DHS Science and Technology Directorate
Technical Assessment of Counter Unmanned Aerial Systems Technologies in Cities (TACTIC)

The Growing Threat of Small Unmanned Aerial Systems

The exponential increase in availability and affordability of commercial unmanned aerial systems (UAS), along with recent advances in UAS capability create more opportunities for both legitimate and nefarious uses of UAS. This, in turn, poses significant challenges to air traffic safety and homeland security with growing potential threats to critical infrastructure, operational personnel and the general public. This is especially true in the case of small-unmanned aerial systems (s-UAS), defined as systems weighing less than 55 pounds. Department of Homeland Security (DHS) components and Homeland Security Enterprise (HSE) partners currently have limited capabilities to detect, track and identify s-UAS, and respond to their unauthorized use.

What is TACTIC?

The 2017 Technical Assessment of Counter Unmanned Aerial Systems Technologies in Cities (TACTIC) will assess technologies currently available to DHS components and the HSE. TACTIC will take place in three phases, with each phase composed of a two-part technical assessment aimed at increasing the understanding of Counter-UAS (C-UAS) solutions to protect homeland security interests nationwide.

The first part of the 2017 TACTIC was conducted in July 2017 to allow C-UAS technology developers to test their equipment and make any modifications to account for conditions at the test site. Part two will be held in December 2017 to assess the C-UAS technology and its ability to detect, track and identify different s-UAS under varying conditions and use cases.

Objective of TACTIC

TACTIC serves as a DHS-validated assessment to support law enforcement, industry officials and public safety organizations seeking solutions to s-UAS threats. The DHS Science and Technology Directorate (S&T) seeks to assess the state of C-UAS technology to determine if solutions are viable for a variety of current missions and operational settings, and identify opportunities for additional research and development. At TACTIC, industry participants will have the opportunity to validate their technology and gather feedback directly from DHS components and the HSE.

A rotary quadcopter s-UAS conducting low altitude flights through an "Urban Canyon" during TACTIC part one.

Information gathered during TACTIC will also be used to:

- Develop and validate modeling and simulation programs to predict system performance in various environments; and
- Build an interagency compendium of C-UAS solutions that will be updated semi-annually for the National Security Council.

DHS S&T Program Executive Office for Unmanned Aerial Systems

In 2016, DHS S&T established the Program Executive Office (PEO) for UAS to lead DHS efforts in guiding, advising and enabling technology solutions in this mission area. The PEO UAS is focused on understanding user requirements for both enabling UAS to support homeland security and public safety missions, as well as use cases for C-UAS systems and the assessment of C-UAS technologies based on these use cases.

TACTIC Execution

DHS S&T's National Urban Security Technology Laboratory (NUSTL) is executing TACTIC as the lead federal test agent for the PEO UAS. NUSTL's TACTIC partners include the Marine Corps Warfighting Laboratory, Homeland Security Systems Engineering and Development Institute - Federally Funded Research and Development Center, and Stevens Institute of Technology, as well as DHS components and first responders.

Homeland Security
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To learn more about 2017 TACTIC, contact NUSTL@hq.dhs.gov.

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