

Quadridox, Inc. Part of UK Department for Transport (DfT) Team to Develop and Validate Synthetic Data Sets to Enable More Rapid Response to Aviation Security Threats

Quadridox, in partnership with Iconal and SureScan, are working to demonstrate and validate the use of physics-based synthetic data in enabling security operators to detect current and emerging threats more quickly and more effectively.

Hillsborough, NC – December 5, 2021 - Quadridox, Inc (QDX), a global leader in physics-based synthetic data tools, is working to demonstrate the validity of synthetic data as a means to augment currently-fielded Explosives Detection Systems (EDS) to better counter current and emerging threats to transportation security. A major step toward this goal is being made through a UK Department of Transport (DfT) contract awarded to Iconal, who have selected Quadridox to be part of their team. Quadridox will provide synthetic data matched to the SureScan x1000 EDS and Iconal will lead the effort by performing testing and validation of the data as an independent agency.

With the advent of machine and deep learning algorithms, there is a requirement for large volumes data with associated ground truth information. However, this data is often sensitive, proprietary, or difficult to acquire due to the dangers of working with energetic materials. In addition, COVID-19-related challenges have further exacerbated data availability. As a result, the creation of data can be slow, expensive, or otherwise inadequate to meet the demand for rapid development and deployment of algorithms to meet all stakeholder needs. Synthetic data is a potential solution to both assess and validate algorithm performance, but requires independent validation in order to become a trusted and valuable tool.

“Our mission at Quadridox is to build the world’s most advanced and comprehensive X-ray simulation and synthetic data tool to advance aviation and security screening,” said Dr. Joel Greenberg, President and CEO of Quadridox, Inc. “We are thrilled to work with DfT and our partners at Iconal Technology Ltd and the SureScan Corporation to demonstrate the value of physics-based synthetic X-ray data.”

“I think that we are all excited to make verified synthetic data a reality – regulators, OEMs and third-party developers all benefit from a streamlined certification process, more robust and agile algorithm development, and shorter, less expensive development cycles” said Dr. David Coccarelli, COO of Quadridox, Inc. “We see our synthetic data as an integral piece of the future of aviation security, from development to deployment.”

About Quadridox:

Quadridox merges physics with computation to revolutionize X-ray technology for a safer, more informed world. We leverage our expertise and growing team to develop innovative tools and technologies in X-ray simulation, synthetic X-ray data generation and X-ray diffraction imaging technology. Our unique simulation tool, QSim RT, rapidly and accurately models a variety of X-ray interactions for arbitrary system configurations, including baggage, air cargo, and cargo scanning. Headquartered in Hillsborough, North Carolina, the Quadridox team is delivering software and hardware solutions to government and commercial customers in security and across industries and use cases.