

HT1 - Load, visualize, crop and export a T-Lidar point cloud

fr_FR.png [...version française de cette page](#)


This tutorial uses the following script in the **Computree HowTo** subfolder: *HT1_Load_Crop_Export_Cloud.xsct2*

Objective


This tutorial shows how to:

1. Load a .xyb point cloud : *sample_cloud.xyb* (located in the HowTo folder)
2. Display the point cloud in the step manager, the model manager and in a 3D view
3. Extract a circular or rectangular plot
4. Export data as file

Load a point cloud

This platform operates in steps that are displayed in the StepManager window. To open a file, you must add a new step. Use the  button and select the .xyb file.

step_manager1_EN.jpg

To actually begin charging the file, press the  button.

When a step execution is completed, the progressing bar is full and the result can be displayed by activating the **Result** checkbox in the **Step manager** window :


step_manager2_EN.jpg

You may notice that subresults are created as well in the **Model manager** :

- a **Scene** which contains the actual point cloud
- ??? **Intensity**
- ??? **Scanner**

Display the point cloud

To view a particular element, activate the corresponding checkbox in the **Model manager** window. To display scan points in the 3D view, check the **Scene** box.

N.B. : Use the  button to adjust camera view to visible elements.

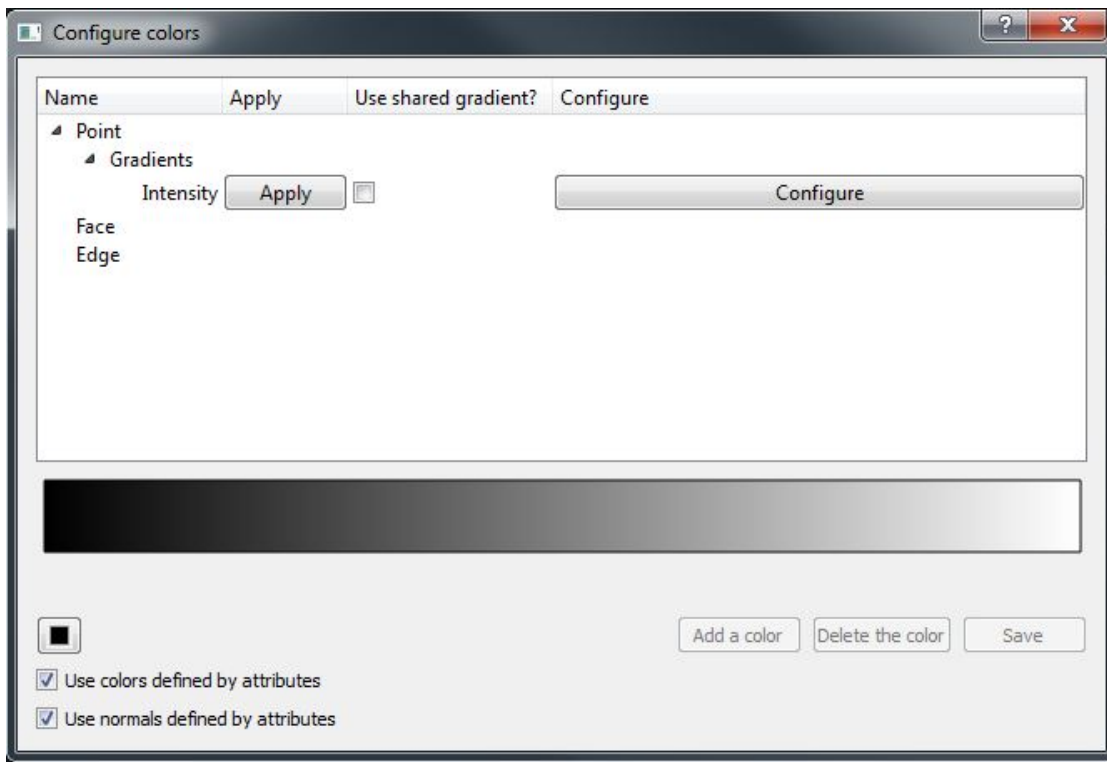


The points **intensity** can also be displayed. In order to do that, use the



button that gives access to the **Configure colors**

window :



Click on the **Apply** button to display intensity :



You may also manually change the color ramp. See [Views functionality documentation](#) for further information.

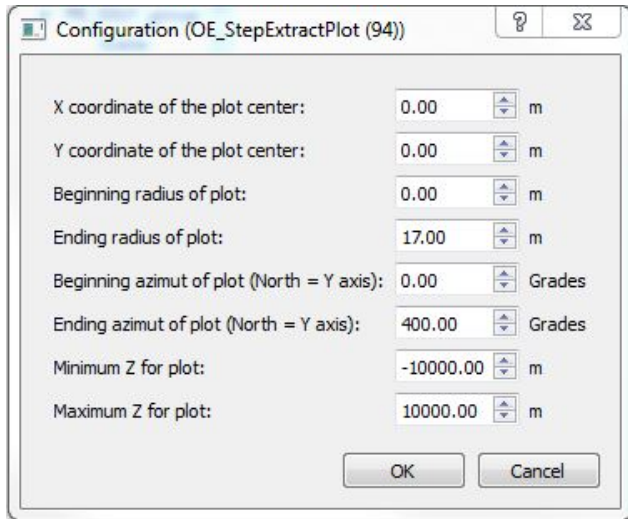
Plot extraction

There are different possibilities in order to extract a portion of the point cloud.

The *HT1_Load_Crop_Export_Cloud.xsct2* script uses two of these methods :

- The *OE_StepExtractPlot* step, found in the **ONF - ENSAM** plugin is used to extract a circular plot of a given radius (*onfensamv2 / Extraction of plot*)
- The *TK_StepExtractBox* step, found in the **ToolKit** plugin is used to extract a portion of the point cloud using a bounding box (*toolkit / Extract Sub-Cloud / Extraction of a point cloud // bounding box*)

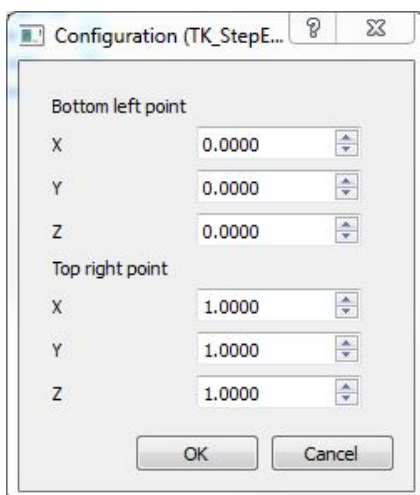
The *OE_StepExtractPlot* tool takes as parameters :



- The **X and Y coordinates of the plot center**
- A **Maximum plot radius**
- The **Z minimum and maximum values**
- If a **Plot start radius** is given, the plot will be annular (ring-shaped)
- If you wish to extract a sector, a **Start and End azimuth** can also be defined.

All azimuth values are specified in **gradian**: North = 0 or 400, East = 100, South = 200, West = 300


The *TK_StepExtractBox* tool takes as parameters :

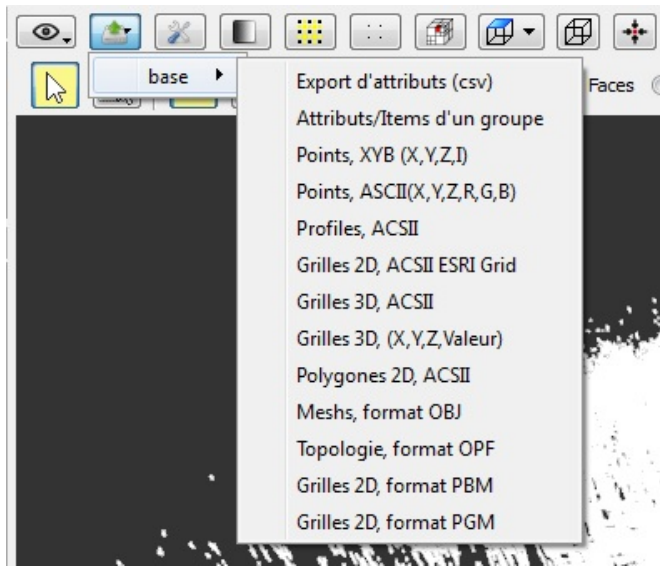


- The bottom left coordinates (X,Y,Z) of the bounding box
- The top right coordinates (X,Y,Z) of the bounding box

It is also possible to extract a point cloud from a cylinder or a sphere. (*toolkit / Extract Sub-Cloud /*)

Save point cloud to file

The  button enables you to export a point cloud to a specified format.



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Files

ajust_cam.jpg	1.27 KB	12/01/2014	Delugre Audrey
color.JPG	7.95 KB	12/01/2014	Delugre Audrey
export.JPG	7.98 KB	12/01/2014	Delugre Audrey
configure_color_EN.JPG	40.3 KB	12/01/2014	Delugre Audrey
extract_box_EN.JPG	21.3 KB	12/01/2014	Delugre Audrey
export_format.jpg	45.8 KB	12/01/2014	Delugre Audrey
folder_add.jpg	1.27 KB	12/01/2014	Delugre Audrey
extract_plot_EN.JPG	33.9 KB	12/01/2014	Delugre Audrey
plot.jpg	217 KB	12/01/2014	Delugre Audrey
plot_2.jpg	211 KB	12/01/2014	Delugre Audrey
start.jpg	1.38 KB	12/02/2014	Delugre Audrey
plot_intensity.jpg	176 KB	12/02/2014	Delugre Audrey