

# Department of the Navy SBIR/STTR Transition Program

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Topic # N193-A03

NAVY TECHNOLOGY ACCELERATION - Advanced Technologies (including AR/VR) for Manpower, Personnel, Training, and Education  
Xiphos Partners, LLC

## WHO

**SYSCOM:** ONR

**Sponsoring Program:** Office of Naval Research (ONR) Code 34

**Transition Target:** United States Marine Corps Training and Education Command / Marine Corps Systems Command Training Systems

**TPOC:** Peter Squire  
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**Other Transition Opportunities:** Exploring opportunity with NSWDC.

**Notes:** Joint Terminal Attack Controller (JTAC) Joint Virtual Controller (JVT)



Image from Xiphos Partners (2023)

## WHAT

**Operational Need and Improvement:** Current virtual reality (VR) / mixed reality (MR) training systems are expensive to purchase and operate and may require the purchase of multiple systems to obtain the same training results.

**Specifications Required:** The Fleet needs low-cost, portable, and adaptive training tools to support fires training at the point of need for JTACs, JFOs, and other fires professionals. The training devices must operate in standalone or networked modes, allowing interoperability with other training systems (e.g., aircraft flight simulators) while still providing training for fires professionals when pilots or other supporting arms elements are unavailable. In order to provide realistic representations of peer-adversary or high-end operations, the training system should support simulations for large operations in degraded or denied environments. In order to maximize training utility, the system should support cross-domain standardized and near real-time After Action Review (AAR), providing highly focused feedback at the appropriate level of detail for the given training, assessment, or certification needed.

**Technology Developed:** JVT disrupts the current legacy JTAC training program. It introduces a versatile virtual reality solution, delivering JTAC/JFO training. It is not beholden to the weather, aircraft availability, or real or digital range times and restrictions. JVT makes training available anywhere at any time at exponentially lower costs compared to current fixed-location training systems. JVT has received interim accreditation from Expeditionary Warfare Training Group Atlantic for initial and currency training. JVT is expected to get full accreditation in the fall of 2023. It is imbedded in Marine Aviation Weapons and Tactics Squadron One's Air Officer graduate level curriculum.

**Warfighter Value:** JVT offers the warfighter the opportunity to train JTACS and fires professionals in a simulated environment. JVT is compliant with the Joint Fires Memorandum, so the training offered is accurate and relevant. JVT does not require live ordnance, aircraft overhead or a live fire range.

## WHEN

**Contract Number:** N68335-22-F-0203

**Ending on:** Jan 16, 2024

Milestone	Risk Level	Measure of Success	Ending TRL	Date
JVT functional as Close Air Support (CAS) Training System	Low	JVT integrated into USMC training and recognized as functional tool for CAS training	6	3rd QTR FY21
Integration of VBS 3	Low	Demonstrated integration with VBS 3 software	7	4th QTR FY21
Interim Accreditation for T&R Completion	Low	JVT authorized for completion of initial and currency training events in the JTAC T&R	7	4th QTR FY22
DACAS Integration	Medium	JVT successfully demonstrates ability to work with existing USMC DACAS hardware	5	3rd QTR FY22
Call for Fire (CFF) Integration	Low	Demonstrated CFF functionality in JVT	7	3rd QTR FY23
Full Accreditation for T&R Completion	High	JVT recognized as an authorized CAS and CFF training system for the USMC	8	4th QTR FY23
PM TRASYS Evaluation	High	JVT completes fleet evaluation conducted by PM TRASYS. Competitive systems being evaluated simultaneously	8	4th QTR FY24

## HOW

**Projected Business Model:** Transition to a program of record with USMC being first customer. Expand across the services and integrate into the training networks. Xiphos Partners is working to sell directly through the DLA TLS program, or direct to government via Phase III SBIR and one or more GWACs.

**Company Objectives:** JVT is "by Marines, for Marines," and the product of a team with a personal interest in the system's proliferation—the effective, frequent training of USMC JTACs. We want to lead the market and be the first element of Project Tripoli for USMC. JVT will continue development to provide updates and configurations to other services and foreign partners from there as part of our growth strategy.

**Potential Commercial Applications:** This project is focused on Joint Fires Observer (JFO) / Call For Fire (CFF) warfighter training.

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