Navy SBIR/STTR Success

Swimmer Detection Sonar Network: Transportable System and Cost-Saving Enhancements

Seaports handle 95% of the nation's overseas trade, mobilization of armed forces, and are key transit points for millions of cruise and ferry passengers, making their protection of great importance.

Topic Number: N02-207/1

SBIR Investment:
$3,826,903

Phase III Revenue:
$11,127,499

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About the Technology:

By utilizing sound waves, which can travel great distances in water, Scientific Solutions, Inc. (SSI) developed the Swimmer Detection SONAR Network (SDSN). The Swimmer Detection Sonar Network is comprised of multi-channel nodes, which are arranged in multi-static arrays and track the presence of undersea intruders approaching sensitive areas and in-water assets. The system features many of SSI's most advanced technologies including active acoustics, multi-static signal processing, and programmable signal sets.

Naval Benefit

There are currently 361 seaports in the United States, and many support the deployment of U.S. Armed Forces. The Swimmer Detection Sonar Network system allows the US Navy, Coast Guard, and Office of Homeland Defense, as well as friendly foreign governments, to protect ships, bridges, oil refineries, and other key harbor assets against the threat of swimmers, resulting in safer waters and protection for the fleet. Port security is a top priority in homeland security, and the Navy is continuing its investment in swimmer detection and defense technologies.

Transition

Both the U.S. Office of Naval Research and the Republic of Singapore provided additional funding necessary to advance the technology of the Swimmer Detection Sonar Network, and a prototype was successfully tested in Singapore Harbor. Scientific Solutions recently received a $600K grant from the Department of Energy to support the ongoing testing and development of its Active Acoustics Monitoring system, a technology that developed from this SBIR funded project. SSI also partnered with Ocean Renewable Power Company (ORPC) and serves as its acoustic consultant. Recently, ORPC and SSI developed a National Oceanic and Atmospheric Administration-sanctioned methodology using a drifting spar buoy for pre-deployment acoustic monitoring at the high velocity deployment site. SSI products' commercial potential stems from the huge value of maritime commerce it protects and from the anticipated need for flexible, easily deployed, and operated systems in hundreds of harbors.

Scientific Solutions, Inc.

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