The Navy's goal is to develop improved distributed sensor options for towed arrays that result in lower costs and improved performance. Options for achieving this include reducing the cost of discrete components (like telemetry and acoustic/magnetic sensors) within existing sensor technology, improving sensor manufacturing and construction methods, or by developing brand new sensor technologies that are more cost effectively scaled to higher performance applications.

The Navy’s testing of the fielded TWS system indicated it’s capable of detecting and targeting a threat torpedo demonstrating 100% availability with no telemetry, hydrophone, or mechanical failures. To date, TWS has exhibited near 100% availability on several deployments, contractor test events and Quality Reliability Assurance (QRA) testing. Not only did the technology meet the Navy’s operational needs, but it has reliability improvements over existing array technology that enhances operational availability. This technology enables telemetry canister production at reduced manufacturing costs and simplifies assembly and test procedures. The scheme is simple and does not require advanced manufacturing capabilities while the flexible and scalable architecture enables extensive Commercial Off the Shelf (COTS) equipment use.

This dual-use technology is applicable to any sensor-based array or range systems in airborne, sea, and land based applications requiring time synchronous sampling, data set fusion and dissemination. Within the DoD, many operational systems could leverage the technology including sonobuoys; platform mounted or platform deployed sensors, telemetry, and/or arrays; and bottom mounted surveillance arrays and/or mobile autonomous distributed sensors. Commercial applications include enhanced instrumentation for oceanographic and environmental data collection and monitoring for Integrated Ocean Observing (IOOS) supported by NOAA, port security and other remote sensing applications.

"THE 3 PHOENIX TELEMETRY TECHNOLOGY TRANSITIONED EARLY AND VERY SUCCESSFULLY TO EXTEND THE SERVICE LIFE OF TB-23 THIN-LINE TOWED ARRAYS. BUT PERHAPS THE GREATEST SUCCESS OF THE 3 PHOENIX SBIR EFFORT IS THAT IT MOTIVATED A SUCCESSFUL COMPETITIVE EFFORT TO ACHIEVE AN ELEGANT, TOPOLOGICALLY SIMPLE DATA PATH."

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