



News Release

Defense Advanced Research Projects Agency

3701 North Fairfax Drive
Arlington, VA 22203-1714

IMMEDIATE RELEASE

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DARPA Looks to Inspire Next Generation of Defense Manufacturers

Four-year, \$10M manufacturing outreach effort launched to engage students

Recently, United States President Barack Obama said, “Our success as a nation depends on strengthening America’s role as the world’s engine of discovery and innovation.” That engine of innovation is especially important within the national defense arena and the science, technology, engineering and mathematics fields. Such skills are critical for careers in systems design and manufacturing, and a strong manufacturing base is essential to maintaining a well-built defense. To reignite a passion for exploration among our nation’s youth, the Defense Advanced Research Projects Agency (DARPA) is launching its Manufacturing Experimentation and Outreach (MENTOR) initiative.

For MENTOR, DARPA will contract multiple organizations to deploy a variety of programmable manufacturing equipment, such as 3D printers, to high schools throughout the country and orchestrate a series of prize-based challenges to encourage competition and collaboration within high school teams as they design and build cyber-electro-mechanical systems. “The systems will be of moderate complexity,” said Paul Eremenko, DARPA program manager. “Challenges will involve the design and building of things like go-carts, mobile robots and small unmanned aircraft. And we’ll encourage collaboration during the challenges through the use of social media and social networking applications.”

Eremenko envisions a significant deployment of technology to schools. “DARPA will pilot this activity with 10 high schools by our second year and expand to 100 by the third year, with plans for 1,000 by the fourth,” said Eremenko. To reach this goal, DARPA released a [draft solicitation](#), explicitly encouraging small businesses, non-profits, academia and other non-traditional U.S. and international researchers with capabilities in science, technology, engineering and mathematics to submit proposals for executing the four-year, \$10M MENTOR initiative.

MENTOR is part of DARPA’s Adaptive Vehicle Make (AVM) program, a larger effort to dramatically compress development timelines for future defense vehicles, shift the product value chain toward high value-added design activities and democratize the innovation process. AVM seeks a “fab-less” approach to design of correct-by-construction cyber-electro-mechanical systems, a foundry-style bitstream programmable manufacturing capability and a crowd-sourcing infrastructure for development of vehicle systems similar to open-source software today. AVM will culminate in a prize-based design and fabrication of a next-generation infantry fighting vehicle for the U.S. Army. MENTOR’s role is to help ensure a competitive next-generation workforce to enable and sustain this new design and manufacturing construct developed by AVM.

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Interested parties may attend the virtual Adaptive Vehicle Make Proposers’ Day. Additional information and registration instructions are available at:

<http://go.usa.gov/xwR>

Draft versions of the MENTOR solicitation may be found at:

<http://go.usa.gov/xwN>

Media with inquiries, contact DARPA Public Affairs, DARPAPublicAffairsOffice@darpa.mil