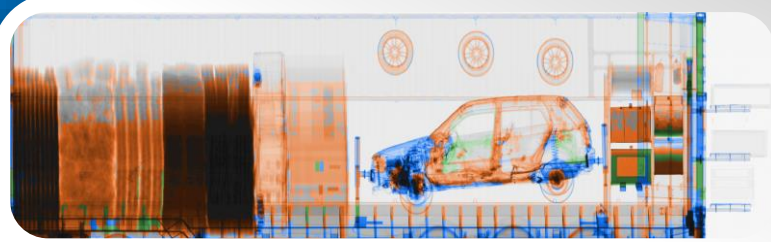

STANDARD TEST CONTAINER (STC)

Advanced Training For Cargo Scanner Images Analysis And Threat Objects Recognition

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STC

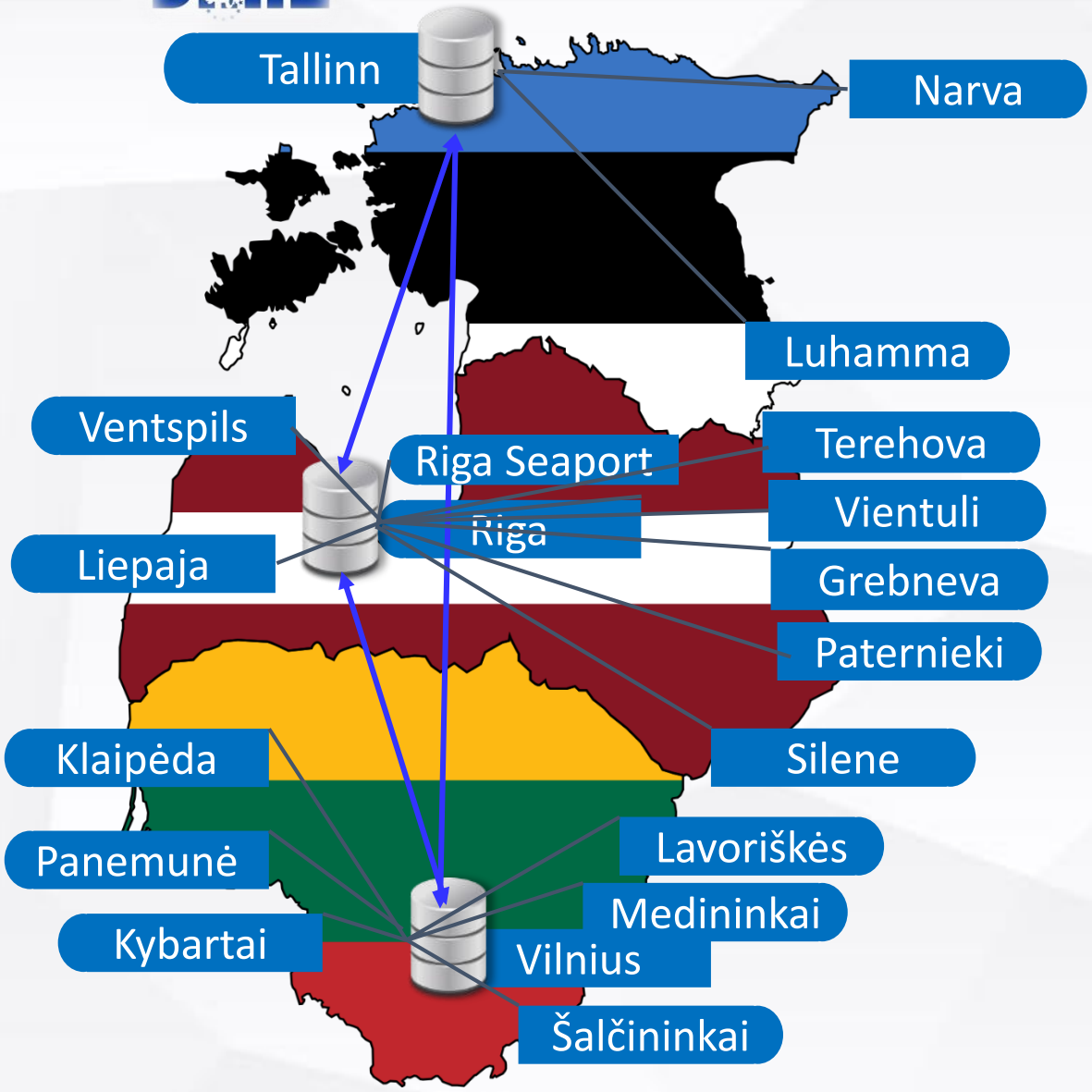
Challenge

"The most sophisticated machines become worthless if the people who operate them and who visually inspect the X-ray images are not qualified to do so (International Journal of Industrial Ergonomics, 2014)."

STC

Work and learn

Learning from historical cases



- **16 X-ray Scanners**
  - 6 in Lithuania
  - 8 in Latvia
  - 2 in Estonia

- **2 Training Centers**
  - 1 in Lithuania, Vilnius
  - 1 in Latvia, Riga

- **3 IT Centers**
  - 1 in Lithuania
  - 1 in Latvia
  - 1 in Estonia

The limitations of regular training

STC

- To slow a training process
- Preparation for something that has already happened, but not for something that can happen
- The limitation of situation variations
- No knowledge regarding the scanner's limits

STC training overview

STC

Brief description of the solution

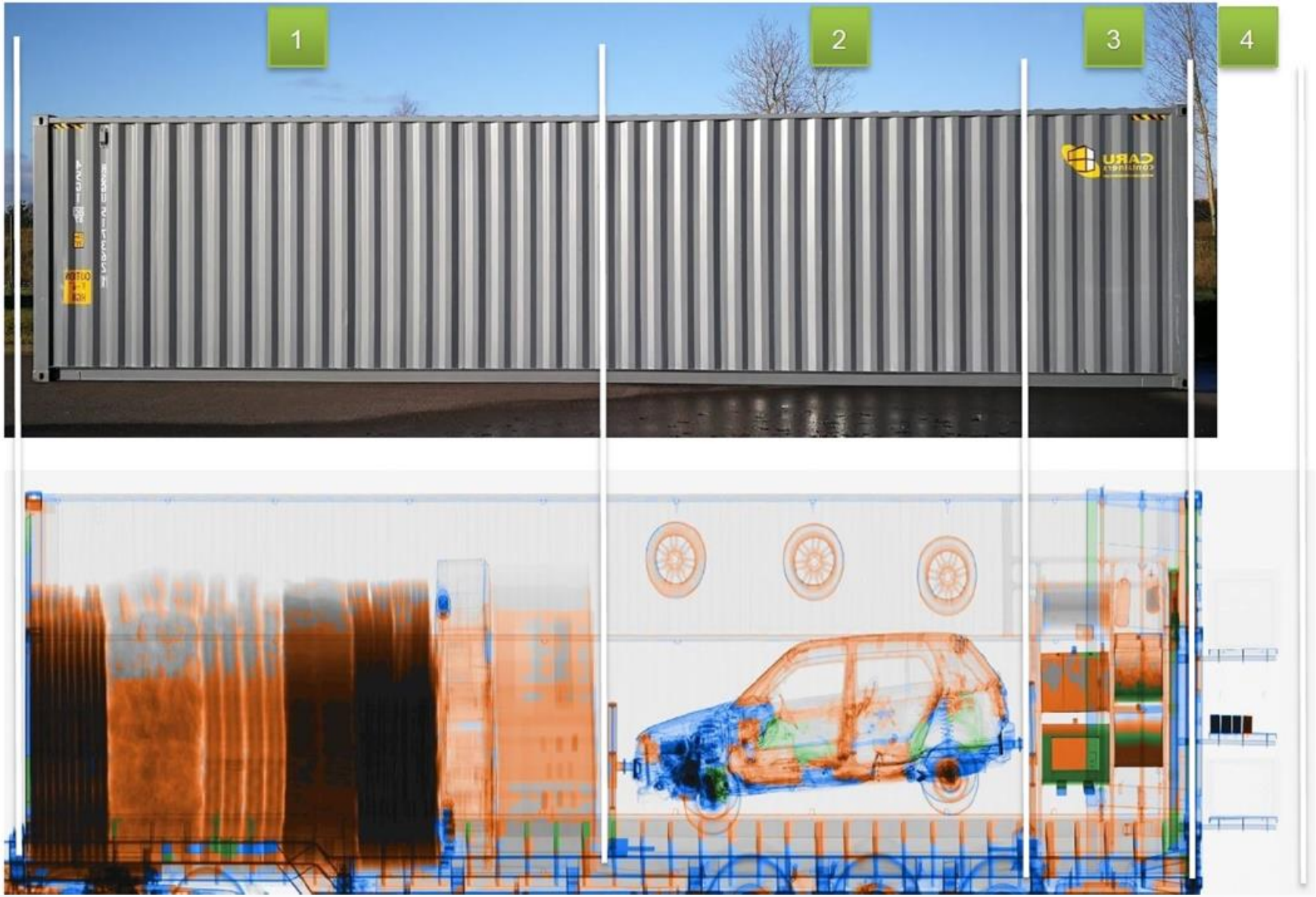
- Manufactured Standard Test Container (STC) with different situations regarding posed threats as a tool for the training of cargo scanner operators

Training objective(s)

- Demonstrate how one may recognize the signature of an object which poses a level of threat (tobacco, explosives, firearms, drugs, illegals and so on)
- A faster and more efficienct screening process
- Reduce smuggling, detect threats, and improve customs enforcement
- Learn how to conduct an image analysis both effectively and efficiently

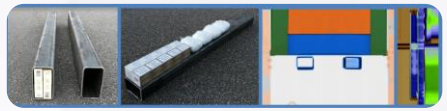
Key achievements

STC



Key achievements

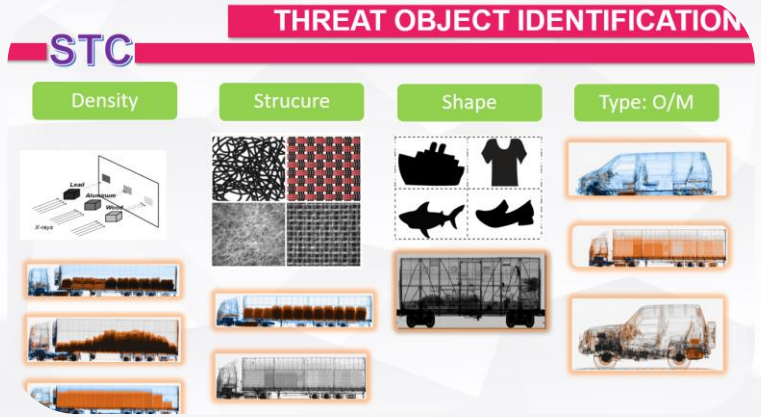
STC



- **More then a hundred STC scans** carried out in six different types of cargo scanner and an STC library created with 150 different situations regarding objects which may pose a threat

- **Manufactured** unique training tool – Standard Test Container (STC)

- **Training performed-** for 10 different countries



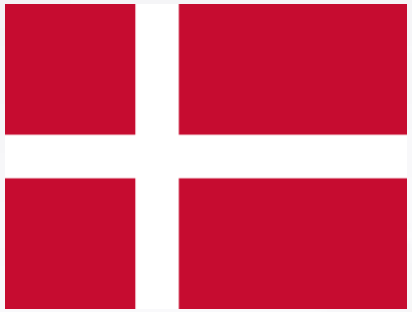
- **Hundreds of x-ray images** from real cases have been analysed and an image analysis methodology has been prepared

Key achievements

STC

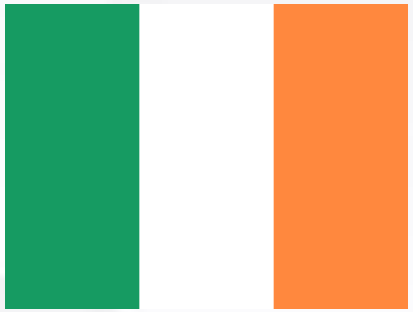
Lithuania

Latvia

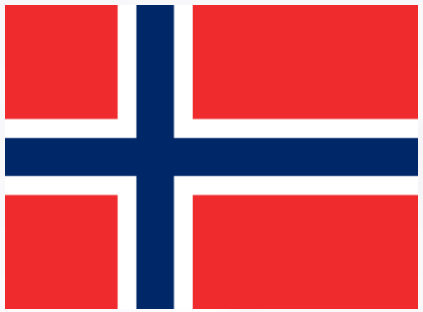


Denmark

Iceland



Ireland



Norway

Sweden

Finland

Estonia

Bulgaria

Promo Video

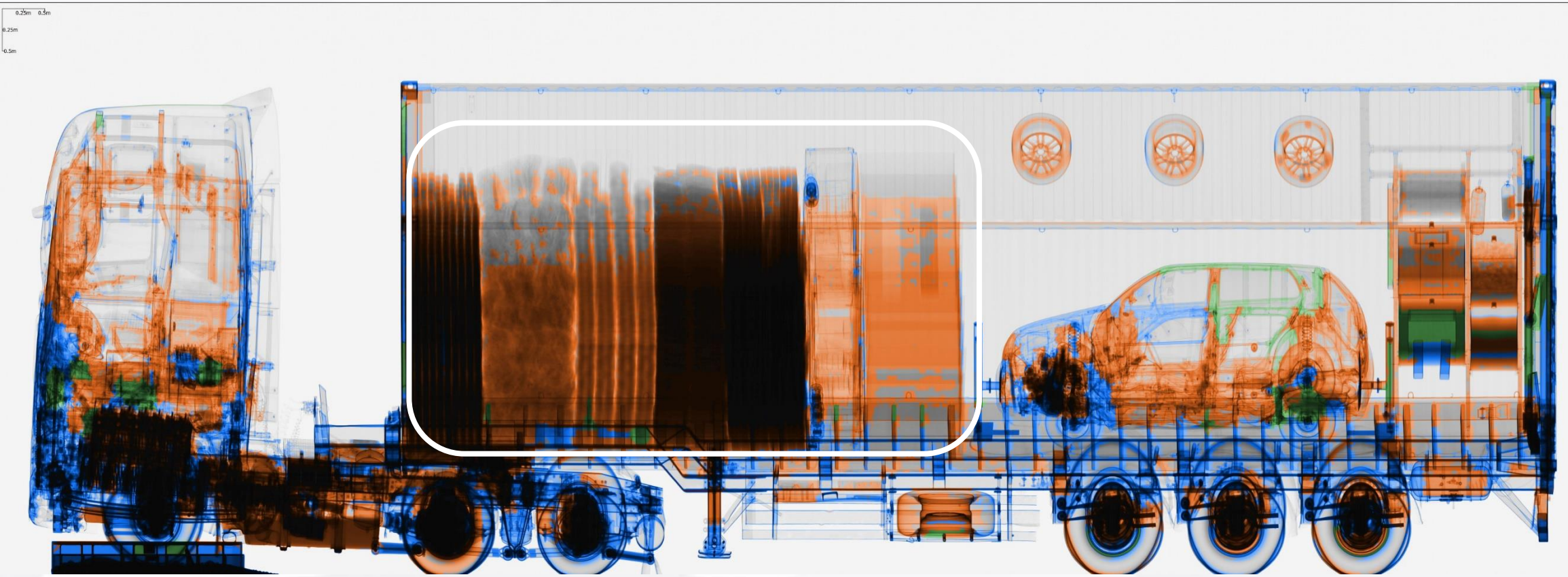
Training programme

STC

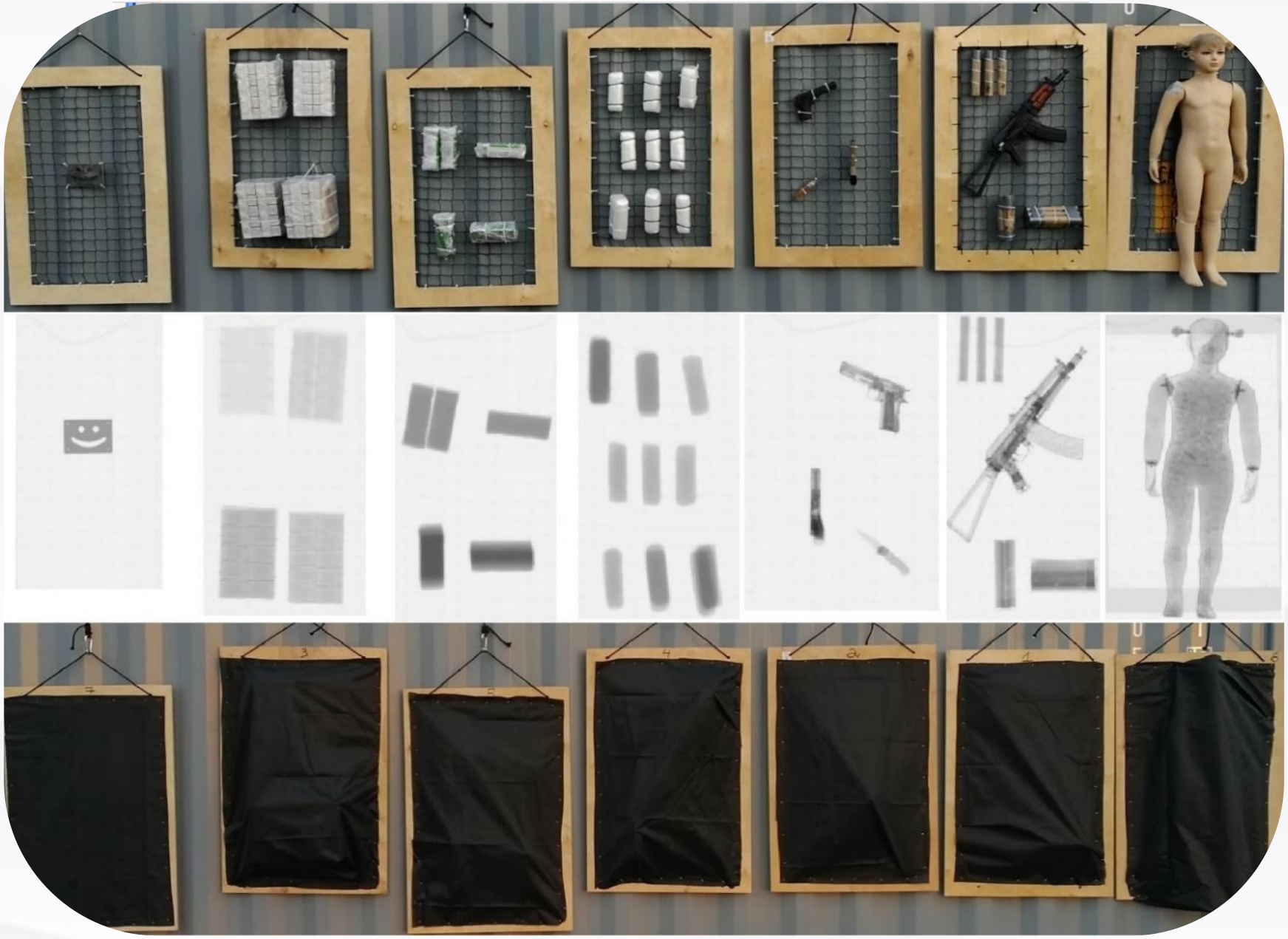
- Firearms recognition training
- Explosives recognition training
- Drugs recognition training
- Cigarettes recognition training
- Illegal persons recognition training
- Scanner performance tests

CARGO SECTION

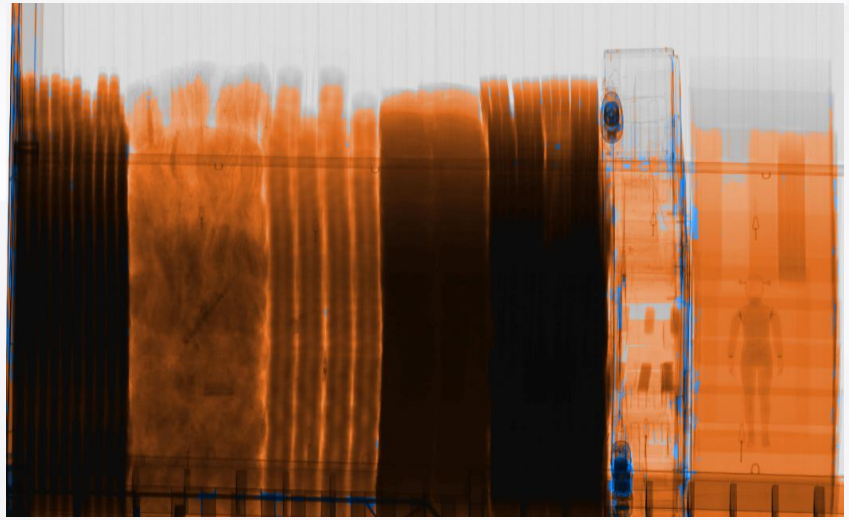
Cargo section

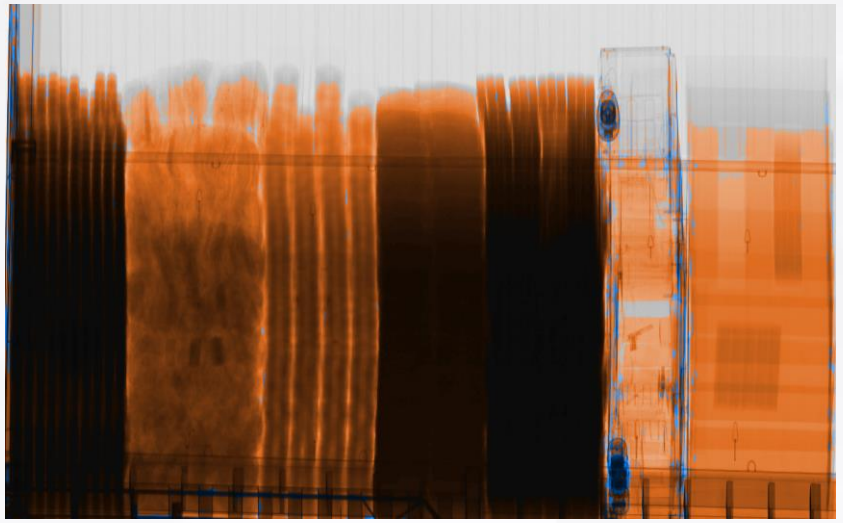


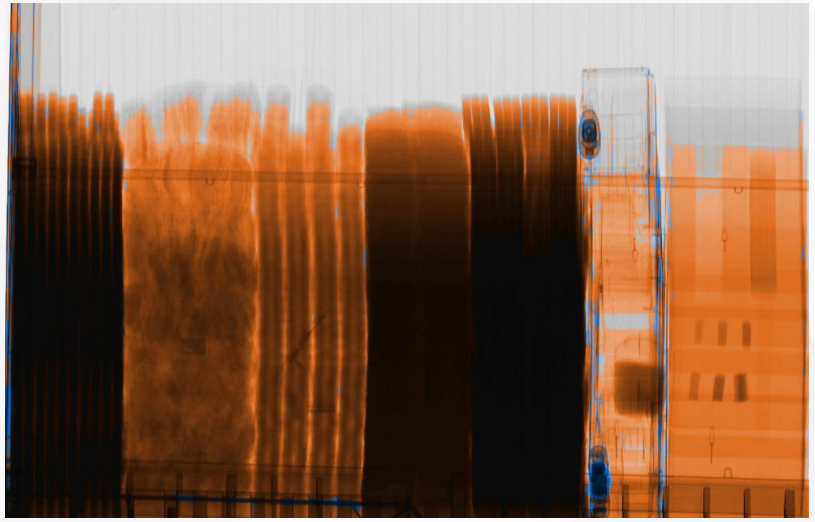
Cargo section

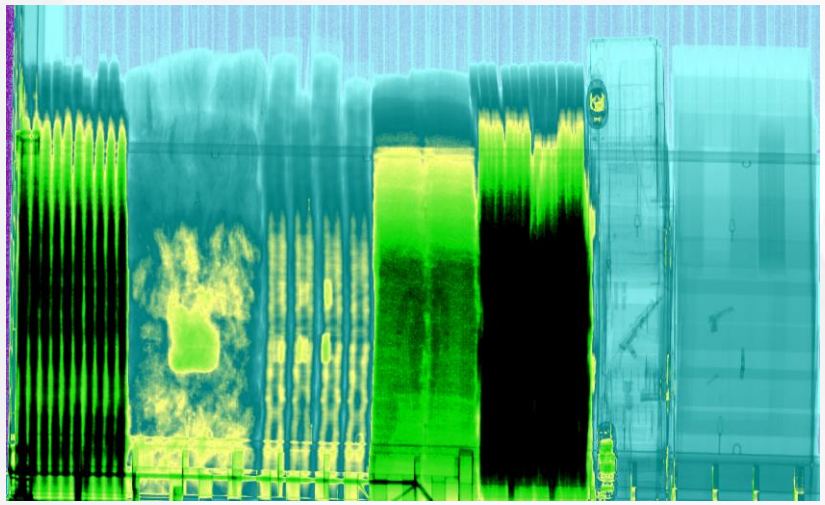


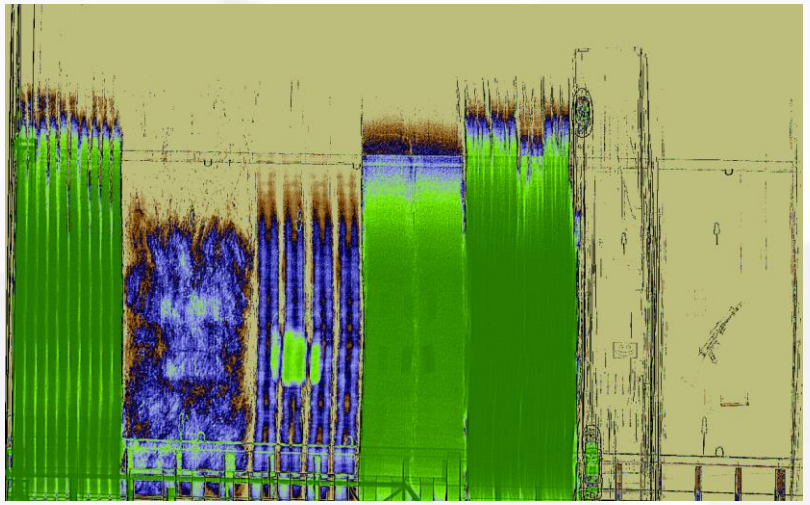
Cargo section

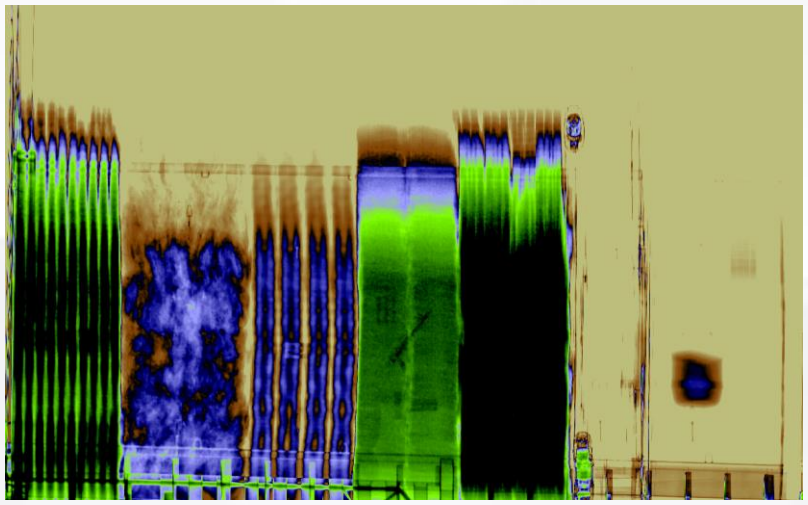






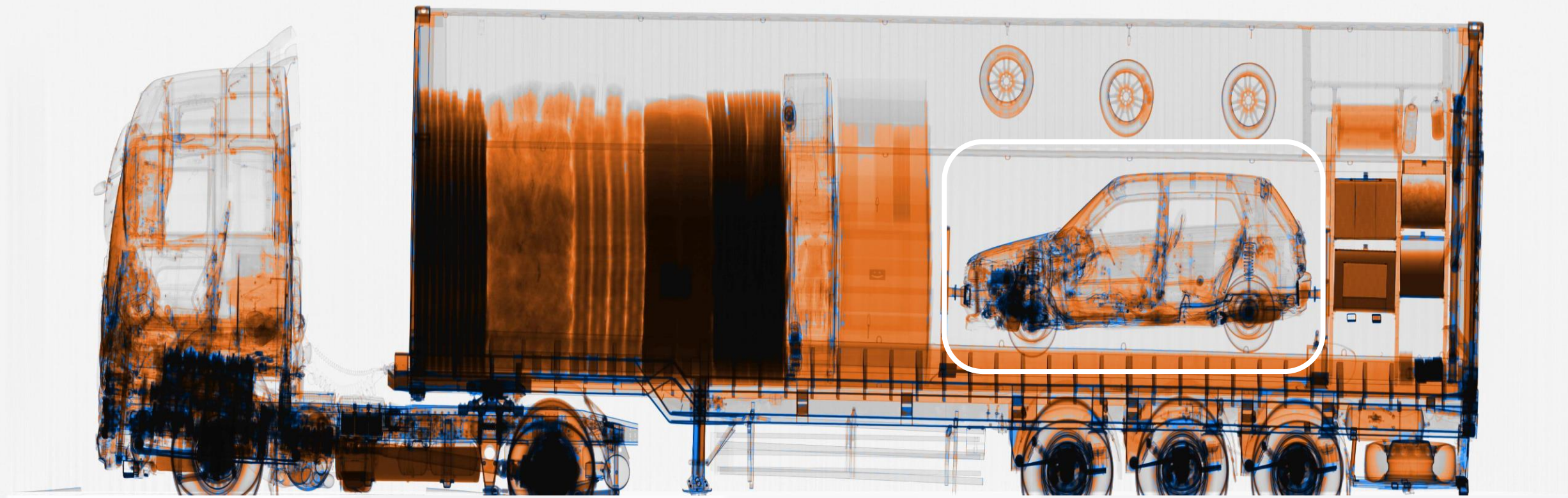






LIGHT CAR SECTION

Light car section



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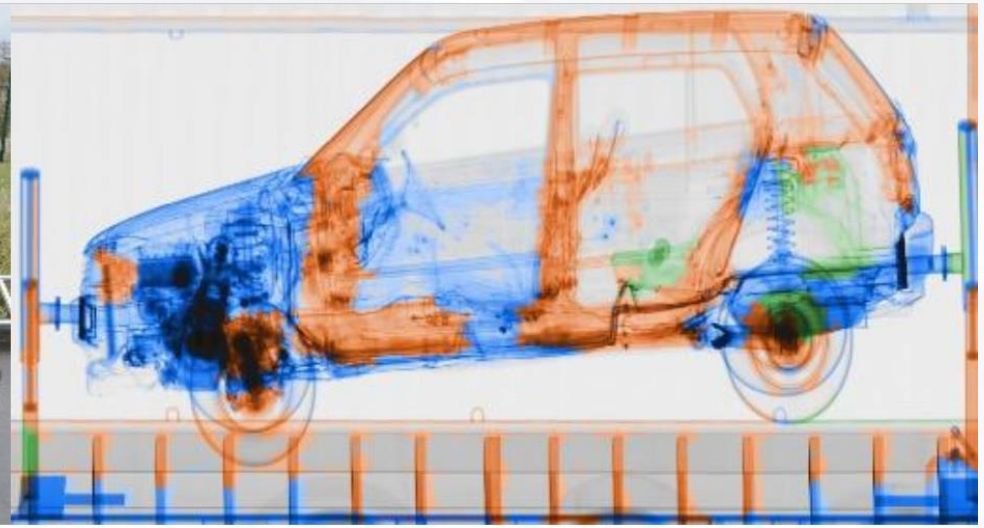

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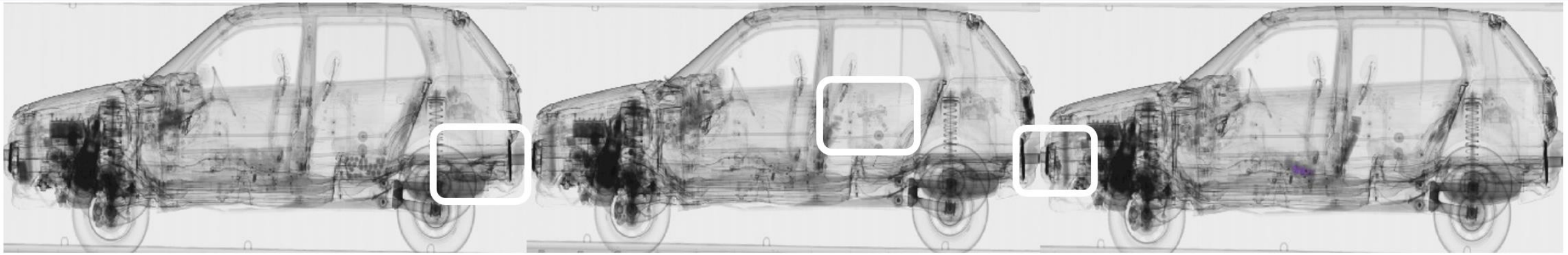
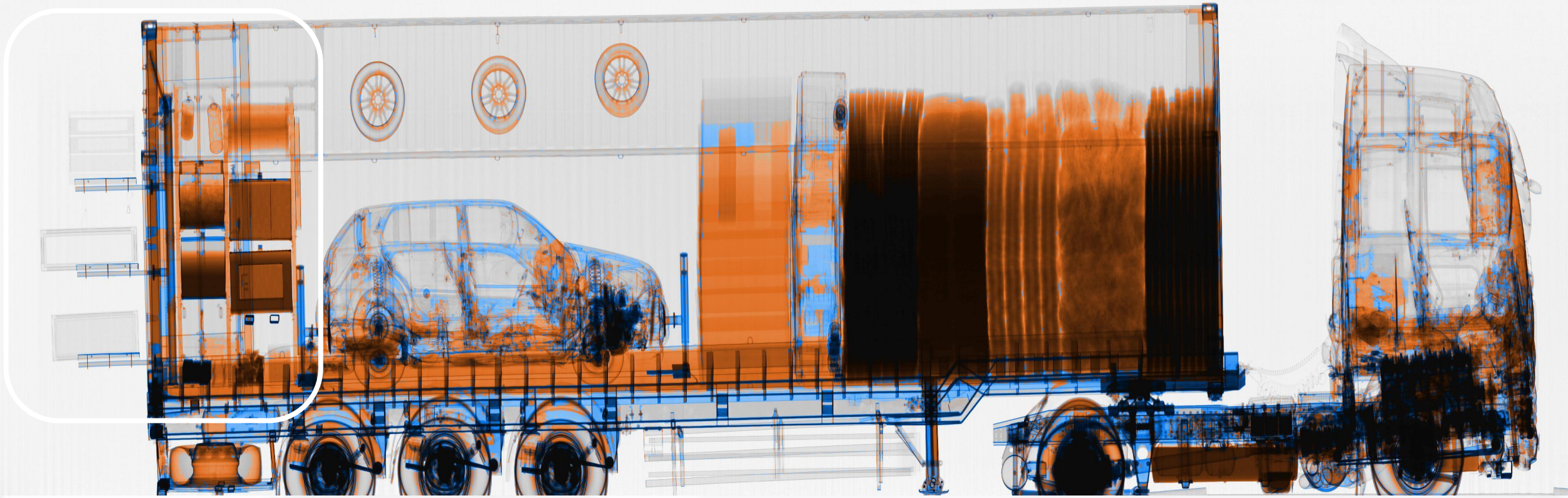
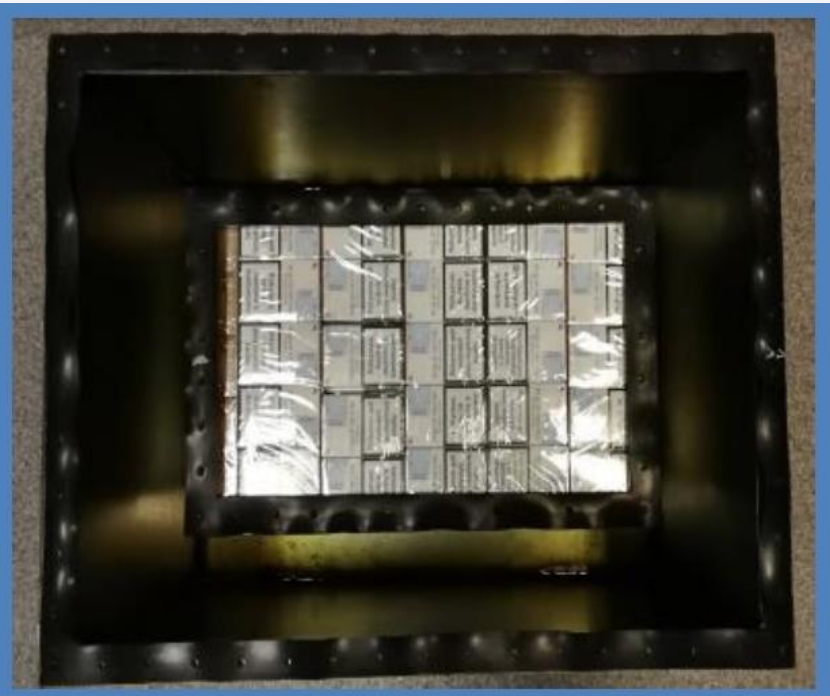


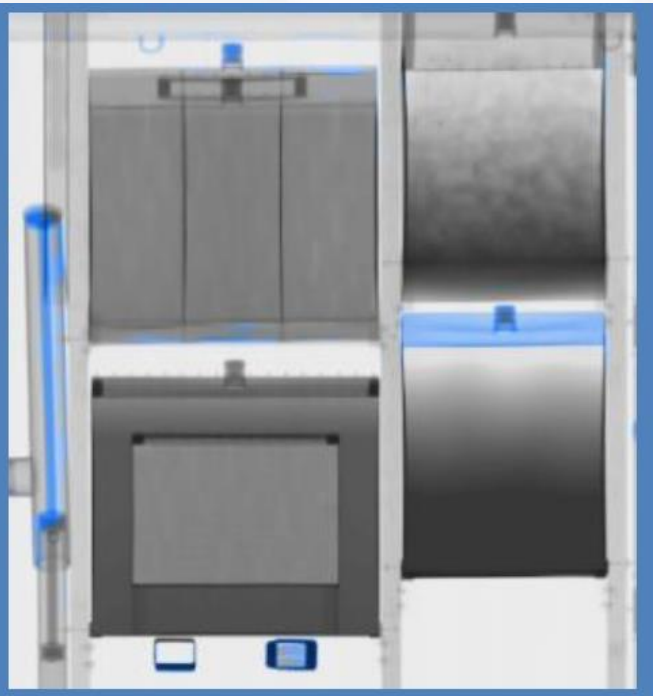
OBJECTS SECTION

Objects section



Objects section





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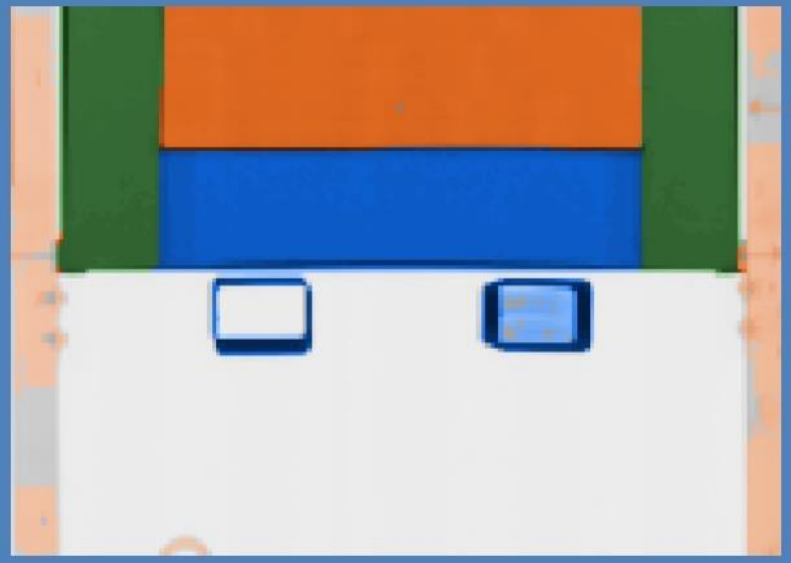

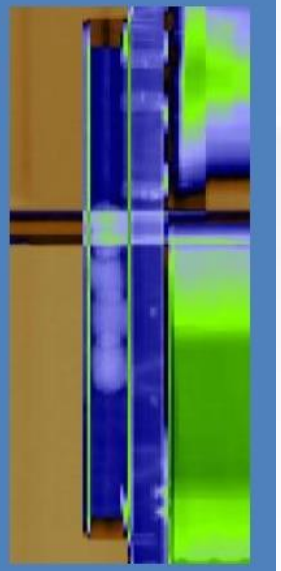

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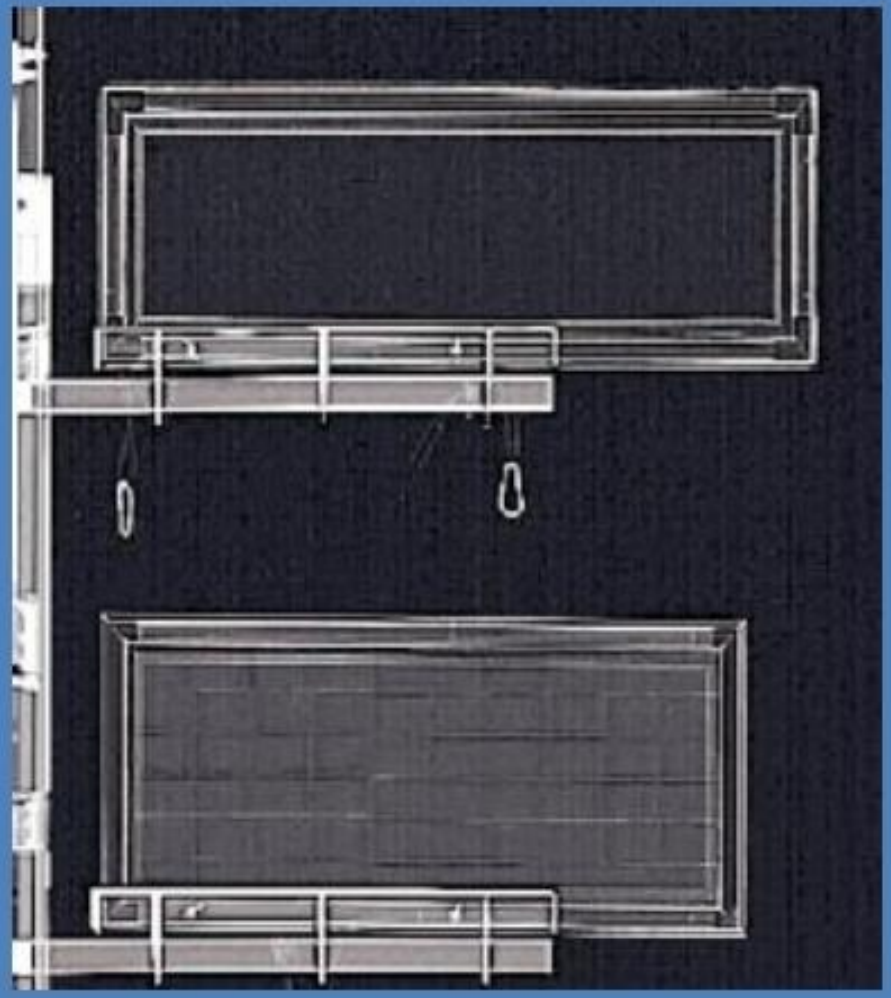

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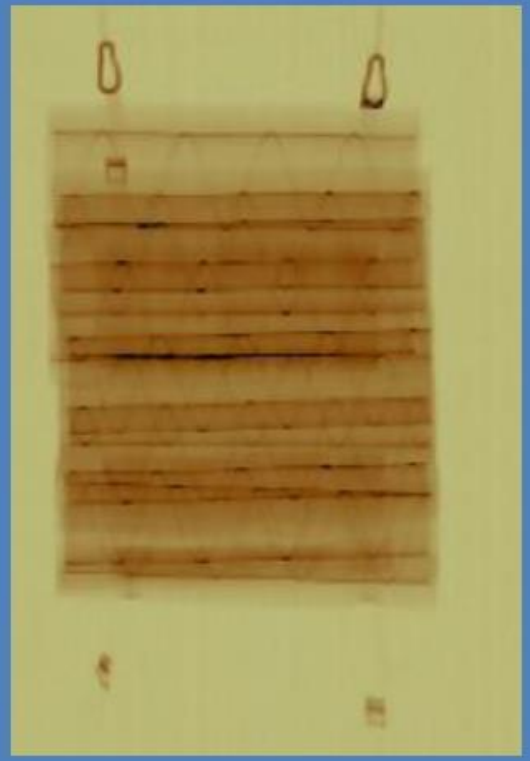
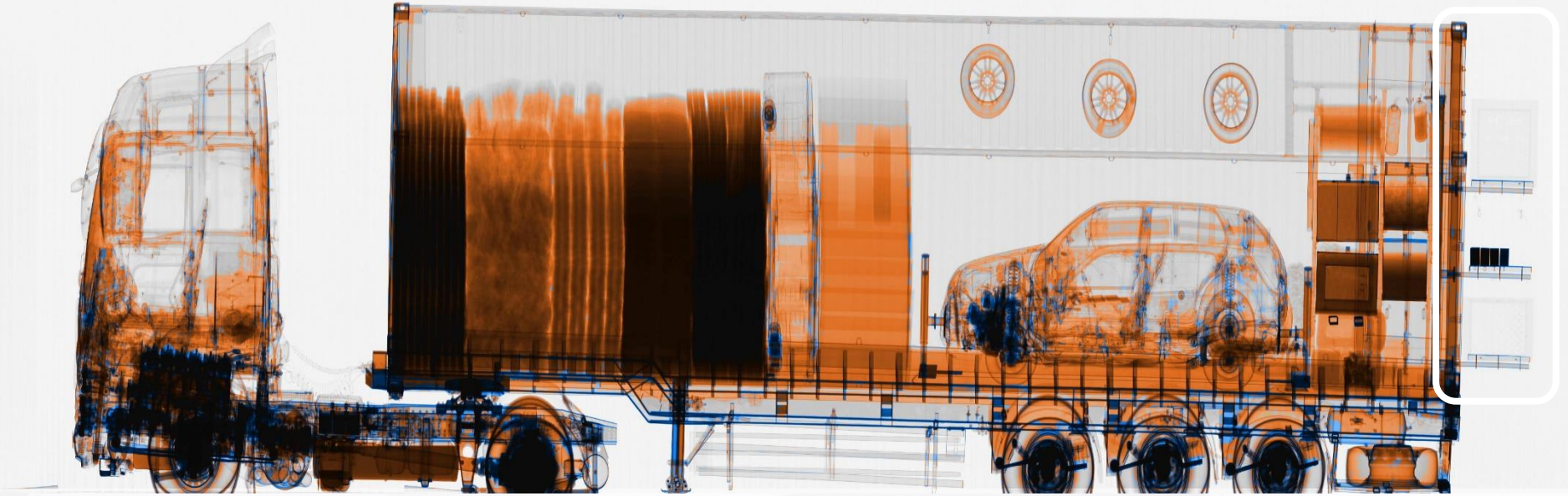


Objects section

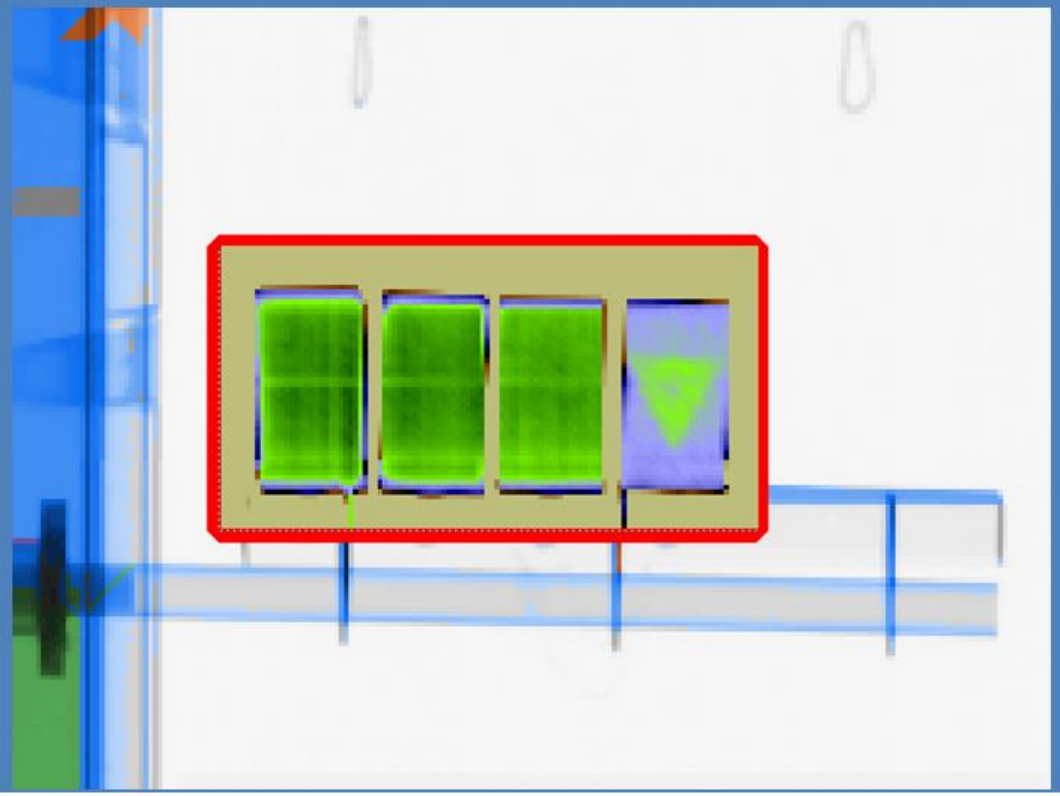
Objects section

SCANER PERFORMANCE TEST SECTION

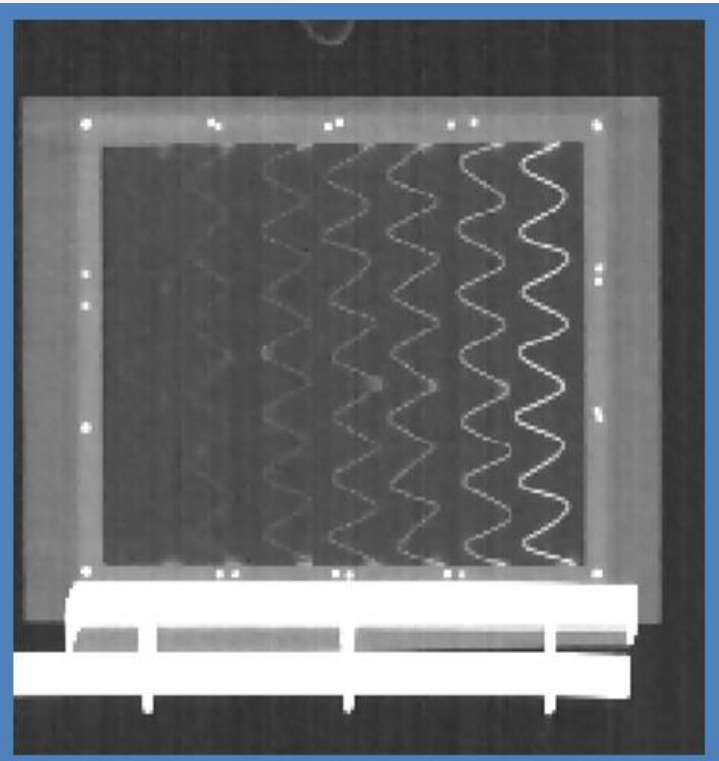
Scanner performance test section



Scanner performance test section



Scanner performance test section



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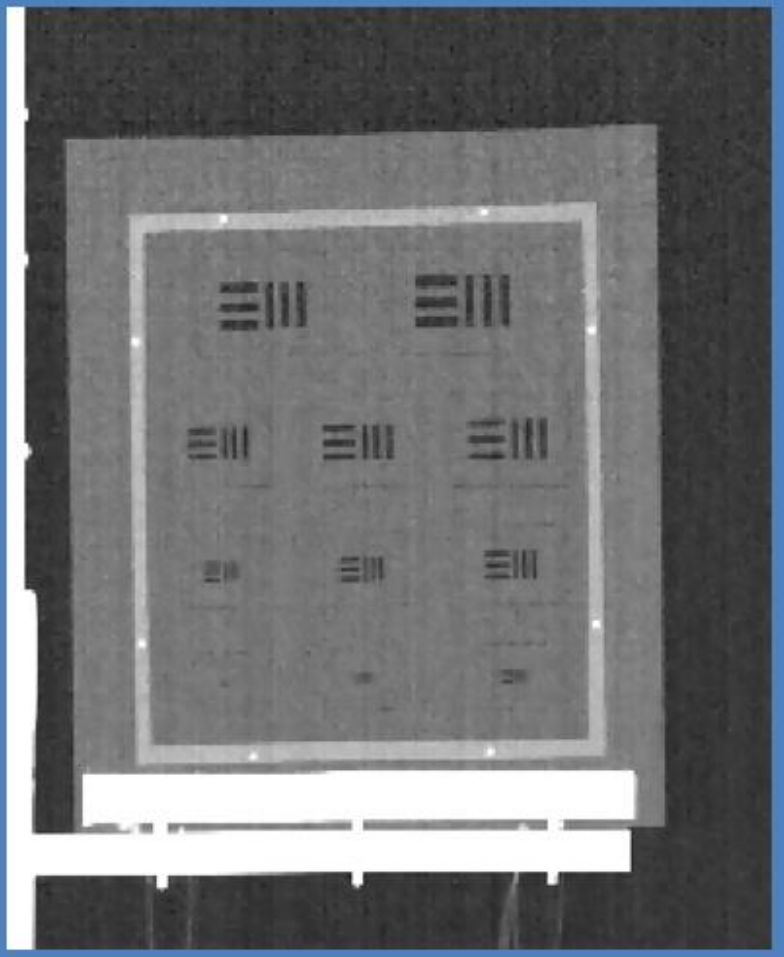

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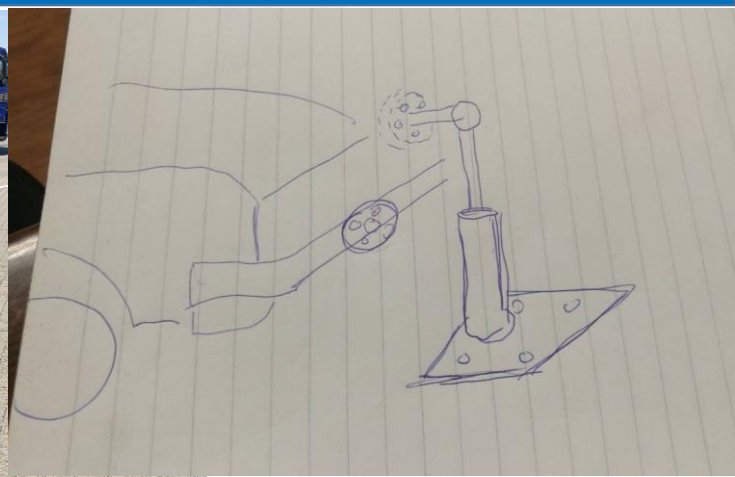
donatas.limantas@inta.lt