700829 — 3D-Forensics/FTI — H2020-FTIPilot-2015-1

3D-Forensics/FTI – Mobile high-resolution 3D-Scanner and 3D data analysis for forensic evidence fast track to innovation

D3.3 Dedicated dataset for user training

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SUMMARY: The deliverable D3.3 Dedicated dataset for user training is an “Other” type of deliverable. It is the *dedicated dataset* not a *report*. This report describes and provides a short documentation of the deliverable D3.3, which includes a number of selected training datasets. The training datasets are provided with the new version of the 3D-Forensics analysis software. It is used for basic training and as help to support users in the first steps.

Document Evolution			
Revision	**Date**	**File Reference**	**Reason of change**
Rev. 0_1	18/01/2019	3DFFTI_RPT_D33	Initial version
Rev.0_2	21/01/2019	3DFFTI_RPT_D33	Reviewed version
Rev 0_3	21/01/2019	3DFFTI_RPT_D33	Reviewed version
Rev 1_0	15/03/2019	3DFFTI_RPT_D33	Creation of V1_0 from V0_3 with minor updating.

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1 Introduction

The deliverable D3.3 Dedicated dataset for user training is an “Other” type of deliverable. It is the *dedicated dataset* not a *report*. This report describes and provides a short documentation of the deliverable D3.3 which is training material provided to the External Expert Tester Group (EETG) for familiarization with the scan results from the 3D-Forensics scanner and the usage of the 3D-Forensics analysis software.

Chapter 2 gives a short survey of the dataset content. Chapter 3 introduces the training presentation provided to EETG.

The dataset was available in November 2018 and was used with the first member of the EETG on 5 December 2018.

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2 Demo datasets

For familiarization with the data collected by the 3D-Forensics scanner and with the analysis software, 3 scan projects are provided as datasets.

The first dataset is called "crimescene 1" and includes:

- 1 scan of calibration board
- 2 scans of MikroTrack™ impression of “shoe 1” (used for alignment and registration tutorial)
- 1 scan of sand impression of “shoe 1”

The second dataset is called "crimescene 2" and includes:

- 1 scan of calibration board
- 1 scan of another MikrotTrack™ impression of “shoe 1”
- 2 scans of soil impression of “shoe 1” (used for alignment and registration tutorial)
- 1 scan of sand impression of “shoe 2”

The third dataset is called "suspect" and includes:

- 1 scan of calibration board
- 1 scan of sole from “shoe 1”
- 1 scan of sole from “shoe 2”

An overview of the datasets is given in the file “3DFFTI_RPT_33_Presentation” as reported in chapter 3 and in shown in annex 1.

The raw data and the processed 3D-Forensics analysis software projects are available from the following link:

https://www.3d-forensics.de/index.php/features/demo-data/

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3 Training presentation

During the training on the usage of the 3D-Forensics analysis software the "3DFFTI_RPT_33_Presentation" presentation, annexed to this report, is provided to the users.

The "3DFFTI_RPT_33_Presentation" first describes the provided raw datasets, then it introduces the user to the software installation and licensing steps.

The following workflow steps are then described in the presentation:

- How to create a project and import data
- Software GUI structure, data navigation, color and light settings
- Phase 1 - processing
    - Point cloud pre-processing
    - Point cloud shading
    - Cloud to cloud registration
    - Photo draping
    - Meshing with external photo as texture
- How to organize multiple projects
- Phase 2 - analysis and comparison
    - Compare an impression with a 2D image
    - Compare an impression with a suspect shoe (3D)
    - Report the analysis

The "3DFFTI_RPT_33_Presentation" is supported by the tutorial videos and the training material described in D3.2 New technical documentation and tutorial.

Annex 1 Copy of training presentation

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3D-Forensics / FTI

Mobile high-resolution 3D-Scanner and 3D data analysis for Footwear and Tyre Track Evidence

D3.3 Dedicated dataset for user training

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 700829

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Dedicated dataset for user training

- The dedicated training dataset includes
  - 3 scanner datasets as raw data:
    - the 3 datasets can be downloaded from the following link (*Bottom of the page in the password protected area*)
    - the compressed folder includes 3 zipped files (password protected)
  - 3 processed projects in the 3D-Forensics analysis software:
    - The 3 projects can be downloaded from the same link

      (*Bottom of the page in the password protected area*)

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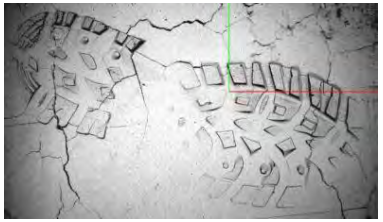
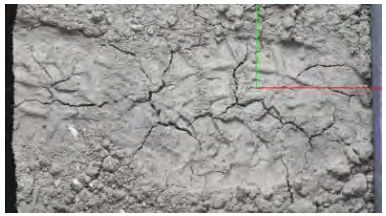
Training on 3D analysis software

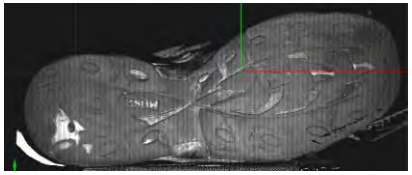
- Training datasets

Crime scene 1





Crime scene 2



Suspect

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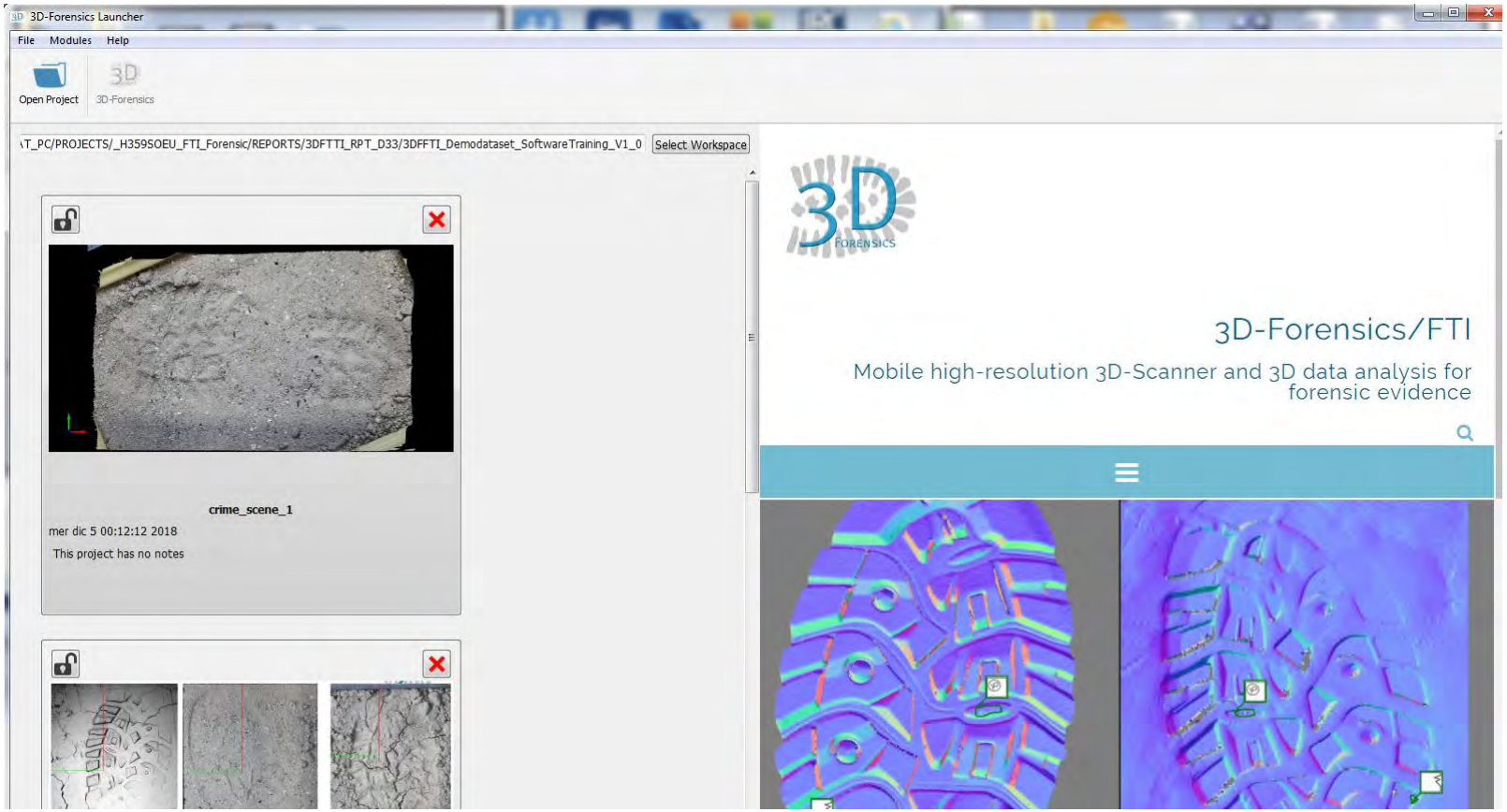
Training on 3D analysis software

- Training dataset:
- Start the 3D-Forensics analysis software and point the workspace to the projects folder, the user can select and open each training project



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Basic training on 3D analysis software

- Software delivery, installation, license
- Training dataset
- How to create a project and import data
- Software GUI structure, data navigation, color and light settings
- Phase 1 processing
  - Point cloud pre-processing
  - Point cloud shading
  - Cloud to cloud registration
  - Photo draping
  - Meshing with external photo as texture
- How to organize multiple projects
- Phase 2 - analysis and comparison
  - Compare an impression with a 2D image
  - Compare an impression with a suspect shoe (3D)
  - Report the analysis

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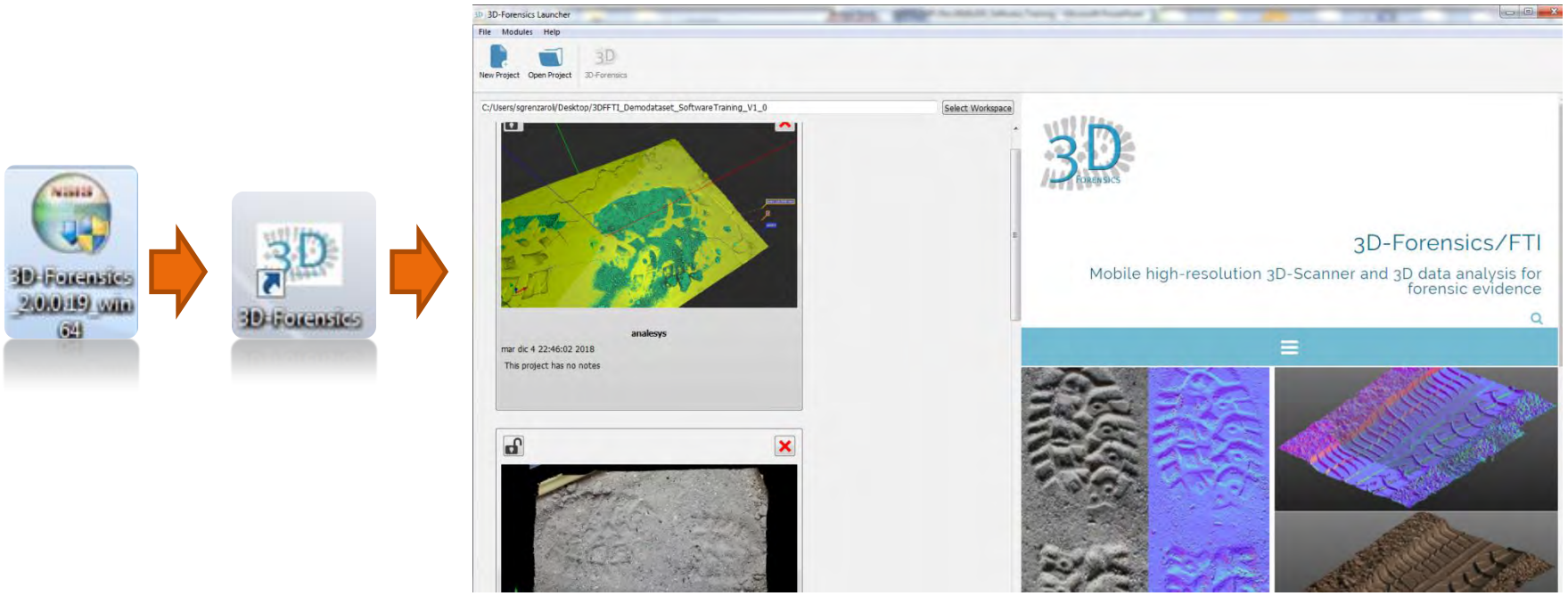
Training on 3D analysis software

- Software delivery, installation, license



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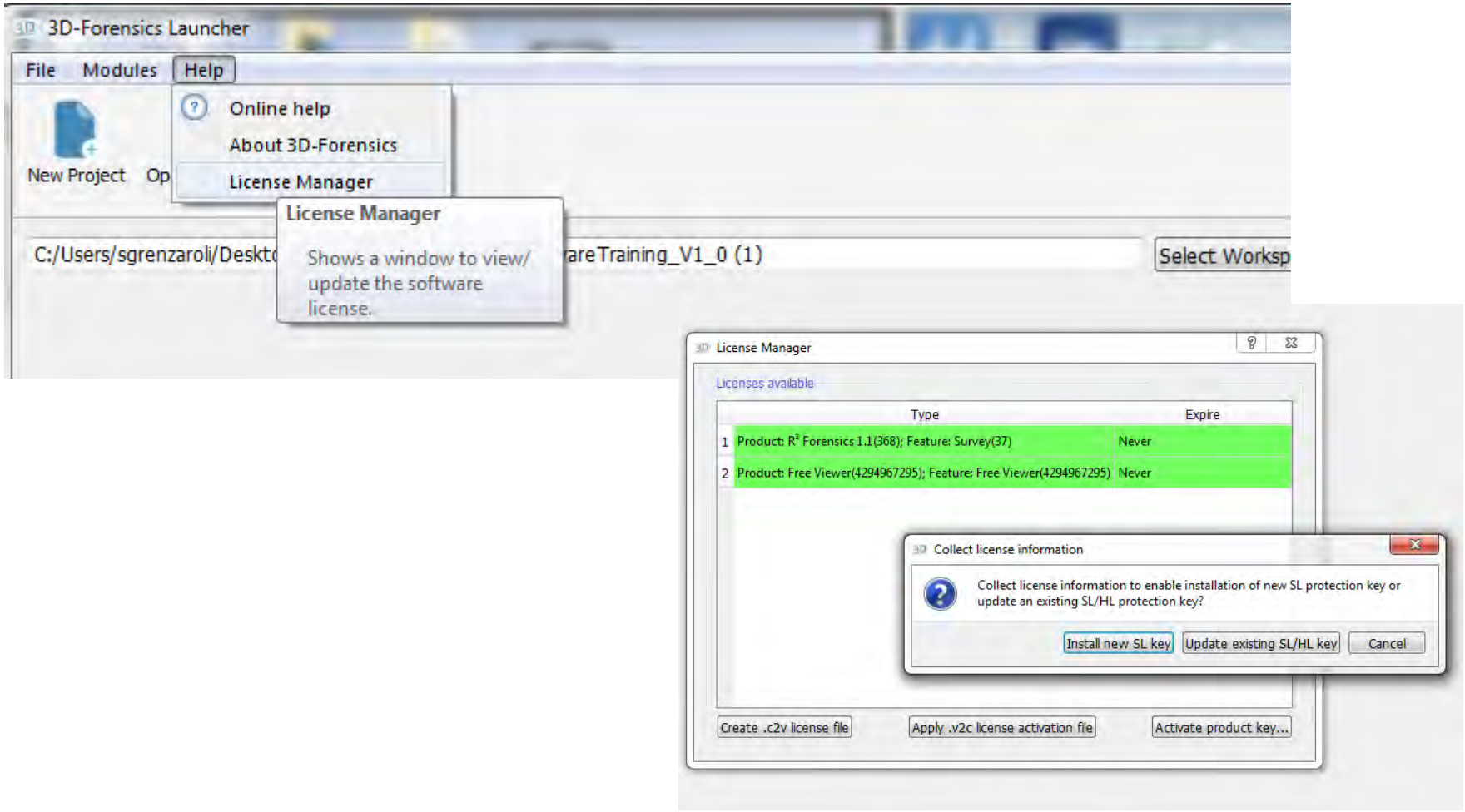
Training on 3D analysis software

- Software delivery, installation, license



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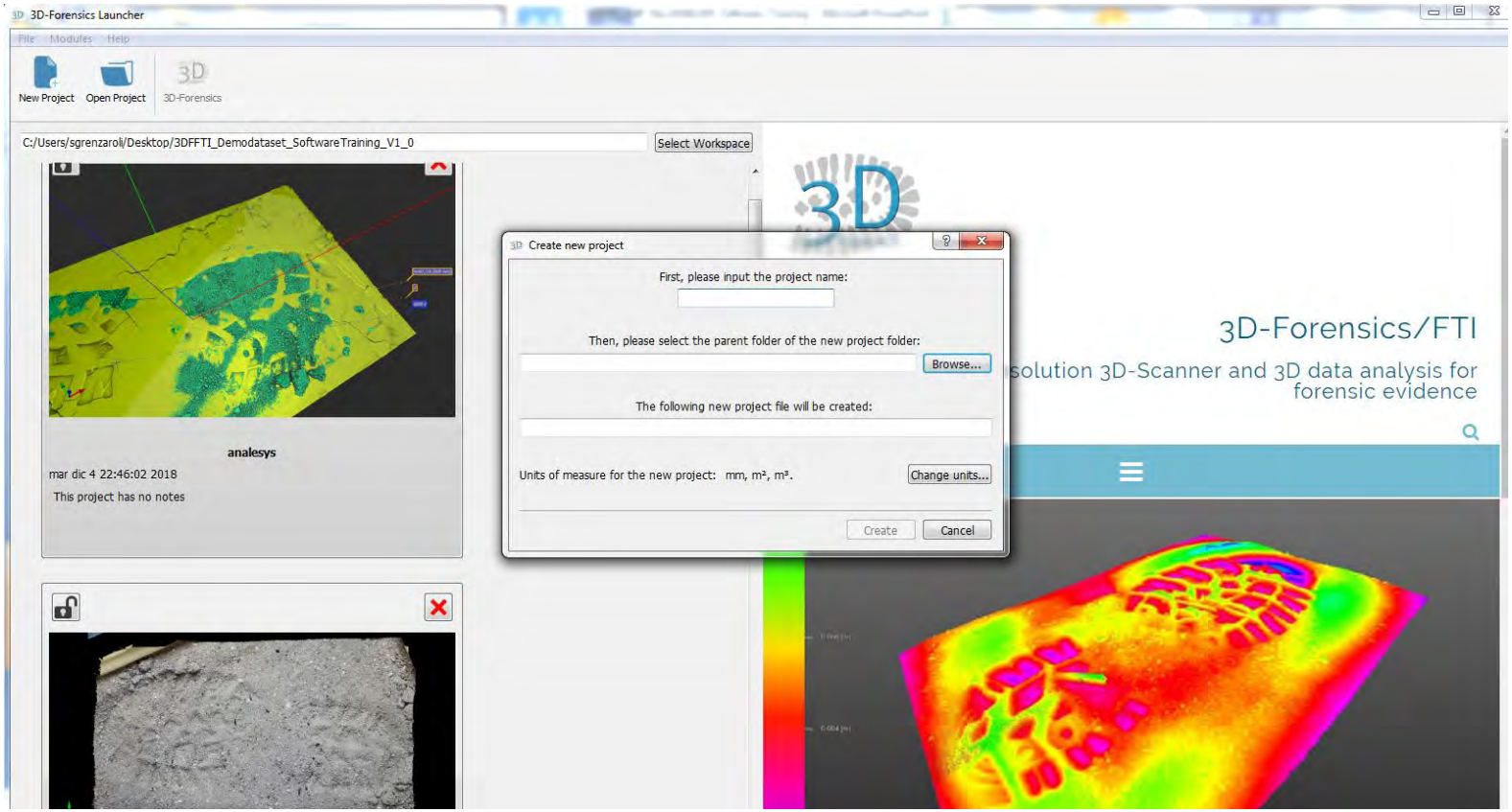
Training on 3D analysis software

- How to create a project and import data



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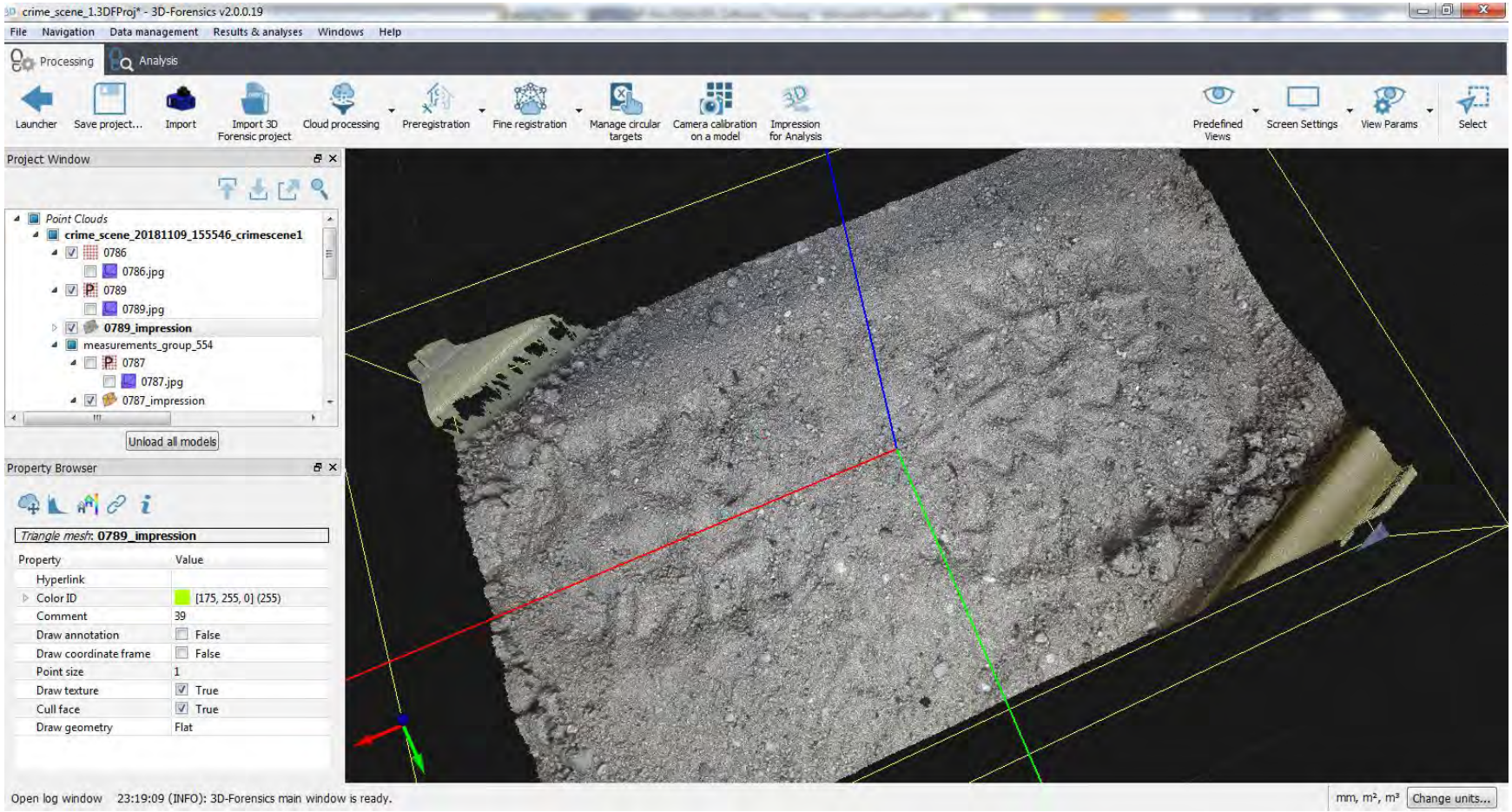
Training on 3D analysis software

- Software GUI structure, data navigation, color and light settings



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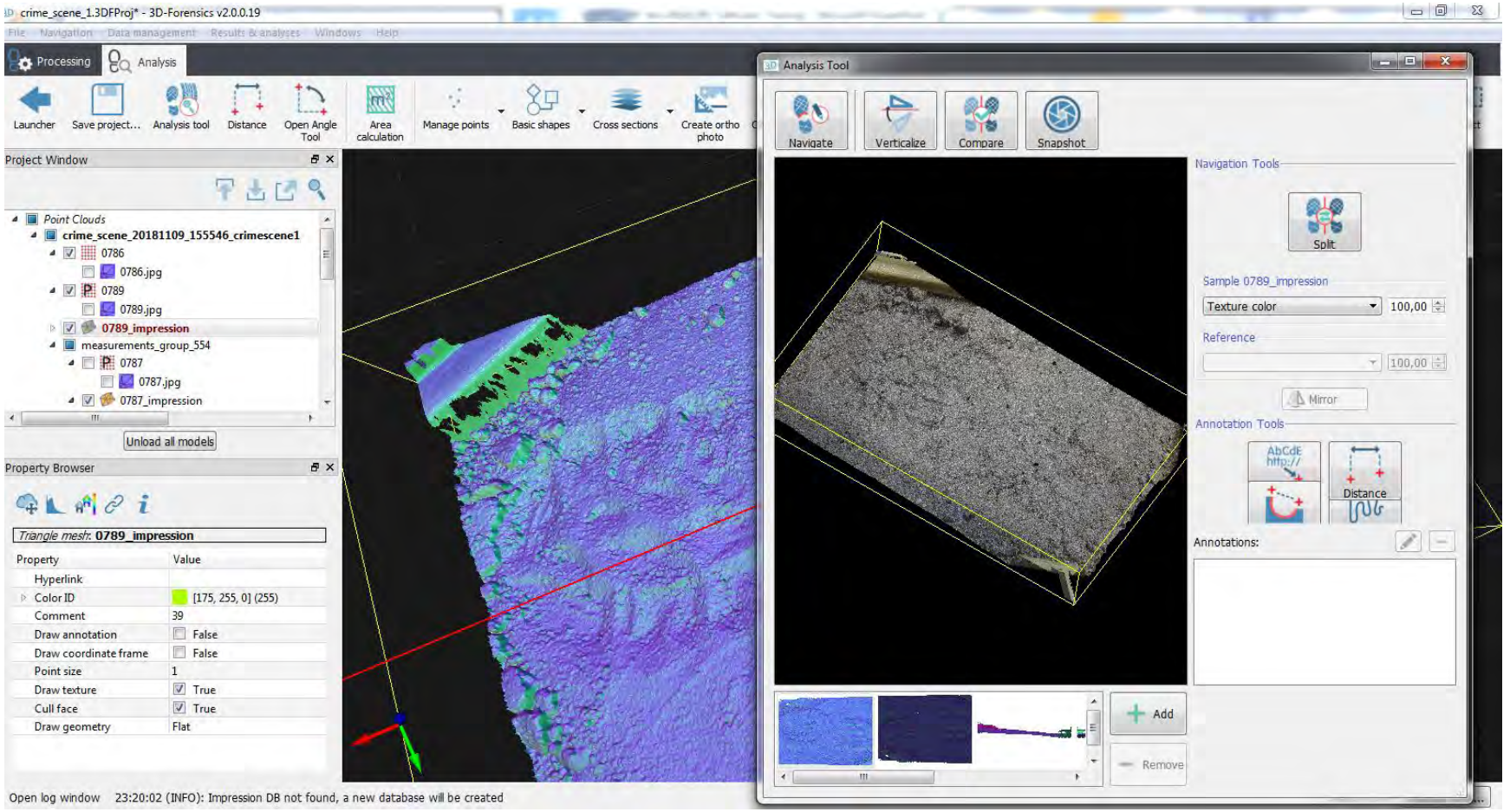
Training on 3D analysis software

- Software GUI structure, data navigation, color and light settings



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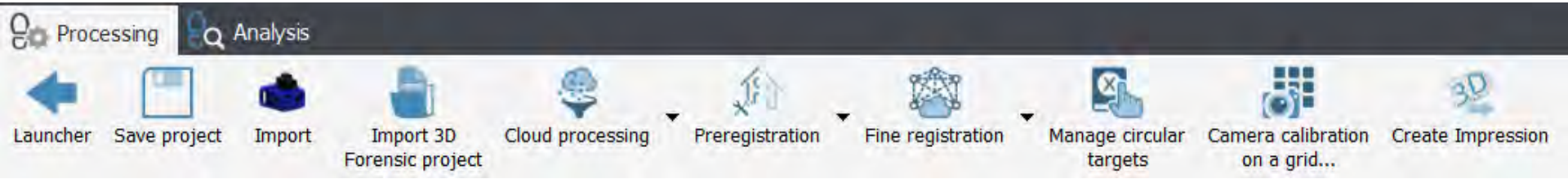
Training on 3D analysis software

- Phase 1- Point cloud pre-processing, point cloud shading, cloud to cloud registration, photo draping, meshing with external photo as texture



- Scan registration
- Photo draping
- Meshing

Crime scene 1

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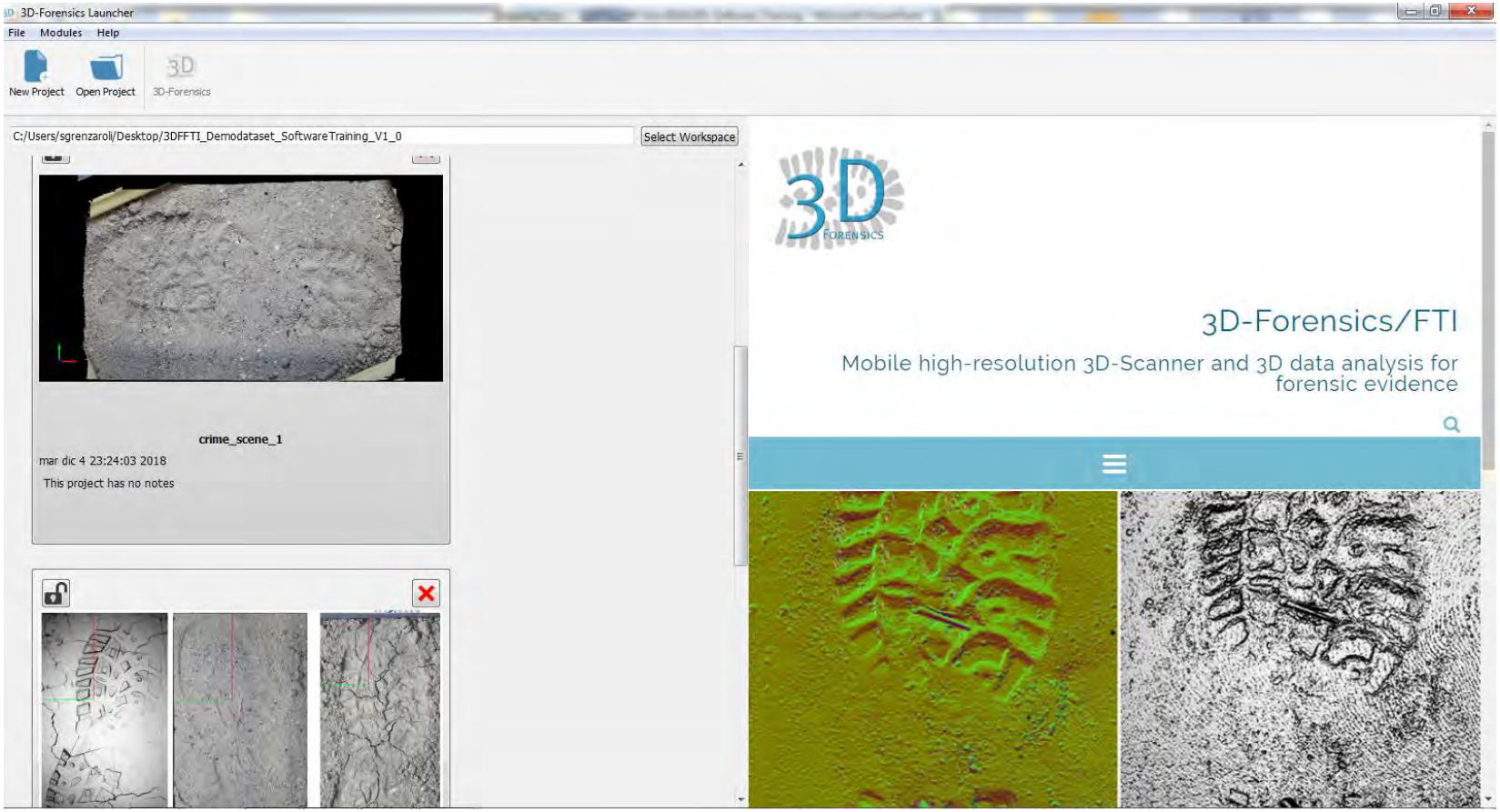
Training on 3D analysis software

- How to organize multiple projects



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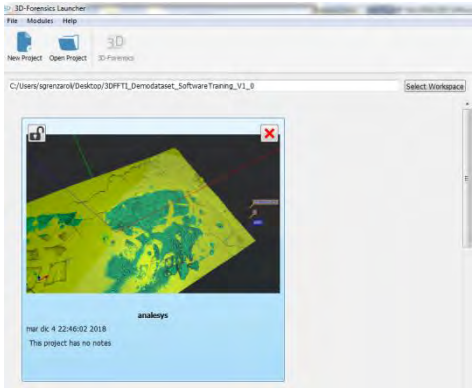
Training on 3D analysis software

- Phase 2 - analysis and comparison
  - Compare an impression with a 2D image
  - Compare an impression with a suspect shoe (3D)
  - Report the analysis

Crime scene 2

Suspect



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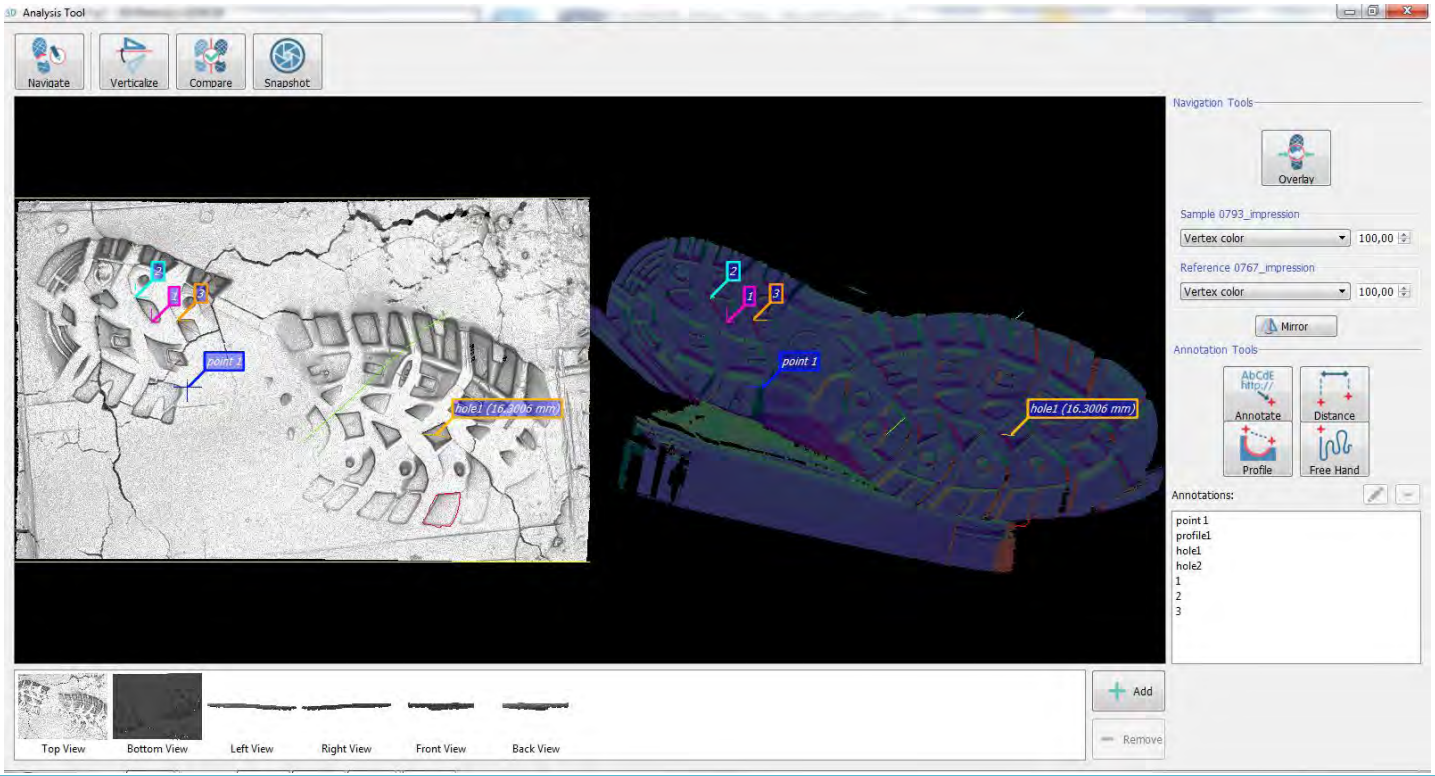
Training on 3D analysis software

- Phase 2 - analysis and comparison
  - Compare an impression with a 2D image
  - Compare an impression with a suspect shoe (3D)
  - Report the analysis



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