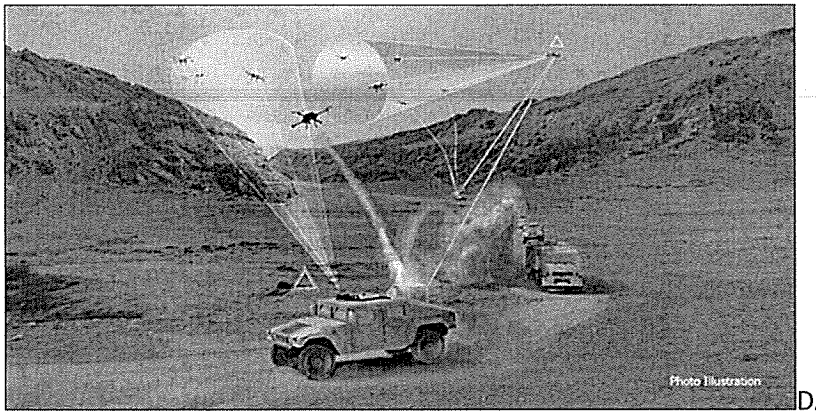
Mobile Force Protection Aims to Thwart Adversaries' Small Unmanned Aircraft

Three teams selected to develop real-time protection of ground and maritime convoys by advancing technology to quickly neutralize hostile unmanned aircraft systems

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DARPA's Mobile Force Protection (MFP) program focuses on a challenge of increasing concern to the U.S. military: countering the proliferation of small, unmanned aircraft systems (sUASs). These systems—which include fixed- or rotary-wing aircraft and have numerous advantages such as portability, low cost, commercial availability, and easy upgradeability—pose a fast-evolving array of dangers for U.S. ground and maritime convoys.

Countering these threats in real time requires a range of technology advances to enable rapid detection, identification, tracking, and neutralization of adversary sUASs—all while mitigating collateral damage. MFP, launched after DARPA issued a Request for Information (RFI) last year, aims to achieve these goals by developing scalable, modular, and affordable approaches that could be deployed within the next three to four years and nimbly evolve with advances in threats, tactics, and technology.

To expedite the development of counter-sUAS capabilities and their near-term introduction to the field, the Agency recently awarded Phase 1 agreements for MFP to three teams, led by Dynetics, Inc. (Huntsville, Ala.), Saab Defense and Security USA, LLC (East Syracuse, N.Y.), and SRC, Inc. (North Syracuse, N.Y.).

"The three teams we've assembled have innovative ideas for a versatile, layered defense system that could protect convoys on the move from multiple small unmanned aircraft systems in real time," said Jean-Charles Ledé, a program manager in DARPA's Tactical Technology Office (TTO). "Each team will now work to integrate novel ideas for advanced sensors and neutralization approaches into a common framework emphasizing safety for civilian bystanders, ease of operation, and low size, weight, power, and cost. Our goal is a technology demonstration system that could fit onto currently deployed tactical ground vehicles and maritime vessels—getting advanced and upgradeable capabilities quickly to the warfighters who need them."

To help speed development and facilitate interoperability of MFP's capabilities, DARPA has selected the U.S. Army's Maneuver Aviation and Fires Integration Application (MAFIA) service-oriented architecture as the common framework for the data-fusion engine, decision-aid algorithms, and user interface, as well as the backbone for the teams' command and control (C2) software. Already fielded by several Defense Department (DoD) programs of record, MAFIA supports multiple

operating systems and provides services, libraries, common applications, and a software development kit for performer integration. These features will facilitate creation of MFP's envisioned plug-and-play system capable of integrating new sensors and emerging technologies.

In addition to all DoD Services, DARPA is working closely on MFP with the Department of Homeland Security's Science & Technology Directorate and the U.S. Coast Guard.

The MFP program is aiming for three phases punctuated by open-air demonstrations involving increasingly sophisticated threats and scenarios. The goal is for the technology demonstration system to show initial functionality at the end of Phase 1 and progressively improve, culminating in a full-capability demonstration on a moving vehicle or vessel by the end of Phase 3.

At the conclusion of each open-air demonstration, DARPA plans to offer the Services and other U.S. Government agencies the opportunity to fund extended field evaluations of the current technology demonstration system. DARPA's goal is to develop the interim versions and the final prototype system to meet the needs of a broad number of potential U.S. Government and commercial users.

Image Caption: DARPA's Mobile Force Protection (MFP) program seeks to develop novel, flexible, and mobile defense systems and component technologies to improve real-time protection of ground and maritime convoys against various small unmanned aircraft system (sUAS) threats and tactics. Click below for high-resolution image.

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