QUADRIDOX

Title: Quadridox's revolutionary explosives detection system takes aim at airport baggage

Byline: The U.S. Department of Homeland Security's (DHS) Science and Technology Directorate (S&T) awards Quadridox a contract **to develop and test a novel explosives detection system for baggage that promises to increase throughput and reduce costs**

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Hillsborough, NC: Quadridox, a leader in computational X-ray imaging, has received an award from the U.S. Department of Homeland Security (DHS) Science and Technology Directorate (S&T) to continue the development of a novel checked baggage explosives detection system. This program addresses key problems that airports around the world face: the need to quickly scan bags while also realizing extremely accurate threat detection against an evolving adversary.

The key to accomplishing this challenging goal is to use a different kind of X-ray measurement, known as X-ray diffraction. Quadridox's X-ray diffraction scanner can augment currently deployed computed tomography (CT)-based explosives detection systems by providing unique information about the material composition of the items in a bag. By combining the X-ray diffraction and CT scanners into a single, hybrid system, airports can maintain their existing workflow while better detecting threats and eliminating false alarms. As a result, the public can travel more safely and conveniently, and airports can more effectively and efficiently serve an ever-increasing volume of travelers.

Through a previous S&T effort, Quadridox has already participated in a training data collection at the DHS S&T Transportation Security Laboratory (TSL) with a prototype hybrid X-ray diffraction system. Combining this data with a limited stream of commerce data collection at Quadridox's facility, Quadridox demonstrated the potential for a significant reduction in false alarm rate relative to existing CT systems†. The new S&T program builds on Quadridox's previous successful efforts with the prototype system enabling the development and further validation of a commercial-ready version of the system. "We are confident that our innovative approach is ideally suited to address the current needs in the checked baggage sector, and Quadridox is looking forward to showcasing the effectiveness of its technology," said Dr. David Coccarelli, Chief Operating Officer and Head of Data and Artificial Intelligence at Quadridox.

"We are proud that DHS S&T is trusting Quadridox with this important mission, and we are excited to take this giant step forward in bringing an X-ray diffraction imaging solution to the security market. The stars have finally aligned for widespread deployment of X-ray diffraction imaging systems: the technology is mature and validated, the currently deployed CT systems are reaching the end of their lives, and the need for better detection is well-established," said Dr. Joel Greenberg, co-founder, CEO and Chief Technology Officer (CTO) of Quadridox.

† False alarm reductions were based on Quadridox's analysis of the data and do not reflect testing done by the TSL

About Quadridox

Quadridox applies physics-based simulation and computational imaging methods to the design and development X-ray imaging systems and algorithms. With a world-class, multi-disciplinary team of scientists and engineers that brings decades of combined product development experience to bear on challenging problems, Quadridox has developed a suite of X-ray diffraction imaging systems for medical, security, and industrial imaging applications. In addition, Quadridox has developed a unique simulation tool, QSim RT, that rapidly and accurately generates synthetic X-ray data at scale across industries to meet the data needs of developers and regulators.

For more information, visit: www.quadridox.com or our LinkedIn channel https://www.linkedin.com/company/quadridox/

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