Department of the Navy SBIR/STTR Transition Program

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MCSC-PRR-5103

Topic # N202-090

Single Amphibious Integrated Precision Augmented Reality Navigation (SAIPAN) System

VR Rehab, Inc. (VRR)

WHO

SYSCOM: MCSC

Sponsoring Program: MARCOR

Transition Target: All Manned & UnManned Vehicles, and Common Operating Picture (COPS) PORs

TPOC: sbir.admin@usmc.mil

Other Transition Opportunities: Any Manned or UnManned Vehicles or COPs that could benefit from large-scale enhancements of situational awareness for faster (3X to 5X faster) and better (99.04% accurate) decision making while simultaneously reducing warfighters' cognitive workload.

Notes: HoloWarrior™:SAIPAN innovatively fuses 3D Augmented Reality with 3D Synthetic Vision and 2D Maps/Imagery to 'Make Invisible Threats Visible' and provide safe AI guided Navigation. Optional control and modular enhancements of drones and swarms for Persistent ISR and new types of Loitering munitions for days on existing batteries!

Making Invisible Threats Visible via HoloWarrior™:SAIPAN
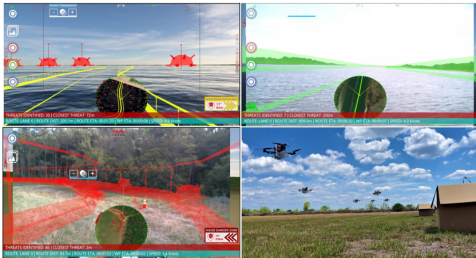
Source VRR 3 SAIPAN Screen Captures & Swarm Warfare Image

WHAT

Operational Need and Improvement: Single Amphibious Integrated Precision Augmented Reality Navigation (SAIPAN) System via HoloWarrior™:SAIPAN 'Makes Invisible Threats Visible' of Sea/Land Mines, with 3D AR & AI Navigation Enhanced Safe Lanes through cleared lanes; and 3D AR visualizaitons of CBRN threats. Enhanced Situational Awareness includes intuitive fusion of 3D AR real-world with 2D maps/imagery for large scale benefits. Integrated with ATAK and IS2OPS. Optional control of drones and swarms as well.

Specifications Required: HoloWarrior™:SAIPAN runs under both Windows and Android on smartphones, tablets, laptops, and AR-HMDs (both optical and video see-through types). Optionally, controls most drones and swarms.

Technology Developed: HoloWarrior™:SAIPAN software running on COTS devices that enable 3D Augmented Reality and Artificial Intelligence visualizations for enhanced situational awareness for faster/better decision making as 2nd screens or 2nd windows add-ons to 2D military apps such as ATAK and IS2OPS. Includes configurations for Manned and UnManned vehicles of all types, as well as other Common Operating Pictures Apps.

Warfighter Value: A $2K Ruggedized COTS Tablets running HoloWarrior™:SAIPAN attached to a RHIB's windshield provides disruptive new 3D AR/AI Safe Lanes visualizations to guide safely through enemy minefields and obstacles, display enemy mines, display chemical, biological, radiation, and nuclear (CBRN) threats. Optionally enables control of drones and swarms to perform Persistent ISR and new types of loitering munitions for days on a single existing battery charge.

WHEN

Contract Number: M67854-22-C-6504   **Ending on:** Aug 08, 2024

Milestone	Risk Level	Measure of Success	Ending TRL	Date
TCE 22.2	Low	RHIBs thru MineFields	6	4th QTR FY22
TCE 23.1	Low	RHIBs & UGVs thru MineFields	6	3rd QTR FY23
TCE 23.2	Low	Adds Drones/Swarms	6	4th QTR FY23
Project Convergence - Next	Low	Early Adopter Products	6	3rd QTR FY24

HOW

Projected Business Model: Numerous copies provided to USMC under Phase-II contract. Additional copies or buy out license available. Licensing to Primes (3 agreements already negotiated), Direct Sales to DoD, First Responders, and Vehicle / Drone markets.

Company Objectives: (1) Developing Disruptive AR/AI Visualizations for Enhanced Situational Awareness for Faster/Better Decision Making while simultaneously reducing Warfighter Cognitive Workload. Pragmatic modular add-ons to existing DoD apps such as ATAK, IS2OPs, Blue Force Trackers, as well as optional control of drones and swarms for Manned UnManned Teaming (MUM-T) applications, etc.
(2) Next Gen AIs that use our fused 3D AR and 3D Synthetic Vision Visualizations to reduce/eliminate manning by human warfighters.

Potential Commercial Applications: First responder and security supporting companies. Vehicle manufacturers (manned, unmanned, and optionally manned), sports and video game markets.

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