Department of the Navy SBIR/STTR Transition Program

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NAVSEA #2021-0403

Topic # AF191-005

Augmented/Virtual Reality Data Architecture Methodology and Reference Platform

Mira Labs

WHO

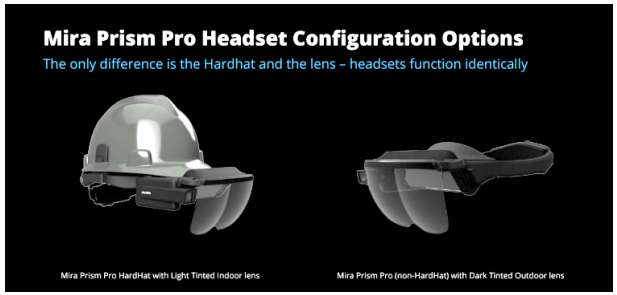
SYSCOM: NAVSEA

Sponsoring Program: WAR (Warfighter Augmented Reality) Project

Transition Target: Program of Record

TPOC:
(267)357-1712

Other transition opportunities: Present commercial applications include remote audits and remote collaboration within multi-national OEMs, mining companies, chemical suppliers, and explosive manufacturers. Minimizing down time for USAF Airmen via tele-maintenance and and remote inspections with C-17 aircraft maintainers, and supporting faster decision-making for Pararescuemen with now-enabled Mira Heads Up Display for Android Tactical Assault Kit (ATAK) Viewer.



Notes: Unlike most Mixed Reality tools, Mira has won the Red Dot Award for product design, has been deployed for years, and is in SBIR Phase 3 contracting discussions with the USAF. Mira has successfully completed two Phase 1 projects under the USAF and is currently delivering on two Phase 2 projects, one for the USAF and one for the USN. Because of the proven successful implementation of this tool in various areas of work requiring maintenance, inspections, audits, and remote training, we know this solution can be quickly leveraged, with minimal training, across teams to provide global support to factories, ships, aircraft, or vehicles located anywhere within range of cellular or WiFi connectivity.

Image above shows the Mira Prism Pro Headset configuration options available. On the left is the optional Hardhat configuration, and on the right is without (Light and Dark Tinted lenses are options).

WHAT

Operational Need and Improvement: Mira's Prism Pro headset enables engineers, supervisors, or SMEs to see what their teammates see on the shipyard and in the back shops, from anywhere in the world. It provides communication and connectivity, helps integrate and digitize paper processes and procedures, collects and can easily share data for analysis to enable collaborative decision making. This heads-up and hands-free, wearable technology allows teams to communicate interactively with remote subject matter experts by enabling real-time problem solving and training, and reducing down time and need for travel and related expenses (airfare, hotel, etc).

Specifications Required: Augmented Reality Data Architecture Methodology enabled with this smartphone powered headset. This technology is different in that it is a full-stack solution made from components that are more affordable than competitor headsets. Ease of upgrading when new smartphones are released allows for scalability because you are not locked into a proprietary device.

Technology Developed: This headset projects visual information in an easy to interact with format with minimal training or technological expertise. This solution is suited to frontline workers, it is user friendly and designed to be intuitive so that it can be deployed immediately and with minimal training. Use-cases include access to checklists in digital form via no-code software, linking teams remotely to facilitate collaboration with front-line workers and engineers, and much more. This tool allows for remote troubleshooting, and remote inspections and audits, via cell service or wifi connectivity.

Warfighter Value: Save maintenance personnel time, and increase team capacity, by allowing remote over-the-shoulder viewing for inspections or for trouble-shooting, all from a desktop or headset, located anywhere in the world. Makes following checklists for frontline workers easier via access to easily curated work flows, instead of needing to reference guidance located in Tough-books or paper job guides. Eliminates travel, so that people can collaborate and more efficiently complete inspection and maintenance processes for multiple vehicle types (i.e. ships, aircraft). This is a relatively low cost product, with outsized impact on cost-savings for the customer by saving money on travel while still maintaining effectiveness, and minimizing time spent to complete auditing tasks via automatic compliance reporting.

WHEN

Contract Number: N68335-20-C-0869

Milestone	Risk Level	Measure of Success	Ending TRL	Date
ATAK Heads-up Display Situational Awareness Viewer	N/A	Completed	7	March 2020
Commercial Enterprise Sales, others	N/A	Commercial Sales	8	January 2021
Downrange C-17 tele-maintenance	Low	Pilot Studies with SMEs	7	May 2021
Electronic AR training for Dry Dock Procedures	Med	Test with PSNS Docking Foreman	7	August 2021

HOW

Projected Business Model: We sell the Prism Pro headsets with SaaS subscriptions. This is a full-stack solution which provides a unified user experience. Mira is the Mixed Reality leader and aims to evolve into a system of record for industrial businesses. We are doing something you can't solve any other way, especially at this price point, by using smartphones and no-code software to quickly author content. Mira is your accessible Mixed Reality and mobility solution when cell phone or internet connectivity is present.

Company Objectives: Mira will continue to develop additional features to remain the industry leader in affordable heads-up and hands-free mixed reality headsets. Mira sells a connection which facilitates faster knowledge capture, transfer, and enables team collaboration for time critical operations and high-risk situations. We want to speak with programs and primes who prefer an "all-in-one" solution that is intuitive and easily scalable. Our team is comprised of a deep bench of Augmented Reality, Virtual Reality, and Mixed Reality experience, which is why Mira has had commercial successes (e.g. Toyota Tsusho America, Koch Industries, Nintendo) for 5 years, and is VC backed by Sequoia Capital and others.

Potential Commercial Applications: Allows following checklists, performing audits, remote-visits, or telemaintenance with frontline workers and supervisors simple via access to easily curated work flows, all in a heads-up, hands-free headset. This replaces the practice or need to reference guidance located in laptops or on paper job-guides. This solution facilitates collaborative teaming so that inspection and maintenance processes are safer, documented, and analyzable. This is a relatively low cost product, with outsized impact on cost-savings for the customer (e.g. trim travel times and lower expenses, minimize interruptions to work flows, reduce time needed to complete tasks, increase maintenance personnel capacity, enable remote training).

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