

Department of the Navy SBIR/STTR Transition Program

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Topic # N193-A03-3

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

WHO

SYSCOM: ONR

Sponsoring Program: SBIR Navy Technology Acceleration

Transition Target: MARCORSSYSCOM, PM-TRASYS, DVTE, SAVT, SOCOM J-3I

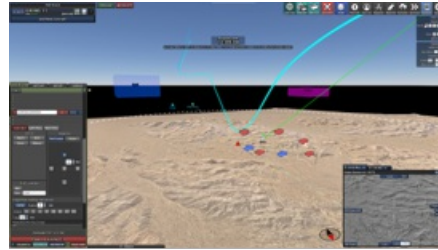
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Other transition opportunities:

Organizations and units with remote training requirements for Joint Terminal Attack Controller (JTAC)/Joint Fires Observer (JFO) training in the joint, special operations, and allied partner spheres.

Notes: Top image: A close air support (CAS) attack as viewed from the instructor and debrief station as well as the geometry of aircraft flight paths, friendly and opposition ground forces, air space control measures (ACM), video down link (VDL), and 9-line attack brief. Bottom image: The product base kit with laser cut custom foam that houses and protects the virtual reality (VR) hardware, gaming laptop and accessories in a single highly durable and weather resistant Pelican case.



WHAT

Operational Need and Improvement: Joint Terminal Attack Controller (JTAC) simulator that provides a portable, immersive, tactically relevant fires training in a commercial gaming environment. Enables terrain ingestion, networking with legacy simulations, integration with program of record (PoR) equipment. Does not require contractor support to operate or update.

Specifications Required: Fits inside (1) man-portable mil-spec Pelican case, employing commercial gaming and VR software to provide immersive capability that sets up rapidly, is scalable, and meets or exceeds requirements outlined by the accreditations criteria in the Executive Steering Committee (ESC) Joint Terminal Attack Controller (JTAC) Memorandum of Agreement (MOA).

Technology Developed: Unique to the JTAC Virtual Trainer (JVT) is the multi-option Tactical Air Control Party (TACP) equipment interface: emulated within the sim, and functionally stimulated 3D printed models. The JVT is also interoperable with existing VBS family of systems, allowing the user to network with existing systems to build realistic scenarios. The JVT is designed to interface with existing Target-Hand-Off Systems (THSv2) systems allowing training on actual gear (stimulated).

Warfighter Value: The low cost, high transportability, and game-like user experience means that access to high quality training can be provided to units anywhere, complementing existing program of record simulations, and expanding training and proficiency opportunities by 100x. The collaboration of commercial video game developers, terrain, and Close Air Support (CAS) subject matter experts (SME) result in the most intuitive, high quality user experience for fires training and proficiency.

WHEN

Contract Number: N68335-20-F-0542 **Ending on:** November 9, 2021

Milestone	Risk Level	Measure of Success	Ending TRL	Date
S&T FITE Culminating Demo	Low	Training Community Support and Transition Criteria	6	TBD
Initial/Interim Accreditation	Med	Demonstrates adherence to JFS ESC MOA criteria	7	TBD
Phase III / Transition identification	Med	Low Rate Initial Production and Final Release Development	8	TBD
Program of Record Acquisition	Med	# of Kits and Instances Fielded by USMC and other services	8	TBD

HOW

Projected Business Model: US and Int'l partner fires training communities at the application level. We specialize in building next generation virtual worlds and virtual reality experiences using commercial gaming engines and easily updatable commercial VR equipment for immersion. Spatial, terrain, user interface (UI)/user experience (UX) tactical capabilities have application across multiple industries. We are interested in developing highly specialized and cost effective training solutions to enable 100x improvement in training and proficiency.

Company Objectives: The goal of this program is to establish JVT as an accredited program of record for the US Marine Corps, and provide highest quality immersive virtual training for the domestic and partner warfighters. More broadly, we hope to bridge the gap between commercial gaming quality and ease of use and to enable training communities across industries.

Potential Commercial Applications: Use in training fire supporters, Joint Fires Observers (JFOs) and Joint Terminal Attack Controllers (JTACs), Front end mission rehearsal, design and management, Terrain ingestion and digital assets and software modules for spatial, immersive, high quality gaming applications.

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