

DARPA Selects BAE Systems to Advance Autonomy Software for Multi-Domain Mission Planning



BAE Systems will further develop software enabling semi-autonomous, multi-domain mission planning under a new DARPA contract. *BAE SYSTEMS*

BURLINGTON, Mass. – BAE Systems Inc. has received a \$6.5 million Phase 2 contract from the U.S. Defense Advanced Research Projects Agency (DARPA) to further develop software that will enable semi-autonomous, multi-domain mission planning. The Phase 2 award under the Adapting Cross-Domain Kill-Webs, or ACK, program follows a successful Phase 1 demonstration.

As part of Phase 1, BAE Systems' FAST Labs research and development organization, along with teammates Carnegie Mellon University and Uncharted Software, created software called the Multi-domain Adaptive Request Service. The Phase 1 demonstration highlighted the software's ability to update a plan in real time during a live exercise by ingesting information feeds to track the state of planned tasks, and then generating options to adapt the plan to insert new tasks. The Multi-domain Adaptive Request Service software adapts a plan with 100s of missions to insert tasks against new targets, requiring only fractions of a second per target added.

Under Phase 2, BAE Systems will continue to mature and advance the software to scale up the capabilities designed to help operators make informed decisions by automatically identifying available assets across domains, and then rapidly assessing the costs and benefits of using those assets when adapting mission tasks. Phase 2 is a step toward the ultimate goal of

the program: demonstrating the techniques in a full scale, operationally realistic setting.

“Autonomy is a critical enabler for multi-domain mission planning,” said Chris Eisenbies, product line director of the Autonomy, Controls, and Estimation group at BAE Systems. “The Phase 2 award will focus on advancing the software designed for military operators to leverage battlespace resources from across various domains, including space, air, land, and sea, for more effective, efficient missions.”

The software builds on BAE Systems’ robust autonomy portfolio and 20-year history pioneering autonomy technology. Work on the ACK program is being performed at the company’s facilities in Burlington, Massachusetts and Arlington, Virginia.