Department of the Navy SBIR/STTR Transition Program

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NAVSEA #2023-0717

Topic # N211-046
Undersea Warfare Decision Support System Coalition Data Parser & Advanced Display
Sonalysts, Inc.

WHO

SYSCOM: NAVSEA

Sponsoring Program: PEO IWS

Transition Target: AN/UYQ-100 Undersea Warfare Decision Support System (USW-DSS)

TPOC: (401) 832-6182

Other Transition Opportunities: All command-and-control systems requiring coalition interoperability, cross domain solutions, and network firewall applications.

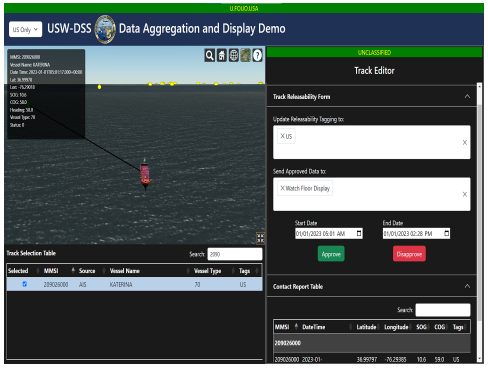

Image courtesy of Sonalysts, Inc. 2023

Notes: The image shows the Graphical User Interface for our human in the loop data parsing, routing, and approval demonstration. The upper left quadrant provides a four-dimensional view of vessel track data. The lower left quadrant provides a table view of the same vessel data. The right-hand side allows operators to select track data, modify releasability tags, and route data to a specific location with the updated and approved data tags. The application back end uses proprietary methods to efficiently filter and tag real-time data streams and route them to approved locations. This technology can also delete or modify data during the filtering process. Testing has confirmed that our filtering technology performs significantly faster than traditional methods to parse or filter data.

WHAT

Operational Need and Improvement: An automated coalition data parser to improve collaboration with foreign partners.

Specifications Required: An automated coalition data parsing and four-dimensional display application that enables coalition interoperability for Theater Undersea Warfare (TUSW).

Technology Developed: Demonstrated a framework and user interface using a commercial-off-the-shelf (COTS) four-dimensional display technology and a novel use of COTS messaging software to develop a data parsing solution that allows human in the loop review and approval of message tagging and routing.

Warfighter Value: Improved coordination with coalition forces with reduced likelihood of unauthorized data disclosure.

WHEN

Contract Number: N68335-22-C-0428 **Ending on:** Aug 01, 2024

Milestone	Risk Level	Measure of Success	Ending TRL	Date
Delivery of initial prototype	Low	Demonstration shows data parsing technology can filter data based on releasability tags and can update the data with new operator approved releasability tags. Data approved for release can be shown on four-dimensional display.	4	4th QTR FY23
Delivery of updated prototype	Low	Demonstration shows data parsing technology can filter data based on releasability tags at a rate equal to the message source data rate and can update the data with new operator approved releasability tags when required. Data approved for release can be shown on four-dimensional display.	6	4th QTR FY24
Demonstrate prototype on a Live-Virtual-Constructive event	Low	Government decision to integration technology into USW-DSS.	7	2nd QTR FY25
Technolgy deployed in USW-DSS	Low	Integration of technology into a production build of USW-DSS	8	2nd QTR FY26

HOW

Projected Business Model: Partner with command-and-control system prime integrators by delivering and integrating software-based solutions to parse, tag, and filter data to improve coalition interoperability. Initially will focus on integrating technology into USW-DSS, and once successfully productionized, will expand application use to additional command-and-control systems. Will develop a license free base software application that can easily integrate into modern command-and-control systems and then be customized to support the specific data parsing requirements for the target systems.

Company Objectives: Development of data parsing technology to greatly enhance warfighter efficiency and effectiveness managing data to support operations with coalition partners. The goal is to provide a superior solution in demand by the warfighter that can easily be integrated into existing command-and-control systems and then to integrate our solution into as many of these systems as possible.

Potential Commercial Applications: The data parsing technology can be used in cross domain solutions and network firewalls that require high-rate data filtering and modification or obfuscation.

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