

Jove Sciences, Inc.

Data fusing national and tactical sensors to detect and track Emcon Silent or "Dark" Contacts, such as illegal arms carriers, drug runners, and Pirate ships.



Jove Sciences, Inc. is a specialist in signal processing, underwater acoustics/noise modeling and ship track data fusion. It provides surface and subsurface vessel tracking and conducts related research and development for the U.S. Department of Defense and other government contractors, and in conjunction with the Naval Space and Warfare (SPAWAR) Command, Office of Naval Research, the MQ-9 Reaper, and other government agencies that offer maritime information and intelligence services.

One of Jove's principal programs is AquaQuIPS (AQ), a highly successful multi-INT (intelligence) maritime data fusion engine. AQ processes and fuses data from virtually any electronic sensor (national, tactical and/or local, whether sea-, land-, airborne, or space-based) to detect, locate, identify and track surface vessels. AQ greatly reduces instances of false tracks, delivers an increased number of legitimate surface tracks and delivers approximately 8-10 times as many legitimate tracks as U.S. Navy Fleet Maritime Operations Centers. AQ is especially effective at tracking EMCON (emissions control) silent contacts including naval combatants, fast boats, pirate vessels, self-powered semi- and fully-submersibles, and carriers of arms and contraband.

AquaQuIPS delivers:

- An increased number of tracks with far better accuracy and reduced number of false tracks; and
- Tools to reduce operator workloads and accelerate threat assessment and decision-making.

At the tactical level, AQ can fuse Battle Group sensors with national sensors to extend and improve situational awareness over the horizon resulting in:

- Increased situational awareness and early warning of threats; and
- Expanded time to evaluate the threat, determine a course of action, and execute it.

On a strategic level, and when integrated with the relevant sensor sources and airborne sensors AQ can enhance wide area persistent surveillance of any area of interest (AOI) worldwide including but not limited to the East and South China Seas, Arabian Sea, and the Eastern Mediterranean Sea, resulting in:

- A superior ability to track vessels engaged in transnational crime including smuggling of weapons, people and narcotics; and
- The more efficient allocation of high value assets.

A top-ranked participant in four Trident Warrior exercises from 2008-2012, AQ is rated Technology Readiness Level (TRL) 9, and has been fully integrated into a NavSea Program of Record. Jove is equipped to handle a wide range of projects at different classification levels. The company has a Top Secret facility clearance and is based in Building 605 of SPAWAR Systems Center – Pacific in San Diego, CA. Additionally, Jove has a SPAWAR contract, a Seaport-e contract covering seven ports, two subcontracts to large DoD contractors and multiple TS/SCI billets.

Jove was founded in 2003 by its President, James H. Wilson, a qualified submariner, Dr. Wilson was formerly chief scientist of Neptune Sciences, Inc. and has extensive experience developing data fusion and beamforming algorithms. A graduate of the U.S. Naval Academy with a B.S. in Mathematics and Nuclear Physics, Dr. Wilson received a M.A. in Applied Math and a Ph.D. in Applied Math/Nuclear Physics from Pennsylvania State University. From 1992-2004 he held the Arctic Chair in the Naval Postgraduate School Monterey. He has written numerous technical reports and scientific papers in the areas of signal processing, ambient noise, quantum mechanics and arctic oceanography.

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