

Airport Security Massive Multiplexing Image System

Enhance the Security and Efficiency of the Airport Checkpoint and Baggage Screening Process

Providing a Solution to Aviation Security.

Each day, aviation security systems are put to the test as air travel rebounds following the pandemic and travelers return to airports around the world with their carry-on items and checked baggage. As global airport staffing shortages persist and the potential for threats remains ever-present, there is a constant, vital need to improve both effectiveness and efficiency of airport security operations.

To meet this need, security experts at Integrated Defense and Security Solutions (IDSS) and The Chertoff Group have developed a massive multiplexing system that enables images generated by checkpoint and checked baggage security scanners at any airport to be screened offsite at redundant centralized locations (see figure on backside). Our team has independently validated that our solution allows remote security image review at the same speed as the local airport checkpoint with typical airport bandwidth requirements.

This system uses patented covert node technology, developed by The Chertoff Group, to insert bag images with real threat objects into the stream of images to test, train, and improve officer performance and monitor system-wide effectiveness against actual and emerging threats.

Today's Advantage of Massive Multiplexing.

The primary advantages of this networked approach are the ability to remotely evaluate the performance of the aviation security system, individual officers, and the overall efficiency of screening operations. Its benefits extend to stakeholders across the aviation environment – including the traveling public, airport management, technology providers, and federal officials.

Developing the infrastructure connections you'll need.

There is no limit on the number of airports with standard IT infrastructure connections that can connect to the massive multiplexing network, which is entirely decentralized and redundant. Through the use of this innovative technology, it is as fast to display an image for review at remote facilities hundreds or thousands of miles away as it is to display it for review locally.

The system is based on an open architecture, allowing any manufacturer operating with the open DICOS standard and who meets high cybersecurity requirements to operate in the massive multiplexing environment (Open Architecture for Airport Security Systems v1).

Reduced Airport Staffing Requirements

Distributing image interpretation across the network reduces officer downtime, improves utilization and allows staffing requirements to be reduced for any airport operating on the network.

Open Architecture

Any security scanning system that uses open imaging standards (DICOS) and meets cybersecurity requirements can operate in the remote screening environment. This fosters greater competition and innovation.

Promote Expertise

Remote screening promotes officer specialization, which enhances effectiveness and improves efficiency.

Cybersecurity

The system meets Zero Trust Architecture principles.

Rich Data

The system facilitates an expansion of stream of commerce and threat image data to train next-generation artificial intelligence-based threat detection capabilities and reduce reliance on human image interpretation.

Emerging Threat Response

Remote screening makes it easier to adapt and respond in real-time to emerging threats.

Monitor System Performance

Actionable performance data is collected in a global KPI database to monitor system-wide performance and security effectiveness.



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Integrated Defense and Security Solutions (IDSS) develops, produces, deploys, and supports advanced Computed Tomography (CT) security solutions. The DETECT 1000TM uses standard DICOS image format and incorporates open architecture for ease of integration. Designed for long-term adaptability, it's operationally efficient to meet the needs of airport and security operators. For more information, please contact Jeff Hamel, jhamel@idsscorp.net

The Chertoff Group is an advisory firm that helps global clients understand, manage, and communicate on security risk. Our team's focused insights, context, and perspective in the disciplines of cybersecurity, corporate security, geopolitical, regulatory, and federal market strategy illuminate the global influences on the risk that modern organizations face. For more information, please contact Lee Kair, lee.kair@chertoffgroup.com