

SUCCESS STORY

TOPIC NUMBER:
N10A-T045, N093-196

SBIR INVESTMENT:
\$1,585,091

PHASE III FUNDING:
\$8,750,047



ADVANCED DIGITAL WARFARE SYSTEM DEVELOPMENT DIGITAL INTEGRATION SYSTEM MODERNIZATION

SOLUTE Inc., a Sigma Defense Systems company, is developing and deploying technologies and tools that accelerate system modernization and digital transformation tools in support of the Navy Operational Architecture (NOA).

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THE CHALLENGE

The maritime environment is being transformed by artificial intelligence and machine learning, autonomy, quantum computing, additive manufacturing, and new communication technologies. These technologies have expanded into all naval domains and have made contested spaces more lethal. The Navy needed a resilient network that connects command and control nodes, platforms, weapons, and sensors together, amplifying the fleet's ability to disperse and project synchronized lethal and nonlethal effects from multiple points and in all domains. To achieve this vision, the Navy developed the Naval Operational Architecture (NOA) that integrates with Joint All-Domain Command and Control (JADC2).

THE TECHNOLOGY

NOA is a collection of networks, infrastructure, data, and analytic tools that connects the distributed forces and provides decision advantage. Solute Inc., a Sigma Defense Systems LLC company, is developing and deploying technologies and tools for advanced digital warfare development, digital interaction, and system modernization supporting the NOA for Distributed Maritime Operations (DMO). These technologies and tools enable command, control, computers, communications, cyber, intelligence and reconnaissance (C5ISR) integration between tactical and nontactical mission systems.

THE TRANSITION

In 2022, Sigma Defense acquired SOLUTE. Sigma Defense was awarded an SBIR Phase III contract for the continuation of SOLUTE's work developed under topics N10A-T024, "Development of Navy Wave Rich Collaboration for Command and Control" and N093-196 "Automated Application Distribution Deployment."

The General Services Administration (GSA) awarded this indefinite delivery, indefinite quantity (IDIQ) contract (47QFLA-21-D-0019) to Sigma Defense for advanced digital warfare system development and digital integration system modernization and is valued at \$44 million. Four firm fixed price delivery orders have been awarded against the contract to date with Office of Naval Research (ONR), Naval Sea Systems Command (NAVSEA), and Naval Air Systems Command (NAVAIR) as the buying organizations.

THE NAVAL BENEFIT

NOA creates a resilient web of sensors, command and control nodes, platforms, and weapons allowing the Navy to cover wider distances and operate in contested environments, allowing the data between operations to be shared more widely, more quietly and more effectively. By persistently monitoring maritime activities, NOA expands the Navy's information and decision advantage of sharing information and data at the operational and tactical levels. Because NOA is a component of JADC2, the Navy works in tandem with other U.S. military forces creating a network of networks across sea, land, air, space and cyberspace.

THE FUTURE

Sigma Defense's GSA contract for advanced digital warfare development and system integration is active through September 2028. This effort will continue to develop prototype capabilities and enhance existing modern, modular open software systems, including the NOA. Sigma Defense is supporting the next generation of JADC2, CJADC2, with Olympus, an open-source technology ecosystem that integrates DevSecOps, cloud and edge compute capabilities to deliver new applications and resources to the field quickly and securely, streamlining implementation of complex technologies.