



Reveal Imaging Technologies

Reveal Imaging Technologies offers the first EDS technology designed for 100% checked baggage inspection. Reveal's experienced management team is focused on the design, manufacture and sale of security systems to inspect airline passenger checked baggage. The company was formed to offer airports more options in response to the new security regulations following September 11th, mandating 100% inspection of checked baggage, as well as the increasing demand for inspection of air freight, cargo and mail carried on commercial airliners.

Reveal has developed new CT technology to produce an EDS system that is less than half the physical size of other in-line EDS systems. Because of this, we can deploy the Reveal system in a way that better integrates into existing airport operations at less than one quarter the cost of

alternative in-line screening options. Reveal's management experience with current EDS systems, and the team's airport experience, will allow Reveal to quickly certify, deploy and

integrate this technology into the airport operations.

Current Solution

As of 2004, airline checked baggage must be screened electronically, using TSA Certified Explosive Detection Systems (EDS) or Explosives Trace Detection (ETD) technology. As of this writing, all certified EDS systems utilize Computed Tomography (CT scan) technology.

There are two broad categories of EDS machines currently available:

- * Stand-alone machines which will be deployed in "lobby" installations
- * Integrated machines which will be deployed in "in-line" installations

Lobby Installation

The two primary advantages of the lobby installations are the quick implementation time and the fact that passengers are present if their bag is identified for physical search.

The advantages of installing Reveal EDS machine are as follows:-

- * Easy installation – roll in and plug in

- * Instant process improvement
- * Immediate improvement in operational efficiencies
- * Eliminates primary ETD screening
- * Curbside, lobby, check-in or kiosk
- * Minimal airport modifications; plugs into standard 220v
- * Ideal for level 3 screening as part of any inline checked baggage installation HBS

In Line Baggage Screening

The alternative is to install EDS machines directly into the airport baggage conveyor system. The three primary advantages of the in-line EDS solution are annual labor savings of 75% compared to lobby installations due to the networking of the on screen resolution process, freeing up of lobby space, and a check-in process similar to that of pre-9-11 where passengers only need to queue once.

The benefits of installing Reveal EDS are as follows:-

- * Removes screening process from passenger lobby area
- * Distributed architecture handles any level of throughput
- * Minimal infrastructure cost
- * Built-in EDS screening redundancy
- * Fully multiplexed, allowing threat resolution with passenger or in baggage makeup area
- * Minimal space required in baggage makeup area
- * Expanded infeed queue serves as new takeaway belt for agents
- * Simplest in-line configuration for larger airports.

This option requires massive modification to the baggage conveyor system and airport infrastructure in order to add the EDS equipment, conveyors, and bag tracking systems. However due to the size of Reveal EDS equipment, the super-positioning of it over existing Baggage Handling System layout will not pose a situation

Description of the System

The Reveal EDS is a revolutionary new device that incorporates well-defined third generation CT technologies in a new and innovative manner. A major advantage of the system is its compactness. In order to achieve the compact size without sacrificing the tunnel size or resolution, Reveal invented Wide Angle CT and the Multi-Radial Detector Array (patents pending). Wide Angle CT uses an X-ray source with a fan beam $>100^\circ$, compared to typical CT using a 60° to 70° fan beam. This allows the X-ray source to be placed much closer to the inspection tunnel. Reveal's Multi-Radial Detector concept breaks the detector array into multiple components placed as close as possible to the inspection tunnel. While optically equivalent to standard CT images, Reveal's system can be made substantially smaller, since all of the imaging components are positioned much closer to the inspection tunnel.

Reveal's proprietary Wide-Angle CT and Multi-Radial Detector Array shrinks the CT scanner from its current size of approximately 7 feet wide by 7 feet high to approximately 4 feet by 4 feet at its widest point, at a weight consistent with today's carry-on inspection machines. Reveal's unique architecture accomplishes this significant overall size reduction (critical for the machine's acceptance in the ticketing and checkpoint areas) while maintaining tunnel size equal to today's EDS machines.

