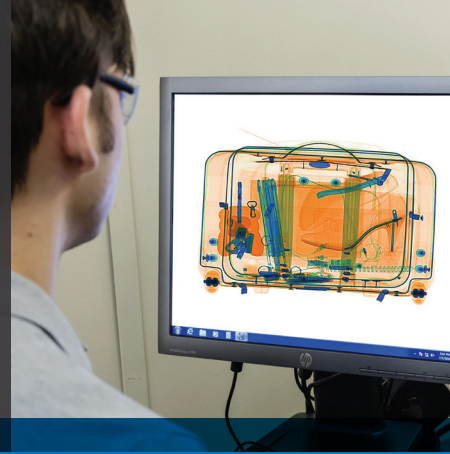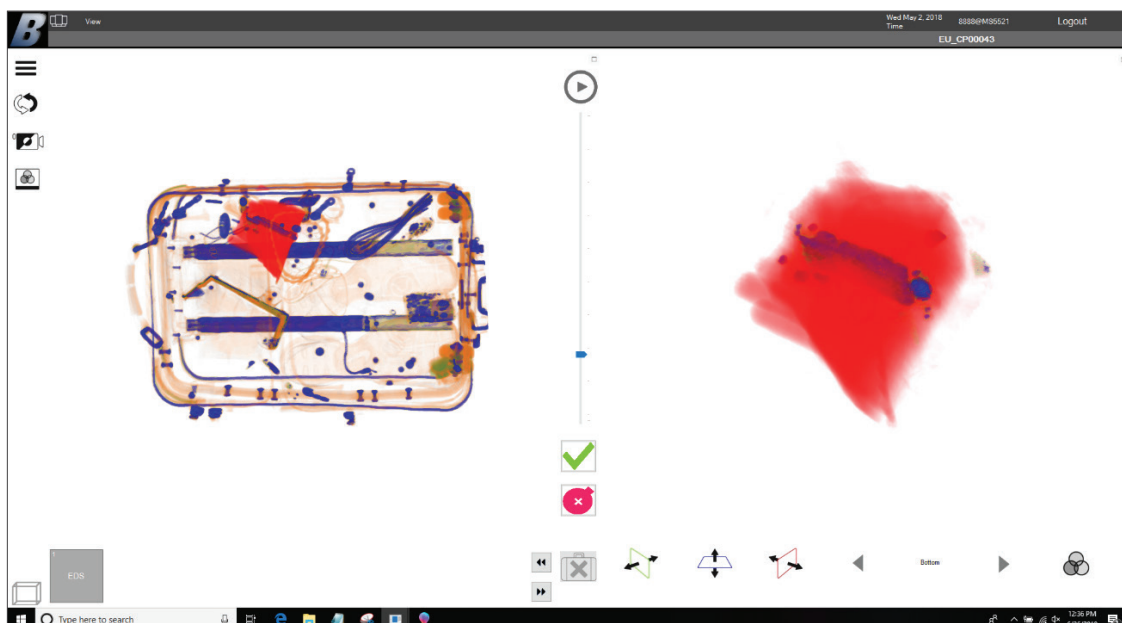# ProDetect™ CT SECURITY SCREENER TRAINING

Battelle's ProDetect CT system is an interactive computer-based training system for aviation security screeners using computed tomography (CT) explosives detection systems (EDS). The ProDetect CT system combines Battelle's human factors expertise, CT X-ray technology competency, in-depth understanding of aviation security operations and protocols, and state-of-the-art computer software and internet technology skills. It's the most advanced training available for aviation security personnel conducting screening at airport checkpoints, baggage rooms and cargo processing facilities.

For more than 20 years, Battelle has provided aviation security research and technical services to the U.S. Department of Homeland Security, the Transportation Security Administration, the Federal Aviation Administration and the international civil aviation community. That experience is now available to the security screeners worldwide through Battelle's advanced CT screener training software, verifiably the first such CBT training in the industry.

The ProDetect CT system represents the state-of-the-art in dynamic, interactive, computer-based training to match the dynamic challenges posed by terrorism and evolving explosive and non-explosive threats.

The system is based on Battelle's proprietary human factors research platform, which provides it with extensive features and the capability required for professional training, including:

- A high fidelity simulated screening environment for training realism
- An extensive 3D image library of representative stream of commerce cabin, hold and cargo items with realistic threats
- System and software flexibility to adapt to the rapidly changing world of computed tomography scanning systems
- In-depth immersive training features for superior training and skill retention
- Extensive data capture features of all trainee actions and responses to allow meaningful post training screener skill assessment and remediation planning
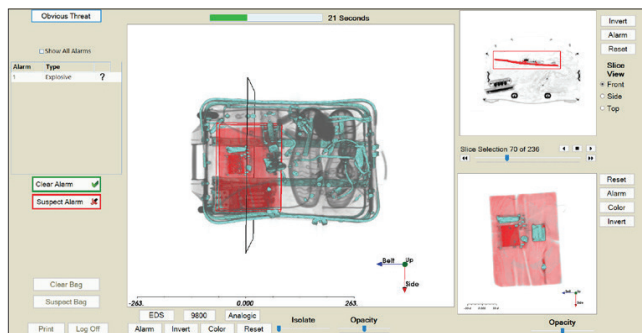

Simulated L3 Clear Scan Graphical User Interface (GUI)

BATTELLE

The ProDetect CT security screener training software consists of the core operating system, the Image Interpretation Training (IIT) module, and the optional, standalone ProDetect IED Builder and immersive training modules.

Image Interpretation Training

The ProDetect CT system's Image Interpretation training (IIT) module provides virtual screening of CT 3D images of typical cabin baggage, hold baggage and cargo (depending on the training), some of which contain IEDs or prohibited items. Our training incorporates key human factors (HF) training principals.

ProDetect CT training display showing TSA Common GUI

Realism – We ensure that trainees encounter a training experience that reflects their working CT environment. X-ray images are actual CT images of bag or cargo content with threats physically placed to avoid the "easy to spot" tipped images that are sometimes used in training. In addition, our ProDetect software presents the actual GUI of the screening system used by the screener including GUI layout, button functionality and image/color renditions. GUIs are selectable from the start screen.

Immediate feedback – ProDetect software provides immediate feedback after each bag decision, which is essential to reinforcing strengths and highlighting weaknesses. Results of the screener's total performance are also summarized at the end of the training exercise and included in his/her record.

Immersive training (optional) – A fundamental tenant of the HF discipline is the importance of training content immersion as a means of effective learning and skill development. Our software embodies this HF tenant through our immersive training following each bag resolution exercise. Through this feature trainees are presented with four exercises relating to the bag they just

adjudicated, including: questions and answers, standard operating procedure reinforcement (optional), specific identification of IED components in the X-ray images and detailed information about IED components. During immersive training exercises, trainees have the same bag, slice and alarm views as they used during the screening exercise with full GUI controls.
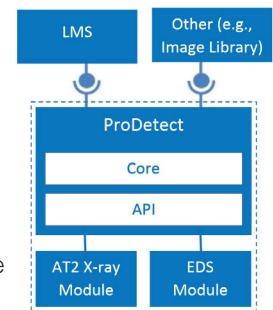
ProDetect IED Builder (optional)

ProDetect IED Builder is a separately launchable, standalone module that allows trainees to virtually build improvised explosive devices (IEDs) on a self-paced basis from a large menu of components and see the resulting IED as a photo and as an X-ray image.

Administrative Features

The flexibility of the ProDetect software allows administrators to manage the 1,000-image library and the trainee roster to create and combine different image playlists and user groups to support training for any skill level and trainee group. Trainee skill tests can be developed in this same way and the system's unique data feature captures each decision, control selection and mouse click made by a trainee to allow administrators to assess trainee weaknesses in depth to understand weaknesses or to identify successful screening strategies to help improve training and screening protocols.

ProDetect CT Core

The ProDetect CT system's modular design allows it to be used as a complete, standalone training system or interfaced with a pre-existing learning management system (LMS). Its modular design, permits system and content modification and updating without having to change the entire preprogram. Interfaces allow access to external resources (e.g. image libraries) and to the internet for downloading playlists and uploading performance data dynamically.

The training system can be deployed either on an individual computer, a local area network within an airport or industrial screening facility environment for AT2 and EDS platforms or as a web-based solution*

Web applications may not be available for certain requirements/configurations.

800.201.2011 | **solutions@battelle.org** | **www.battelle.org/aviation-security**

BATTELLE

It can be done