Department of the Navy SBIR/STTR Transition Program

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Topic # N193-A01

Advanced Correlator - Navy (ACOR-N) and Cooperative Engagement Capability (CEC) Data Fusion Testing Using Data Collected by Jove Sciences, Inc. (JOVE) Jove Sciences, Inc.

WHO

SYSCOM: NAVSEA

Sponsoring Program: NAVSEA, PEO Integrated Warfare Systems (IWS-6)

Transition Target: Cooperative Engagement Capability (CEC)/Combat Systems

budits USB Fusion Engine Lifeot Date Factor Uncord/Patient Uncord/	Publisher	OTH-Gold Fused Track Data OTH-Gold Fused ARTF Track data KMZ File with Images and KML metadata	Regular ACOR-1 Display AREF Display Each AREF tracl will have geofeasible images around for operator to examine
	output	metauata	

TPOC: (202) 781-3014

Image courtesy Jove Sciences.

Other Transition Opportunities: NAVAIR Minotaur Program, NAVWAR, PMW-150 Command and Control Tactical, COMTHIRDFLT MIOC, COMPACFLT

Notes: Al/ML processes to autonomously characterize behaviors of self-reporting maritime traffic using AIS data in order to use these behavioral models and data to (1) identify apparent shipping lanes and (2) detect anomalous behavior in support of determining surface vessel intent.

WHAT

Operational Need and Improvement: Detection, Tracking, Classification (DT&C) of Contacts of Interest provided by the Advanced Correlator-Navy (ACOR-N) – cueing for dark contact acquisition through optimized search.

ACOR-N tracks Automatic Identification System (AIS) ships accurately to declutter non-interest to enhance contact DT&C.

Specifications Required: AI/ML processes to autonomously characterize behaviors of self-reporting maritime traffic using AIS data in order to use these behavioral models and data to (1) identify apparent shipping lanes and (2) detect anomalous behavior in support of determining surface vessel intent. ACOR-N will enhance the performance of limited numbers of interdiction assets to patrol large areas.

Technology Developed: ACOR-N's data fusion and characterization is well tested, and associated enhancement applications support mission execution.

Future capabilities being developed include fusion of data from other sources for a clearer operational picture.

Warfighter Value: Through data fusion and characterization, ACOR-N detects contacts of interest in dense and cluttered maritime environments. ACOR-N uses Al/ML processes to autonomously characterize behaviors of self-reporting maritime traffic using AIS data in order to use these behavioral models and data to (1) identify apparent shipping lanes and (2) detect anomalous behavior in support of determining surface vessel intent.

ACOR-N's fusion of sensor sources integrated to operational picture enhances interdiction probability.

WHEN	Contract Number: N00024-24-C-S00	Contract Number: N00024-24-C-S002		Ending on: Dec 22, 2024		
Milestone		Risk Level	Measure of Success	Ending TRL	Date	
ACOR-N Transition	n to program of record	Medium	SBIR Phase 3 contract award	8	3rd QTR FY26	
Develop ACOR-N Fishing detection a tracking, and pirate	for commercial applications, such as IUU and tracking, Drug Runner detection and e ship detection and tracking	Medium	SBIR Phase 3 contract award	8	3rd QTR FY25	

HOW

Projected Business Model: Current overall TRL 6; associated applications vary in TRL, but all applications integrate with the fusion engine. Optimize ACOR-N and incorporate with various Civilian and DoD platforms.

Company Objectives: Develop and refine ACOR-N to add further Warfighter value. Collect AIS and other ship track data in Areas of Interest to support mission execution. Provide a Pattern of Life (PoL) ship historical baseline.

Potential Commercial Applications: Jove Sciences, Inc. is a specialist in signal processing, underwater acoustics/noise modeling and ship track data fusion. Technology developed could be used IUU Fishing detection and tracking, maritime drug running detection and interdiction, and pirate ship detection and tracking