



News Release

Defense Advanced Research Projects Agency

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Defense Manufacturing Revolution Moves Forward with META Contract Awards

The Defense Advanced Research Projects Agency (DARPA), committed to revolutionizing defense manufacturing through its Adaptive Vehicle Make (AVM) initiative, has awarded 13 performer contracts for the META program. META is one part of the AVM portfolio and aimed at model-based design and verification of complex systems that are correct-by-construction.

META performers will, over a 12 month period, develop: a metalanguage suitable for the representation of highly heterogeneous cyber-electro-mechanical systems while retaining formal properties necessary for proofs of correctness; a model-based design flow suitable for the creation of systems such as military ground vehicles; a verification approach to generating probabilistic certificates of correctness for various designs; and practical, observable metrics of complexity and adaptability that can be used to guide design optimization. As with the rest of the program portfolio, the META program is explicitly structured to enable best-of-class performers to play to their strengths. Performers bring a variety of ideas for tackling the program challenges—ranging from research into fundamental breakthrough technologies, to iconoclastic approaches to key technical challenges, to integration with existing design tool suites. Awards were made to the following prime contractors:

- Adventium Enterprises (Minneapolis)
- BAE Systems (Minneapolis)
- Boeing (St Louis)
- IBM Haifa Research Lab (Haifa, Israel)
- MIT—Dr. Donna Rhodes (Cambridge, Mass.)
- MIT—Prof. Karen Willcox (Cambridge, Mass.)
- Rockwell Collins (Cedar Rapids, Iowa)
- Smart Information Flow Technologies (Minneapolis)
- SRI (Menlo Park, Calif.)
- United Technologies Research Center (East Hartford, Conn.)
- Vanderbilt University—Dr. Theodore Bapty (Nashville, Tenn.)
- Vanderbilt University—Dr. Sandeep Neema (Nashville, Tenn.)
- Xerox PARC (Palo Alto, Calif.)

“We are delighted by the tremendous enthusiasm that the META program and Adaptive Vehicle Make initiative have garnered from a variety of industries, across a range of performers small and large, and from around the world,” said Paul Eremenko, the program manager for META and the AVM portfolio. “We look forward to tackling some very challenging fundamental problems that, once solved, offer the potential to truly revolutionize the way we make products in the defense industry and beyond,” Eremenko added.

Case studies used to drive and test progress of the META program will focus around a next-generation infantry fighting vehicle for the U.S. Army. META is a cornerstone of the AVM initiative which seeks to dramatically compress development timelines, shift the product value chain toward high-value-add design activities, and democratize the innovation process. Several solicitations complimentary to the META program are currently open:

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