

Topic: N142-117

SeaLandAire Technologies, Inc.

Components for a Deep Drifting Sonobuoy

DDEMS (Deep Drifting Environmental Measurement Sonobuoy) is an A-size long life, test and engineering measurement sonobuoy supporting development and evaluation of technology components for the deep drifting sonobuoy being developed by the NGAPS (Next Generation Airborne Passive System) FNC program. DDEMS features the ability to deploy sensor payloads to a deep depth in the ocean and collect broad bandwidth data from the sensors. This data is then relayed via a high data rate fiber optic cable to a surface unit containing an RF radio link for easy data collection in a real time or at a time late data recall mode. While needed by the NGAPS FNC program, DDEMS is also a unique sonobuoy vehicle to support cost effective deep depth ocean measurements using a variety of sensor payloads.

Technology Category Alignment:

Electronics Integration

RF Components for sensing, transmission and communication

Sensors, Electronics and Photonics

Acoustic, Seismic and Magnetic

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SYSCOM: ONR

Contract: N68335-16-C-0065

 Corporate Brochure: https://navystp.com/vtm/open_file?type=brochure&id=N68335-16-C-0065

Department of the Navy SBIR/STTR Transition Program

STATEMENT A. Approved for public release; distribution is unlimited.

ONR Approval # #43-2203-16

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WHO

SYSCOM: ONR

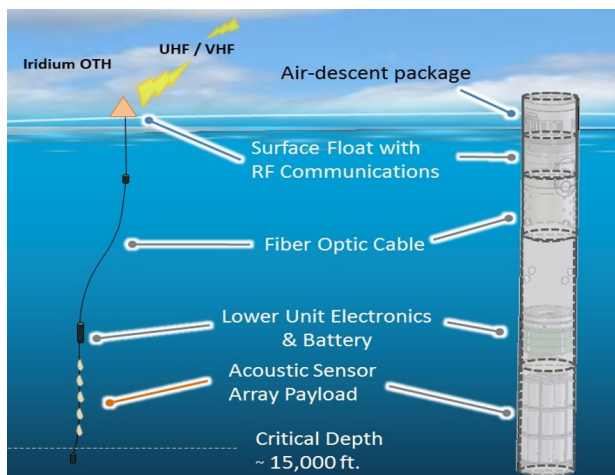
Sponsoring Program: NGAPS
(Next Generation Airborne Passive System) FNC

Transition Target: NGAPS
Sonobuoy

TPOC:
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Other transition opportunities:
Ocean deployed sensor systems requiring long life, deep depth and/or high bandwidth data exfiltration.

Notes: All DDEMS components are designed to be packaged and deployed from an A-size sonobuoy housing.



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WHAT

Operational Need and Improvement: A high data rate communication link between sensor payloads deployed at deep ocean depths and surface unit RF communication radios for data exfiltration.

Specifications Required: Long life endurance, high data rates, deep ocean depth operation, SWaP-C (Size, Weight, Power and Cost) compatible for A-size packaging

Technology Developed: A specialized long life capable sonobuoy platform called DDEMS (Deep Depth Engineering Measurement Sonobuoy) that can be customized to support deployment of sensor payloads from shallow to deep ocean depths and provide high bandwidth data exfiltration over a variety of RF communication links. Featured technology includes specialized fiber optic signal cable pack, deep depth pressure housings, low power data collection electronics.

Warfighter Value: Key technologies enable future NGAPS sonobuoy design which improves passive ASW capabilities

WHEN

Contract Number: N68335-16-C-0065 **Ending on:** December 31, 1969

Milestone	Risk Level	Measure of Success	Ending TRL	Date
Initial Ocean Deployment Test	High	Deploys and operates per requirements	6	February 2017
Second Ocean Deployment Test	Med	Deploys and operates per requirements	7	April 2017

HOW

Projected Business Model: We plan to provide key technologies to the NGAPS FNC program for use on the NGAPS sonobuoy. We also plan to customize and manufacture or sell/lease the resulting DDEMS platform design to support ocean deployed sensor systems.

Company Objectives: Transition key technologies to NGAPS FNC program and transfer the resulting DDEMS platform to our limited quantity manufacturing product lines for prototype and specialized "boutique" sonobuoy and sensor products.

Potential Commercial Applications: Oil exploration and drilling platform undersea sensor deployments and data collections, Oceanographic sensor system data collections

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