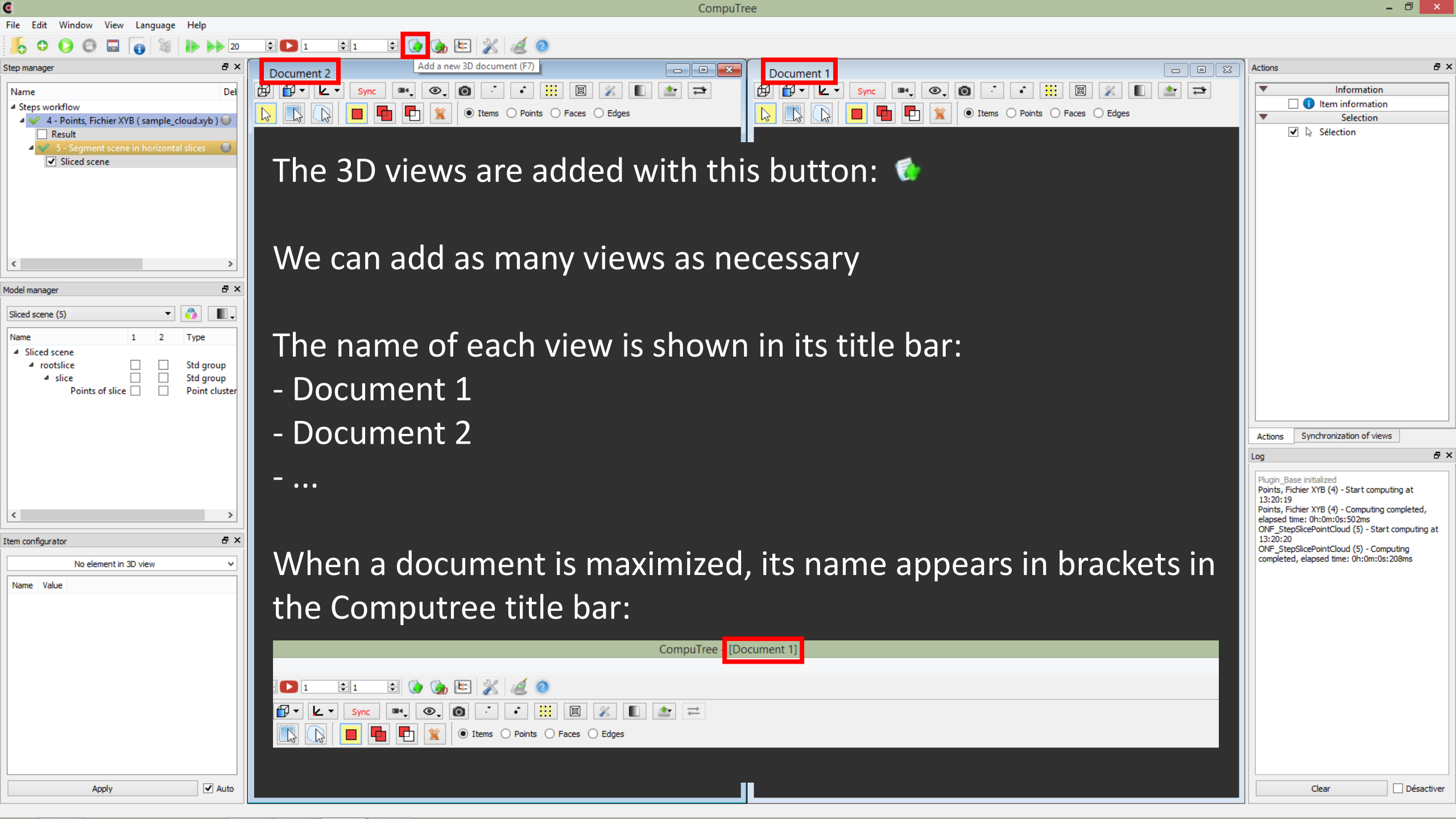


# Tutorial CT02

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## EN

Using 3D views,  
Selection Toolbar



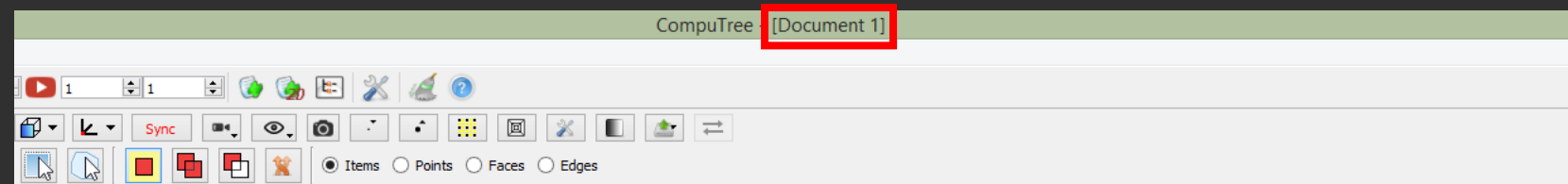
The 3D views are added with this button: 

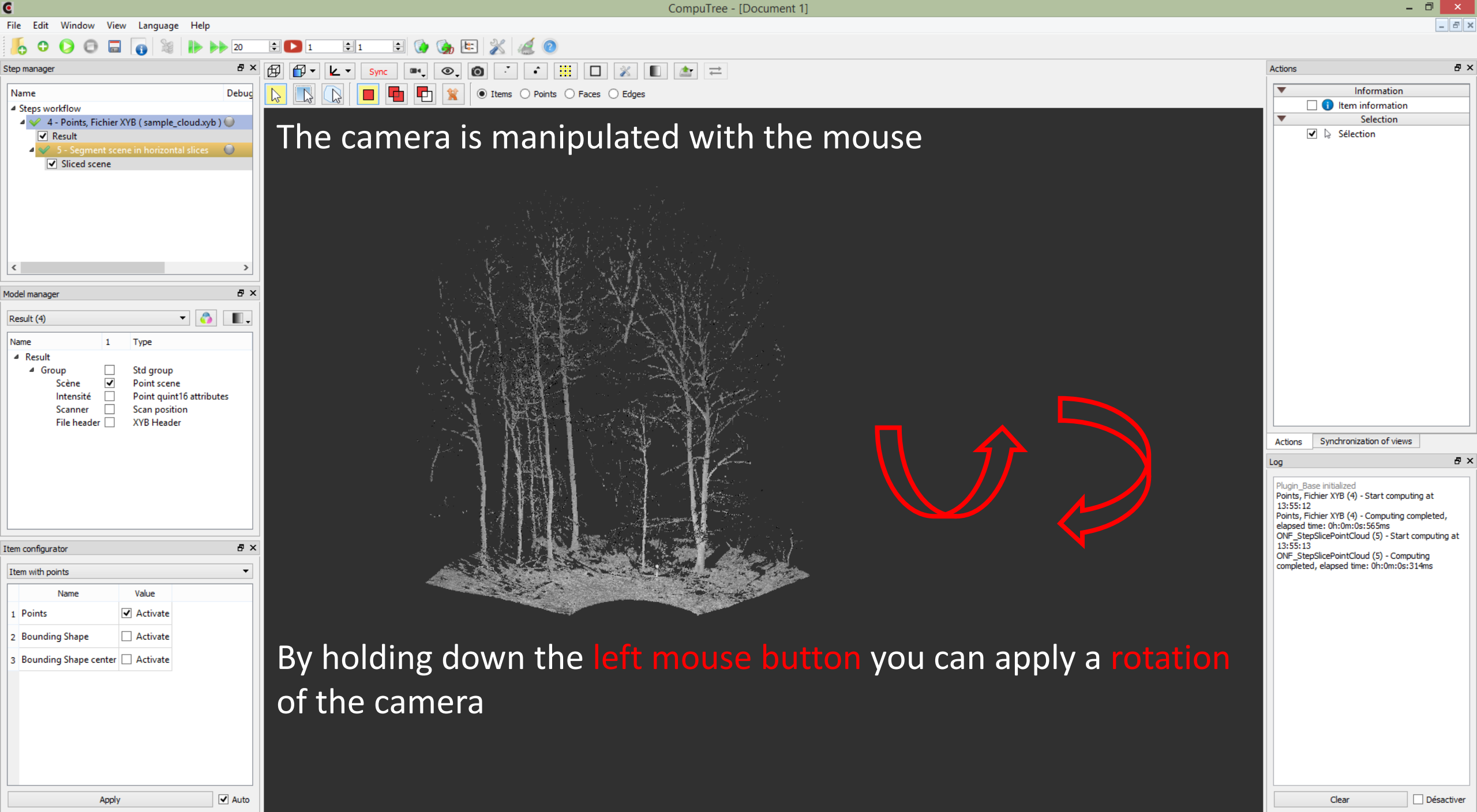
We can add as many views as necessary

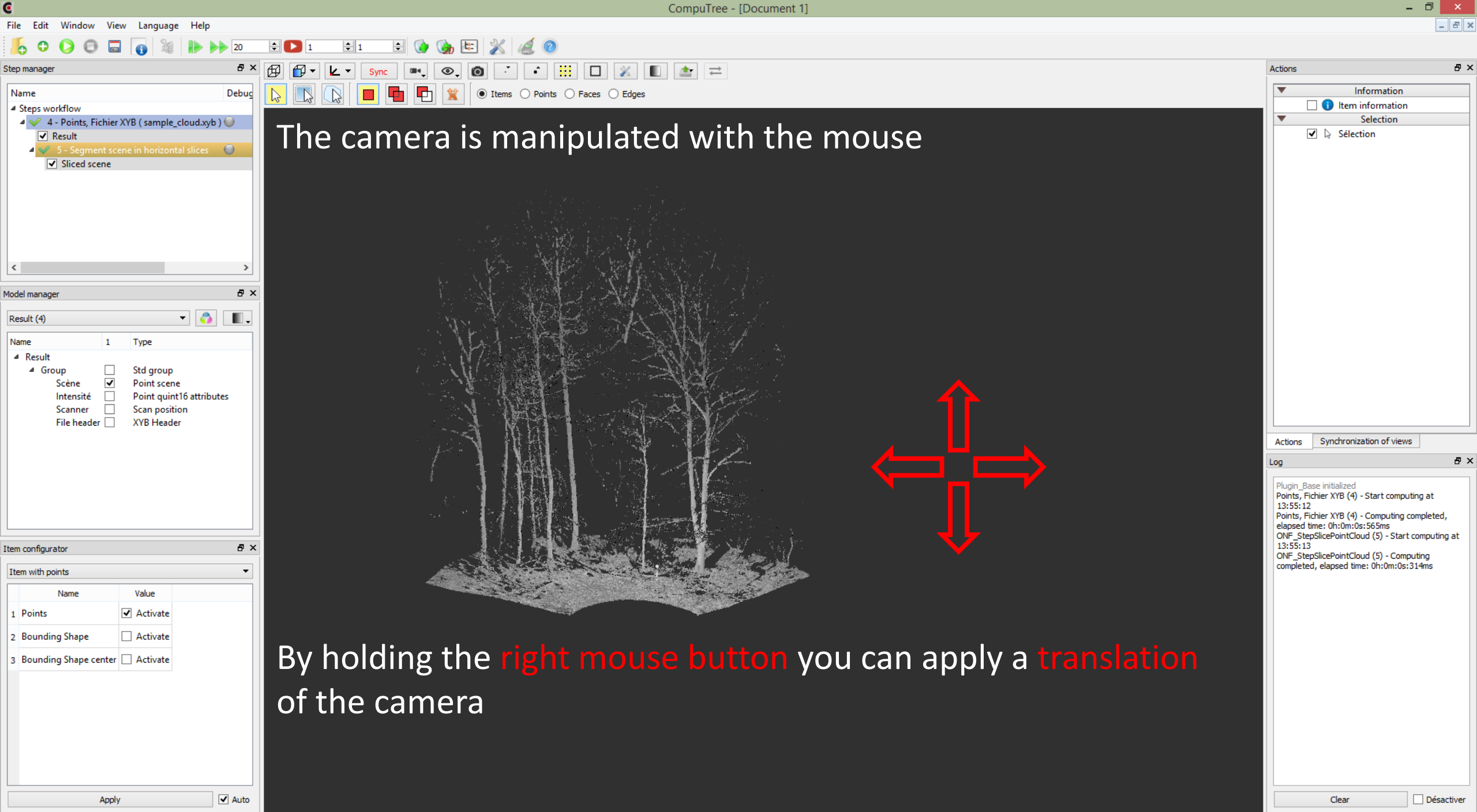
The name of each view is shown in its title bar:

- Document 1
- Document 2
- ...

When a document is maximized, its name appears in brackets in the Computree title bar:







The screenshot displays three overlapping windows from a software application:

- Step manager (top):** Shows a workflow with two steps:
  - Step 4: "4 - Points, Fichier XYZ ( sample\_cloud.xyz )" with a checked "Result" checkbox.
  - Step 5: "5 - Segment scene in horizontal slices" with a checked "Sliced scene" checkbox.
- Model manager (middle):** Displays the "Result (4)" model. It lists attributes with checkboxes:
 

Name	1	Type
Result		
Group	<input type="checkbox"/>	Std group
Scène	<input checked="" type="checkbox"/>	Point scene
Intensité	<input type="checkbox"/>	Point quint16 attributes
Scanner	<input type="checkbox"/>	Scan position
File header	<input type="checkbox"/>	XYZ Header
- Item configurator (bottom):** Shows the "Item with points" configuration table:
 

	Name	Value
1	Points	<input checked="" type="checkbox"/> Activate
2	Bounding Shape	<input type="checkbox"/> Activate
3	Bounding Shape center	<input type="checkbox"/> Activate

## The camera is manipulated with the mouse




The mouse wheel allows you to zoom in / out:


- Either by rolling it forward / backward
- Either by holding it down while moving backward / forward

Actions

Information

☐  Item information

Selection

☒  Sélection

Actions

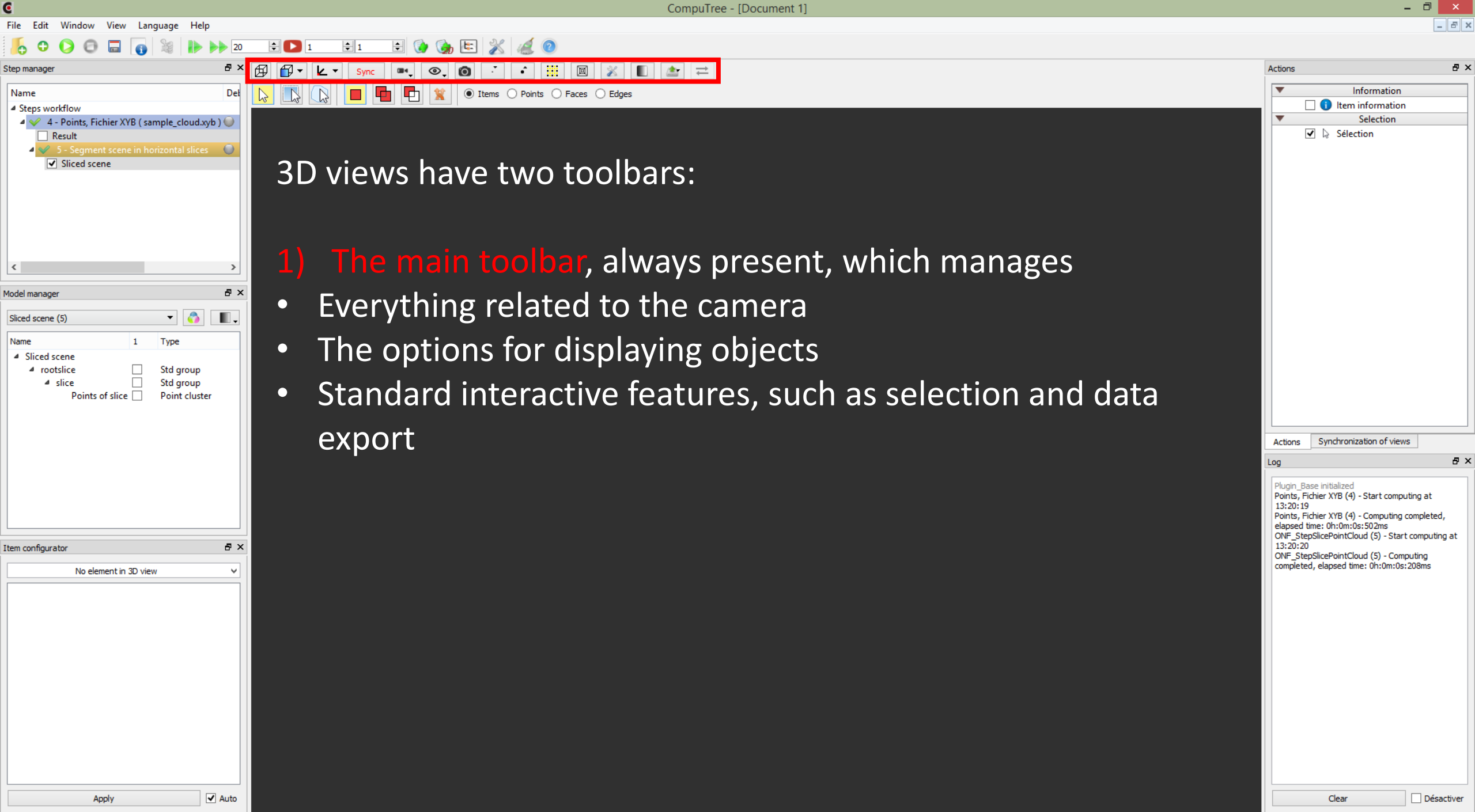
Synchronization of views

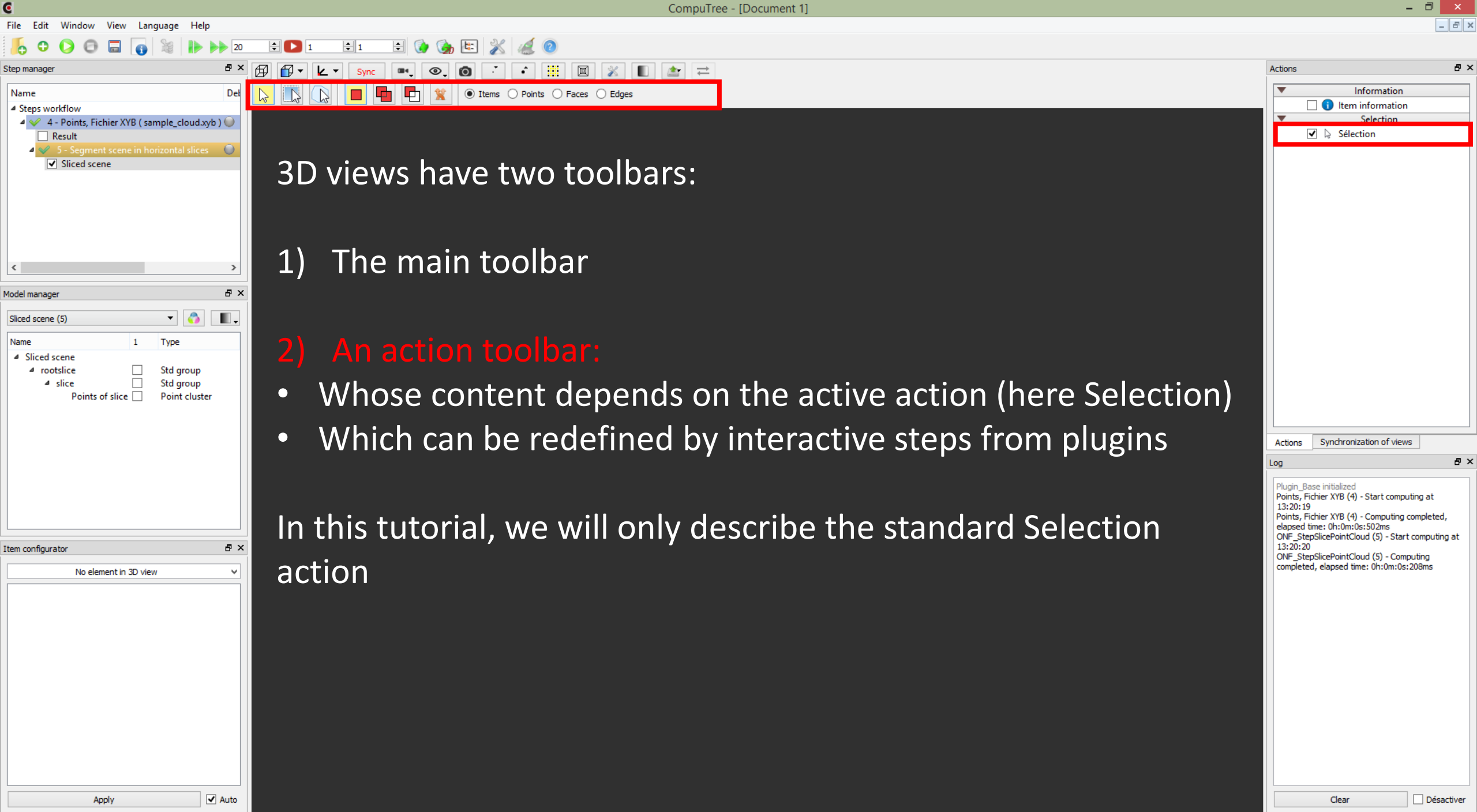
Log

Plugin\_Base initialized  
Points, Fichier XYB (4) - Start computing at 13:55:12  
Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:565ms  
ONF\_StepSlicePointCloud (5) - Start computing at 13:55:13  
ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:314ms

Clear

☐ Désactiver







Step manager

Name

Steps workflow

- 4 - Points, Fichier XYB ( sample\_cloud.xyb )
  - Result
- 5 - Segment scene in horizontal slices
  - Sliced scene

Model manager

Sliced scene (5)

Name	1	Type
Sliced scene		
rootslice	<input type="checkbox"/>	Std group
slice	<input type="checkbox"/>	Std group
Points of slice	<input checked="" type="checkbox"/>	Point cluster

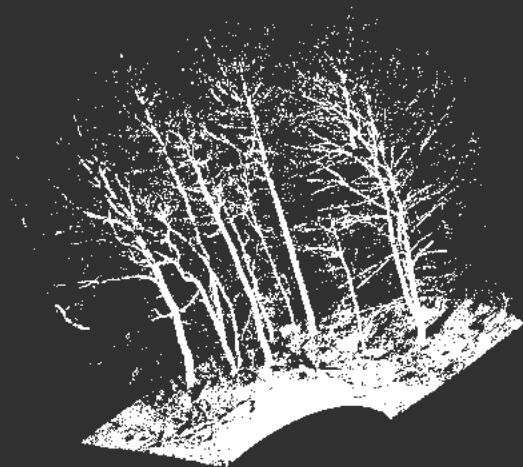
Item configurator

Point cluster

	Name	Value
1	Points	<input checked="" type="checkbox"/> Activate
2	Bounding Shape	<input type="checkbox"/> Activate
3	Bounding Shape center	<input type="checkbox"/> Activate
4	Barycenter	<input type="checkbox"/> Activate
5	Polyline	<input type="checkbox"/> Activate

Apply ☒ Auto

Let's start with the **main toolbar**



Actions

Information

- ☐ Item information

Selection

- ☒ Sélection

Actions Synchronization of views

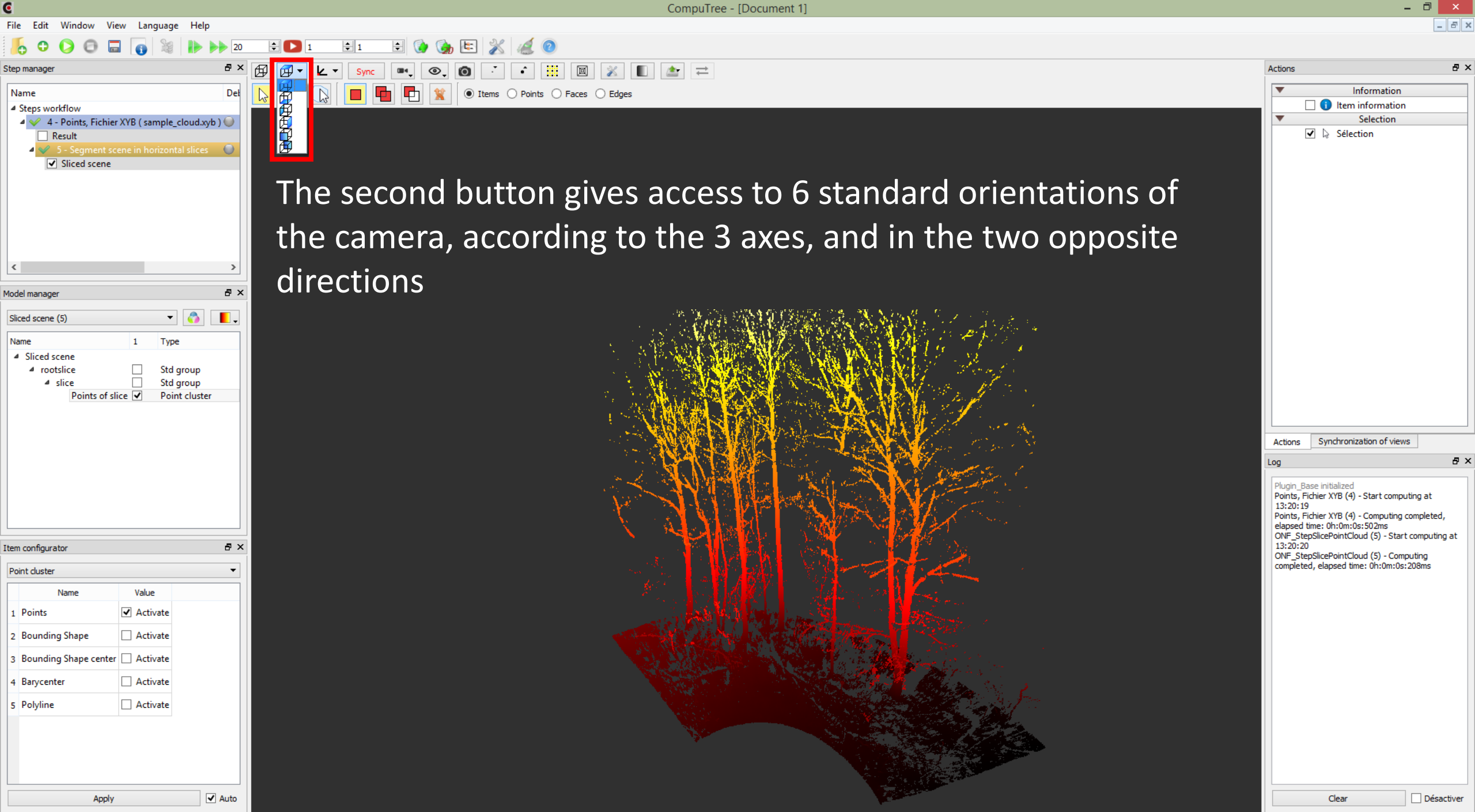
Log

Plugin\_Base initialized  
Points, Fichier XYB (4) - Start computing at 13:20:19  
Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:502ms  
ONF\_StepSlicePointCloud (5) - Start computing at 13:20:20  
ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:208ms

Clear ☐ Désactiver



By default the view is centered on the coordinates (0,0,0). It is therefore necessary to use this button to "find" data.



Step manager

Name Del

- Steps workflow
  - 4 - Points, Fichier XYB ( sample\_cloud.xyb )
    - Result
    - 5 - Segment scene in horizontal slices
      - Sliced scene

Model manager

Sliced scene (5)

Name 1 Type

- Sliced scene
  - rootslice ☐ Std group
  - slice ☐ Std group
  - Points of slice ☒ Point cluster

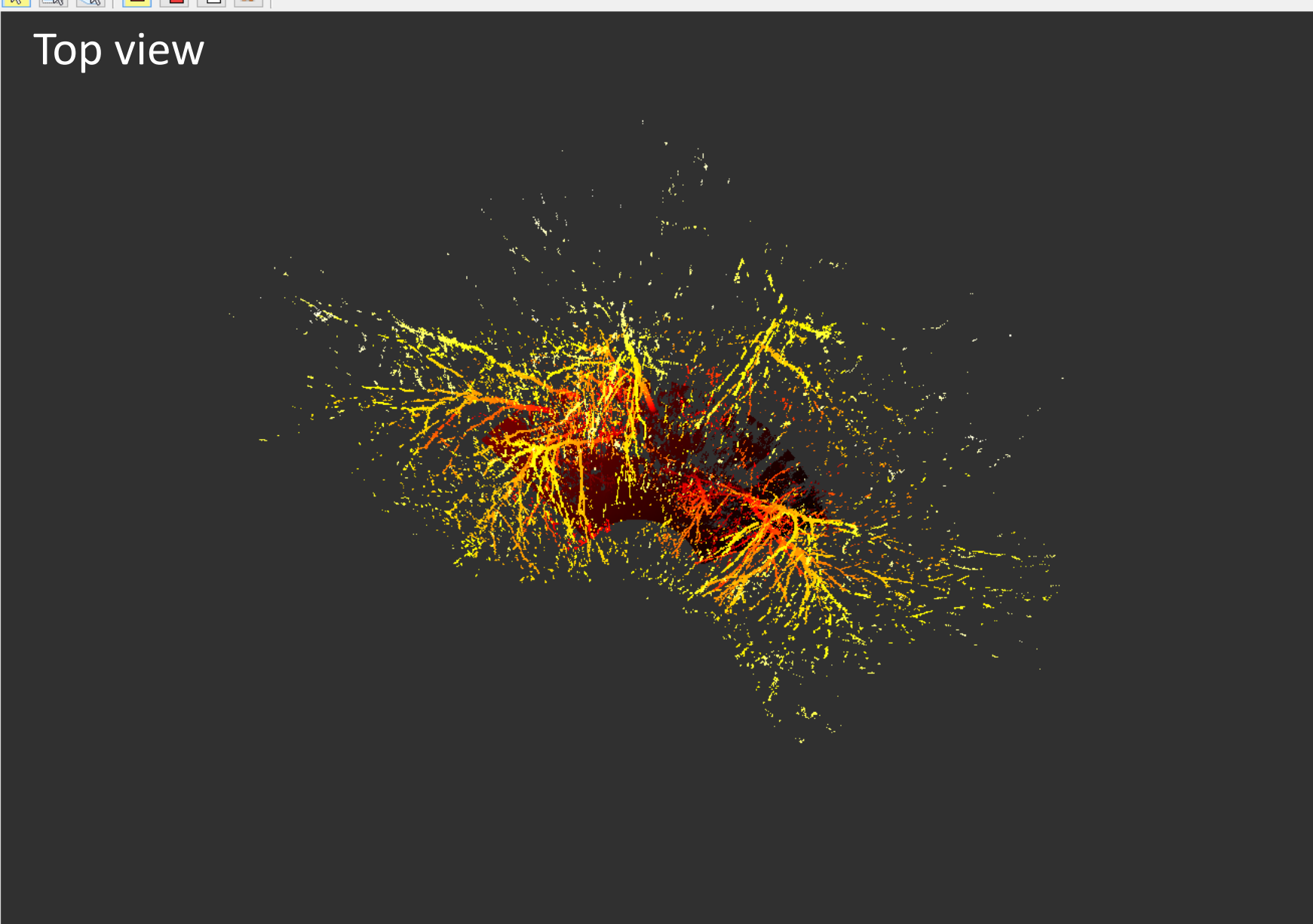
Item configurator

Point cluster

	Name	Value
1	Points	<input checked="" type="checkbox"/> Activate
2	Bounding Shape	<input type="checkbox"/> Activate
3	Bounding Shape center	<input type="checkbox"/> Activate
4	Barycenter	<input type="checkbox"/> Activate
5	Polyline	<input type="checkbox"/> Activate

Apply ☒ Auto

Top view



Actions

Information

- ☐ Item information

Selection

- ☒ Sélection

Actions Synchronization of views

Log

Plugin\_Base initialized

Points, Fichier XYB (4) - Start computing at 13:20:19

Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:502ms

ONF\_StepSlicePointCloud (5) - Start computing at 13:20:20

ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:208ms

Clear ☐ Désactiver

Step manager

Name

Steps workflow

- 4 - Points, Fichier XYB ( sample\_cloud.xyb )
  - Result
- 5 - Segment scene in horizontal slices
  - Sliced scene

Model manager

Sliced scene (5)

Name 1 Type

- Sliced scene
  - rootslice ☐ Std group
  - slice ☐ Std group
  - Points of slice ☒ Point cluster

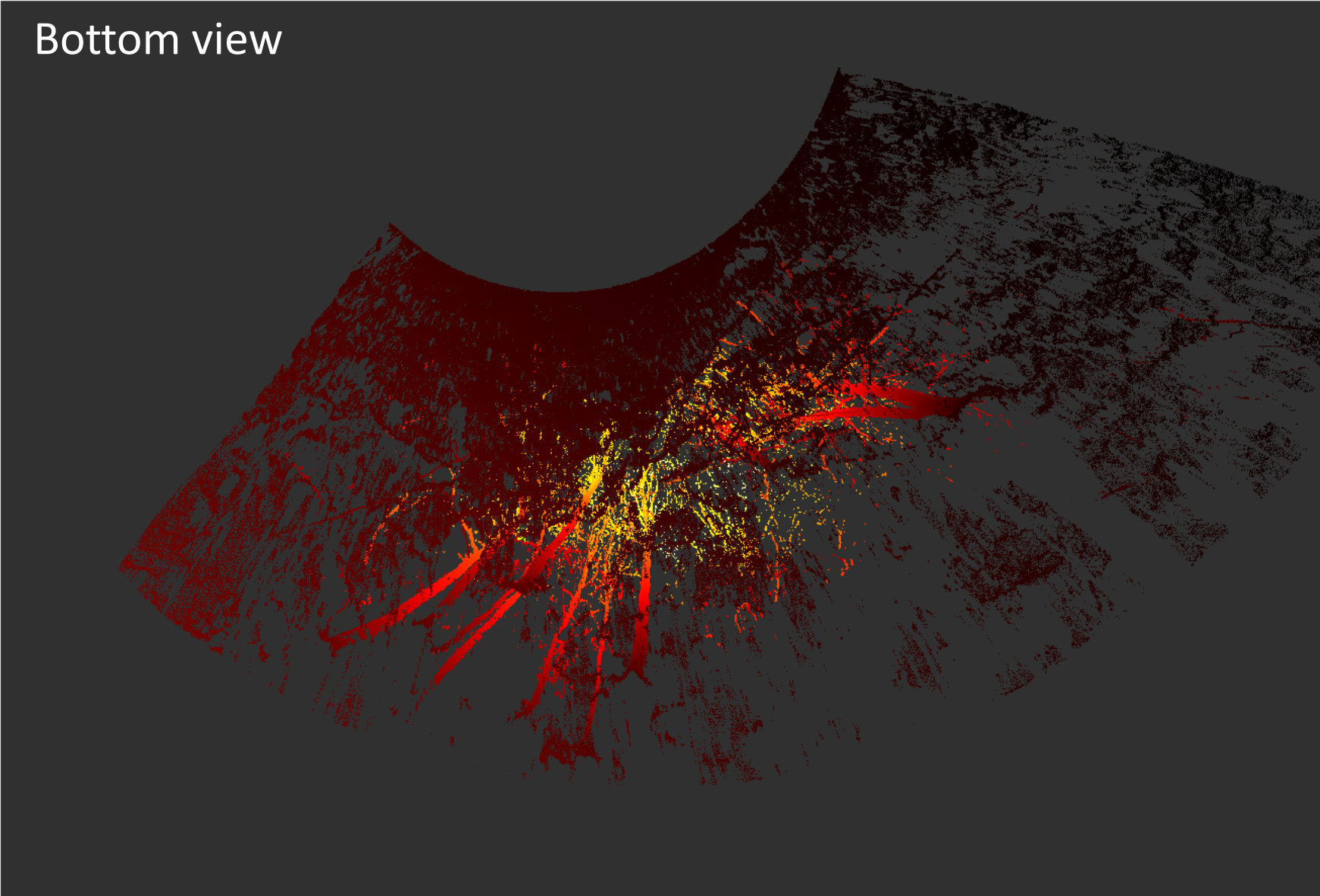
Item configurator

Point cluster

	Name	Value
1	Points	<input checked="" type="checkbox"/> Activate
2	Bounding Shape	<input type="checkbox"/> Activate
3	Bounding Shape center	<input type="checkbox"/> Activate
4	Barycenter	<input type="checkbox"/> Activate
5	Polyline	<input type="checkbox"/> Activate

Apply ☒ Auto

Bottom view



Actions

Information

☐ Item information

Selection

☒ Sélection

Actions Synchronization of views

Log

Plugin\_Base initialized

Points, Fichier XYB (4) - Start computing at 13:20:19

Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:502ms

ONF\_StepSlicePointCloud (5) - Start computing at 13:20:20

ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:208ms

Clear ☐ Désactiver

Step manager

Name

Steps workflow

- 4 - Points, Fichier XYB ( sample\_cloud.xyb )
  - Result
- 5 - Segment scene in horizontal slices
  - Sliced scene

Model manager

Sliced scene (5)

Name

1

Type

- Sliced scene
  - rootslice
    - slice
      - Points of slice

Points of slice

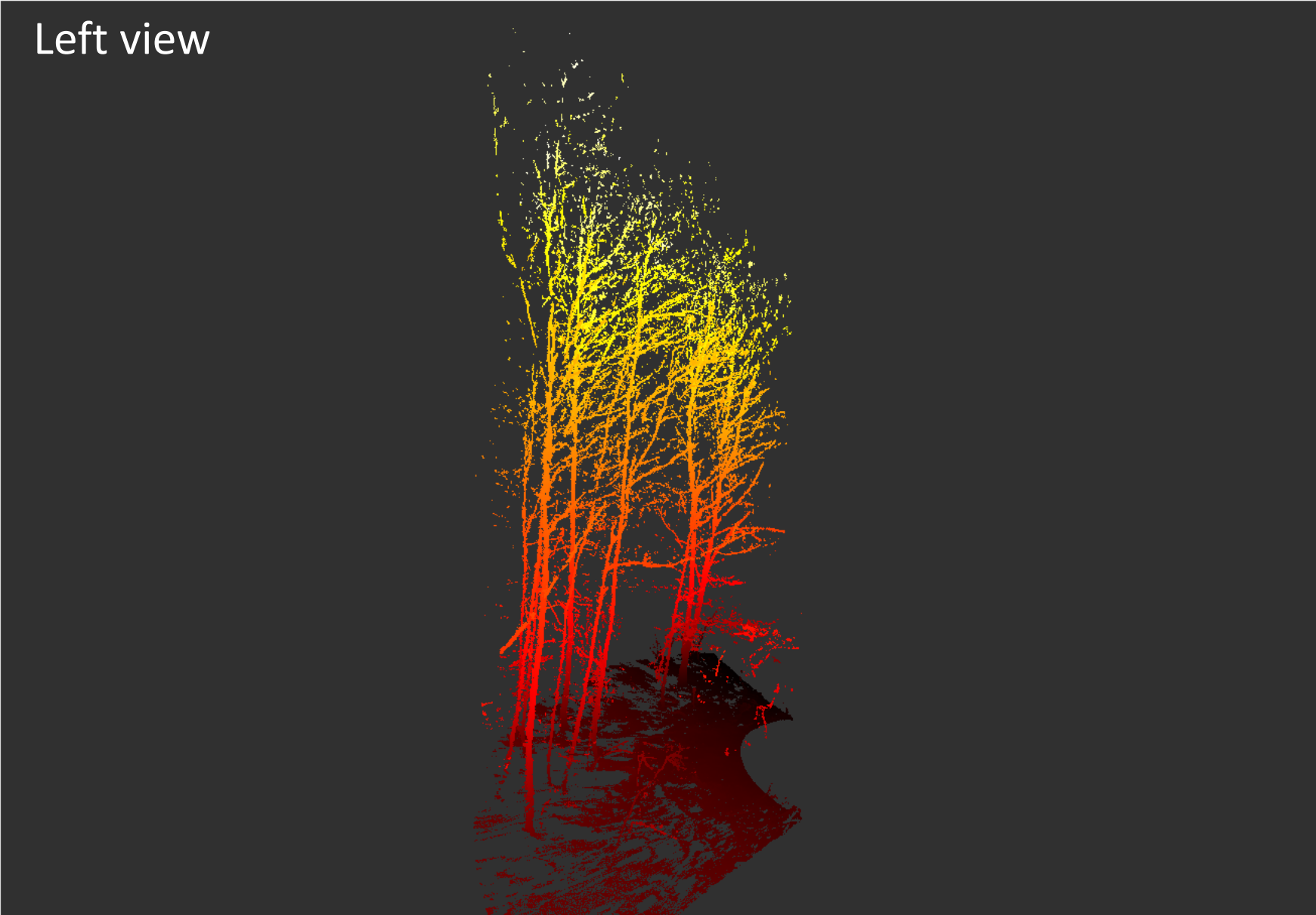
Item configurator

Point cluster

	Name	Value
1	Points	<input checked="" type="checkbox"/> Activate
2	Bounding Shape	<input type="checkbox"/> Activate
3	Bounding Shape center	<input type="checkbox"/> Activate
4	Barycenter	<input type="checkbox"/> Activate
5	Polyline	<input type="checkbox"/> Activate

Apply ☒ Auto

Left view



Actions

Information

☐ Item information

Selection

☒ Sélection

Actions Synchronization of views

Log

Plugin\_Base initialized

Points, Fichier XYB (4) - Start computing at 13:20:19

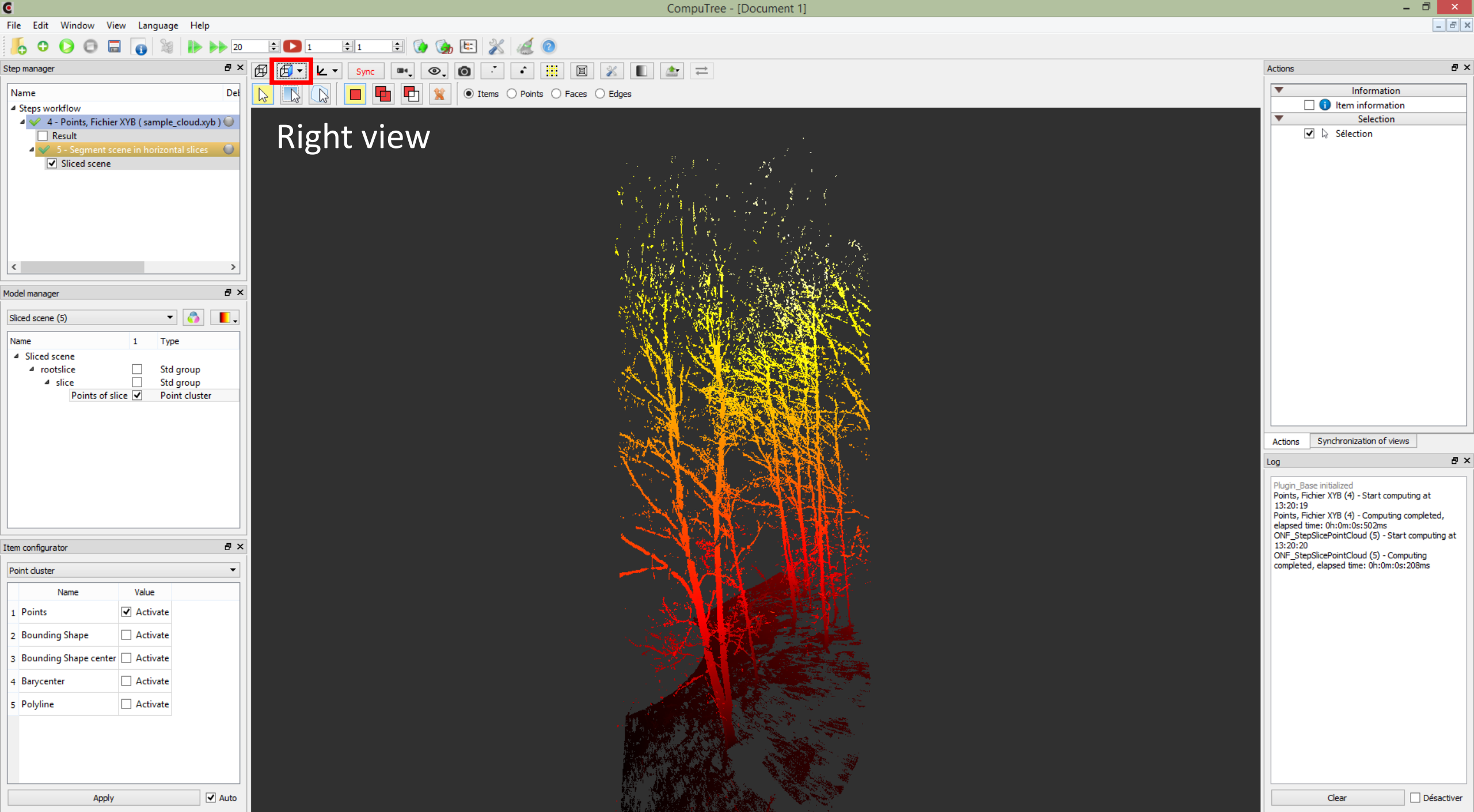
Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:502ms

ONF\_StepSlicePointCloud (5) - Start computing at 13:20:20

ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:208ms

Clear ☐ Désactiver





Right view

Information  
Item information  
Selection  
Sélection

Log  
Plugin\_Base initialized  
Points, Fichier XYB (4) - Start computing at 13:20:19  
Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:502ms  
ONF\_StepSlicePointCloud (5) - Start computing at 13:20:20  
ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:208ms

Point cluster		
Name	Value	
1 Points	<input checked="" type="checkbox"/>	Activate
2 Bounding Shape	<input type="checkbox"/>	Activate
3 Bounding Shape center	<input type="checkbox"/>	Activate
4 Barycenter	<input type="checkbox"/>	Activate
5 Polyline	<input type="checkbox"/>	Activate

Apply ☒ Auto

Clear ☐ Désactiver

Step manager

Name

Steps workflow

- 4 - Points, Fichier XYB ( sample\_cloud.xyb )
  - Result
  - 5 - Segment scene in horizontal slices
    - Sliced scene

Model manager

Sliced scene (5)

Name

1

Type

- Sliced scene
  - rootslice
    - slice
      - Points of slice
        - Point cluster


Item configurator

Point cluster

Name	Value
1 Points	<input checked="" type="checkbox"/> Activate
2 Bounding Shape	<input type="checkbox"/> Activate
3 Bounding Shape center	<input type="checkbox"/> Activate
4 Barycenter	<input type="checkbox"/> Activate
5 Polyline	<input type="checkbox"/> Activate

Apply ☒ Auto

Front view



Actions

Information

- Item information
- Selection
  - Sélection

Actions Synchronization of views

Log

Plugin\_Base initialized

Points, Fichier XYB (4) - Start computing at 13:49:22

Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:523ms

ONF\_StepSlicePointCloud (5) - Start computing at 13:49:22

ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:242ms

Clear ☐ Désactiver

Step manager

Name

Steps workflow

- 4 - Points, Fichier XYB ( sample\_cloud.xyb )
  - Result
- 5 - Segment scene in horizontal slices
  - Sliced scene

Model manager

Sliced scene (5)

Name 1 Type

- Sliced scene
  - rootslice ☐ Std group
  - slice ☐ Std group
  - Points of slice ☒ Point cluster


Item configurator

Point cluster

	Name	Value
1	Points	<input checked="" type="checkbox"/> Activate
2	Bounding Shape	<input type="checkbox"/> Activate
3	Bounding Shape center	<input type="checkbox"/> Activate
4	Barycenter	<input type="checkbox"/> Activate
5	Polyline	<input type="checkbox"/> Activate

Apply ☒ Auto

Rear view



Actions

Information

- ☐ Item information

Selection

- ☒ Sélection

Actions Synchronization of views

Log

Plugin\_Base initialized

Points, Fichier XYB (4) - Start computing at 13:49:22

Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:523ms

ONF\_StepSlicePointCloud (5) - Start computing at 13:49:22

ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:242ms

Clear ☐ Désactiver



CompuTree - [Document 1]

File Edit Window View Language Help

Step manager

Name Debug

Steps workflow

- 4 - Points, Fichier XYB ( sample\_cloud.xyb )
  - Result
- 5 - Segment scene in horizontal slices
  - Sliced scene

Model manager

Result (4)

Name	1	Type
Result		
Group	<input type="checkbox"/>	Std group
Scène	<input type="checkbox"/>	Point scene
Intensité	<input type="checkbox"/>	Point quint16 attributes
Scanner	<input type="checkbox"/>	Scan position
File header	<input type="checkbox"/>	XYB Header

Item configurator

No element in 3D view

Apply Auto

Actions

Information

- Item information
- Selection
  - Sélection

Synchronization of views

Log

Plugin\_Base initialized  
Points, Fichier XYB (4) - Start computing at 13:55:12  
Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:565ms  
ONF\_StepSlicePointCloud (5) - Start computing at 13:55:13  
ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:314ms

Clear Désactiver

The 3<sup>rd</sup> button allows you to choose the center of rotation of the view:

- Centered on (0,0,0)
- Centered on the barycenter of the **visible** elements
- Centered on the barycenter of the **selected** elements

CompuTree - [Document 1]

File Edit Window View Language Help

Step manager

Name Debug

Steps workflow

- 4 - Points, Fichier XYB ( sample\_cloud.xyb )
  - Result
- 5 - Segment scene in horizontal slices
  - Sliced scene

Model manager

Result (4)

Name	1	Type
Result		
Group	<input type="checkbox"/>	Std group
Scène	<input checked="" type="checkbox"/>	Point scene
Intensité	<input type="checkbox"/>	Point quint16 attributes
Scanner	<input type="checkbox"/>	Scan position
File header	<input type="checkbox"/>	XYB Header

Item configurator

Item with points

	Name	Value
1	Points	<input checked="" type="checkbox"/> Activate
2	Bounding Shape	<input type="checkbox"/> Activate
3	Bounding Shape center	<input type="checkbox"/> Activate

Apply ☒ Auto

Centered on (0,0,0)

Actions

Information

- Item information
- Selection
  - Sélection

Synchronization of views

Log

Plugin\_Base initialized  
Points, Fichier XYB (4) - Start computing at 13:55:12  
Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:565ms  
ONF\_StepSlicePointCloud (5) - Start computing at 13:55:13  
ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:314ms

Clear ☐ Désactiver

Step manager

Name

Steps workflow

- 4 - Points, Fichier XYB ( sample\_cloud.xyb )
  - Result
- 5 - Segment scene in horizontal slices
  - Sliced scene

Model manager

Result (4)

Name	1	Type
Result		
Group	<input type="checkbox"/>	Std group
Scène	<input checked="" type="checkbox"/>	Point scene
Intensité	<input type="checkbox"/>	Point quint16 attributes
Scanner	<input type="checkbox"/>	Scan position
File header	<input type="checkbox"/>	XYB Header

Item configurator

Item with points

Name	Value
1 Points	<input checked="" type="checkbox"/> Activate
2 Bounding Shape	<input checked="" type="checkbox"/> Activate
3 Bounding Shape center	<input checked="" type="checkbox"/> Activate

Apply ☒ Auto

Centered on the barycenter of the **visible** elements

Actions

Information

- ☐ Item information

Selection

- ☒ Sélection

Actions Synchronization of views

Log

Plugin\_Base initialized

Points, Fichier XYB (4) - Start computing at 13:55:12

Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:565ms

ONF\_StepSlicePointCloud (5) - Start computing at 13:55:13

ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:314ms

Clear ☐ Désactiver

Step manager

Name

Steps workflow

- 4 - Points, Fichier XYB ( sample\_cloud.xyb )
  - Result
- 5 - Segment scene in horizontal slices
  - Sliced scene

Model manager

Sliced scene (5)

Name

1

Type

- Sliced scene
  - rootslice
    - slice
      - Points of slice

Item configurator

Point cluster

Name	Value
1 Points	<input checked="" type="checkbox"/> Activate
2 Bounding Shape	<input checked="" type="checkbox"/> Activate
3 Bounding Shape center	<input checked="" type="checkbox"/> Activate
4 Barycenter	<input type="checkbox"/> Activate
5 Polyline	<input type="checkbox"/> Activate

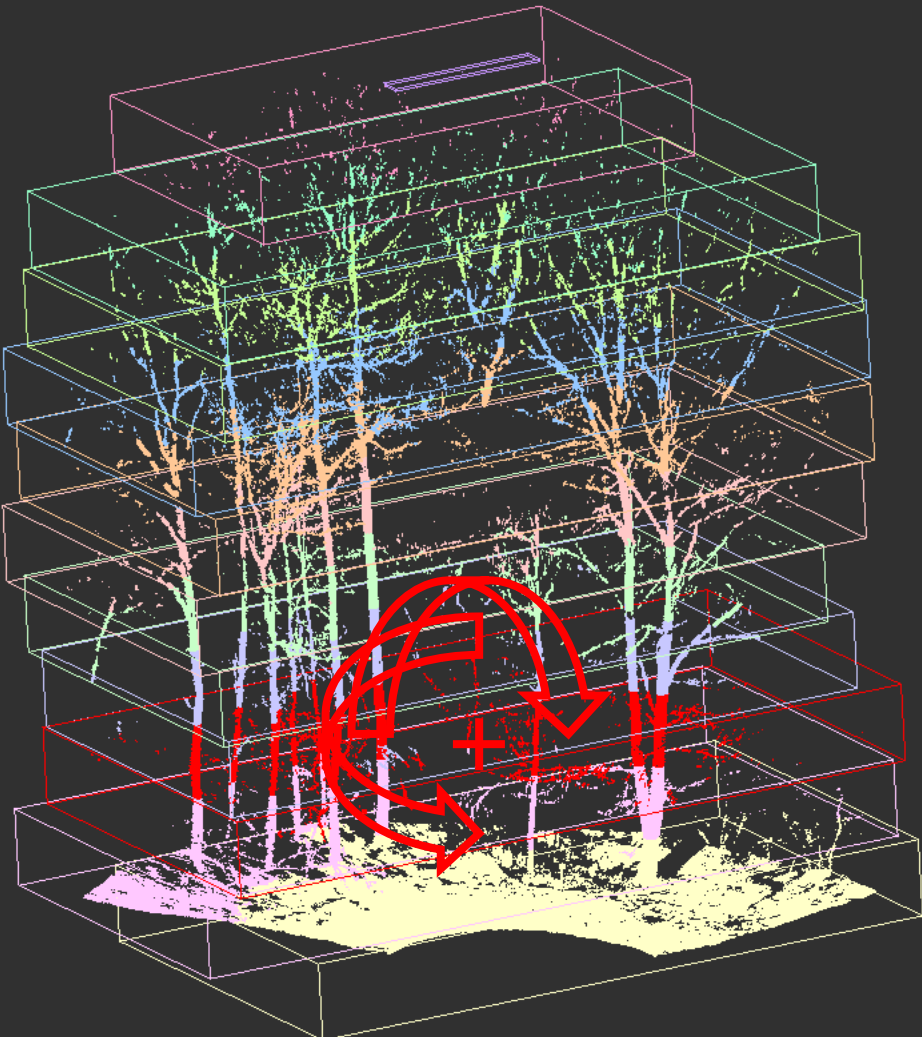
Apply

Auto

Sync

Items Points Faces Edges

# Centered on the barycenter of the **selected** elements



Actions

Information

- Item information
- Selection
  - Sélection

Actions Synchronization of views

Log

Plugin\_Base initialized

Points, Fichier XYB (4) - Start computing at 13:55:12

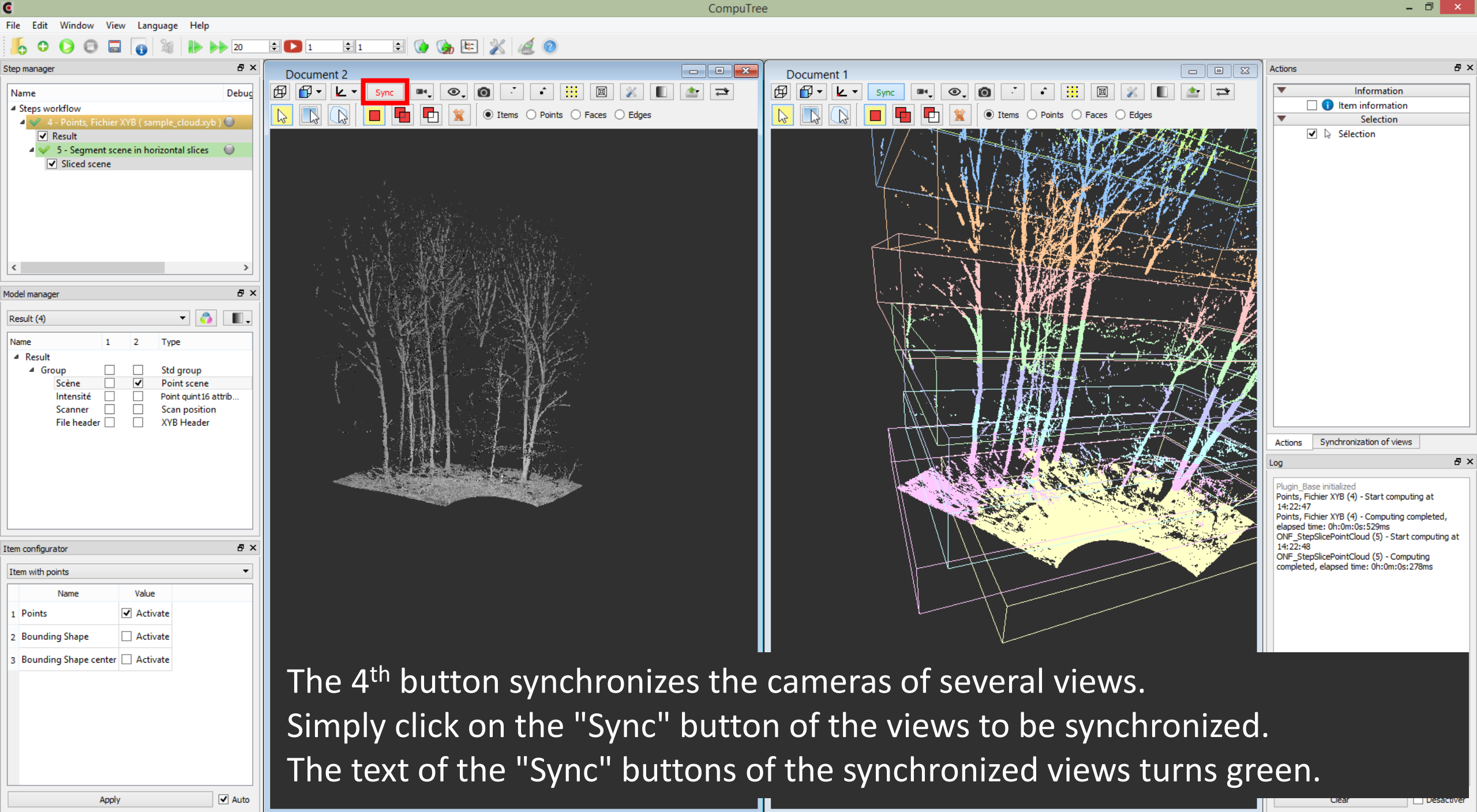
Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:565ms

ONF\_StepSlicePointCloud (5) - Start computing at 13:55:13

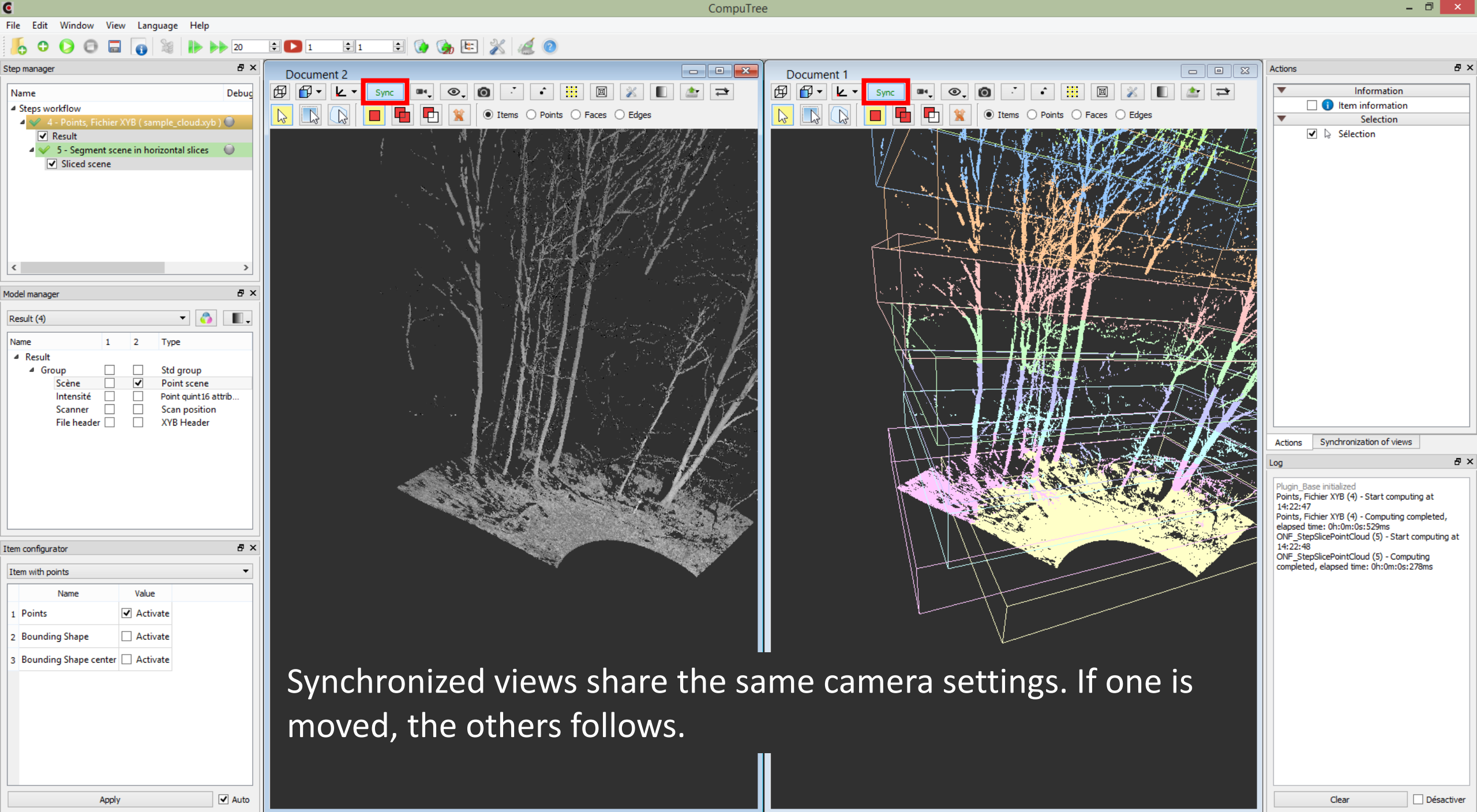
ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:314ms

Clear

Désactiver







CompuTree - [Document 1]

File Edit Window View Language Help

Step manager

Name Debug

Steps workflow

- 4 - Points, Fichier XYB ( sample\_cloud.xyb )
- Result
- 5 - Segment scene in horizontal slices
  - Sliced scene

Model manager

Result (4)

Name 1 Type

Result

- Group
  - Scène ☒ Std group
  - Intensité ☐ Point scene
  - Scanner ☐ Point quint16 attributes
  - File header ☐ Scan position
  - XYB Header

Item configurator

Item with points

Name	Value
1 Points	<input checked="" type="checkbox"/> Activate
2 Bounding Shape	<input type="checkbox"/> Activate
3 Bounding Shape center	<input type="checkbox"/> Activate

Apply ☒ Auto

Points Faces Edges

x : -10.0347  
y : -11.0174  
z : 12.6945  
cx : 1.4599  
cy : 6.6155  
cz : 8.9033

RAZ

Apply

Actions

Information

- Item information
- Selection
  - Sélection

Actions Synchronization of views

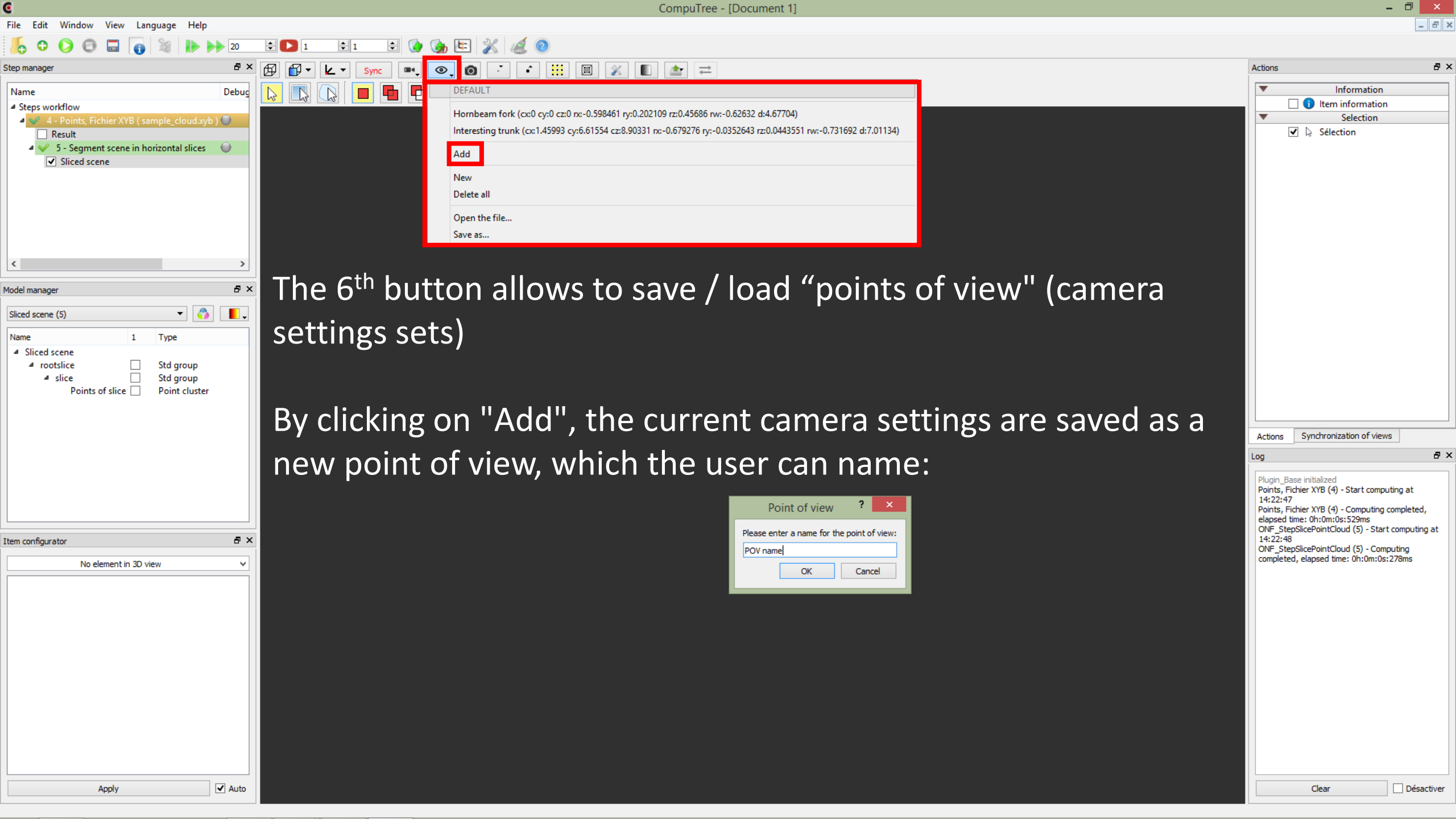
Log

Plugin\_Base initialized  
Points, Fichier XYB (4) - Start computing at 14:22:47  
Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:529ms  
ONF\_StepSlicePointCloud (5) - Start computing at 14:22:48  
ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:278ms

Clear ☐ Désactiver

The 5<sup>th</sup> button allows to manually adjust the camera settings:

- (x, y, z) is the position of the camera
- (cx, cy, cz) is the position of the center of rotation of the view
- RAZ resets the view rotation center to (0, 0, 0), and sets the camera position at (0, 1, 0)
- "Apply" is used to apply the specified values



The 6<sup>th</sup> button allows to save / load "points of view" (camera settings sets)

By clicking on "Add", the current camera settings are saved as a new point of view, which the user can name:

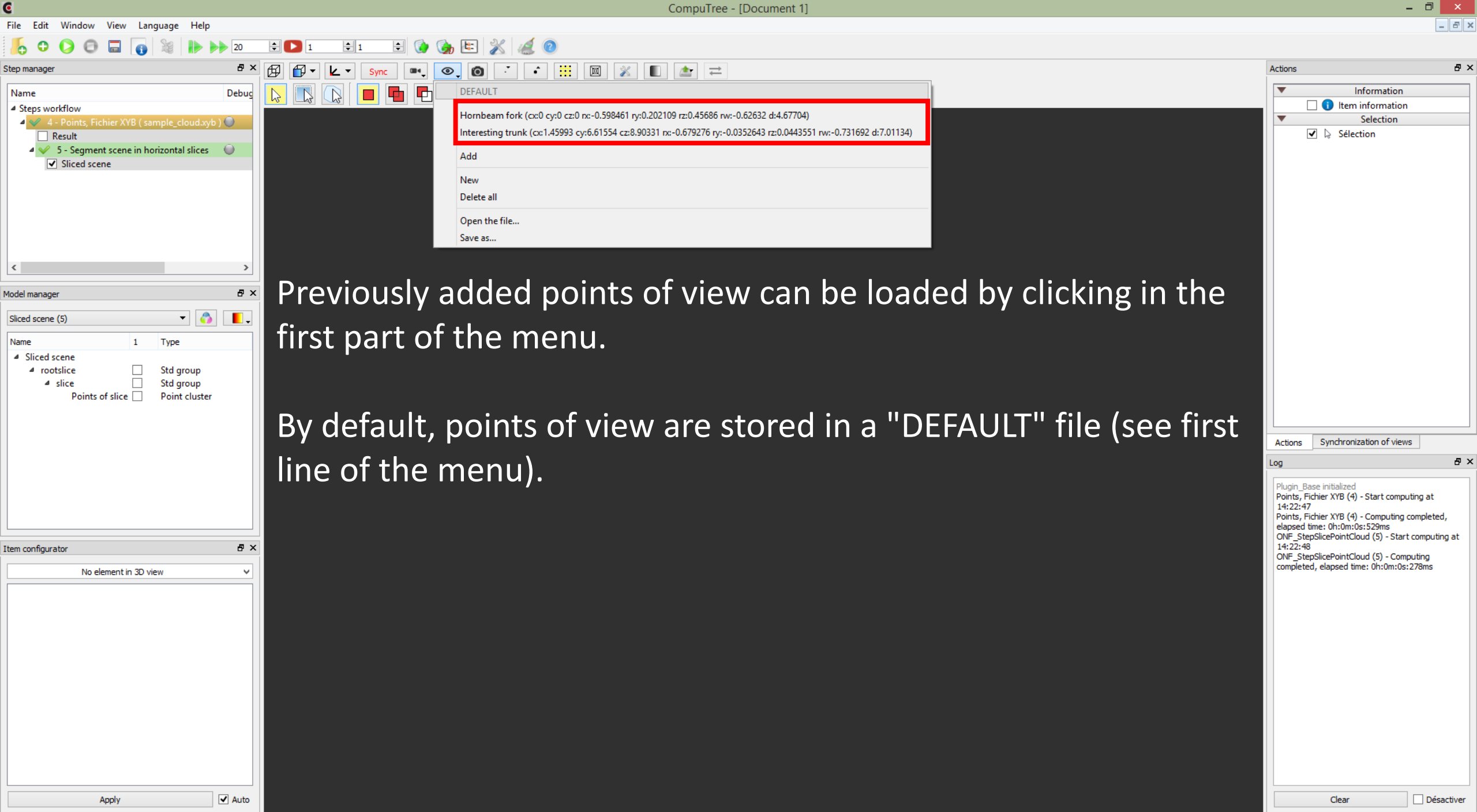
Point of view ? x

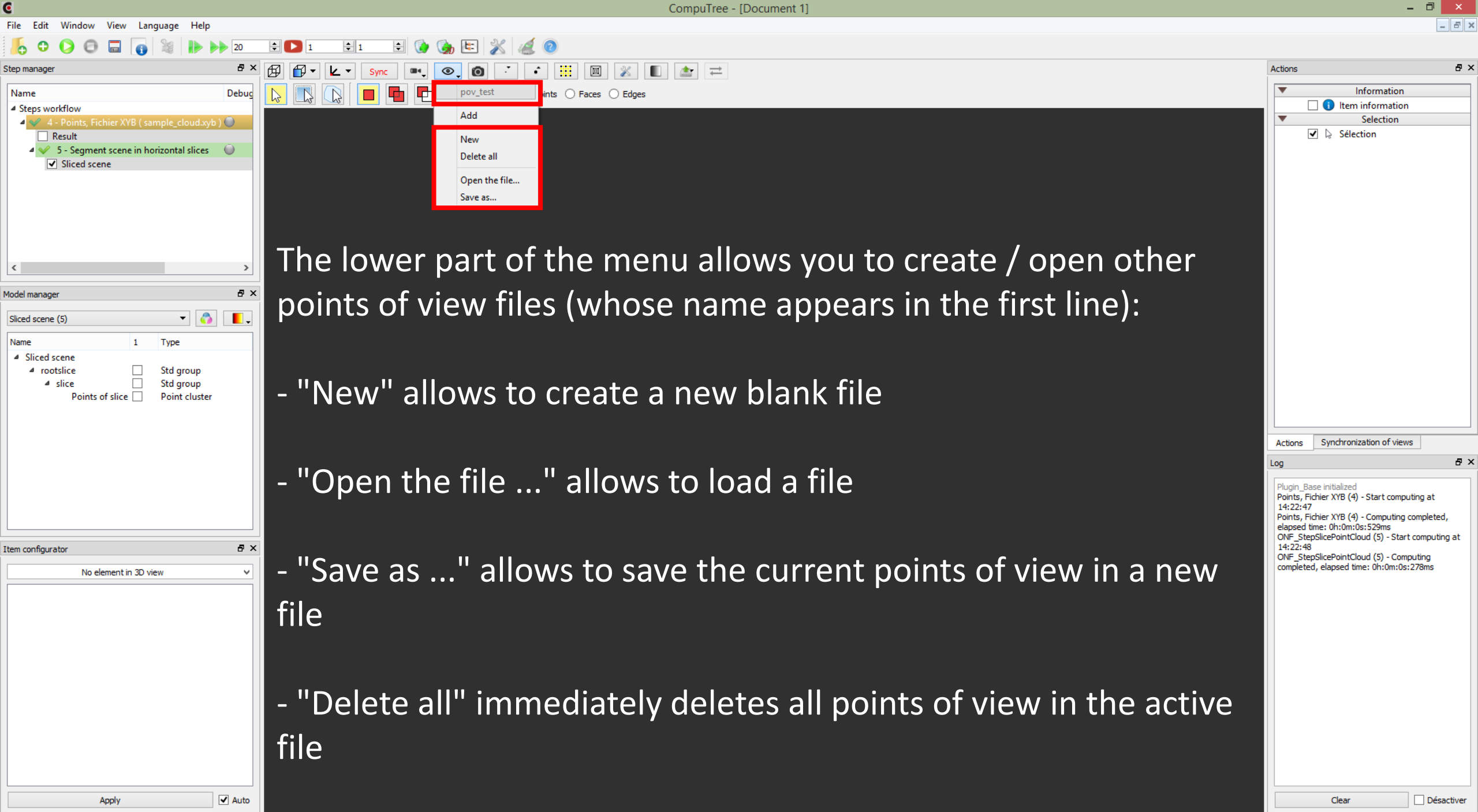
Please enter a name for the point of view:

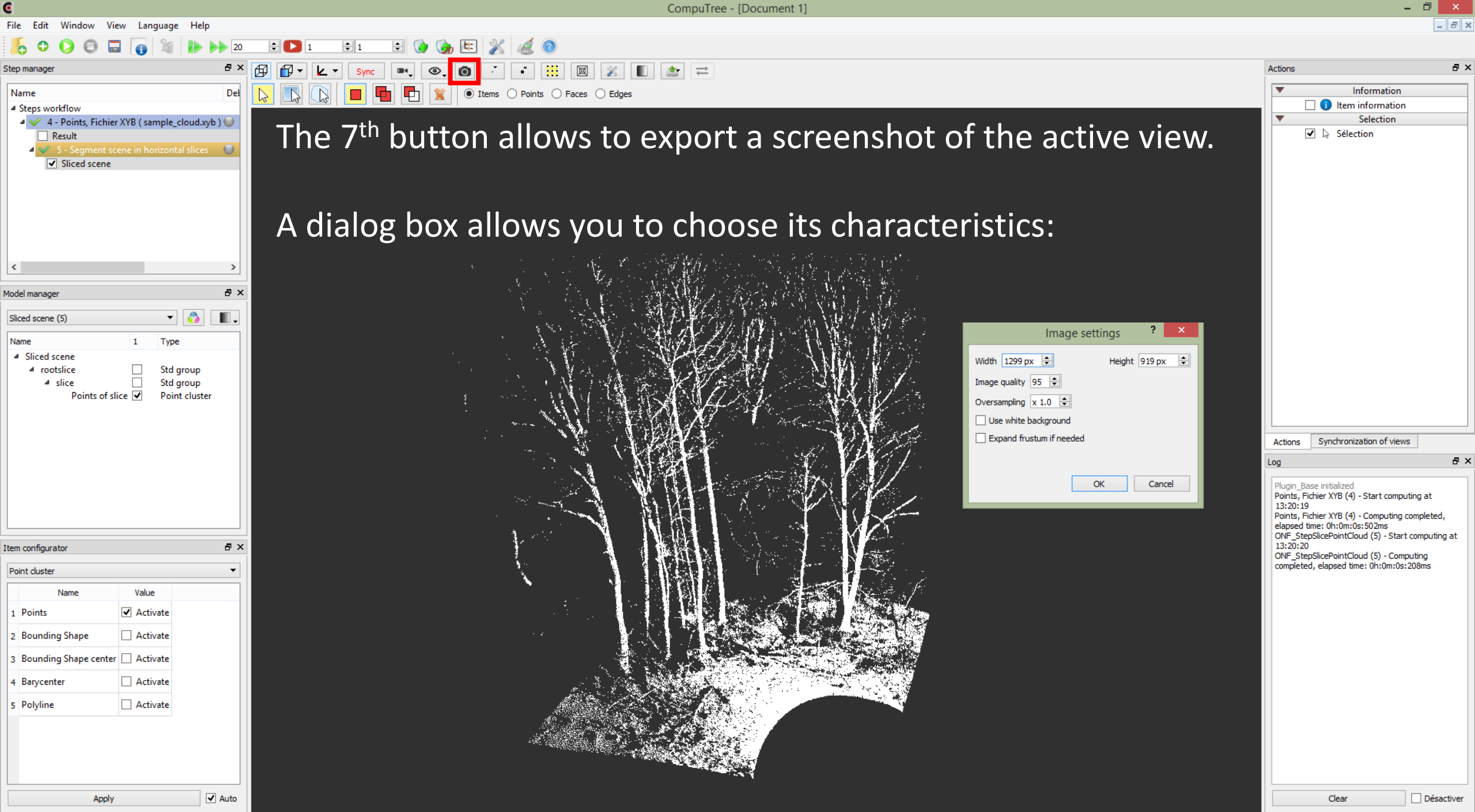
POV name

OK Cancel









Step manager

Name

Steps workflow

- 4 - Points, Fichier XYB ( sample\_cloud.xyb )
  - Result
- 5 - Segment scene in horizontal slices
  - Sliced scene

Model manager

Result (4)

Name	1	Type
Result		
Group	<input type="checkbox"/>	Std group
Scène	<input type="checkbox"/>	Point scene
Intensité	<input type="checkbox"/>	Point quint16 attributes
Scanner	<input type="checkbox"/>	Scan position
File header	<input type="checkbox"/>	XYB Header

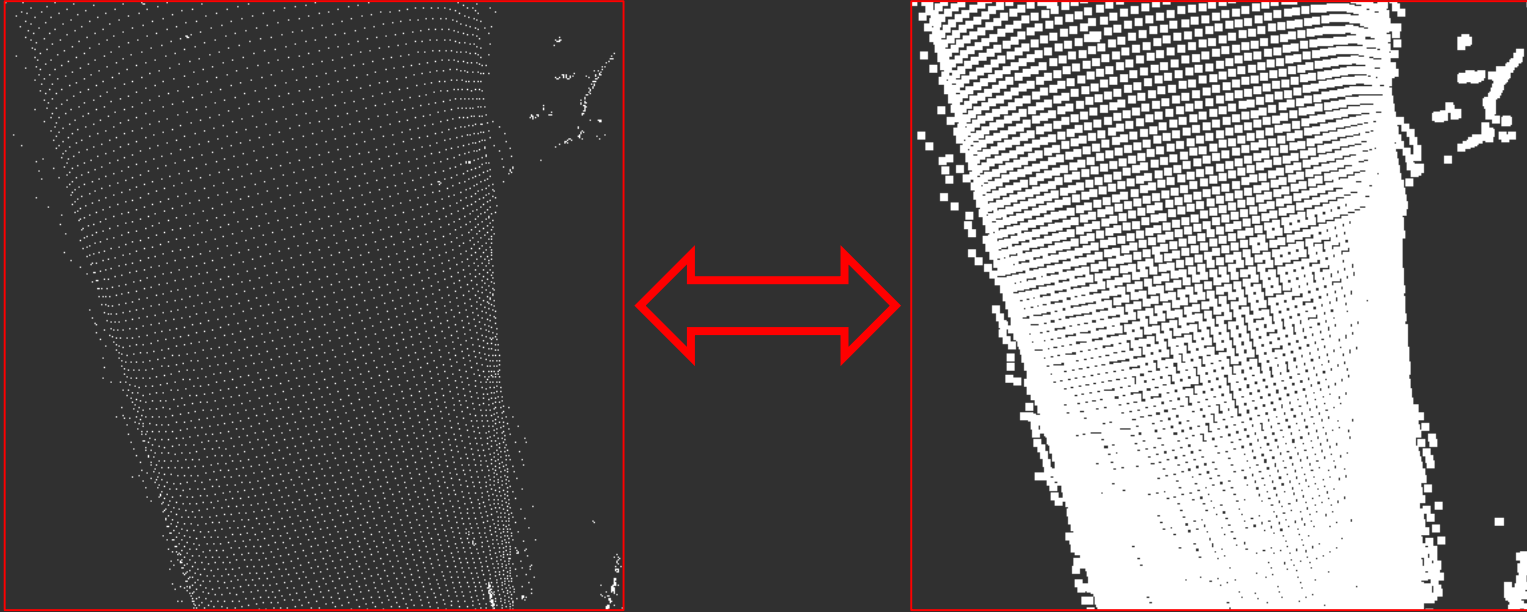
Item configurator

No element in 3D view

Apply

Auto

The 8<sup>th</sup> and 9<sup>th</sup> buttons allow to decrease / increase the size of the displayed points



Actions

Information

- Item information

Selection

- Sélection

Actions

Synchronization of views

Log

Plugin\_Base initialized

Points, Fichier XYB (4) - Start computing at 14:22:47

Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:529ms

ONF\_StepSlicePointCloud (5) - Start computing at 14:22:48

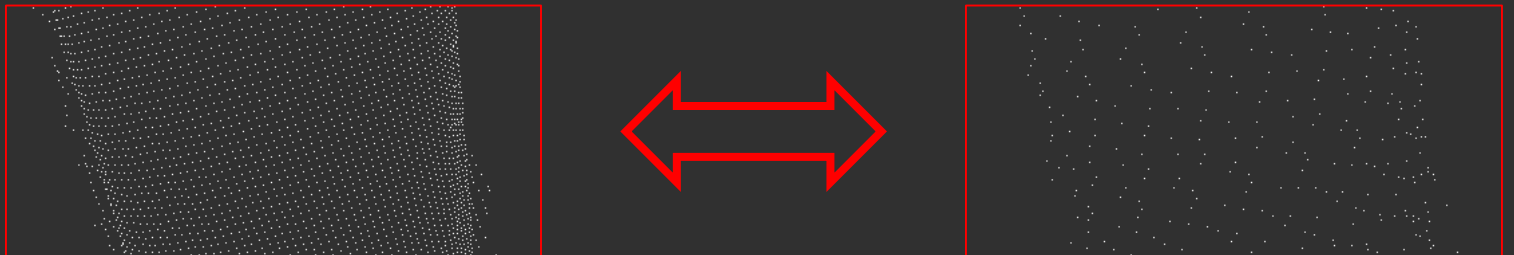
ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:278ms

Clear

Désactiver

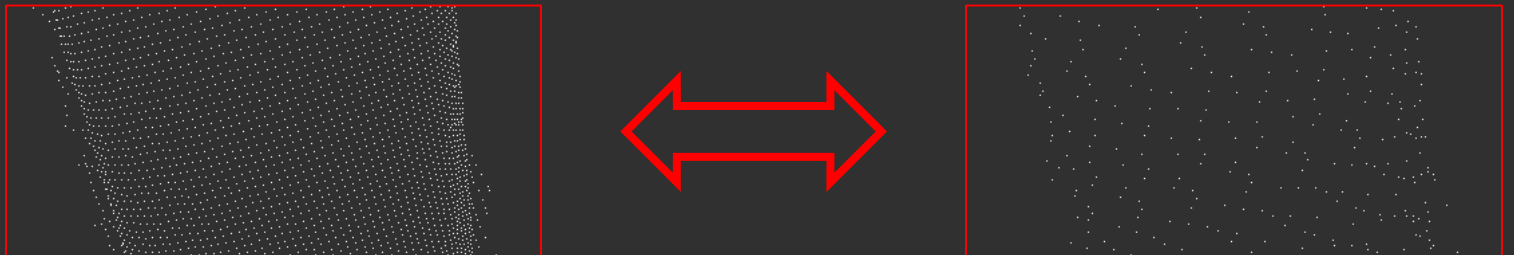
The 10<sup>th</sup> button allows to set the display mode. The button allows looping between 3 display modes:

- All points are displayed (accurate)
- Only a part of the points is displayed (optimized)
- Only a part of the points is displayed during the movements, but when the movements stop, all points are displayed (optimized during movements, accurate when it stops)



The 10<sup>th</sup> button allows to set the display mode. The button allows looping between 3 display modes:

- All points are displayed (accurate)
- Only a part of the points is displayed (optimized)
- Only a part of the points is displayed during the movements, but when the movements stop, all points are displayed (optimized during movements, accurate when it stops)

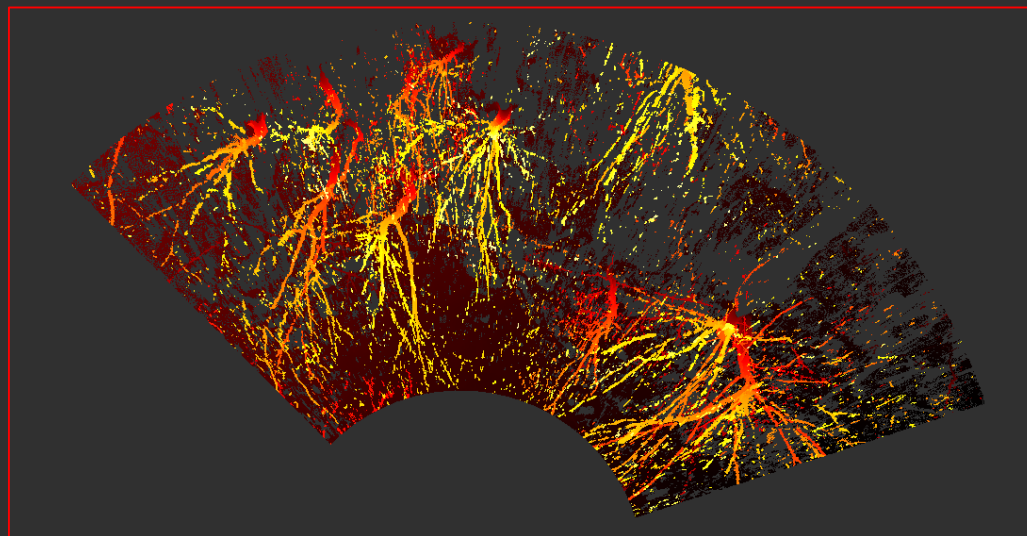


The screenshot displays three panels from a 3D software interface:

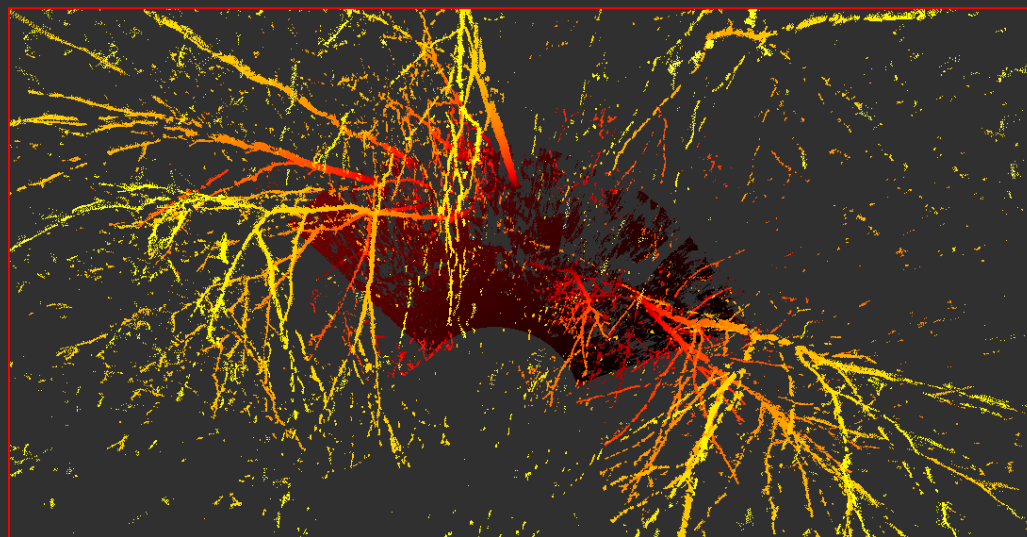
- Step manager:** Shows a workflow with steps:
  - 4 - Points, Fichier XYB ( sample\_cloud.xyb )
  - Result
  - 5 - Segment scene in horizontal slices
  - Sliced scene
- Model manager:** Shows a dropdown menu set to "Result (4)". Below it is a table:
 

Name	1	Type
Result		
Group	<input type="checkbox"/>	Std group
Scène	<input type="checkbox"/>	Point scene
Intensité	<input type="checkbox"/>	Point quint16 attributes
Scanner	<input type="checkbox"/>	Scan position
File header	<input type="checkbox"/>	XYB Header
- Item configurator:** Shows a dropdown menu set to "No element in 3D view". Below it is a large empty rectangular area. At the bottom, there is an "Apply" button and a checked "Auto" checkbox.

The 11<sup>th</sup> button allows to define the projection mode:




- Orthographic (GIS mode)



## - Perspective

**Actions**

Information	
<input type="checkbox"/>	Item information
Selection	
<input checked="" type="checkbox"/> 	Sélection

**Actions**      Synchronization of views

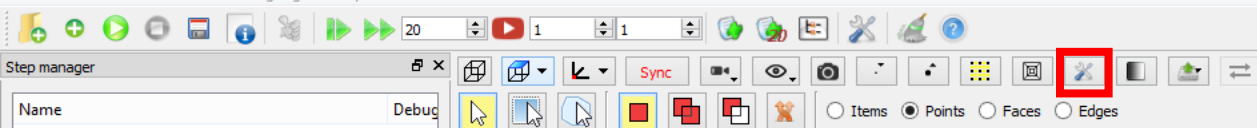
---

**Log**

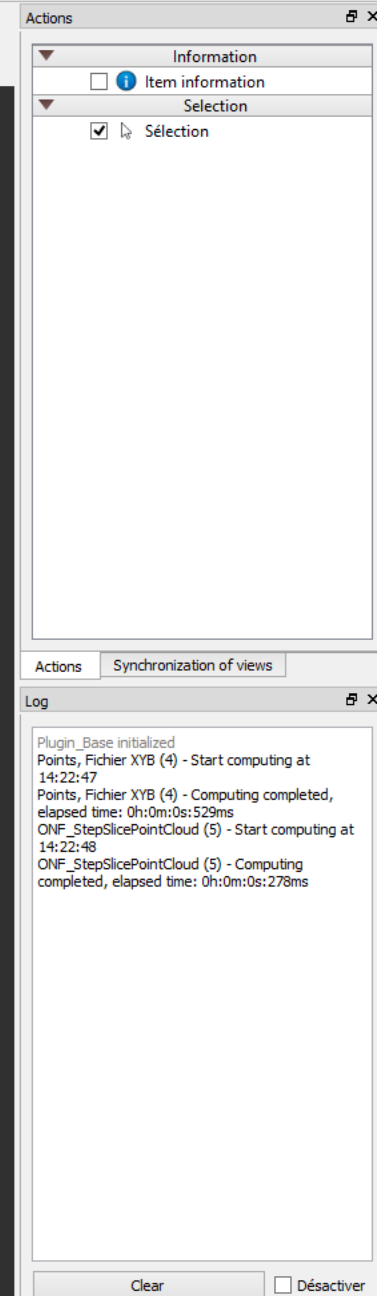
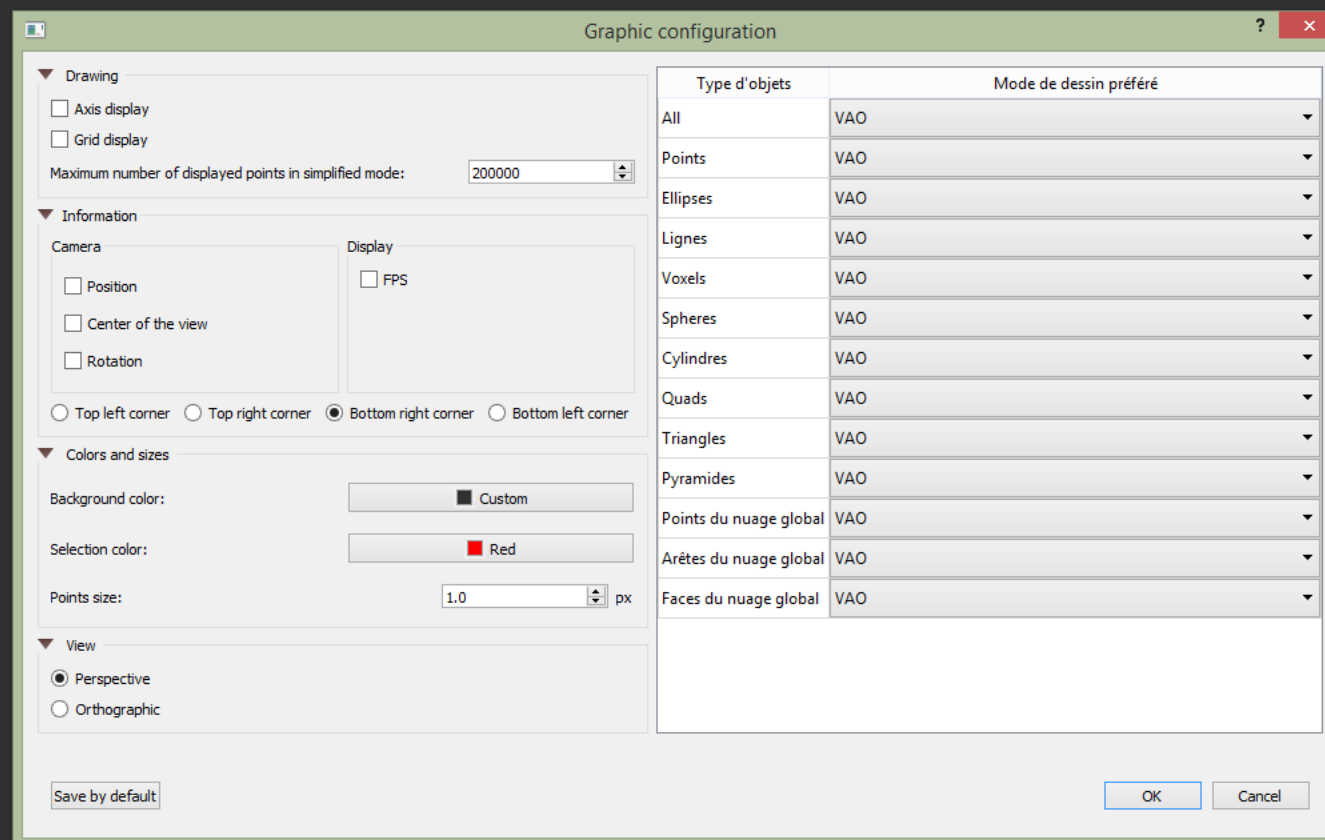
```

Plugin_Base initialized
Points, Fichier XYB (4) - Start computing at
14:22:47
Points, Fichier XYB (4) - Computing completed,
elapsed time: 0h:0m:0s:529ms
ONF_StepSlicePointCloud (5) - Start computing at
14:22:48
ONF_StepSlicePointCloud (5) - Computing
completed, elapsed time: 0h:0m:0s:278ms
    
```

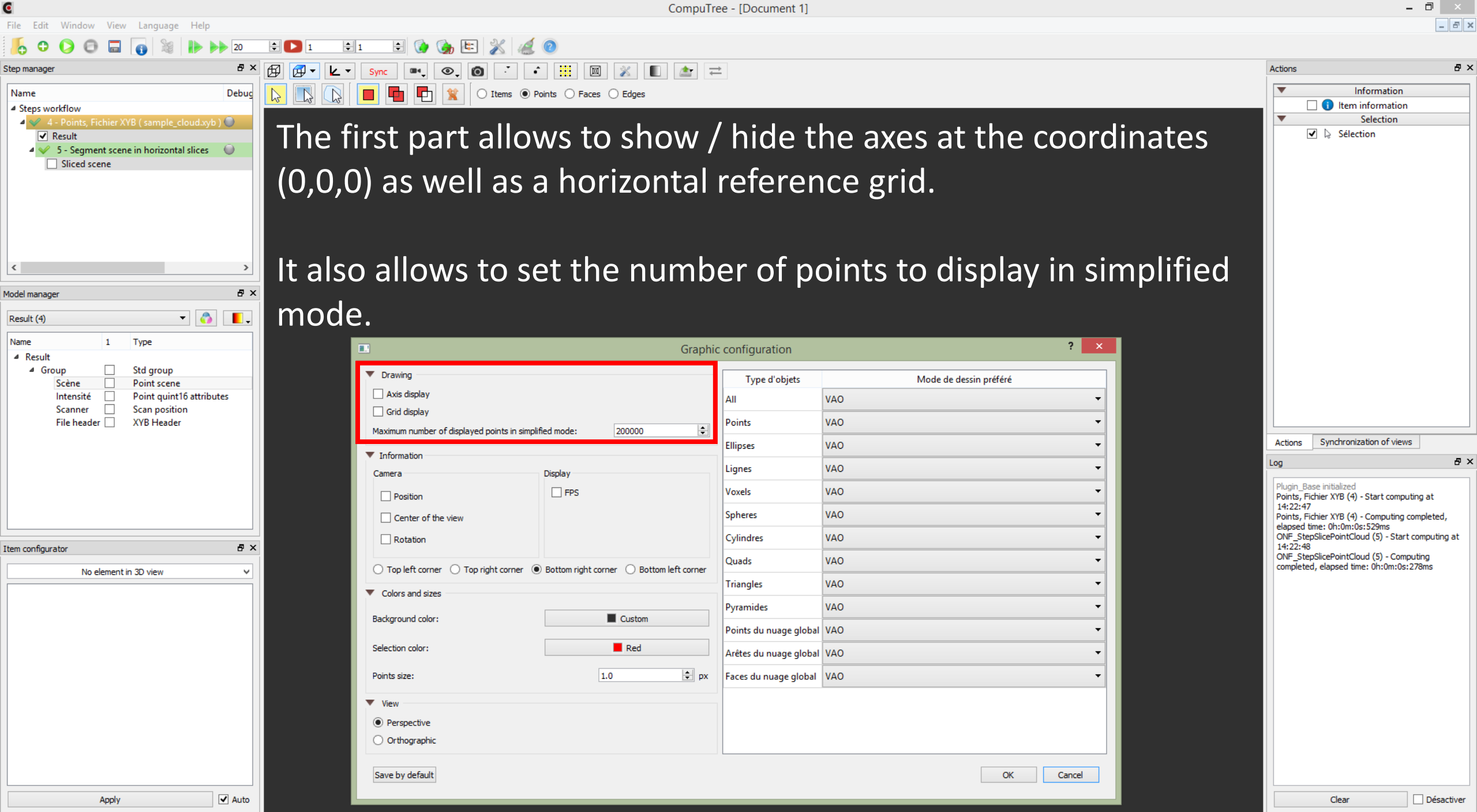
Clear      ☐ Désactiver



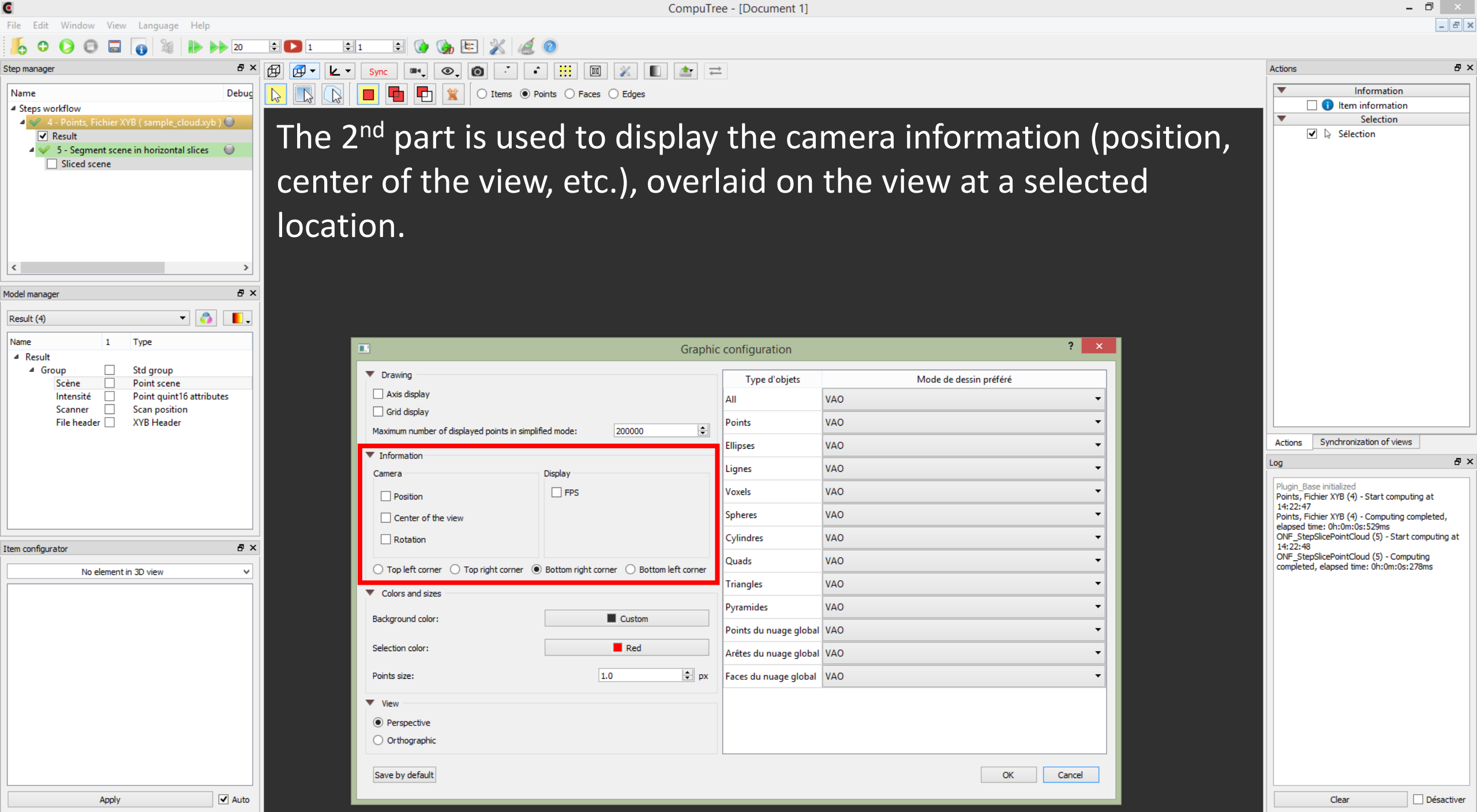
The 12<sup>th</sup> button opens the advanced graphics settings dialog box:

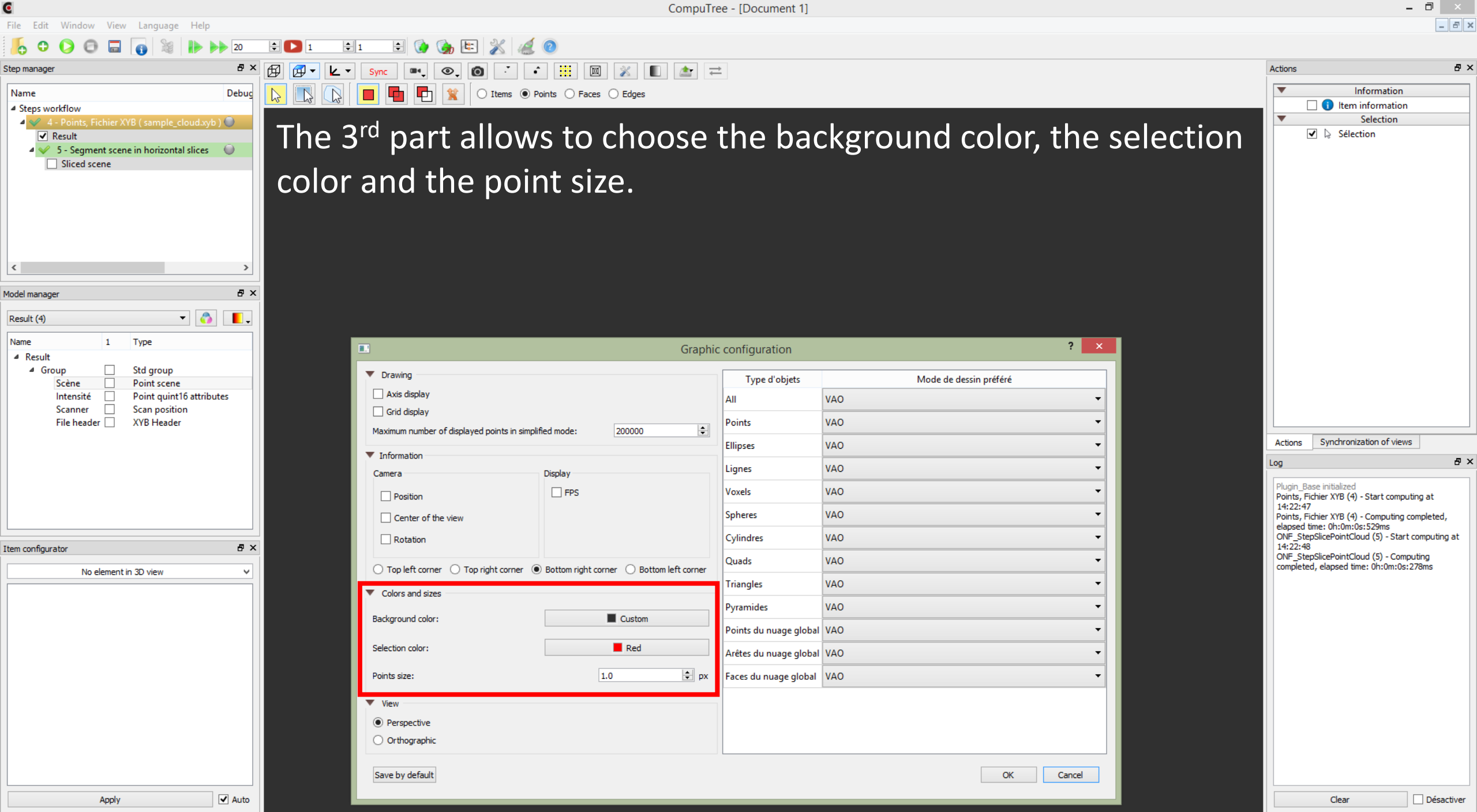


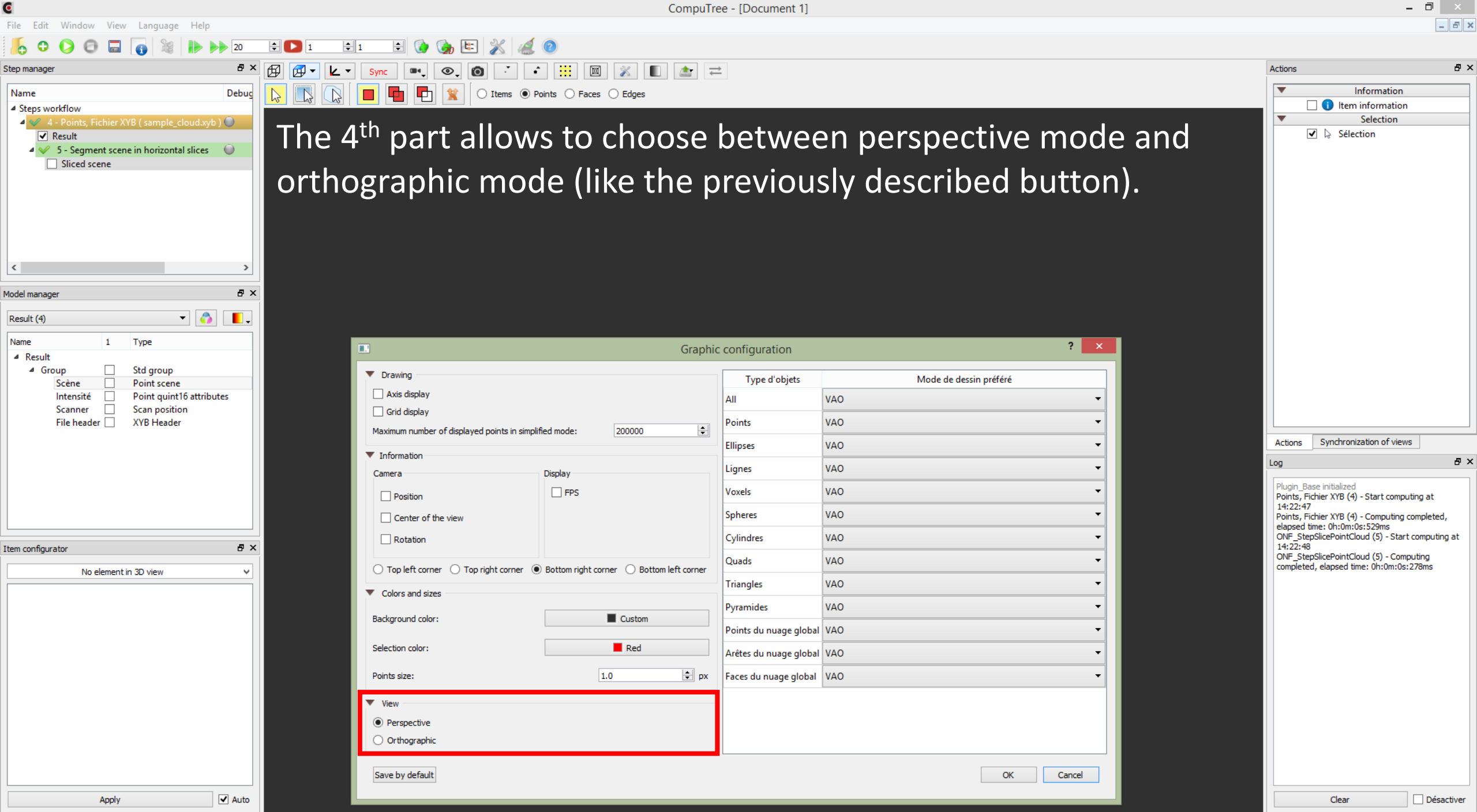


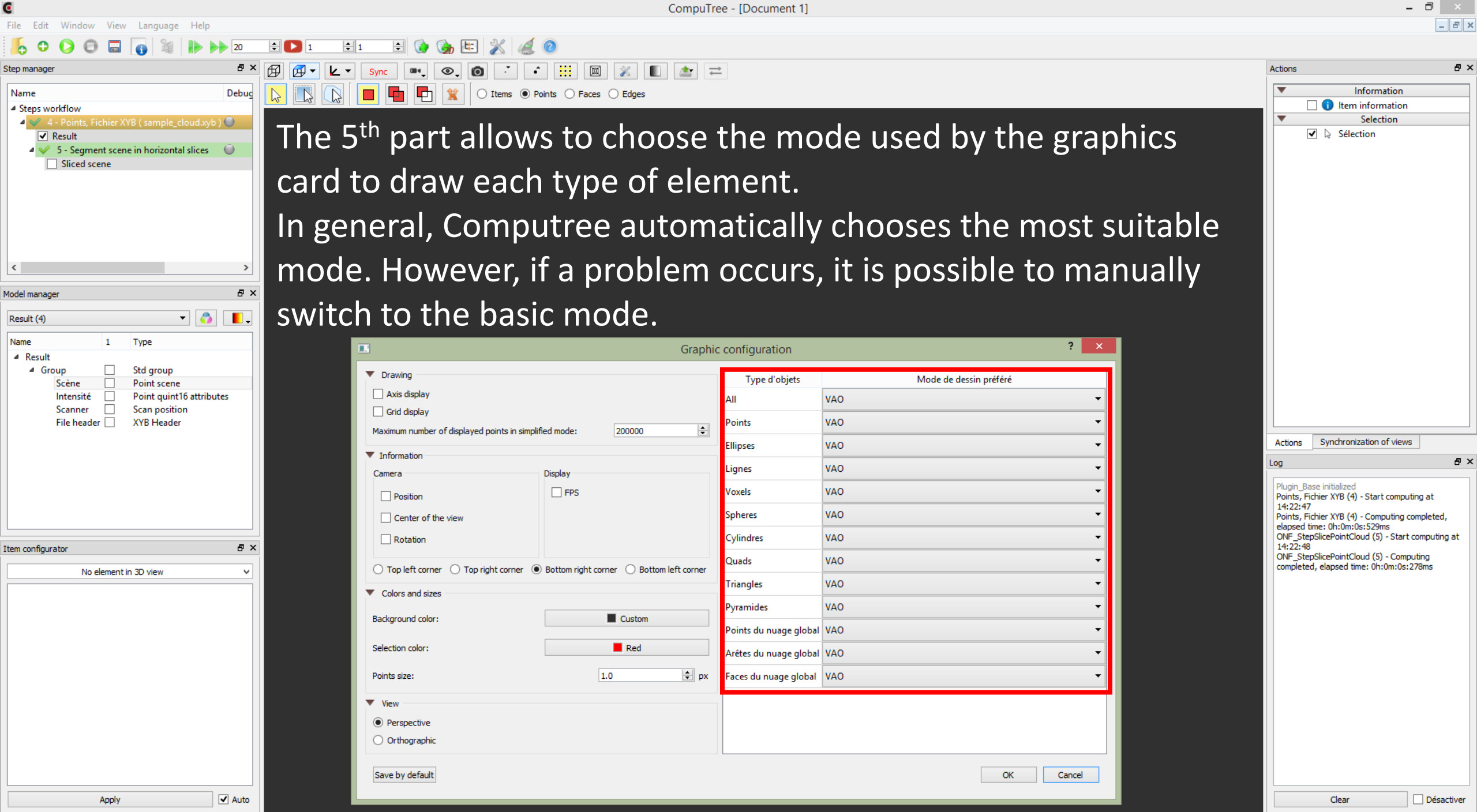


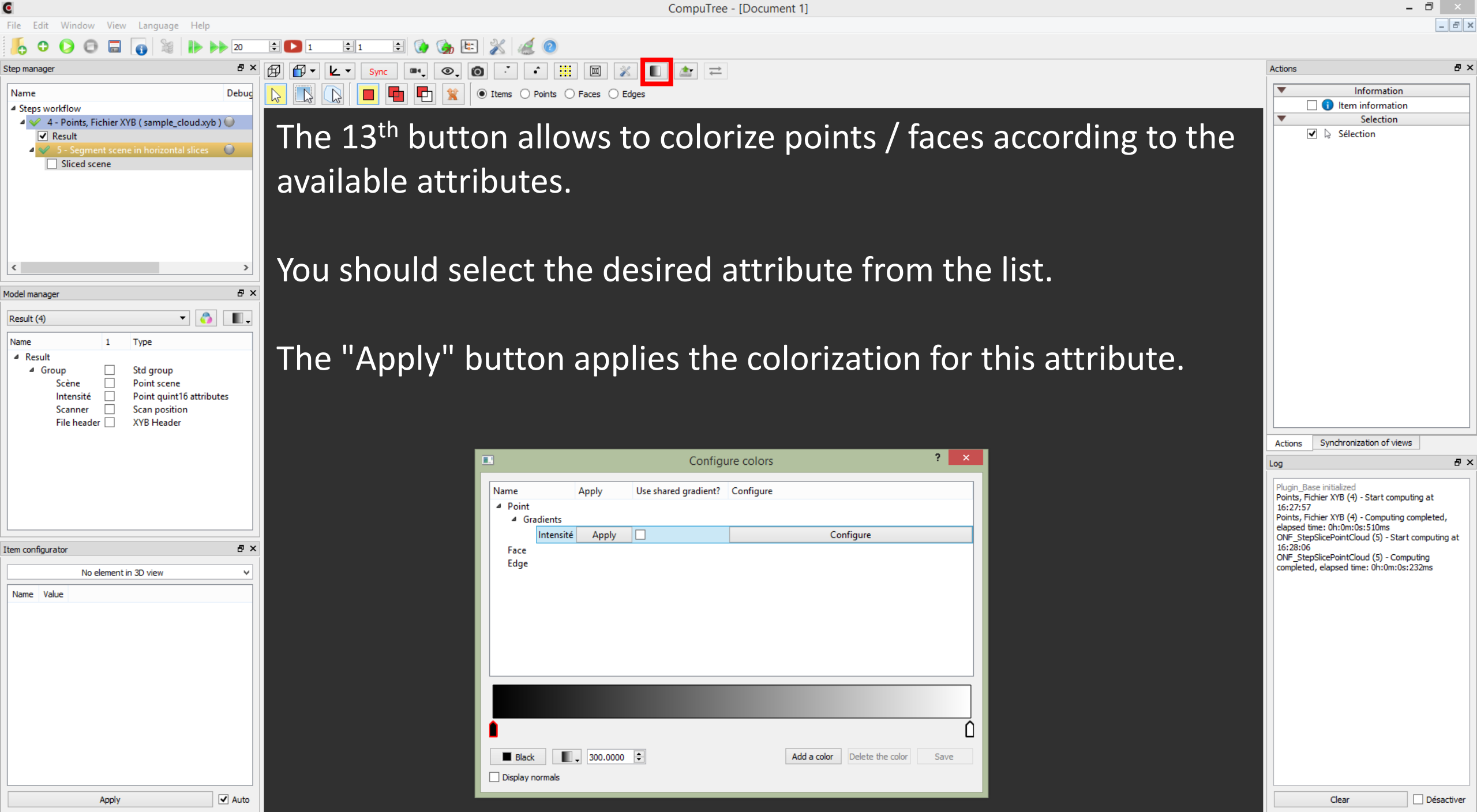












Step manager

Name Debug

Steps workflow

- 4 - Points, Fichier XYB ( sample\_cloud.xyb )
  - Result
- 5 - Segment scene in horizontal slices
  - Sliced scene

Model manager

Result (4)

Name 1 Type

Result

- Group ☐ Std group
- Scène ☐ Point scene
- Intensité ☐ Point quint16 attributes
- Scanner ☐ Scan position
- File header ☐ XYB Header

Item configurator

No element in 3D view

Name Value

Apply ☒ Auto

The configure button is used to limit the value range on which the gradient is mapped

Configure colors

Name Apply Use shared gradient? Configure

Point

- Gradients
  - Intensité ☐ ☒
- Face
- Edge

Configuration

Minimum 300.000000

Maximum 1835.000000

☒ Automatically adjust

Black

☐ Display normals

Actions

Information

- ☐ Item information
- Selection
  - ☒ Sélection

Actions Synchronization of views

Log

Plugin\_Base initialized

Points, Fichier XYB (4) - Start computing at 16:27:57

Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:510ms

ONF\_StepSlicePointCloud (5) - Start computing at 16:28:06

ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:232ms

Clear ☐ Désactiver

CompuTree - [Document 1]

File Edit Window View Language Help

Step manager

Name Debug

Steps workflow

- 4 - Points, Fichier XYB ( sample\_cloud.xyb )
  - Result
- 5 - Segment scene in horizontal slices
  - Sliced scene

Model manager

Result (4)

Name 1 Type

- Result
  - Group
    - Scène
    - Intensité
    - Scanner
    - File header

Item configurator

No element in 3D view

Name Value

Apply Auto

Actions

Information

- Item information
- Selection
  - Sélection

Synchronization of views

Log

Plugin\_Base initialized  
Points, Fichier XYB (4) - Start computing at 16:27:57  
Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:510ms  
ONF\_StepSlicePointCloud (5) - Start computing at 16:28:06  
ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:232ms

Clear Désactiver

The lower part allows to choose / modify the used gradient:

- A button allows to choose an existing gradient
- It is possible to add a color: «Add a color»
- It is possible to delete a color: "Delete the color"
- By selecting one of the color markers, one can:
  - Change color (colored button)
  - Specify the attribute value for this marker position

Color marker

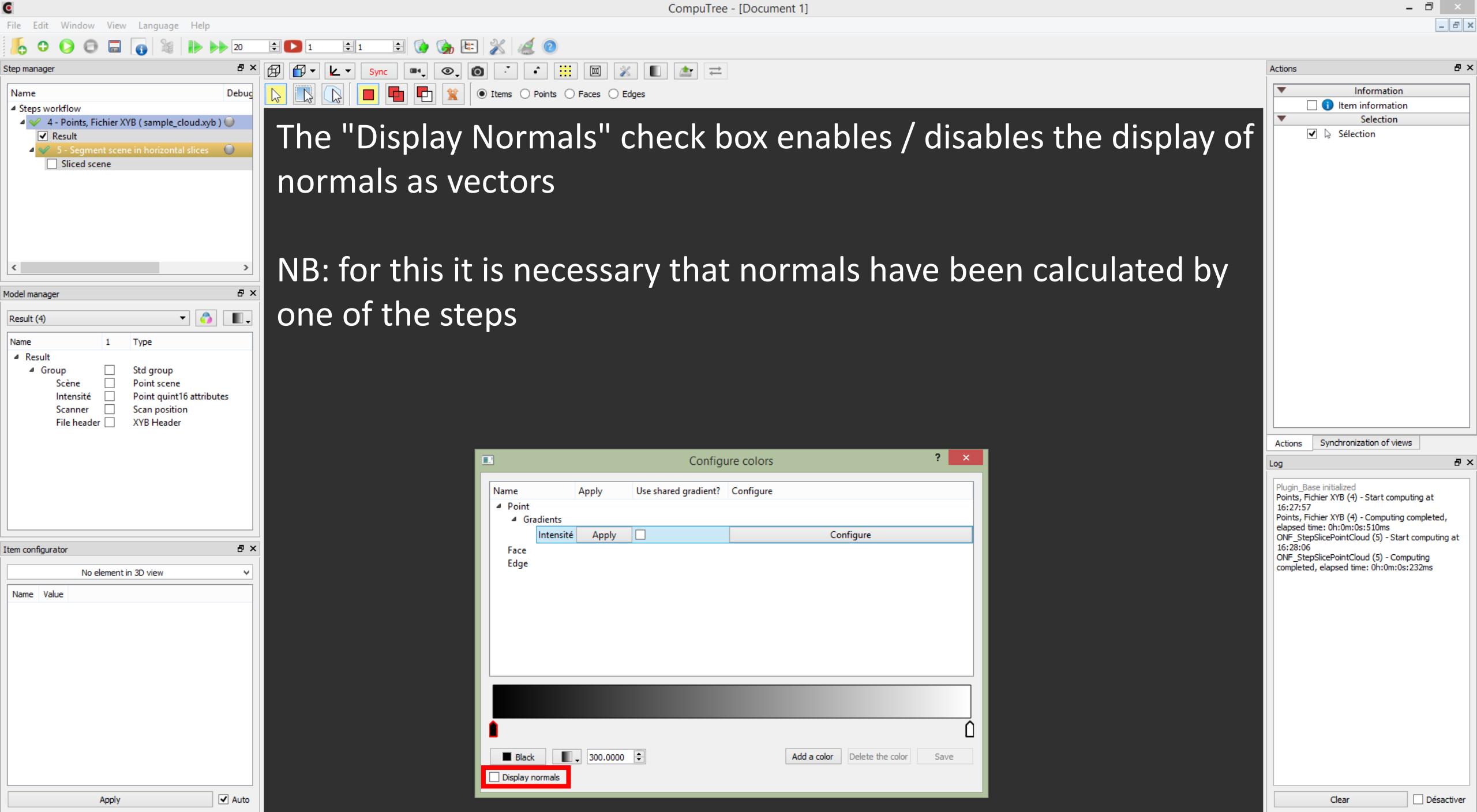
Configure colors

Name Apply Use shared gradient? Configure

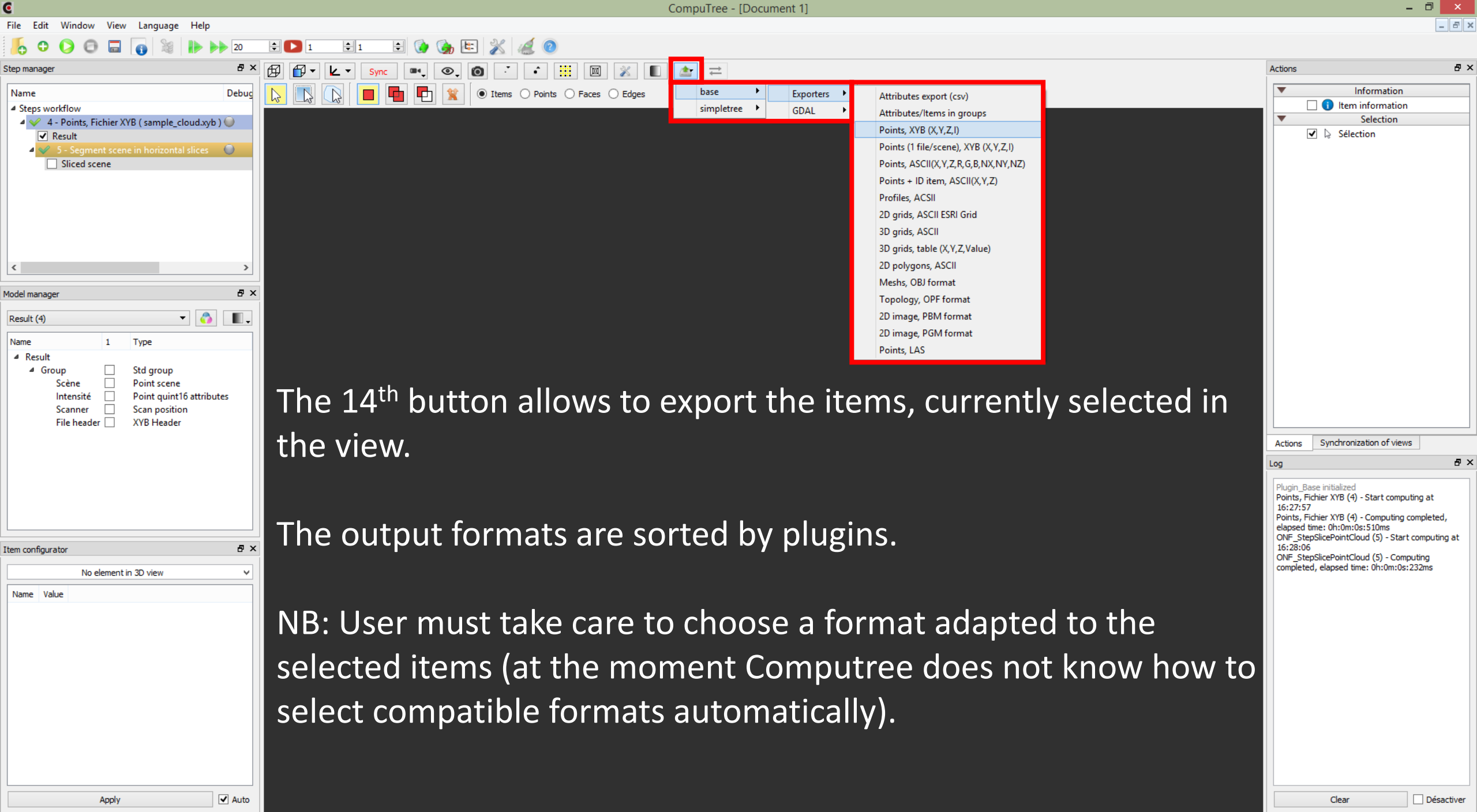
- Point
  - Gradients
    - Intensité Apply ☐ Configure
- Face
- Edge

Black 300.0000 Add a color Delete the color Save

Display normals



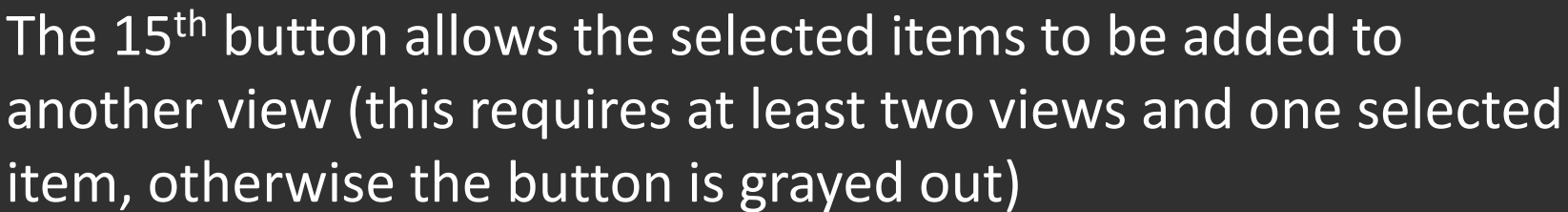


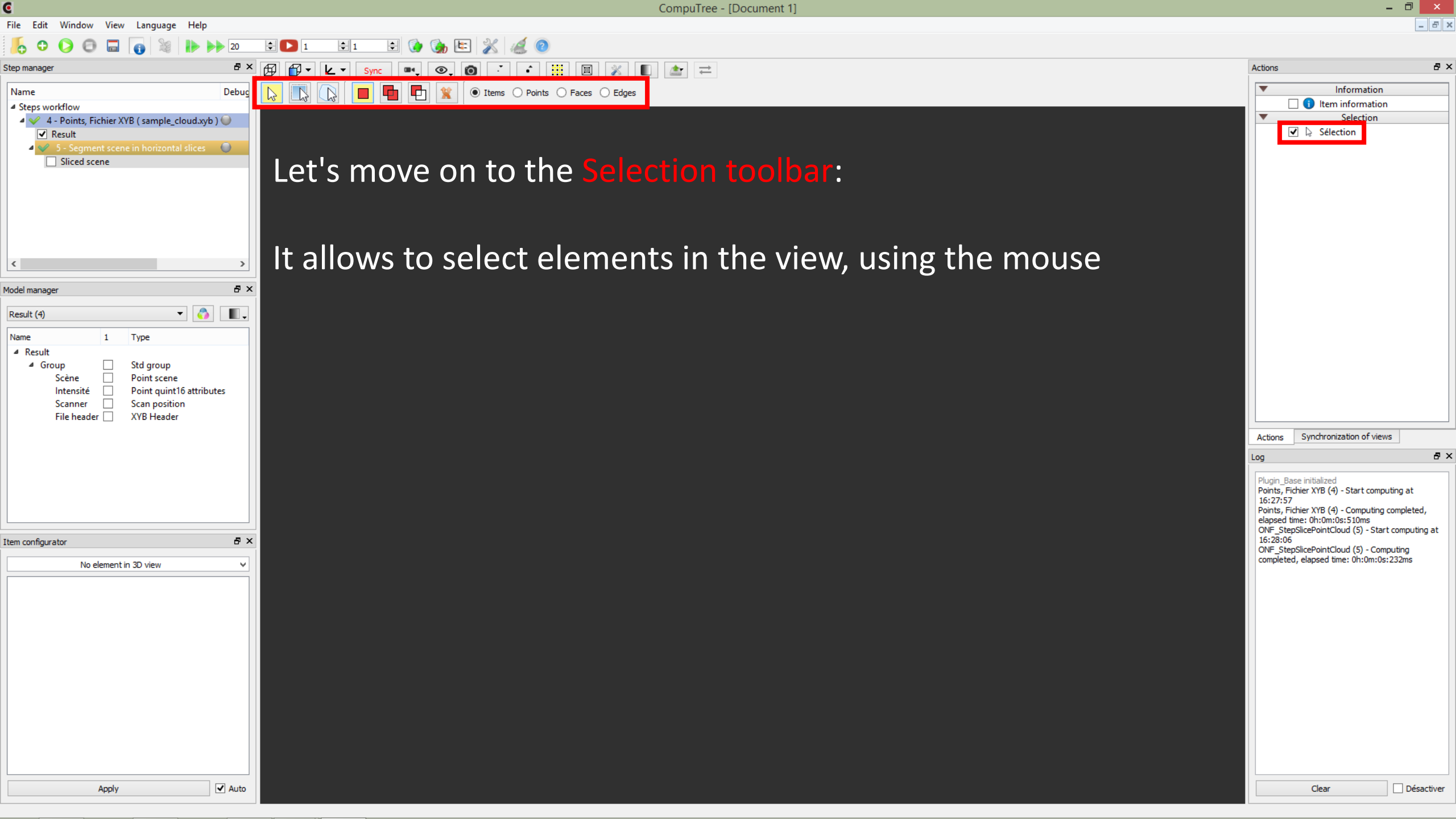


The 14<sup>th</sup> button allows to export the items, currently selected in the view.

The output formats are sorted by plugins.

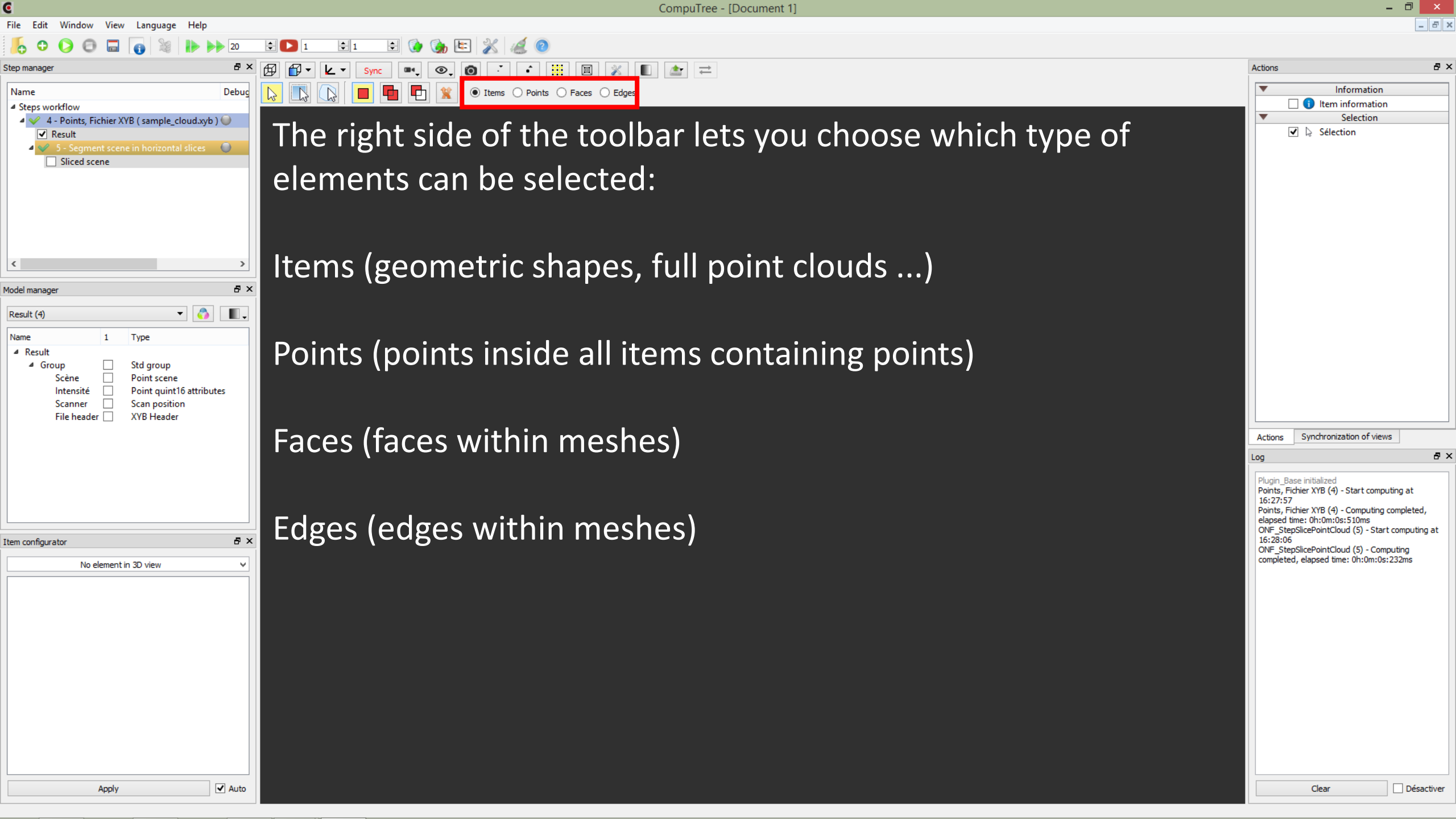
NB: User must take care to choose a format adapted to the selected items (at the moment Computree does not know how to select compatible formats automatically).





Let's move on to the **Selection toolbar**:

It allows to select elements in the view, using the mouse



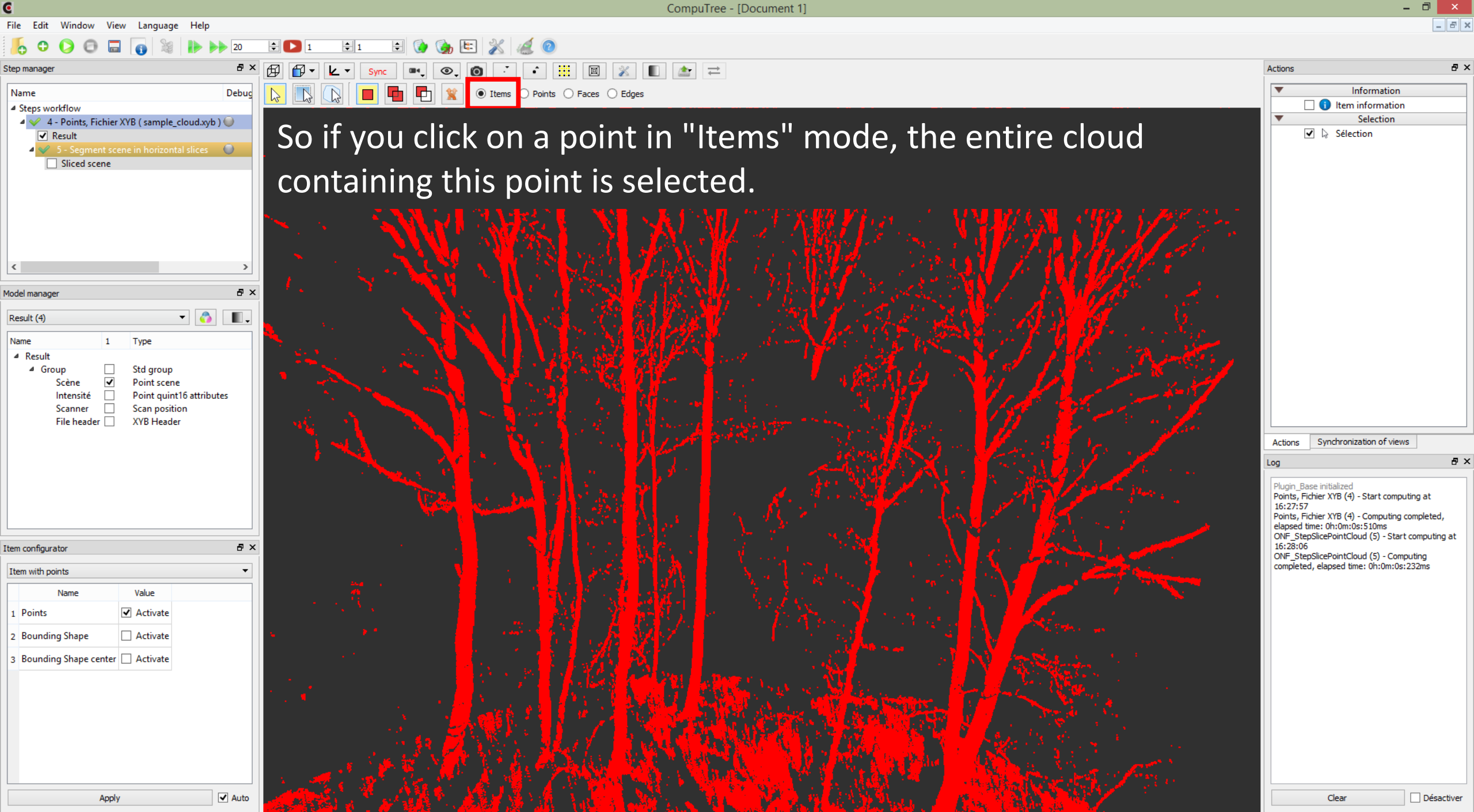
The right side of the toolbar lets you choose which type of elements can be selected:

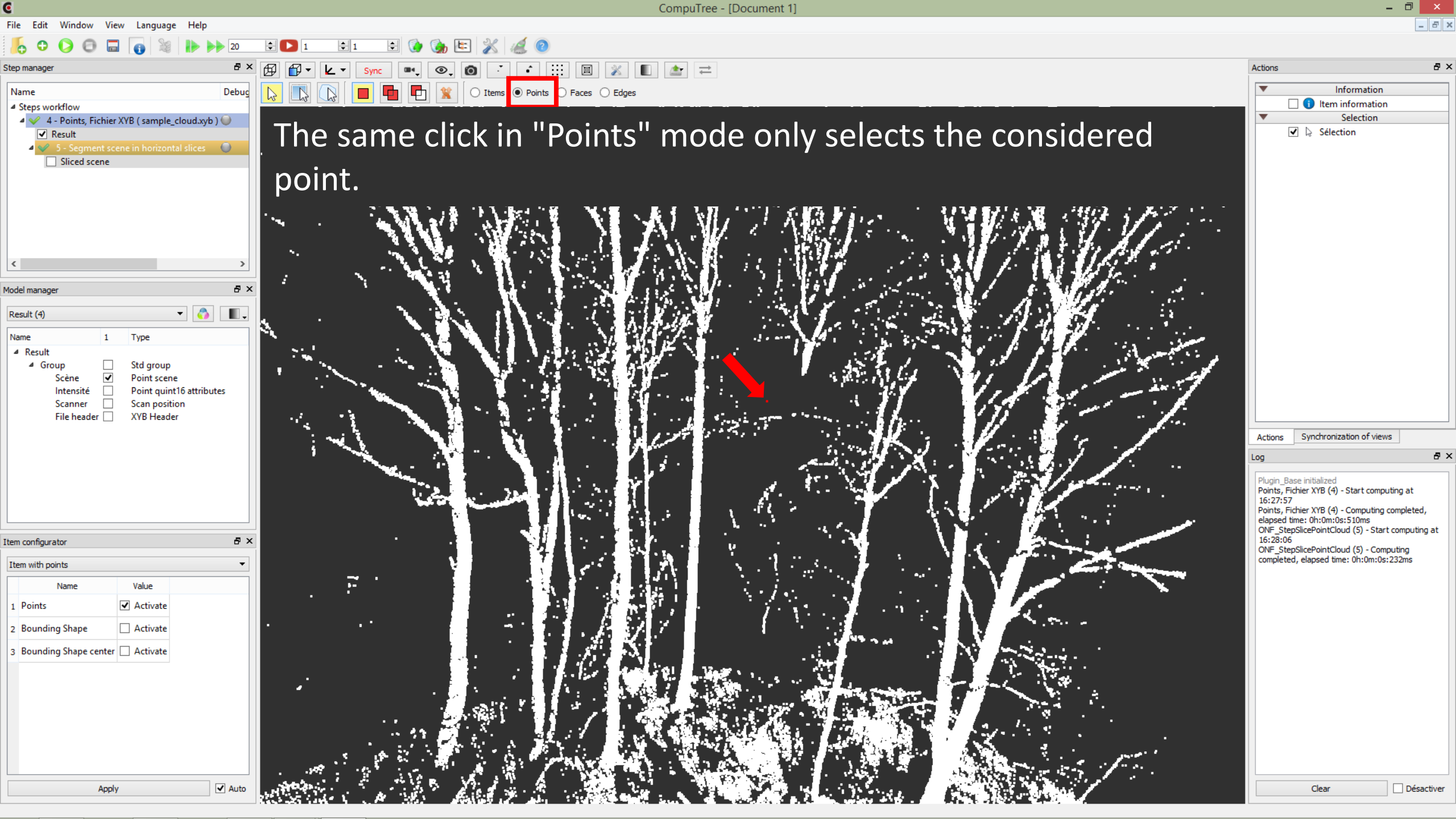
Items (geometric shapes, full point clouds ...)

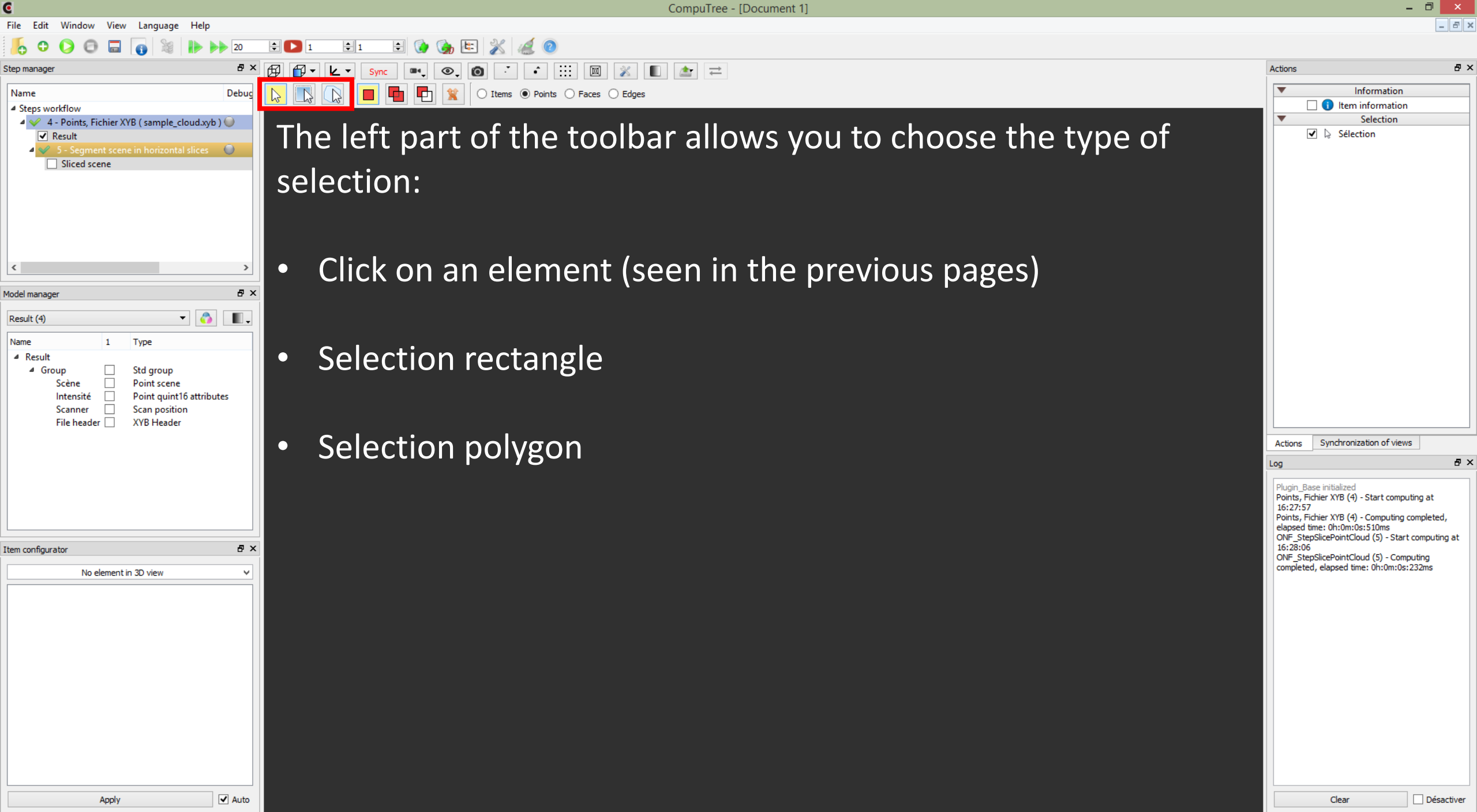
Points (points inside all items containing points)

Faces (faces within meshes)

Edges (edges within meshes)









CompuTree - [Document 1]

File Edit Window View Language Help

Step manager

Name Debug

Steps workflow

- 4 - Points, Fichier XYZ ( sample\_cloud.xyz )
  - Result
- 5 - Segment scene in horizontal slices
  - Sliced scene

Model manager

Result (4)

Name	1	Type
Result		
Group	<input type="checkbox"/>	Std group
Scène	<input checked="" type="checkbox"/>	Point scene
Intensité	<input type="checkbox"/>	Point quint16 attributes
Scanner	<input type="checkbox"/>	Scan position
File header	<input type="checkbox"/>	XYZ Header

Item configurator

Item with points

Name	Value
1 Points	<input checked="" type="checkbox"/> Activate
2 Bounding Shape	<input type="checkbox"/> Activate
3 Bounding Shape center	<input type="checkbox"/> Activate

Apply ☒ Auto

Selection rectangle mode:

- Left click to define the top left corner
- Move the mouse while holding down
- By releasing, it gives a rectangle

Actions

Information

- ☐ Item information
- ☒ Selection

Log

Plugin\_Base initialized  
Points, Fichier XYZ (4) - Start computing at 16:27:57  
Points, Fichier XYZ (4) - Computing completed, elapsed time: 0h:0m:0s:510ms  
ONF\_StepSlicePointCloud (5) - Start computing at 16:28:06  
ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:232ms

Clear ☐ Désactiver

The screenshot shows the 'Steps manager' window. It has a 'Name' field and a 'Debug' button. The workflow is expanded, showing two steps:

- Step 4: '4 - Points, Fichier XYZ ( sample\_cloud.xyz )' with a checked 'Result' checkbox.
- Step 5: '5 - Segment scene in horizontal slices' with a checked 'Result' checkbox and an unchecked 'Sliced scene' checkbox.

Below the steps manager is the 'Model manager' window, which shows the 'Result (4)' model. It has a 'Name' field, a '1' field, and a 'Type' field. The 'Result' model is expanded, showing a list of attributes:

- Group: ☐ Std group
- Scène: ☒ Point scene
- Intensité: ☐ Point quint16 attributes
- Scanner: ☐ Scan position
- File header: ☐ XYZ Header

Below the model manager is the 'Item configurator' window, which shows the 'Item with points' configuration. It has a table with columns 'Name' and 'Value'.

	Name	Value
1	Points	<input checked="" type="checkbox"/> Activate
2	Bounding Shape	<input type="checkbox"/> Activate
3	Bounding Shape center	<input type="checkbox"/> Activate

At the bottom of the 'Item configurator' window, there is an 'Apply' button and an 'Auto' checkbox which is checked.


This rectangle can be moved (left click maintained) or resized (with corners).

The "ENTER" key selects the points of the rectangle:




Actions

Information

☐  Item information

Selection

☒  Sélection

ActionsSynchronization of views

Log

Plugin\_Base initialized  
Points, Fichier XYB (4) - Start computing at 16:27:57  
Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:510ms  
ONF\_StepSlicePointCloud (5) - Start computing at 16:28:06  
ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:232ms

Clear

☐ Désactiver

The screenshot displays three panels from a 3D software interface:

- Step manager:** Shows a workflow with two steps:
  - Step 4: "4 - Points, Fichier XYZB ( sample\_cloud.xyzb )" with a checked "Result" checkbox.
  - Step 5: "5 - Segment scene in horizontal slices" with a checked "Sliced scene" checkbox.
- Model manager:** Shows a dropdown menu set to "Result (4)". Below it is a table:
 

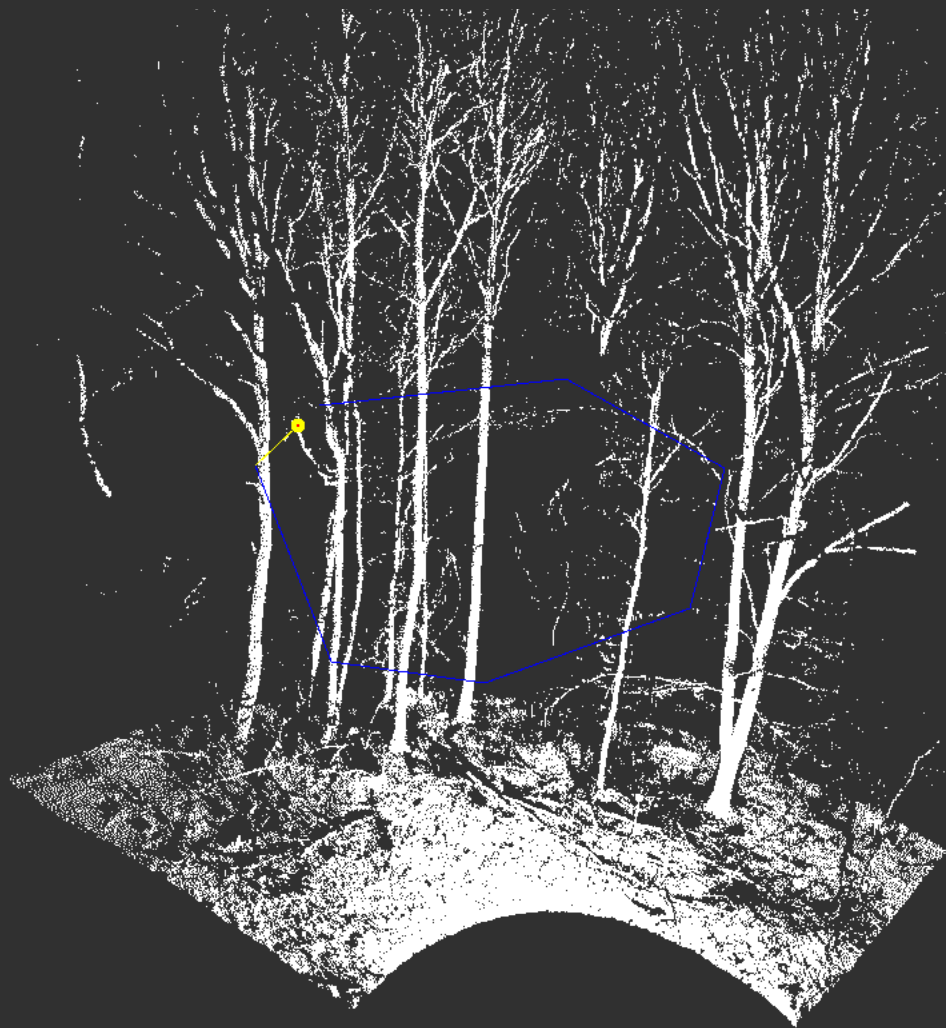
Name	1	Type
Result		
Group	<input type="checkbox"/>	Std group
Scène	<input checked="" type="checkbox"/>	Point scene
Intensité	<input type="checkbox"/>	Point quint16 attributes
Scanner	<input type="checkbox"/>	Scan position
File header	<input type="checkbox"/>	XYZB Header
- Item configurator:** Shows a dropdown menu set to "Item with points". Below it is a table:
 

	Name	Value
1	Points	<input checked="" type="checkbox"/> Activate
2	Bounding Shape	<input type="checkbox"/> Activate
3	Bounding Shape center	<input type="checkbox"/> Activate

At the bottom of the Item configurator panel, there is an "Apply" button and a checked "Auto" checkbox.


In polygon selection mode:

1. Left click to define each vertex of the polygon




Actions

Information

☐  Item information

Selection

☒  Sélection

Actions

Synchronization of views

Log

Plugin\_Base initialized  
Points, Fichier XYB (4) - Start computing at 16:27:57  
Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:510ms  
ONF\_StepSlicePointCloud (5) - Start computing at 16:28:06  
ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:232ms

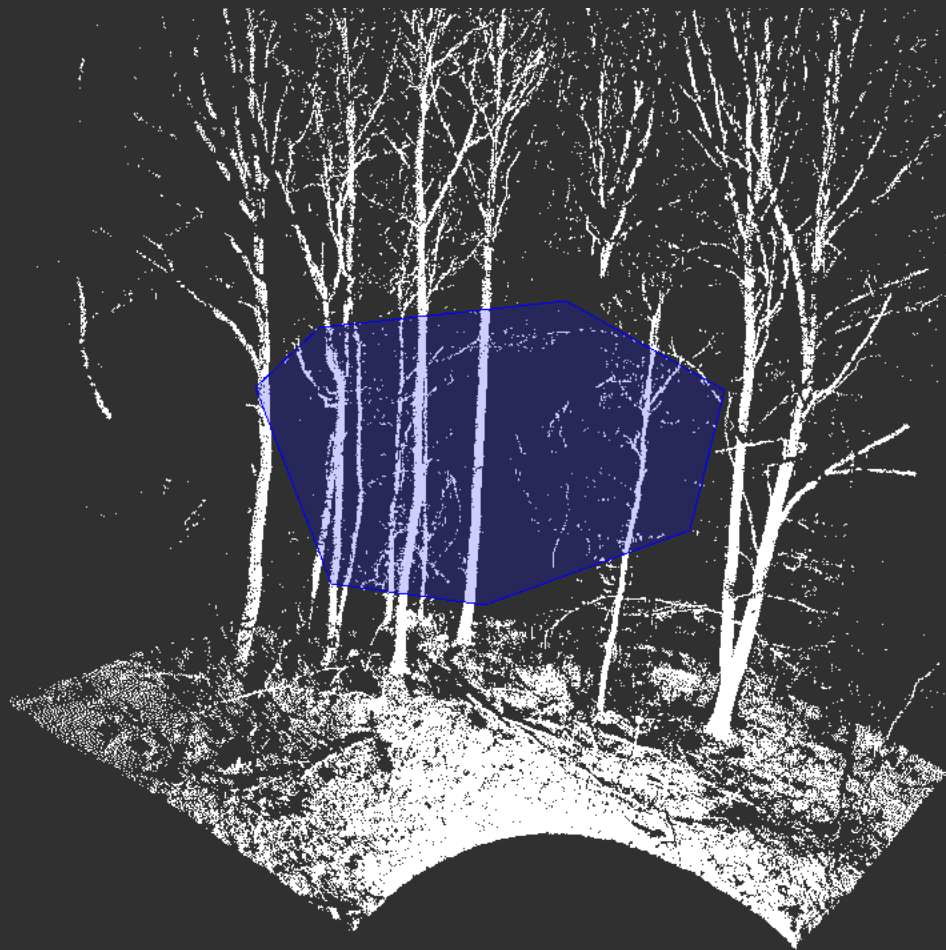
Clear ☐ Désactiver

The screenshot displays three panels from a 3D software interface:

- Steps manager:** Shows a workflow with two steps:
  - Step 4: "4 - Points, Fichier XYZ ( sample\_cloud.xyz )" with a "Result" sub-step checked.
  - Step 5: "5 - Segment scene in horizontal slices" with a "Sliced scene" sub-step unchecked.
- Model manager:** Displays the "Result (4)" model. It lists attributes for the "Result" group:
  - Group: Unchecked
  - Scène: Checked
  - Intensité: Unchecked
  - Scanner: Unchecked
  - File header: Unchecked
 The corresponding types are: Std group, Point scene, Point quint16 attributes, Scan position, and XYZ Header.
- Item configurator:** Shows the "Item with points" configuration. It lists three items:
  - 1 Points: Checked (Activate)
  - 2 Bounding Shape: Unchecked (Activate)
  - 3 Bounding Shape center: Unchecked (Activate)


## In polygon selection mode:

1. Left click to define each vertex of the polygon
2. We validate (ENTER) a first time to close the polygon




Actions

Information

☐  Item information

Selection

☒  Selection

Actions Synchronization of views

Log

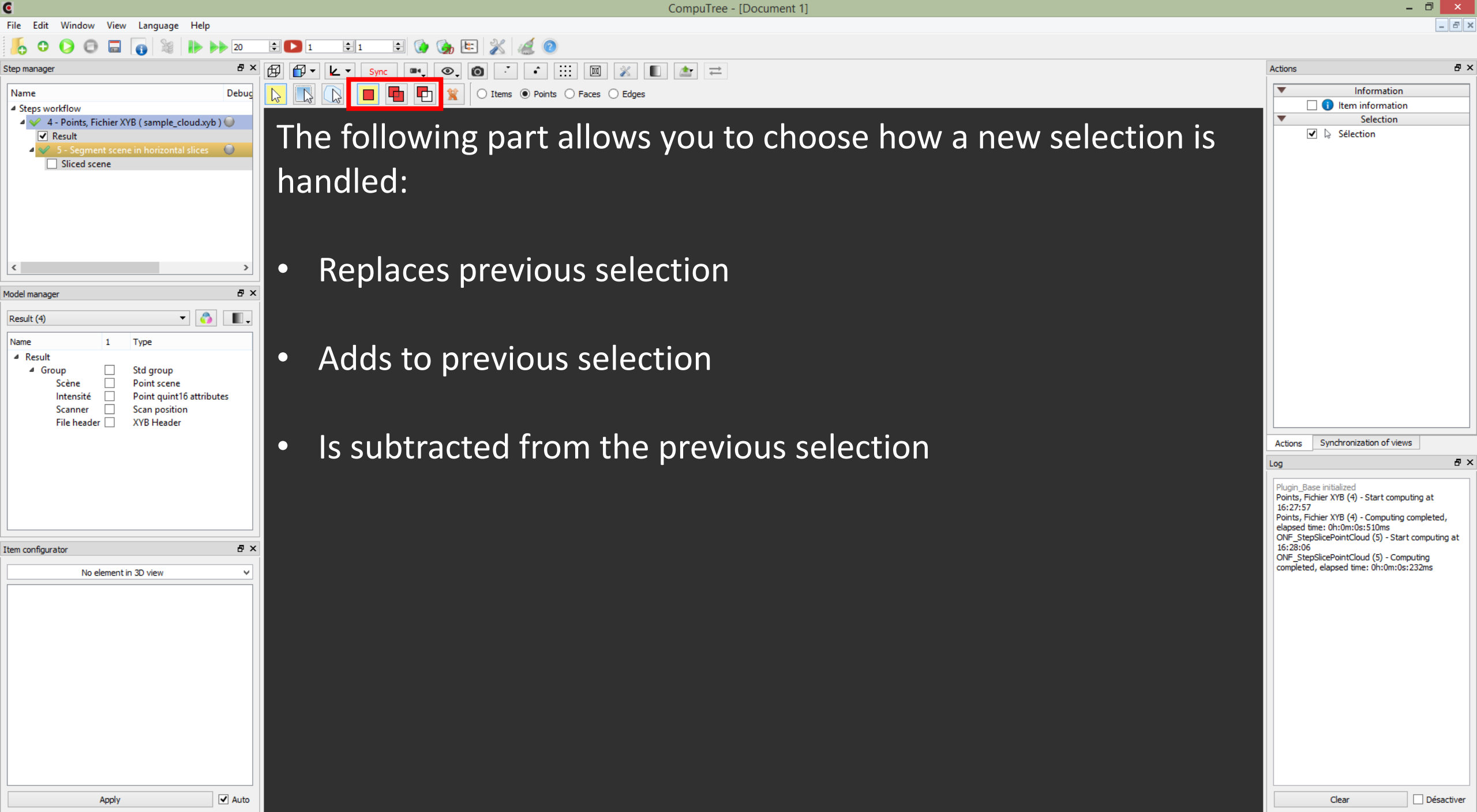
Plugin\_Base initialized  
Points, Fichier XYB (4) - Start computing at 16:27:57  
Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:510ms  
ONF\_StepSlicePointCloud (5) - Start computing at 16:28:06  
ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:232ms

Clear ☐ Désactiver

1. Left click to define each vertex of the polygon
2. We validate (ENTER) a first time to close the polygon
3. We validate (ENTER) a second time to select the points



NB: in step 2, one can move or modify the vertices of the polygon, as for rectangle selection mode



The following part allows you to choose how a new selection is handled:

- Replaces previous selection
- Adds to previous selection
- Is subtracted from the previous selection



Step manager

Name

Steps workflow

- 4 - Points, Fichier XYZ ( sample\_cloud.xyz )
  - Result
- 5 - Segment scene in horizontal slices
  - Sliced scene

Model manager

Result (4)

Name	1	Type
Result		
Group	<input type="checkbox"/>	Std group
Scène	<input checked="" type="checkbox"/>	Point scene
Intensité	<input type="checkbox"/>	Point quint16 attributes
Scanner	<input type="checkbox"/>	Scan position
File header	<input type="checkbox"/>	XYZ Header

Item configurator

Item with points


Name	Value
1 Points	<input checked="" type="checkbox"/> Activate
2 Bounding Shape	<input type="checkbox"/> Activate
3 Bounding Shape center	<input type="checkbox"/> Activate

Apply ☒ Auto

Sync

Items Points Faces Edges

This button is used to invert the selection



Actions

Information

- ☐ Item information
- ☒ Selection

Actions Synchronization of views

Log

Plugin\_Base initialized

Points, Fichier XYZ (4) - Start computing at 16:27:57

Points, Fichier XYZ (4) - Computing completed, elapsed time: 0h:0m:0s:510ms

ONF\_StepSlicePointCloud (5) - Start computing at 16:28:06

ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:232ms

Clear ☐ Désactiver



Step manager

Name

Steps workflow

- 4 - Points, Fichier XYB ( sample\_cloud.xyb )
  - Result
- 5 - Segment scene in horizontal slices
  - Sliced scene

Model manager

Result (4)

Name	1	Type
Result		
Group	<input type="checkbox"/>	Std group
Scène	<input checked="" type="checkbox"/>	Point scene
Intensité	<input type="checkbox"/>	Point quint16 attributes
Scanner	<input type="checkbox"/>	Scan position
File header	<input type="checkbox"/>	XYB Header

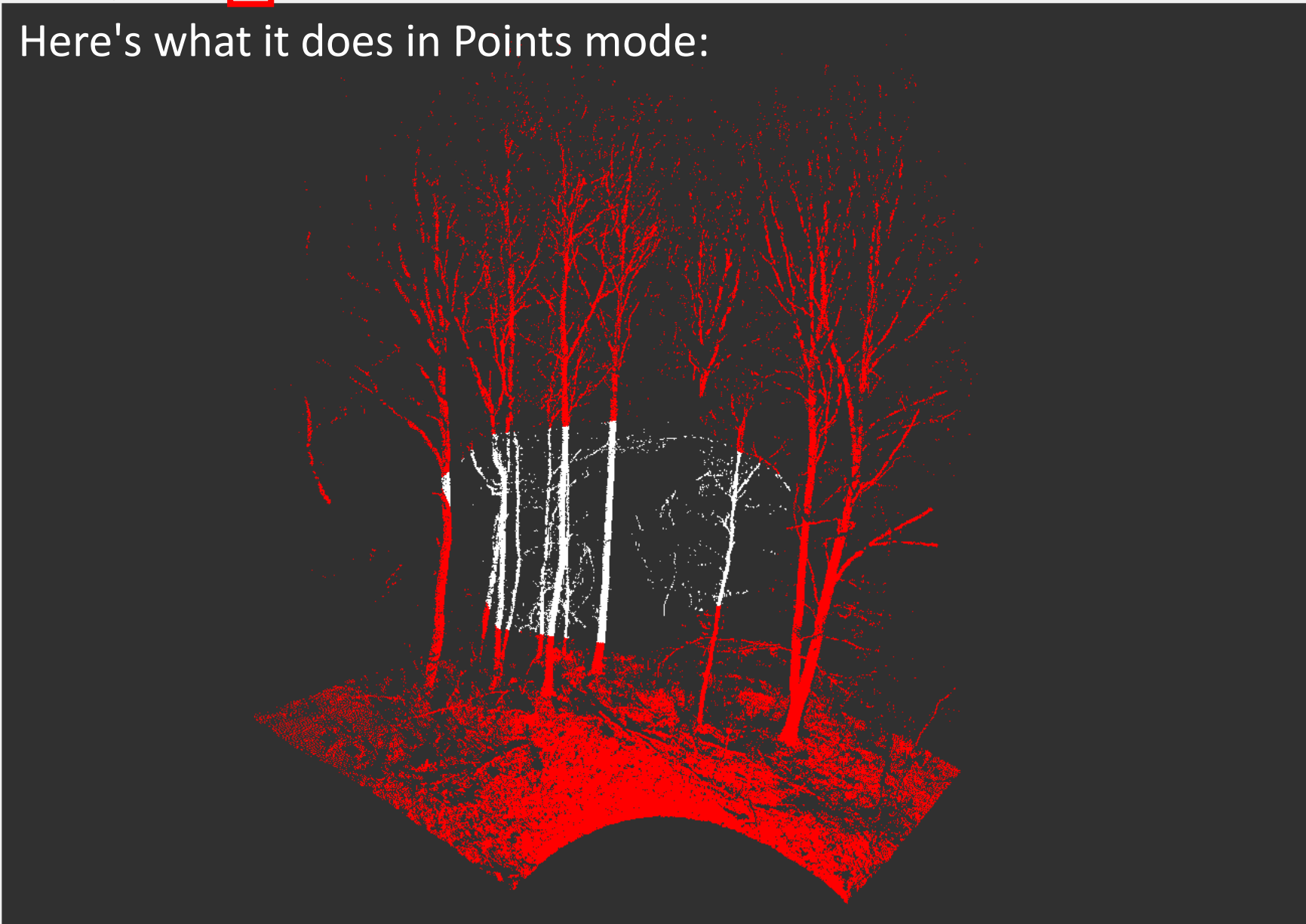
Item configurator

Item with points

Name	Value
1 Points	<input checked="" type="checkbox"/> Activate
2 Bounding Shape	<input type="checkbox"/> Activate
3 Bounding Shape center	<input type="checkbox"/> Activate

Apply ☒ Auto

Here's what it does in Points mode:



Actions

Information

- ☐ Item information

Selection

- ☒ Sélection

Actions Synchronization of views

Log

Plugin\_Base initialized

Points, Fichier XYB (4) - Start computing at 16:27:57

Points, Fichier XYB (4) - Computing completed, elapsed time: 0h:0m:0s:510ms

ONF\_StepSlicePointCloud (5) - Start computing at 16:28:06

ONF\_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:232ms

Clear ☐ Désactiver