

SUCCESS STORY

TOPIC NUMBER: N95-209

SBIR INVESTMENT: \$819,138

PHASE III FUNDING: \$8,345,755.96



COMPONENTS AND SERVICES IN SUPPORT OF THE TOWED ARRAY INTEGRATED PRODUCT TEAM (TAIPT)

L3 Technologies, Inc. enhanced Towed Array Integrated Product Team (TAIPT) telemetry, improving submarine and ship detection capabilities through innovative towed array systems.

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THE CHALLENGE

A towed array system uses hydrophones towed on a cable trailing behind a submarine or surface ship, playing a critical role in detecting adversary submarines. Meeting operational demands necessitates innovative methods for the design, development and deployment of towed array systems. Efforts are underway to develop approaches to create affordable towed array technologies compatible with both surface ships and submarines, leveraging existing commercial and Navy technologies. The objectives in releasing this SBIR topic were sensor enhancement, receiver design, signal processing enhancement, and mechanical improvements, including telemetry hardware for efficient submarine detection.

THE TECHNOLOGY

This project, one of two of L3 Technologies' developed under the topic N95-209, focused on the enhancement and support of Towed Array Integrated Product Team (TAIPT) telemetry. Telemetry technology automatically collects, transmits, and measures data from remote sources including sensors. L3 Technologies developed and provided engineering services and components to support TAIPT telemetry, enhancing data collection and transmission.

THE TRANSITION

Naval Undersea Warfare Center Division Newport (NUWCDIVNPT) oversees services and materials procurement for TAIPT telemetry configuration management. Additionally, NUWCDIVNPT handles upgrades, maintenance, fabrication, and development of components and specialized equipment vital to the towed array program utilizing TAIPT.

NUWCDIVNPT released a solicitation, outlining the need for technical engineering services and materials for TAIPT telemetry. L3 Technologies was awarded the sole source contract due to their pioneering SBIR product, new towed array technology developed under topic N95-209. This contract included engineering services, parts, and a comprehensive data package to support TAIPT. In 2019, L3 Technologies merged with Harris Corporation, forming L3 Harris.

THE NAVAL BENEFIT

L3 Harris' innovative common telemetry hardware, applicable to both submarine and surface ship missions, brings significant cost savings in unit production, logistics support, and training. L3 Harris provides depot support for TAIPT components, including failure analysis, repair and product improvements. Towed array test sets provide a standardized testing environment for TAIPT, streamlining testing procedures during various stages, including factory, depot, and dockside. This standardization optimizes processes and reduces costs, bolstering the efficiency of TAIPT.

THE FUTURE

Future efforts focus on continuing to develop TAIPT products and services compatible with both surface ships and submarines. L3 Harris is the prime contractor for the TB-29C, the Navy's next-generation submarine thin towed line array. Additionally, in collaboration with Lockheed Martin, L3 Harris is working on the surface ship TB-37 multi-function towed array, providing TAIPT telemetry and other subcomponents for the system.