

Quadridox signs a Cooperative Research and Development Agreement (CRADA) with the Department of Homeland Security's (DHS's) Transportation Security Lab (TSL)

The Department of Homeland Security's (DHS's) Transportation Security Laboratory (TSL) is collaborating with Quadridox to develop and evaluate physics-based synthetic data for performing virtual test and evaluation (T&E) of X-ray security scanners

December 1, 2023 - Hillsborough, NC: Quadridox, a leader in computational X-ray imaging, is collaborating with the Department of Homeland Security's (DHS's) Transportation Security Laboratory (TSL) to develop and explore the creation, validation, and potential use of synthetic data in performing virtual test and evaluation (T&E) of X-ray security scanners, with a focus on assessing the detection performance of computed tomography-based (CT) technology.

As part of the effort, the TSL will provide Quadridox with datasets of contraband material scanned on commercially available Checked Baggage and Checkpoint security scanners, which will enable Quadridox to improve its QSim RT physics-based synthetic data tools. In addition, Quadridox will engage with the TSL Applied Research Division (ARD) and T&E groups in discussions on methods, metrics, and impacts of synthetic data validation and practical strategies for implementation.

If proven successful, synthetic data could be used for possible T&E applications. "This capability would provide a quick response to new threats: once the new threat is characterized, a large data set can be created and distributed for automated threat recognition (ATR) development" said Dr. Joseph Palma of the DT&E X-ray Inspection Branch at the TSL. Dr. Joel Greenberg, founder and CEO of Quadridox, adds "beyond T&E applications supporting regulators and government agencies, synthetic data can help vendors reduce the time and costs associated with X-ray system design, component selection, and algorithm development as well as accelerate the process of certification and qualification."

About Quadridox

Quadridox applies physics-based simulation and analysis to the design and evaluation of X-ray hardware and data processing algorithms. Our unique simulation tool, QSim RT, rapidly and accurately models X-ray physics for arbitrary system configurations and at scale across industries. In addition to QSim RT, Quadridox is an OEM of X-ray diffraction imaging systems for medical, security, and industrial imaging applications.

For more information, visit: www.quadridox.com or our [LinkedIn channel](#)

Contact:

Dr. Joel Greenberg

Co-founder, President and CEO

joel.greenberg@quadridox.com