



CUSTOMS & BORDERS

WHEN SCIENCE CREATES IMPACT IN X-RAY SCREENING

TRAINING MODULES IN XRT4

Customs and border security officers have the objectives to impede the import of goods that endanger public safety but also to prevent import tax evasion, while facilitating international trade. They face ever-changing challenges when examining X-ray images of air, land and sea cargo as organized crime groups find faster and innovative methods to transport illicit goods.

In X-ray screening, interdiction and detection capabilities can be enhanced through training. Our training programs tackle imaged-based and knowledge-based factors, so that the screening officers are able to recognize new and emerging threats and improve their performance level while constantly updating their knowledge.

XRT4 offers X-ray image analysis training for single, dual-view, high energy and 3D CT images and training modules are available for different screening areas.

CASRA's Customs X-ray training modules include both security threats and the diversified list of illicit goods that fall under Customs' purview, such as currency and valuables, narcotics and pharmaceuticals, protected species and tobacco, among others.

Training modules are available for:

- Baggage Screening
- Air Cargo Screening
- Mail & Parcels Screening
- High Energy Screening (containers and trucks)

XRT
X-RAY TUTOR 4



INDIVIDUALLY ADAPTIVE ALGORITHM

An individually adaptive algorithm is embedded in XRT4 so that each screening officer is trained according to their level and abilities and therefore challenged in their areas of opportunities, which makes the training tailored to each trainee and also interesting and motivating.

This algorithm is based on various research findings and considers the main image-based and knowledge-based factors that influence the detection performance. Direct feedback is provided after each image and session for an improved learning curve.



REPORTING AND ADMINISTRATION FUNCTIONS

XRT4 provides extensive reporting features with adjustable reports available directly within the platform. The embedded report management system allows for an easy assessment of the trainees performance, providing information on such performance by time, training modules, levels and by type of threat and illicit good to be detected.

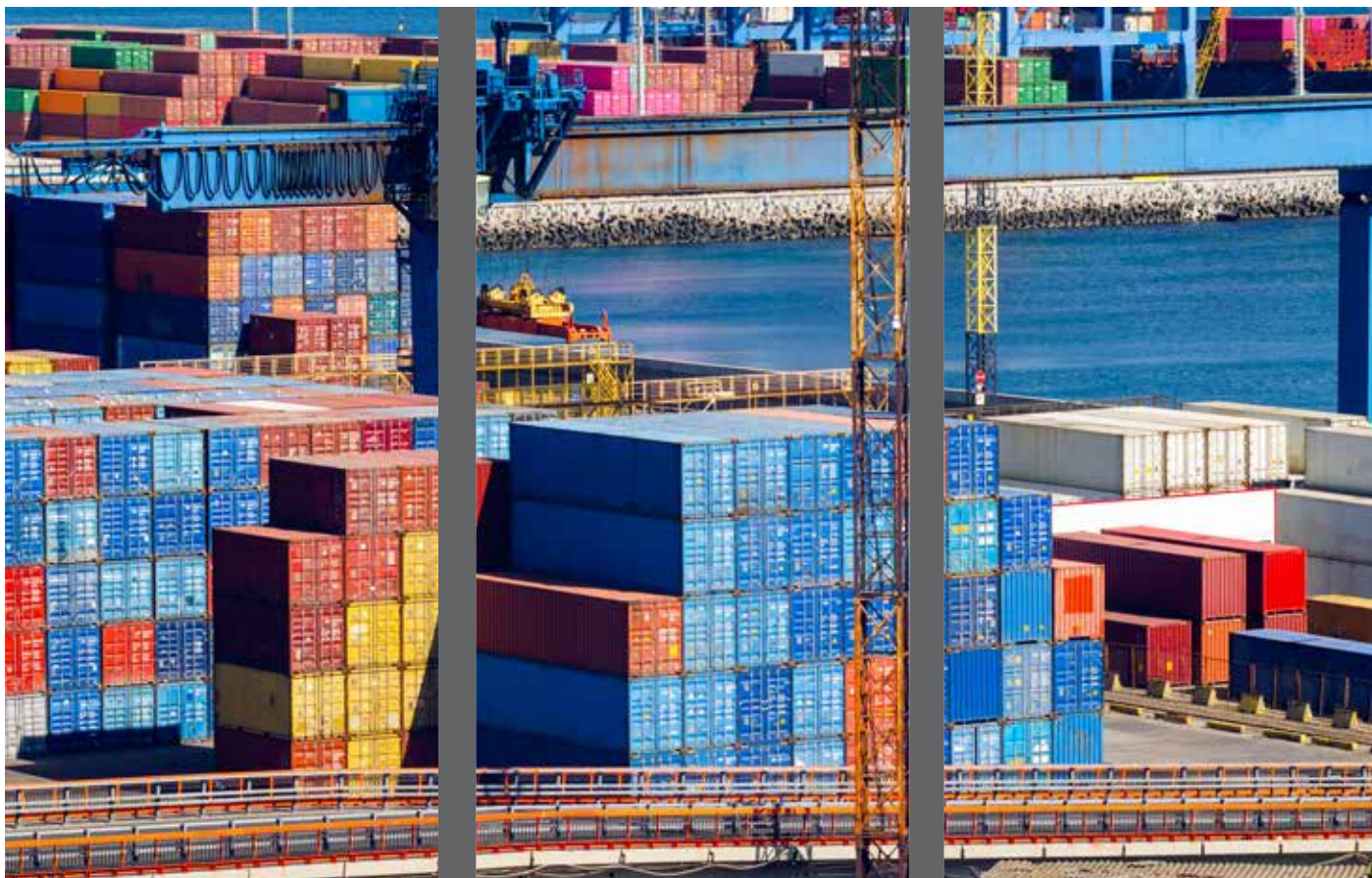
The different types of reports can be exported into different formats in order to conduct training gap and performance analyses.



XRT4 EXPERT: BUILD YOU OWN...

XRT4 Expert access allows the upload of own X-ray images, PowerPoint presentation, e-learning content and case-specific information in order to create own X-ray image libraries and training or assessment modules.

XRT4 Expert enables a whole range of customization and adaptation to individual needs, as settings (pass marks, machine interface, display options) and structure, (introductory levels, training levels) can be changed to fit specific training or testing needs.



X-RAY DATA GENERATION & TRAINING LIBRARIES

The fast development of X-ray data has never been more critical for Customs and border security agencies. The training modules in XRT4 comprise high-quality X-ray images containing a broad variety of prohibited items and smuggled goods developed taking into account the ever-changing concealment methods.

Our methodology for X-ray content generation has allowed us to support national states, regional and international organizations in the training of their X-ray screening officers

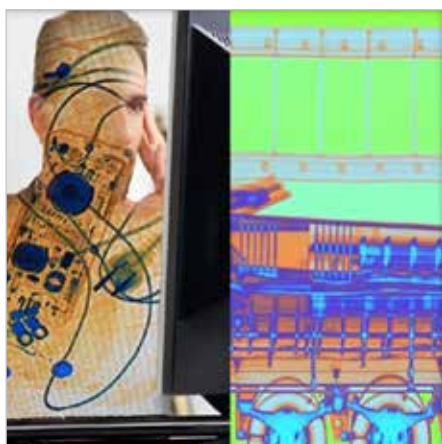
by developing tailored content that has been included in training modules effectively and efficiently.

CASRA's proven merging algorithm is used to merge pre-recorded threats and illicit items into clear images. Such illicit goods are then placed under different rotations, superimposed to different items and merged in the X-ray images so as to represent the modus operandi of the perpetrators, thus providing a training that mirrors the operational needs and no longer lags behind!

SOFTWARE AS A SERVICE VS SOFTWARE ON PREMISE

XRT4 is a web-based application that can be run on modern browsers such as Edge or Chrome, without requiring any client software on workstations. The configuration data and the officers' results are stored on a centralized database.

Alternatively, XRT4 can be installed in the client's server - software on premise solution - which allows the trainees to access the training platform via their organization's intranet.



INSTRUCTOR-LED X-RAY IMAGE ANALYSIS COURSES

Instructor-led classroom style training courses in X-ray image analysis and interpretation as well as Train the Trainers courses are available and can be tailored to the organization's needs.



START BETTER TRAINING TODAY....

WHY CASRA

CASRA is an interdisciplinary team of scientists, security experts, and software engineers with a common purpose and mission: maximizing the human-machine system performance in X-ray screening. Our computer-based training (CBT) and assessment platform X-Ray Tutor 4 (XRT4), is the only remote screening application developed based on studies and scientific investigations focusing on the human factor in X-ray screening. CASRA's software and applications are installed in over 50 countries and at more than 900 airports around the world.

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XRT
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