Department of the Navy SBIR/STTR Transition Program
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NAVSEA #2021-0466

Topic # N191-032
Artificial Intelligence Real-Time Track Modeling and Simulation for Combat Systems
Mosaic ATM, Inc.

WHO

SYSCOM: NAVSEA
Sponsoring Program: IWS-1
Transition Target: AEGIS
TPOC:
(540) 653-1240
Other transition opportunities: Mosaic is pursuing data science solutions for additional NAVAIR, NAVSEA and Air Force platforms and applications.
Notes: *Image: Yokosuka, Japan (Feb. 14, 2012) Operations Specialist 1st Class Lionel Mahoney, training supervisor aboard the Arleigh Burke-class guided-missile destroyer USS Stethem (DDG 63), records enemy locations during a fleet synthetic training scenario. (U.S. Navy photo by Mass Communication Specialist 3rd Class Andrew Ryan Smith)

https://www.flickr.com/photos/usnavy/6887652103/

WHAT

Operational Need and Improvement: To preserve free access to the seas and hold adversaries at risk, the Navy must maintain information dominance for decision superiority. It has become vital to leverage advancements in data stream analytics to improve combat efficiency at sea.

Specifications Required: The government customer desires a prototype demonstration at a Land Based Test Site which represents a combat system environment.

Technology Developed: The goal is to apply artificial intelligence and machine learning tools for current benefits.

Warfighter Value: Mosaic has been able to quickly develop and deploy next generation air defense and surface warfare. These analytics enable informed tactical decisions to optimize kill-chain execution in a resource constrained environment.

WHEN

Contract Number: N68335-21-C-0151   **Ending on:** December 15, 2021

Milestone	Risk Level	Measure of Success	Ending TRL	Date
Base: MS1 - Develop end-to-end prototype with RTS Agent	Low	Software 0.1 demonstration	3	August 2021
Base: MS2 - Deploy Software 0.1 in Virtual Twin at a land-based test site	Low	Successful deployment in test environment	4	September 2021
Option: MS3 - Complete Software 0.2 with model deployment functionality	Low	Software 0.2 demonstration	6	March 2022
Option: MS4 - Deploy Software 0.2 in Virtual Twin at land based test site	Med	Successful deployment at land based test site	7	July 2022
Option: MS5 - Complete Software 0.3 with full functionality incorporating fleet feedback	Med	Software 0.3 demonstration	8	March 2023
Option: MS6 - Deploy Software 1.0 at sea for Seminal Test Event at land based test site	Med	Successful deployment in live environment at land based test site	8	April 2023

HOW

Projected Business Model: Mosaic is leveraging existing systems. We are actively pursuing opportunities to deploy those algorithms in Army, Navy, and Air Force platforms. We have made a significant initial investment and have sound financial operations to ensure the viability and opportunity for the proposed technology to be pursued through commercialization.

Company Objectives: This project is focusing heavily on developing identity and intent micro services capable of building a common operational picture. We would like to continue to expand that development to include a threat assessment micro service that will preclude a tactical action micro service.

Potential Commercial Applications: Outside of the DoD, we are already able to incorporate the identity and intent algorithms into two FAA SBIRs in order to facilitate integration of unmanned aircraft systems into the National Airspace System.

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