

NAVMAR APPLIED SCIENCES CORPORATION

LADAR (LASER RADAR) IDENTIFICATION DEMONSTRATION



Future Operational Concept

About the Technology

Navmar Applied Sciences Corporation (Navmar) has developed technology to address the Navy's need for portable surveillance and remote target identification systems. The technology provides a total integrated system approach to the modification of Patrol and Reconnaissance aircrafts with Intelligence, Surveillance, and Reconnaissance (ISR) and enhanced communications packages. The portable system can be used with fixed wing Unmanned Aerial Systems (UAS) and reconfigurable payloads to provide low-cost, expendable-standoff surveillance, reconnaissance, and targeting.

The remote targeting identification application addresses a requirement by the Navy for automatic target recognition technology. The system's signal processing and target identification functions have direct application to acoustic, non-acoustic, and seismic sensors for remote surveillance applications, which require airdropped and hand-emplaced sensors to remotely monitor and detect/identify targets. Navmar received funding to install the detection systems on its Unmanned Aerial Vehicles, as a "carrier" for the systems to achieve a portable surveillance capability. The portable surveillance and remote targeting identification system is being employed in support of Operation Enduring Freedom.

Military and Commercial Significance

Navmar's successful NAVAIR test performance for in-theater operational use reveals the targeting system's electro optic surveillance feature provides hands-off queuing and targeting that addresses other surveillance application needs of the Navy. The technology utilized the 3 to 5 micron infrared focal plane array instead of the standard 8 to 12 micron focal planes used by many existing systems, which has resulted in higher resolution imagery portability and more sensitive detection capability. Of prime importance are the SBIR technologies developed from the original remote targeting technology that are applicable to flexible payload delivery, and especially applicable to UASs, remote surveillance, and other spin-off technologies.

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Topic Number: N92-170
(NAVAIR)

SBIR Investment: \$1.03M
Project Revenue: \$25M

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APPLICATIONS

- NAVAIR: Fixed Wing and UAS -ISR
- UAS - Requirement for re-configurable payloads
- Navy - Troop/convoy (force) protection, improvised explosive devices detection
- Homeland Security - Border surveillance, counter drug surveillance

About the Company

Navmar has provided professional engineering services and rapid prototyping under contract to the DoD and other government and private sector clients. The company has assisted clients in meeting the challenges of an ever-changing national and international environment. Engineering disciplines include system engineering, system design and development, system integration, and life-cycle management. Navmar subject matter expertise includes avionics, material sciences, acoustic sensors, electro-optics, and communications and navigation.