Department of the Navy SBIR/STTR Transition Program

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NAVSEA #2025-043

Topic # N131-055
ACE Update
Arete Associates

WHO

SYSCOM: NAVSEA

Sponsoring Program: Naval Undersea Warfare Center (NUWC)

Transition Target: US Navy

TPOC: (401) 832-8037

Other Transition Opportunities: NAVAIR, Marine Corps, US Army

Notes: ACE automatically detects, classifies, and tracks airborne threats that an operator would struggle to see. This image shows ACE tracking two targets, each only a handful of pixels, along with their track history.

Image courtesy of Areté

WHAT

Operational Need and Improvement: The United States Navy desires a means to automatically detect aircraft within video imagery in real time and with a very low false alarm rate; Areté's Airborne Cueing Enhancement (ACE) solves that problem. This latest update incorporates state-of-the-art Machine Learning and Deep Learning modules to improve ACE's target detection, false alarm mitigation, and classification suites.

Specifications Required: ACE requires video imagery and associated pointing and timing information. It is capable of daytime operation on video data at 30 frames per second and of tracking targets before they are fully resolved in the imagery

Technology Developed: ACE is an advanced software suite that leverages imagery and meta data (such as timing and pointing information) to detect, track, and classify airborne threats, automatically maintaining situational awareness of the full angle space of the imager.

Warfighter Value: ACE automatically detects, tracks, and characterizes airborne threats, allowing the operator to maintain full situational awareness, perform more high-level information synthesis, and focus on other urgent tasks.

WHEN

Contract Number: N00024-25-C-S000 **Ending on:** Jan 31, 2026

Milestone	Risk Level	Measure of Success	Ending TRL	Date
ACE Integrated	N/A	Validation against real data	8	3rd QTR FY17
ACE detection algorithm update	Low	Validation against real data	5	2nd QTR FY26
ACE tracking algorithm update	Low	Validation against real data	5	2nd QTR FY26
ACE classifier algorithm update	Medium	Validation against real data	5	2nd QTR FY26

HOW

Projected Business Model: Direct transition into existing U.S. Navy systems (both NAVSEA and NAVAIR), systems that are in the developmental stages, as well as into civilian platforms that can benefit from the ACE technology. The Marine Corps and US Army would be included in the target organizations for ACE outside the Navy. Continue to refine ACE technology and other technologies that Areté is currently developing for both military and civilian use.

Company Objectives: Areté is seeking transition partners from both government program offices and industry platform providers to develop ACE towards field deployment and identify specific payloads and CONOPS in which ACE can be used.

Potential Commercial Applications: ACE is designed for compatibility with virtually any Pan-Tilt-Zoom (PTZ) camera system. ACE can provide situational awareness for any application concerned with airborne targets, such as municipal airstrips, commercial airports, or heliports.

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