Amalgamated Vision Secures Back-to-Back Phase II SBIR Awards to Build Revolutionary Wearable Optical Device

Amalgamated Vision has been awarded Phase II SBIR funding from both AFWERX and NASA
for its novel virtual retinal display laser micro-projector technology.

BRENTWOOD, TN, UNITED STATES, July 30, 2024 /EINPresswire.com/ -- Amalgamated Vision, LLC (AV) announces it has been selected by AFWERX and NASA for Phase II follow-on SBIRs in the amounts of $1.25 million and $825 thousand, respectively, for their laser beam scanning, micro-projector optics for head-worn display to address the most pressing challenges in the Department of the Air Force (DAF) and NASA's Human Health and Performance Directorate.

> We're honored to receive Phase II SBIR contracts from AFWERX and NASA to accelerate the development of novel monocular laser beam scanning optical engines that meet their demanding user requirements."
>
> *Adam Davis, MD*

The dual SBIR awards underscore the strategic importance and wide-ranging potential applications of Amalgamated Vision's breakthrough technology. The highly competitive awards from AFWERX (U.S. Air Force) and NASA will fund the development, manufacture, and use case optimization of Amalgamated Vision's innovative virtual retinal display optical engine.

AFWERX has earmarked its award to create a prototype specifically designed for aircraft maintenance personnel, to enhance their efficiency, productivity, and safety with a state-of-the-art, non-obstructive visual aid for augmented reality (AR) assisted diagnostics and just-in-time reference data. Simultaneously, NASA's award will support the development of the device for astronauts and mission specialists to assist them in performing emergency medical procedures during prolonged space missions where conventional medical intervention is impractical.

"We are honored to receive these Phase II SBIR contracts from both AFWERX and NASA and as a small start-up we're gratified to have their support for this pioneering project," said Adam Davis, MD, Founder & CEO of Amalgamated Vision. "This funding allows us to accelerate the development of our monocular laser beam scanning optical engine and customize it specifically for the demanding requirements of the Air Force and NASA. We are excited to have this opportunity and believe this technology can revolutionize wearable optics for a wide range of critical applications."

Key features of AV's monocular laser MEMS virtual retinal display engine include:

• All-day wearability: Designed for comfort and safety during extended use, ideal for long-duration tasks in demanding environments.

• Superior image quality: High resolution; accurate color laser light is projected directly onto the user's retina.

• Non-obstructive and ergonomic: Extremely small in size and weight, it does not obstruct the user's field of view. Nothing interferes with the ability to work safely on complex machinery using hand-held tools or tend to crew members who need medical assistance.

• Versatility: Suitable for diverse applications from autonomous tasks to remote expert guidance.

Applications and Impact
The AFWERX prototype head-mounted display will serve as an advanced visual augmentation tool for aircraft maintenance personnel, offering real-time data and hands-free operation to improve task efficiency and safety. The NASA prototype device will guide astronauts through emergency medical procedures in the challenging conditions of space and provide critical knowledge when traditional HMDS and methods are impractical or unavailable.

The views expressed are those of the author and do not necessarily reflect the official policy or position of the Department of the Air Force, the Department of Defense, or the U.S. government.

About AFRL:
The Air Force Research Laboratory is the primary scientific research and development center for the Department of the Air Force. AFRL plays an integral role in leading the discovery, development, and integration of affordable warfighting technologies for our air, space, and cyberspace forces. With a workforce of more than 12,500 across nine technology areas and 40 other operations across the globe, AFRL provides a diverse portfolio of science and technology ranging from fundamental to advanced research and technology development. For more information, visit afresearchlab.com.

About AFWERX:
As the innovation arm of the DAF and a directorate within the Air Force Research Laboratory, AFWERX brings cutting-edge American ingenuity from small businesses and start-ups to address the most pressing challenges of the DAF. AFWERX employs approximately 370 military, civilian, and contractor personnel at five hubs and sites executing an annual $1.4 billion budget. Since 2019, AFWERX has executed over 6,100 new contracts worth more than $4 billion to strengthen the U.S. defense industrial base and drive faster technology transition to operational capability. For more information, visit: www.afwerx.com.

About NASA Human Health and Performance Directorate:
The Human Health and Performance (HH&P) Directorate is the primary organization focused on humans living, working, and thriving in space, on the moon, and on to Mars. Its mission is to lead the global spaceflight community in protecting astronaut health and ensuring human mission performance by mitigating the risks associated with human spaceflight. For more information, visit: Human Health and Performance - NASA

About Amalgamated Vision:
Amalgamated Vision is a forward-thinking technology company dedicated to developing groundbreaking micro-projector optical devices for visual augmentation. With a team of experts in laser optics, micro-electrical-mechanical systems, and human-digital interface, the startup is at the forefront of innovation in personal, portable, wearable display. For more information, visit: www.amalgamatedvison.com

Amalgamated Vision Press Contact:
To learn more about AV's revolutionary monocular laser MEMS virtual retinal display engine, please contact Paula Katkin, Chief of Marketing, at pkatkin@amalgamatedvision.com.

Paula Katkin
Amalgamated Vision
pkatkin@amalgamatedvision.com
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