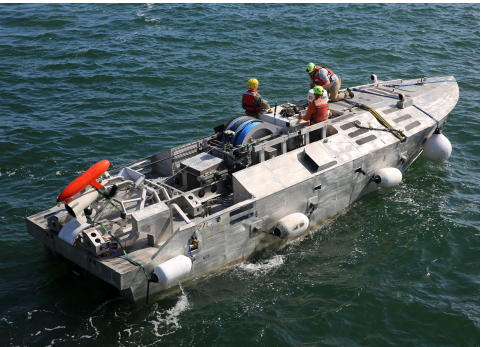


WHO

SYSCOM: NAVSEA
Sponsoring Program: PEO USC
Transition Target: PMS420: USV Program of Record
TPOC: (850) 235-5767
Other Transition Opportunities:

Notes:



U.S. Navy image 190914-N-OH262-0831, available at <https://www.navy.mil/Resources/Photo-Gallery/igphoto/2002361569/>

WHAT

Operational Need and Improvement: The Navy is looking to develop a wideband non-towed array with the same performance as the towed broadband acoustic source that can either be incorporated into the hull or mounted and dismounted from the side of a USV. MSI's solution enables less drag than towed equivalent, will be easier to deploy, and not be subject to damage while providing the same or greater acoustic performance.

Specifications Required: Lightweight (less than 400 lb.)
Require less than 30 kW electrical power
Acoustical power radiation (minimum 175 dB re 1 µPa @ 1m [1/3 Octave Band Level])
Operational frequency range of 10 Hz to 32 kHz
Omni-directional or forward hemisphere transmission

Technology Developed: The Non-towed Broadband Acoustic Source is comprised of three separate transducer arrays. Slotted cylinder and thickness mode resonator solutions will cover the 120- 32000 Hz Mid and High while a mechanically driven Lughead drum will provide Low Band output.

Warfighter Value: The Non-towed Broadband Acoustic Source will have less drag than towed equivalent (increase mission range and duration), will be easier to deploy, and not be subject to damage while providing the same or greater acoustic performance.

WHEN

Contract Number: N68335-23-C-0183 **Ending on:** Feb 10, 2024

Milestone	Risk Level	Measure of Success	Ending TRL	Date
Preliminary Acoustic Source Design	Medium	Model Acoustic Performance Predictions meet goals	3	1st QTR FY23
Prototype Fabricated and Tested	Medium	Meets Project Goals	6	2nd QTR FY24

HOW

Projected Business Model: Commercialization will be as a complete solution or as individual projectors (Low Band, Mid Band and High Band) or separate transducers (LF, VLF or ELF).

Company Objectives: MSI is looking to partner with a prime for modification/integration with MCM USV. Need additional Phase II.5 or Phase III funding in FY25 to continue this effort.

Potential Commercial Applications: The commercial applications for the Low Band transducer solution is primarily in Seismic surveying due to the low frequency range. Commercial applications for the High Band transducer solution are in Acoustic Communications (ACOMMs) due to the large improvement in bandwidth compared to current systems.