

WHO

SYSCOM: NAVSEA

Sponsoring Program: PEO IWS 2

Transition Target: AN/SLQ-32(V)6 Surface Electronic Warfare Improvement Program (SEWIP) Block 2

TPOC: (812) 854-6217

Other Transition Opportunities: AN/SLQ-32(V)7 SEWIP Block 3

Notes: An automated digital EW log is needed to replace the current manual pen and paper process. Cognitive EW algorithms will assist the operator with recognizing recurring events of interest thereby making the EW Operator more efficient and reducing the workload and fatigue.

Acronyms: Data Distribution Service (DDS), Electronic Warfare (EW), EW Digital Operator Log (EWDOL), Minimum Viable Product (MVP), Product Line Architecture (PLA) , Software (SW), Surface Electronic Warfare Improvement Program (SEWIP)



U.S. Navy photo by Mass Communication Specialist 2nd Class Amanda A. Hayes/Released available at <https://news.usni.org/wp-content/uploads/2018/05/180418-N-CF658-036-947x630.jpg>

WHAT

Operational Need and Improvement: Today's EW operators routinely deal with a tremendous amount of emitter data. System upgrades adding capabilities exponentially increase the data management problem for the EW operator. This increase in data represents an increase in operator workload and fatigue. New data sources are becoming available, advanced sensors detect more emitters, and data is being combined and transformed into information in ways that have never been done in the past.

Specifications Required: SimVentions understands that modern Navy systems need to be modular, adaptable, and scalable. Utilizing the latest technologies such as cognitive EW algorithms, Qt Framework, and the DDS standard which underpins the PLA will make our solution a much-needed improvement in Navy capability.

Technology Developed: SimVentions is developing an EWDOL tool that will take the Navy into the future in terms of EW event logging. This new innovative display software will anticipate and facilitate the EW operator's needs and actions. EWDOL will utilize cognitive algorithms to detect events of interest based on predefined parameters. New incoming data will automatically be assessed and compared to historical data to assist the EW operator with recognizing recurring events of interest. The latest information will always be at their fingertips without sacrificing access to historical data, which can be easily sorted, searched, and filtered.

Warfighter Value: EWDOL will automate the task of EW logging in a way that reduces the EW Operator's workload and increases their efficiency. This will enhance situational awareness and improve the Navy's ability to fight. An offline tool being developed as part of this effort will also improve after-action analysis.

WHEN

Contract Number: N68335-21-C-0805

Ending on: Sep 25, 2023

Milestone	Risk Level	Measure of Success	Ending TRL	Date
Minimum Viable Product (MVP)	N/A	Proof of concept delivered and approved by the customer	4	1st QTR FY23
Initial Prototype	N/A	Intelligent logging of events using cognitive algorithms	5	4th QTR FY23
Final Prototype	N/A	EWDOL software operating in a representative operational environment (TACSIM)	6	4th QTR FY24

HOW

Projected Business Model: The EWDOL innovation will transition to the in-service IWS-2 SEWIP program once it is fully verified and regression tested as part of the tactical SW baseline. Our proposed integration strategy integrates the EWDOL SW into the tactical baseline for demonstration and test purposes at the conclusion of the Phase II option. SimVentions is a recognized leader in Federal Government SBIR contracting. Both research and development and business professionals work diligently to accomplish significant project and fiscal milestones to ensure the success of each SBIR project. SimVentions is uniquely qualified to address the problems facing today's military, as roughly a third of the technical and business staff members are former warfighters, including several with US Navy Surface EW expertise. Over the past 20 years, SimVentions has steadily built experience, commercializing many of our Phase I and Phase II SBIR awards into Phase III contracts. SimVentions has successfully extended seven SBIR topics to \$90M+ in Phase III contracts in the last 15 years.

Company Objectives: SimVentions seeks to develop prototype software that will intelligently log EW events and extend the existing EWDOL display prototype to efficiently display tactical information in an organized fashion. Looking forward to a Phase III effort, new interfaces to tactical systems could extend the functionality of the EWDOL system, and thus bring disparate sources of information into one convenient tool for the operator.

Potential Commercial Applications: The EWDOL product is by design highly specialized. The Navy needs an event logging and recording application specifically suited to the capture and assimilation of EW emitter information at the operator console. The unique positioning of the EWDOL application will provide a unique solution to a specific problem for the Navy.

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