



WORLD CUSTOMS ORGANIZATION
ORGANISATION MONDIALE DES DOUANES



Douane
Belastingdienst

Technical Experts Group

Unified File Format Development Program

November 1, 2017

Prepared by WCO Technical Experts Group



Rapiscan



Leidos



AS&E



L3



Nuctech



Smiths Detection



UFF Development

- Start June 2015 Brussels
- Meeting Rotterdam October 2015
- 1st TEG meeting St. Petersburg September 2016
- 2nd TEG meeting Brussels May 2017
- Present state of the development
- Timeline
- Next steps



UFF Development

Start June 2015

- Meeting In Brussels with Industry and Customs Administrations in June 2015
- Handing over the experience from Rotterdam to WCO
- Goals to achieve:
 - To allow interoperability of the different NII equipment bought from different manufacturers;
 - To allow exchange of images within and between Customs Administrations;
 - To allow development of a data base of library of images – a more long term goal; and
 - To assist in training of the image analysts



UFF Development

Meeting Rotterdam October 2015

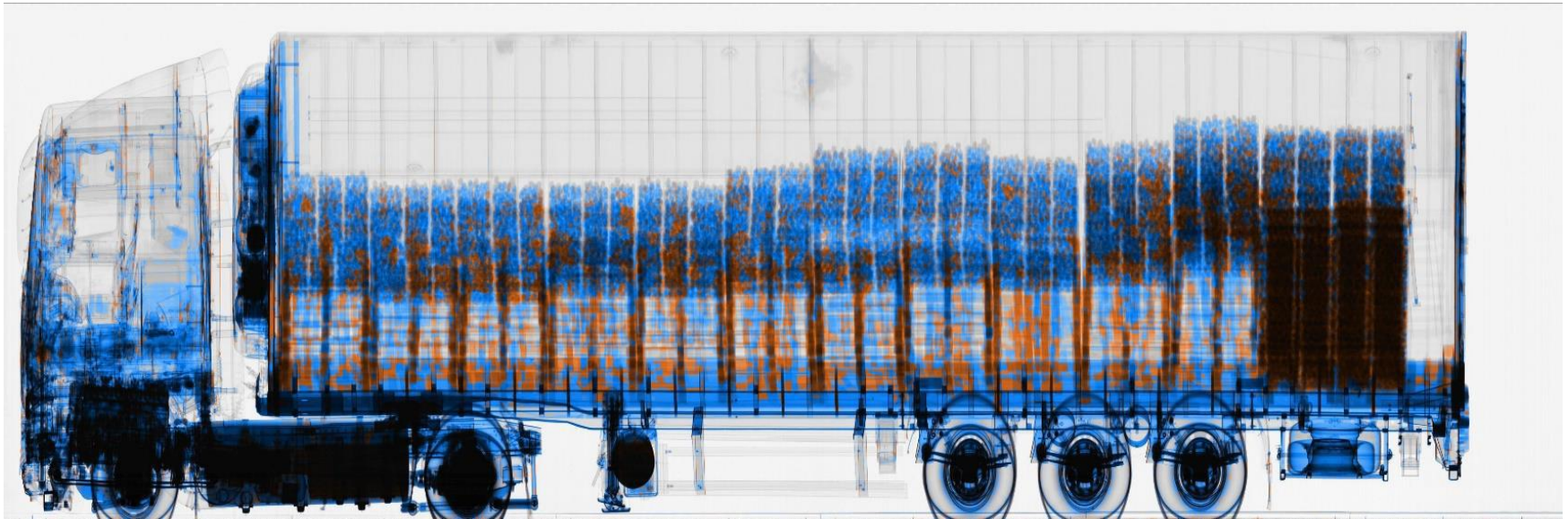
- Having agreement that in good cooperation between Industry and Customs Administrations a standard format for X-ray images should be developed
- A TEG-NII group will be established Co-chaired by one representative from Industry and one from Customs Administrations
- The development will be carried out in two phases;
 - Phase 1: Proof that based on a 16 bit TIFF-file format images can be converted;
 - Phase 2: with help from the lessons learned from phase 1, come to a standard setting for the format



UFF Development

1st TEG meeting St. Petersburg September 2016

- Successful completion of phase 1
- Image captured by Nuctech scanning system displayed by smiths viewer





UFF Development

1st TEG meeting St. Petersburg September 2016

- Phase 2 pilot will be equipped with functionality for export of UFF files
- Agreed is to add a phase 3.
 - A phase 3 will enable the generation of a UFF at the very root of the NII event;
 - At the stage of file standardisation it would be possible to open up the initiative to other suppliers of technology equipment.



UFF Development

2nd TEG meeting Brussels May 2017

- Industry proposed to change phase 2 from a physical pilot into a digital pilot.
Phase 2 deliverables:
- **Unified Format Version-2 Export**
 - Save images and result data post inspection
 - Allow transmission of UFF file to a “server”
- **Unified File Format Viewer**
 - Each vendor will deliver a viewer
 - Each viewer will be able to read all vendors images
 - Able to read images from the “server”

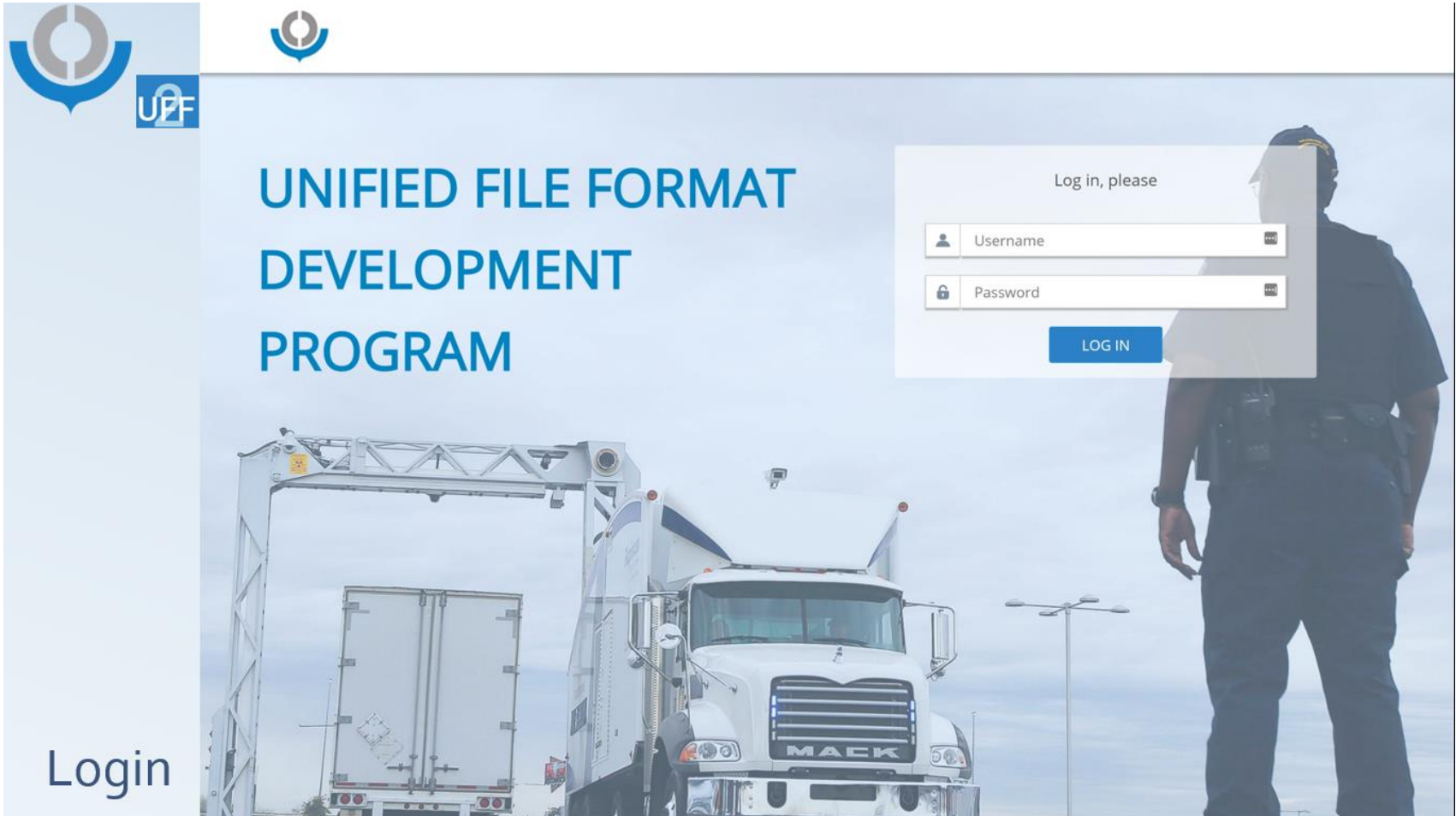


UFF Development:


Present state of the UFF development

- File version 2.0 architecture is now completed.
- Cloud demonstrator application is now completed.
- Process flow to upload and view UFF2.0 files has been tested and ready for activation.
- NII suppliers are underway with final development of their respective UFF file viewers, ahead of the demo execution launch.
- Base requirements for Customs Administrators is now complete and ready to send out to all members for demo consideration.

UFF Demonstrator







The image shows a login interface for the Unified File Format Development Program. The background is a photograph of a white Mack truck at a customs checkpoint with a scanner over it, and a customs officer in uniform standing to the right. The interface includes a 'Login' button in the bottom left corner. The main title 'UNIFIED FILE FORMAT DEVELOPMENT PROGRAM' is displayed in large blue letters. A login form on the right contains the text 'Log in, please', followed by 'Username' and 'Password' input fields, each with a user icon, and a blue 'LOG IN' button.

 **UNIFIED FILE FORMAT
DEVELOPMENT
PROGRAM**

Login

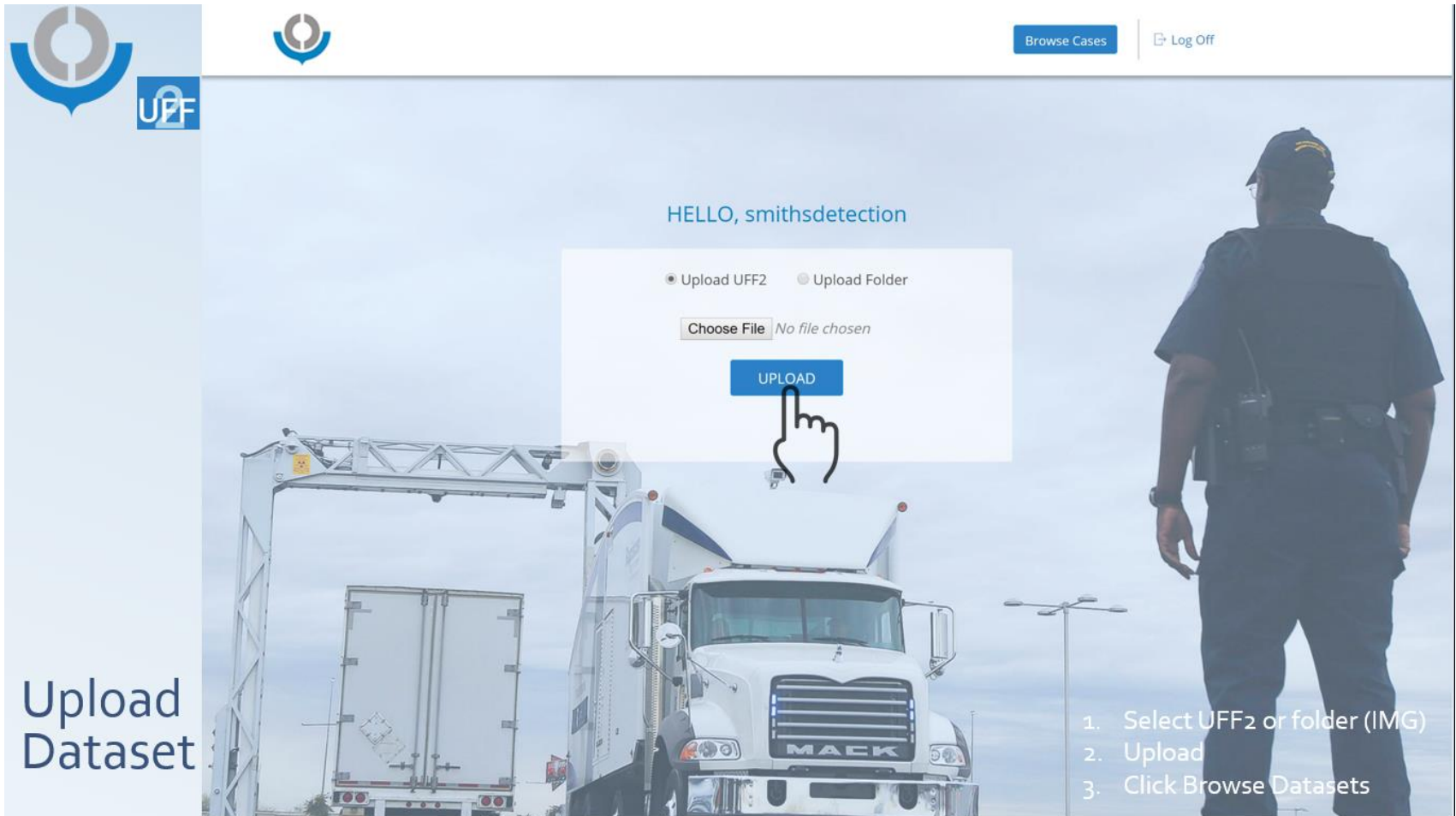
Log in, please

 Username 

 Password 

LOG IN

UFF Demonstrator



HELLO, smithsdetection

☒ Upload UFF2 ☐ Upload Folder

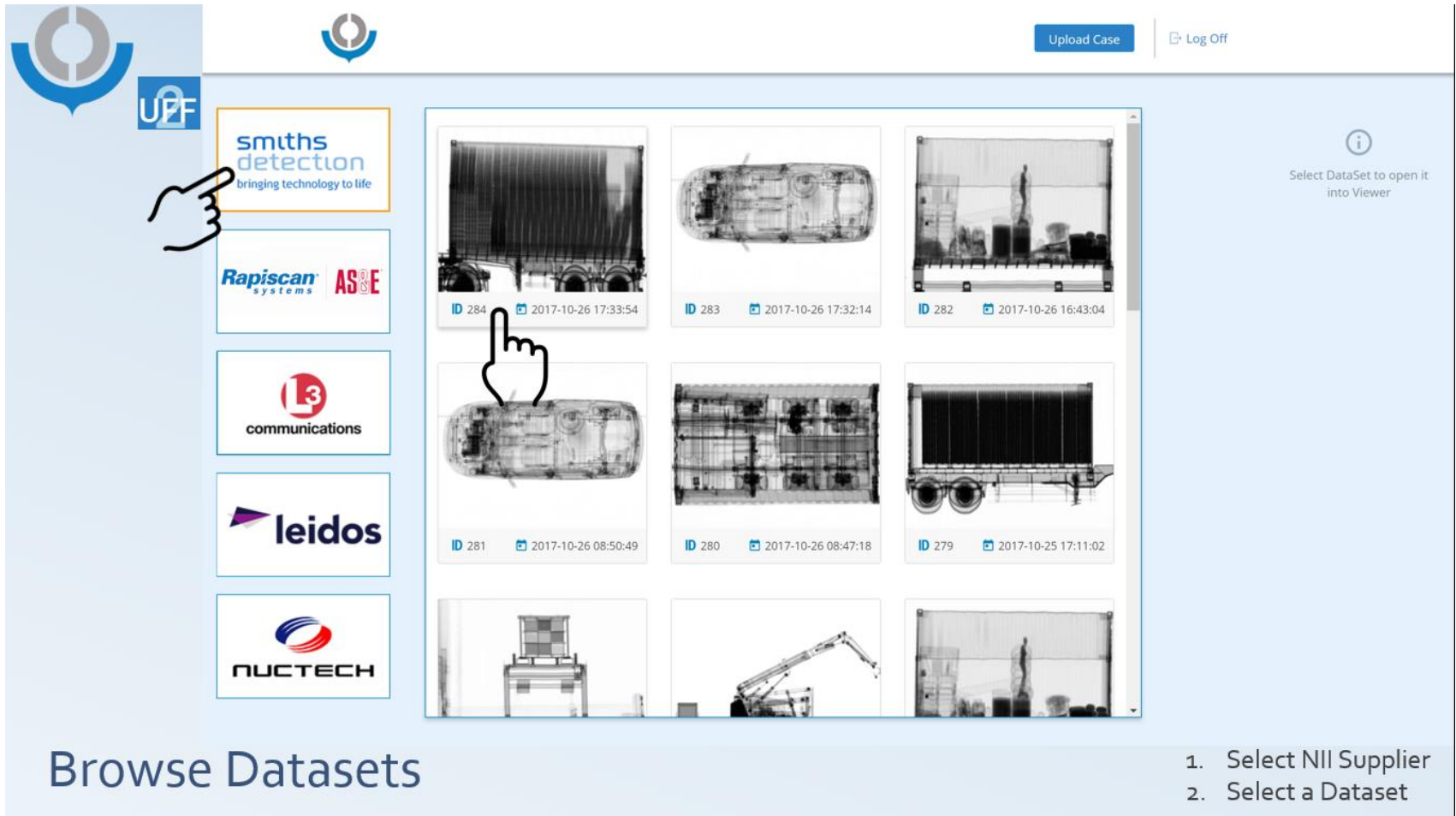
Choose File No file chosen

UPLOAD

Upload Dataset

1. Select UFF2 or folder (IMG)
2. Upload
3. Click Browse Datasets

UFF Demonstrator



The screenshot shows the UFF Demonstrator interface. On the left, a sidebar contains the UFF logo and logos for five suppliers: smiths detection, Rapiscan systems, AS&E, L3 communications, leidos, and NUCTECH. A hand icon points to the smiths detection logo. The main area displays a grid of dataset thumbnails, each with an ID and a timestamp. A hand icon points to the first thumbnail (ID 284). On the right, there is a 'Log Off' button and an information icon with the text 'Select DataSet to open it into Viewer'.

UFF

smiths detection
bringing technology to life

Rapiscan systems AS&E

L3 communications

leidos

NUCTECH

Upload Case Log Off

Select DataSet to open it into Viewer

ID 284 2017-10-26 17:33:54

ID 283 2017-10-26 17:32:14

ID 282 2017-10-26 16:43:04


ID 281 2017-10-26 08:50:49

ID 280 2017-10-26 08:47:18


ID 279 2017-10-25 17:11:02


Browse Datasets


1. Select NII Supplier
2. Select a Dataset





[Upload Case](#) | [Log Off](#)

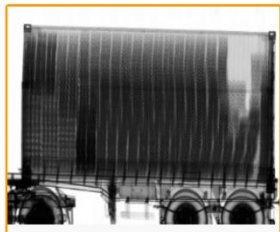
 smiths detection
bringing technology to life

 Rapiscan systems AS&E

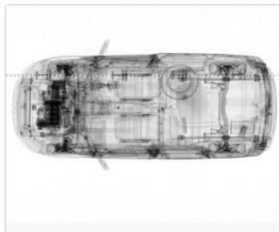
 L3
communications

 leidos

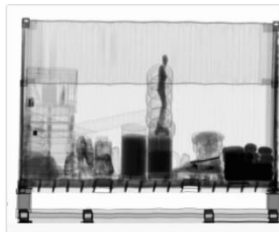
 NUCTECH



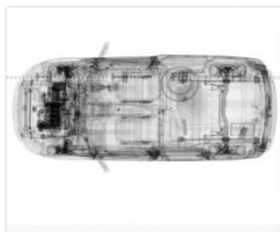
ID 284 2017-10-26 17:33:54



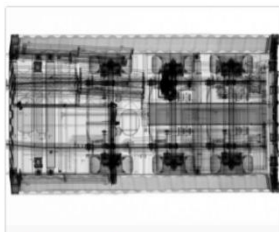
ID 283 2017-10-26 17:32:14



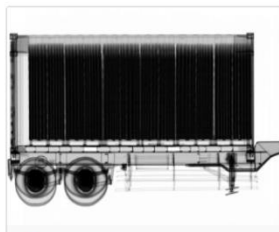
ID 282 2017-10-26 16:43:04




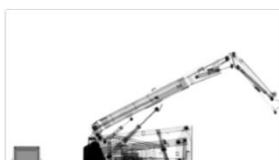

ID 281 2017-10-26 08:50:49





ID 280 2017-10-26 08:47:18





ID 279 2017-10-25 17:11:02





 UFF2 Web Viewer
smiths detection

 CERTSCAN™
UFFviewer

 UFFviewer
NUCTECH

 UFFviewer
ClearView

  UFF
Download

Download UFF2 Dataset

1. Click "Download" to get UFF2



Upload Case

Log Off

UFF

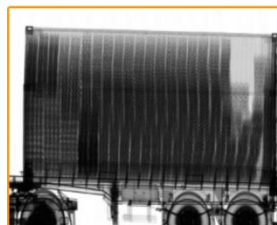
smiths
detection
bringing technology to life

Rapiscan
systems AS&E

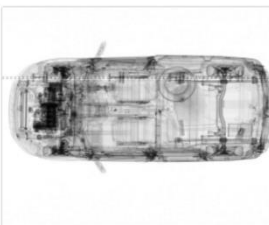
L3
communications

leidos

NUCTECH



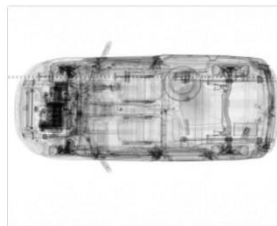
ID 284 2017-10-26 17:33:54



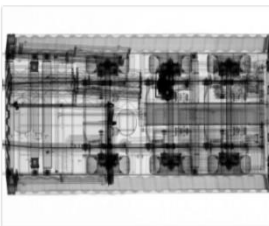
ID 283 2017-10-26 17:32:14



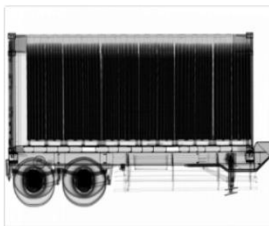
ID 282 2017-10-26 16:43:04



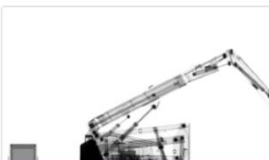
ID 281 2017-10-26 08:50:49



ID 280 2017-10-26 08:47:18



ID 279 2017-10-25 17:11:02



UFF

UFF2 Web Viewer

smiths detection

CERTSCAN™

UFFviewer

UFFviewer
NUCTECH

UFFviewer
ClearView

UFF
Download

Open Dataset

1. Choose a Viewer

1. Stored marks (blue)
2. iCmore marks (yellow)
3. Meta-information from DB

UFF Demonstrator



The screenshot displays the UFF Demonstrator interface. On the left, a container scan image is shown with a yellow box highlighting a specific area. A blue box labeled "Needs live inspection" is overlaid on the scan. In the center, a panel titled "ATTACHED (2 Items)" shows two document thumbnails, each with a hand icon and the text "Open in new window". On the right, a panel titled "CASE INFORMATION" contains a "Documents" button and a "TRACK DETAILS" section with fields for Container ID (123654852-TRF), Origin (Great Britain), Destination (Scotland), Owner (MIS), and DRIVER (First Name: Bond, Last Name: James, License Number: ART58796KR). A vertical toolbar with various icons is located on the far right.

List and Open Manifests

1. View scanned documents



UFF Demonstrator



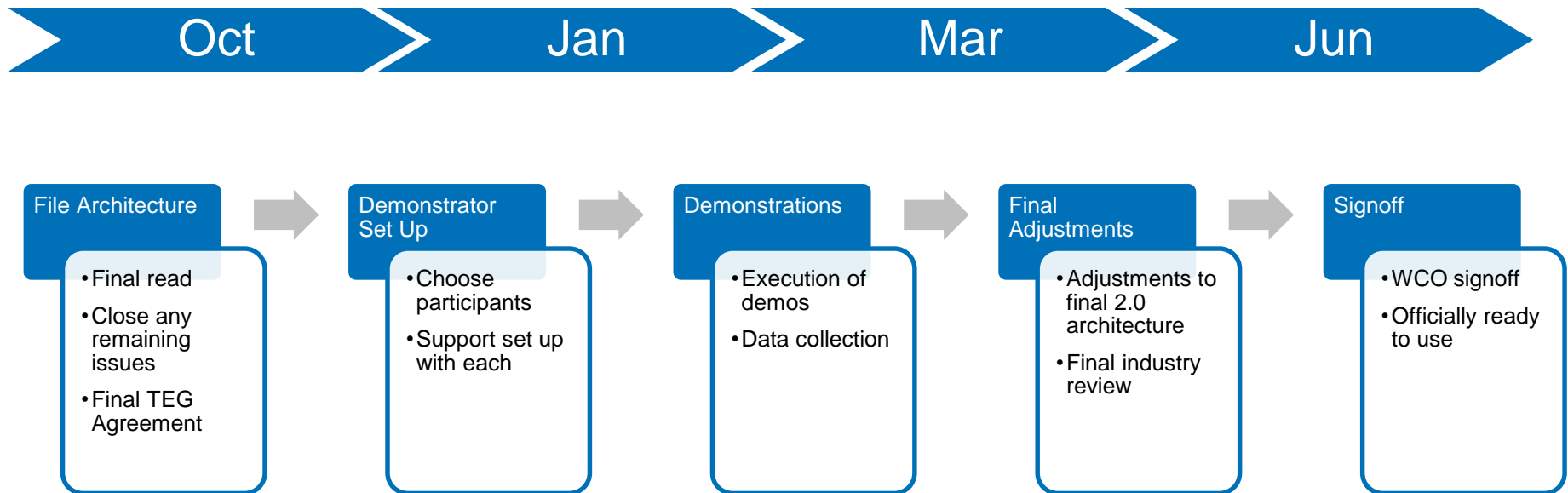
DEPARTMENT OF HOMELAND SECURITY U.S. Customs and Border Protection				AIR CARGO MANIFEST		OMB Control Number: 1521-0001 Expiration Date: 10/25/2015	
1. OPERATOR				2. ISSUES OF NATIONALITY AND REGISTRATION		3. PAGE NO. OF	
4. PORT OF LADING				5. PORT OF UNLOADING		6. DATE	
7. AIRCRAFT TYPE				8. CONSOLIDATOR		9. DE-CONSOLIDATOR	
10. AIRCRAFT TYPE (SHIP, PLANE, BOAT) ↓ 11. AIRCRAFT TYPE				12. NO. OF PIECES	13. NO. OF KGS (LBS)	14. NO. OF ITEMS	15. SHIPPER NAME AND ADDRESS
16. CONSIGNEE NAME AND ADDRESS				17. NATURE OF GOODS			

Manifests.PDF



Timeline and Activities:

- Closing Final Stages of Work Remaining



Next Steps (To Next Meeting):

- Final clean-up of 2.0 Architecture document by TEG UFF committee (Nov 15th).
- WCO will send out an official letter regarding demo participation requirements & instructions (Nov 15th).
- NII Suppliers to finish their respective UFF viewer tools (Dec 1st).
- Final preparations of Cloud-based demonstrator ahead of demo events (Jan 2nd).
- Execute demos & data gathering (Jan 15th to Mar 10th).
- Present results at the March 2018, AO Conference.