



SMALL UNMANNED AERIAL VEHICLES ADVANCED CONCEPT TECHNOLOGY DEMONSTRATION (SUAV ACTD) | TSPID

The proposed SUAV ACTD responds to the high demand for SUAV systems and the significant enhanced situational awareness that it brings to the small unit commander. The program will focus on development and integration of technology to increase the capability that the SUAV provides.

MILITARY NEED:

SUAV systems began to proliferate in the field only within the last three years with the fielding of Pointer, Pathfinder Raven, and Dragoneye SUAVs, among others. In that time, the SUAV has proven to be critical to the small unit, obtaining real-time, relevant situational awareness and reducing risk to the unit's mission and operators. SUAV technology has had a dramatic impact on the battlefield in recent years, permitting commanders and individual warfighters to understand and develop a situation before making contact, maneuver largely out of contact, and only then, initiate decisive action, bringing all inherent capabilities to bear with accuracy and lethality.

Although the SUAV capabilities that have been fielded to the military user have been very well received and instrumental in many operational successes, they have not been without limitations. The SUAV ACTD will develop and integrate advanced technology solutions which address user identified capability gaps.

SUAV ACTD TECHNOLOGY:

Capability gaps for SUAVs fall into five main technical focus areas. Each will have associated technology development and integration projects which address those needs. These areas are currently being explored to determine which efforts will be pursued under the program.

- **Payload Integration:** provides a greatly improved ability to detect and identify potential battlefield threats. Projects could include imaging, image processing, targeting, acoustic or chemical sensing, etc.
- **Targeting:** provides the ability to engage battlefield threats with organic and precision indirect fires. Projects could include: image processing, differential GPS, etc.
- **C3 (command, control and communications):** provides a more efficient and effective use of available bandwidth appropriate to a 2-10 pound SUAV. Projects could include: digital links, communications networks/protocols, relays, encryption, etc.
- **Platform Improvements:** provides the ability to conduct SUAV missions with higher reliability, minimized size/weight, and/or maximized range/endurance. Projects could include: miniaturized avionics, improved propulsion, pocket sized platforms, improved power sources, fuel engines, etc.
- **Simulation/Training:** provides the tools to train effectively, maintain proficiency, and evolve tactics, techniques and procedures. Projects could include: battlespace simulation, hardware in-the-loop trainer, etc.

PARTICIPANTS:

The SUAV ACTD is a USSOCOM sponsored ACTD in partnership with the Natick Soldier RD&E Center's ACTD and Urban Technology Office as Technical Manager. AeroVironment, Inc., a leader in SUAV technology, will participate as an industry partner in this effort.

POINT OF CONTACT:

ACTD & Urban Technology Office
COMM: (508) 233-4517, DSN: 256-4517
E-MAIL: nati-amsrd-nsc-ad-b@conus.army.mil

UNCLASSIFIED

