RADIANT VISION SYSTEMS

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For Immediate Release

Radiant Presents an Optical Design Concept to Revolutionize Development of XR Display Test Systems at SPIE AR | VR | MR

REDMOND, Wash. – January 10, 2022 – Radiant Vision Systems, a leading provider of photometric imaging solutions for light and display measurement, announces that it will present a paper at the SPIE AR | VR | MR conference taking place January 23-25, 2022, at Moscone West in San Francisco, California. Eric Eisenberg, Optics Development Manager, and Javier Ruiz, Staff Optical Software Engineer II, at Radiant will introduce the company's patent-pending "Novel modular optical system for simplified development of AR, VR display measurement solutions." The paper will be presented as part of the conference Technical Talks at daily poster sessions from 12:00 to 12:50 P.M. on each day of the conference, January 23-25 (Sunday through Tuesday).

For AR, VR, and MR (XR) devices, display quality is determined by user perception of the display as observed within the parameters of a headset design. Measurement systems used to evaluate XR display quality emulate the viewing conditions of the user by applying optics that position the entrance pupil (aperture) of an imaging lens at the eye position within the headset. While this viewing position is common across XR displays, there is no standard guiding XR device design. Display technologies, projection methods, and headset form factors continue to evolve. New display measurement equipment must be developed continuously to address the unique viewing conditions of new devices—different angular fields of view (FOV), resolutions, focus ranges, and hardware designs. To address each set of variables, many XR devices require measurement systems with costly custom optics. There is no one-size-fits-all solution and, once designed, a measurement system is not easily modified for different requirements. The speed of XR innovation calls for equipment that helps manufacturers deploy device-specific display measurement as quickly and easily as possible.

As part of the SPIE AR | VR | MR Technical Talks, Radiant's paper introduces a patent-pending novel optical design that greatly simplifies the process of building imaging systems for near-eye display (NED) metrology. Using commercially available modular components, a variety of optical configurations can be produced and, if needed, reconfigured to match unique specifications of most XR headsets with minimal development time. Features such as electronic focus control and folded ("periscope") geometries can be incorporated easily to accommodate different focus ranges and headset form factors. Radiant's technical paper and poster presentations will introduce this optical design concept and demonstrate the performance of the modular system for NED measurement using test data and measurement examples.

Presenting poster sessions on behalf of Radiant Vision Systems are the paper's authors Eric Eisenberg, Optics Development Manager, and Javier Ruiz, Staff Optical Software Engineer II, from Radiant's Engineering team.

18640 NE 67th Court
Redmond, WA 98052 USA
T: +1.425.844.0152

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Eisenberg has extensive hands-on experience incorporating imaging technology for test and measurement and has a deep understanding of the technical considerations required for successful implementation. Prior to joining Radiant, Eisenberg held Optical Engineering roles at Lockheed Martin and Terabeam. Ruiz applies over 20 years of optical metrology and optical design expertise in development projects at Radiant. Working with leading manufacturers, he designs optical systems to image the unique visual properties of displays, AR/VR devices, and light sources for measurement and analysis according to manufacturer specifications. Prior to joining Radiant, Ruiz held Optical Engineering roles at TRIOPTICS USA, Digital Optics, Rockwell Collins, and JVC. Both presenters have invented multiple patents.

For more information or to register for the SPIE AR | VR | MR conference, visit spie.org/conferences-and-exhibitions/ar-vr-mr. Learn more about Radiant Vision Systems at www.RadiantVisionSystems.com.

About Radiant Vision Systems
Radiant Vision Systems works with world-class brands and manufacturers to deliver creative visual inspection solutions that improve quality, reduce costs, and increase customer satisfaction. Radiant's legacy of technology innovation in photometric imaging and worldwide install base date back more than 30 years and address applications from consumer electronics to automotive manufacturing. Radiant Vision Systems product lines include TrueTest™ automated visual inspection software for quality control, and ProMetric® imaging colorimeters, photometers, and light source measurement systems. Radiant is headquartered in Redmond, Washington, USA, with strategic offices in California, Michigan, China, South Korea, and Vietnam. Radiant has been a part of Konica Minolta's Sensing Business Unit since August 2015. For more information, visit www.RadiantVisionSystems.com.

Press Contact:
Shaina Warner
Marketing Program Manager
Radiant Vision Systems
+1 (425) 844-0152 x587
Shaina.Warner@RadiantVS.com