and Global Hawk, unmanned air vehicles flying today in Iraq. And more recently, the Grand Challenge which demonstrated that driverless vehicles can operate safely in traffic with other manned and unmanned vehicles. All of these are DARPA accomplishments."

Other DARPA achievements are less well-known: new materials such as gallium arsenide, used in high-speed circuits; new metals, such as beryllium, stronger than steel but lighter than aluminum; solid-state photon detectors, from visible to long wavelength, which led to night-vision capabilities allowing U.S. forces to "own the night"; microwave and millimeter-wave monolithic integrated circuits, the essence of today's cell phones and miniature GPS receivers; lithography that allowed the number of transistors to reach 100 billion on a chip smaller than the size of a thumbnail.

Current DARPA programs hold the potential to have equally revolutionary impacts in the future. Today's research holds promise to enable military-grade titanium at \$3.50 a pound,

(more)

instead of \$35 a pound; high-quality military jet fuel processed from crops grown in the United States; a machine capable of rapidly translating foreign language speech and text as well as, if not better than, experienced linguists; a prosthetic arm so capable that a wounded Soldier could play the piano, throw a baseball, or pick up his child; a computer that can process at a rate faster than one billion million instructions per second.

DARPA is unique among government research organizations in the way it manages its annual budget. It owns no laboratories or test facilities – instead it solicits and funds research from industry, academia, and other government laboratories. These researchers are managed by DARPA’s world-class program managers, who are hired to bring their innovative ideas and technical expertise to DARPA for a short period of time – most of DARPA’s technical staff stays at the agency for four to six years. The constant influx of new expertise imbues DARPA with an energetic and dynamic outlook not often found in the government or even in private industry.

“DARPA program managers are effective leaders who are creative, work hard, and are not afraid of failure,” said Tether. “We are always looking for people interested in coming to DARPA to make breakthrough discoveries and to turn their dream into reality.” He notes that those interested in learning more about working at DARPA can visit the agency’s website, www.darpa.mil/joinus, for more information.

“I’m honored to serve as Director as DARPA enters its sixth decade,” Tether continues. “The urgency of maintaining technological surprise is as acute as ever. Everyone at DARPA feels a personal commitment to continuing to deliver revolutionary technologies in support of our men and women in uniform.”

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Media with questions, please contact Jan Walker, (703) 696-2404, or [jan.walker\[at\]darpa.mil](mailto:jan.walker@darpa.mil).