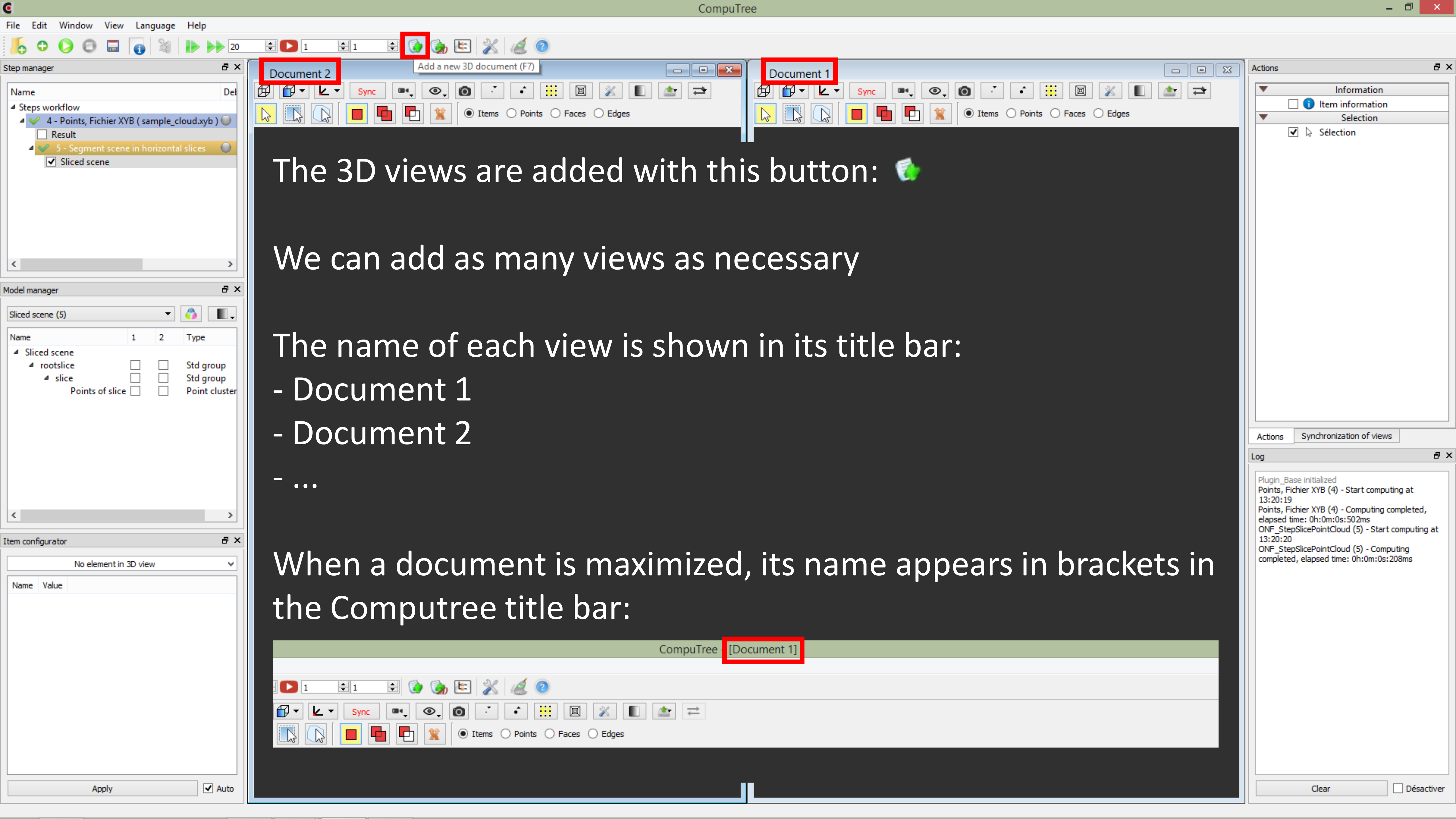
Tutorial CT02
EN

Using 3D views,
Selection Toolbar

Alexandre Piboule, 19/07/2018, Computree v5.0.169

http://rdinnovation.onf.fr/computree


CompuTree
File
Edit
Window
View
Language
Help
20
1
1
Add a new 3D document (F7)
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
2
Type
Sliced scene
rootslice
Std group
slice
Std group
Points of slice
Point cluster
Item configurator
No element in 3D view
Name
Value
Apply
☑ Auto
Document 2
Document 1
Sync
● Items
○ Points
○ Faces
○ Edges
Actions
Information
☐ Item information
Selection
☑ Sélection
Actions
Synchronization of views
Log
Clear
☐ Désactiver

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:

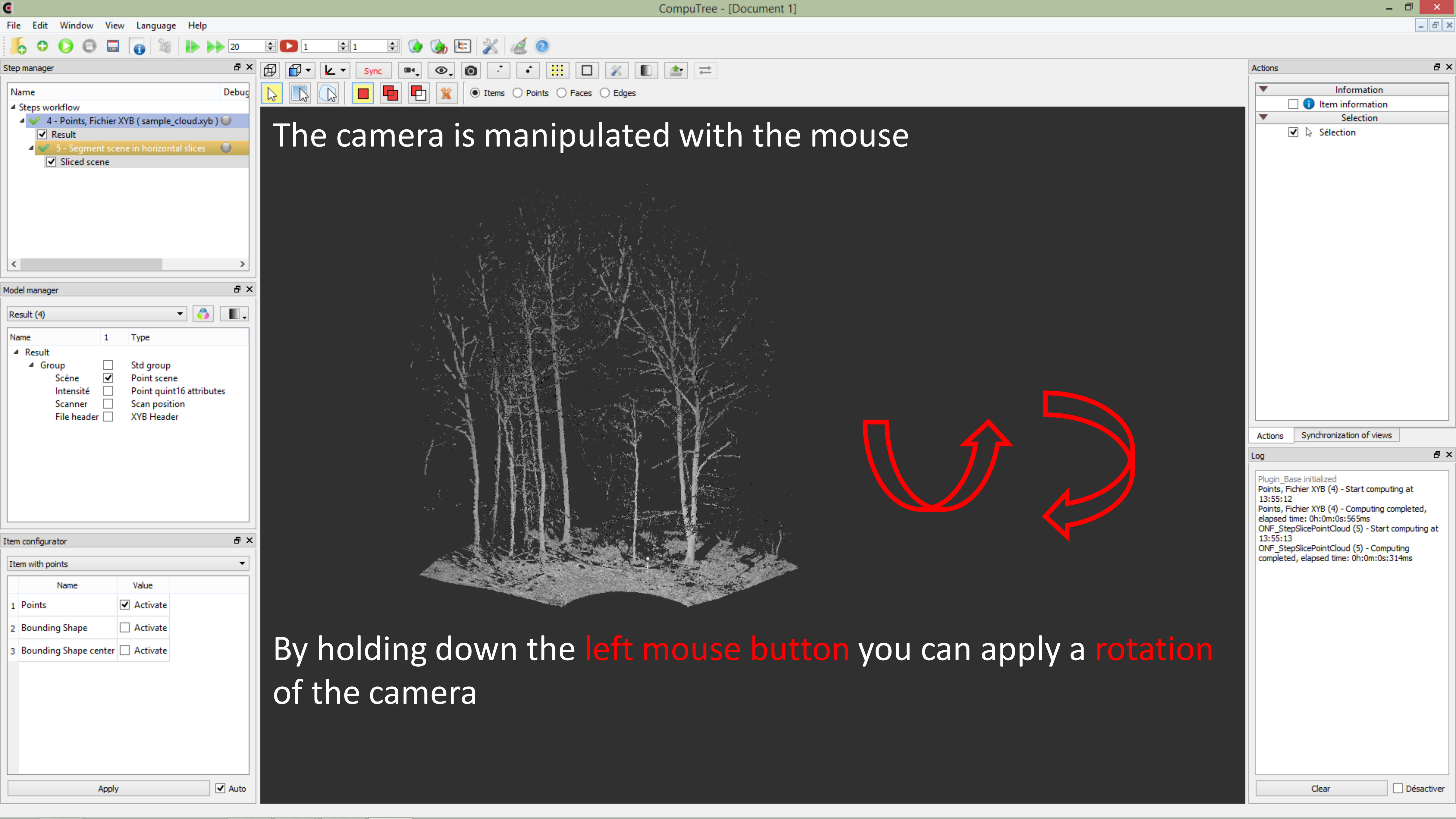
- Document 1
- Document 2
- ...

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

CompuTree - [Document 1]
1
1
Sync
● Items
○ Points
○ Faces
○ Edges

```
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
```

The camera is manipulated with the mouse


CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
20
1
1
Sync
Items
Points
Faces
Edges
Step manager
Name
Debug
Model manager
Item configurator
Actions
Information
Selection
Actions
Synchronization of views
Log
Apply
Auto
Clear
Désactiver

By holding down the **left mouse button** you can apply a **rotation** of the camera

Step manager:

- 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: Item with points

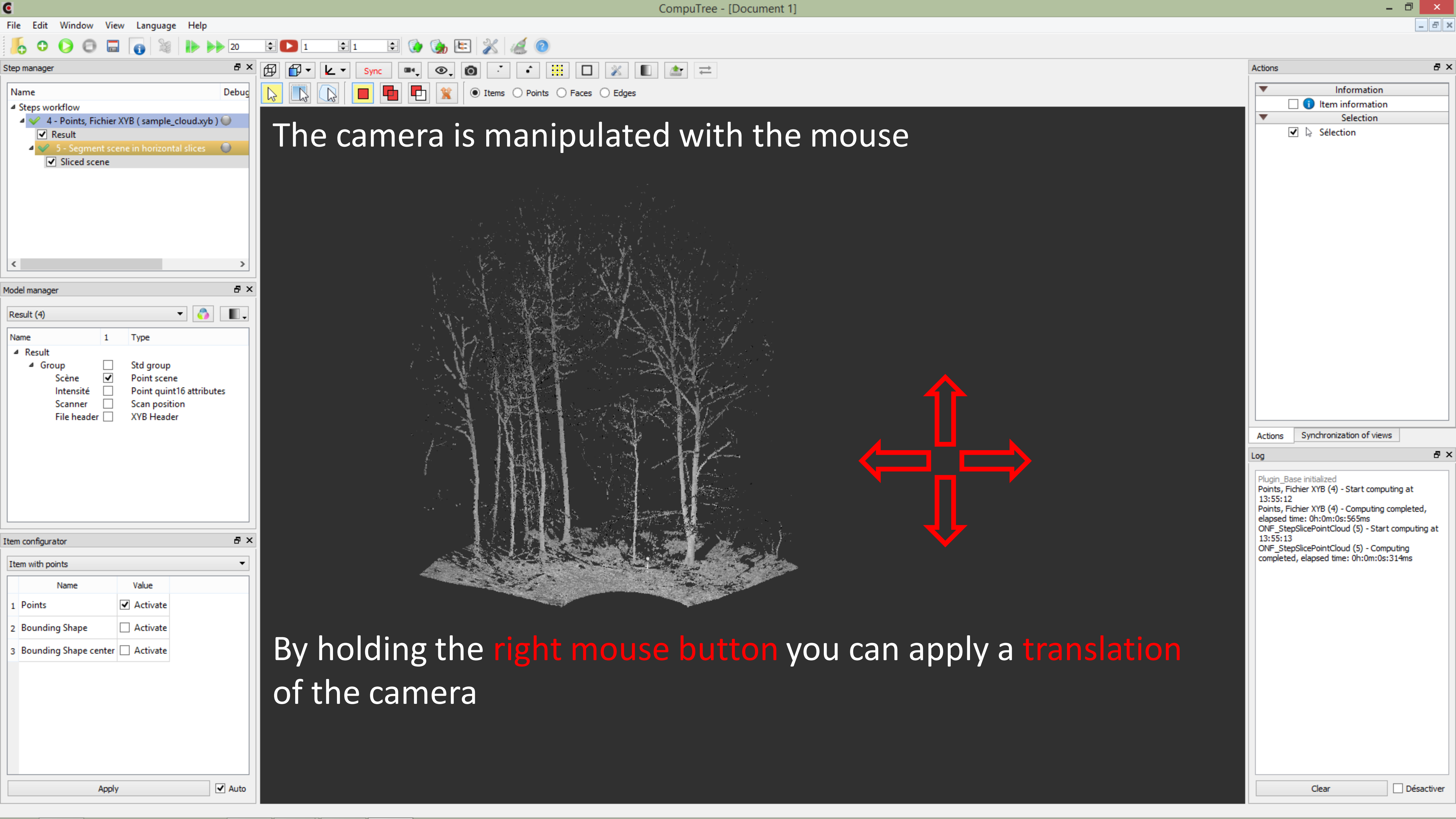
	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate

Actions:

- Information
  - ☐ Item information
- Selection
  - ☑ Sélection

```
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
```

The camera is manipulated with the mouse



By holding the right mouse button you can apply a translation of the camera

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 ☐ Std group
Scène ☑ Point scene
Intensité ☐ Point quint16 attributes
Scanner ☐ Scan position
File header ☐ XYB Header
Item configurator
Item with points
Name
Value
1 Points ☑ Activate
2 Bounding Shape ☐ Activate
3 Bounding Shape center ☐ Activate
Apply
☑ Auto
Sync
● Items
○ Points
○ Faces
○ Edges
Actions
Information
☐ Item information
Selection
☑ Sélection
Actions
Synchronization of views
Log
Clear
☐ Désactiver

```
Plugin_Base initialized
Points, Fichier XYB (4) - Start computing at
13:55:12
Points, Fichier XYB (4) - Computing completed,
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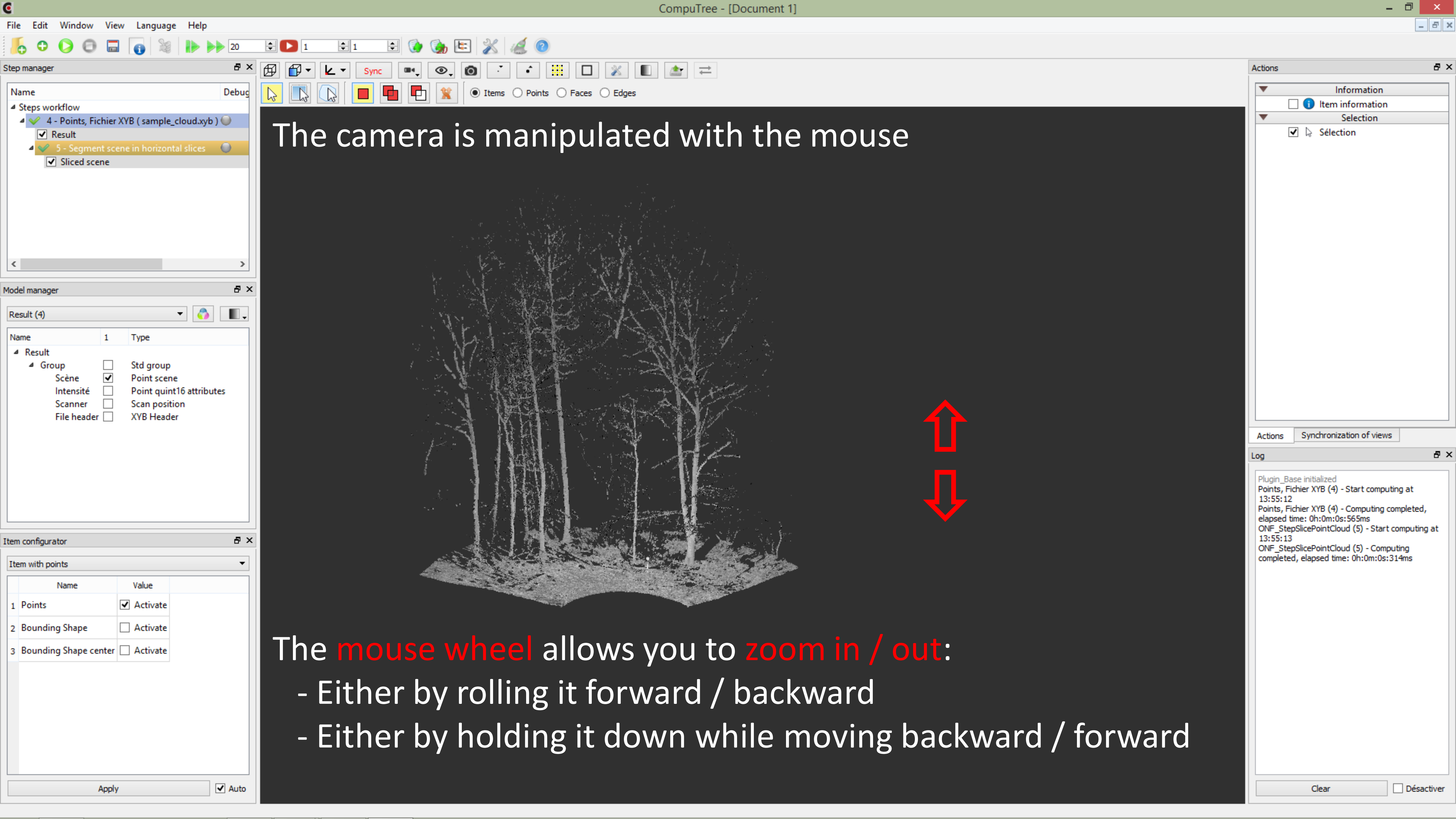
```


CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
Step manager
Model manager
Item configurator
Actions
Information
Item information
Selection
Sélection
Synchronization of views
Log
Sync
Items
Points
Faces
Edges
Apply
Auto
Clear
Désactiver

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

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: Item with points

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate

```
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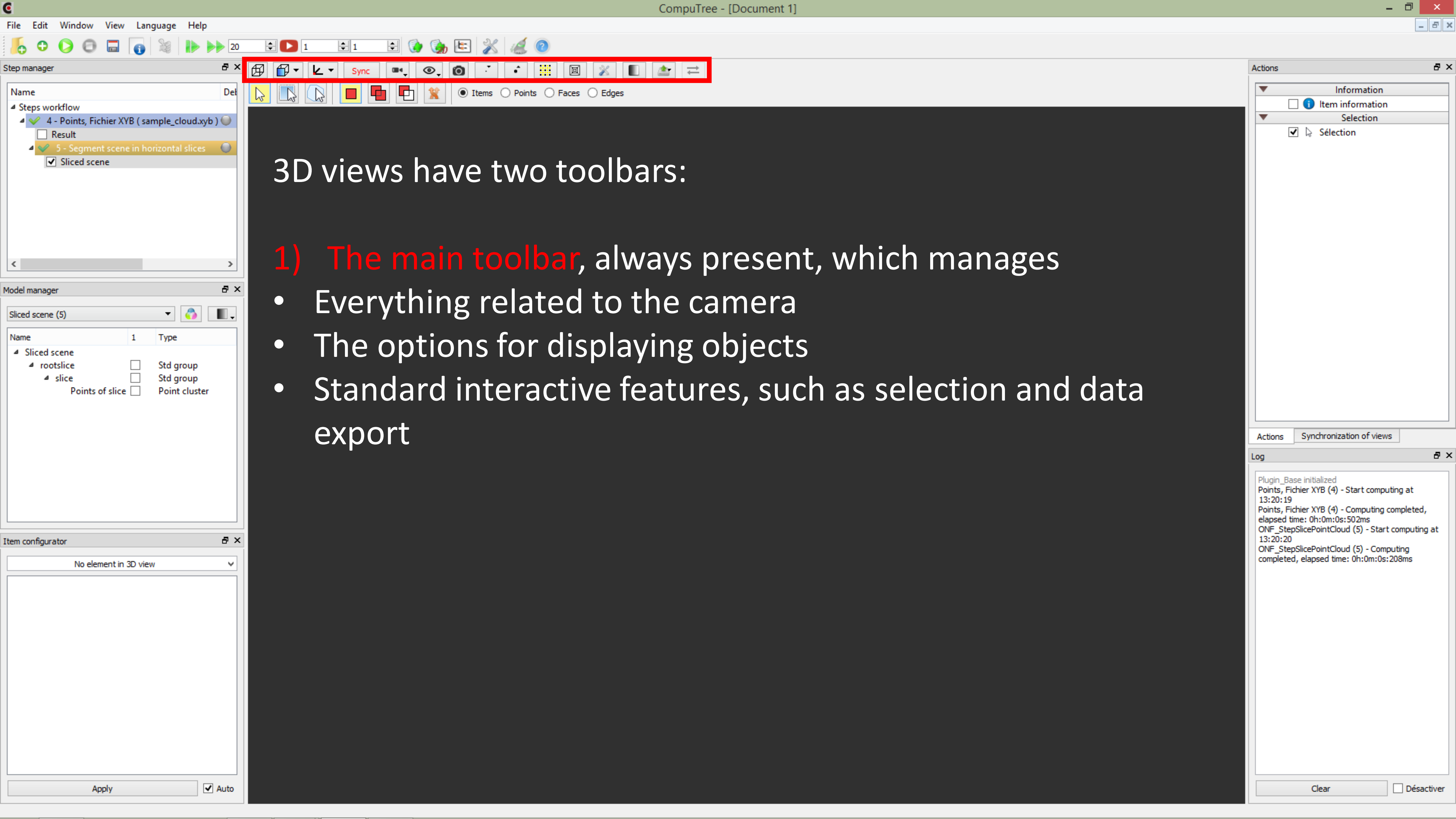
CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
20
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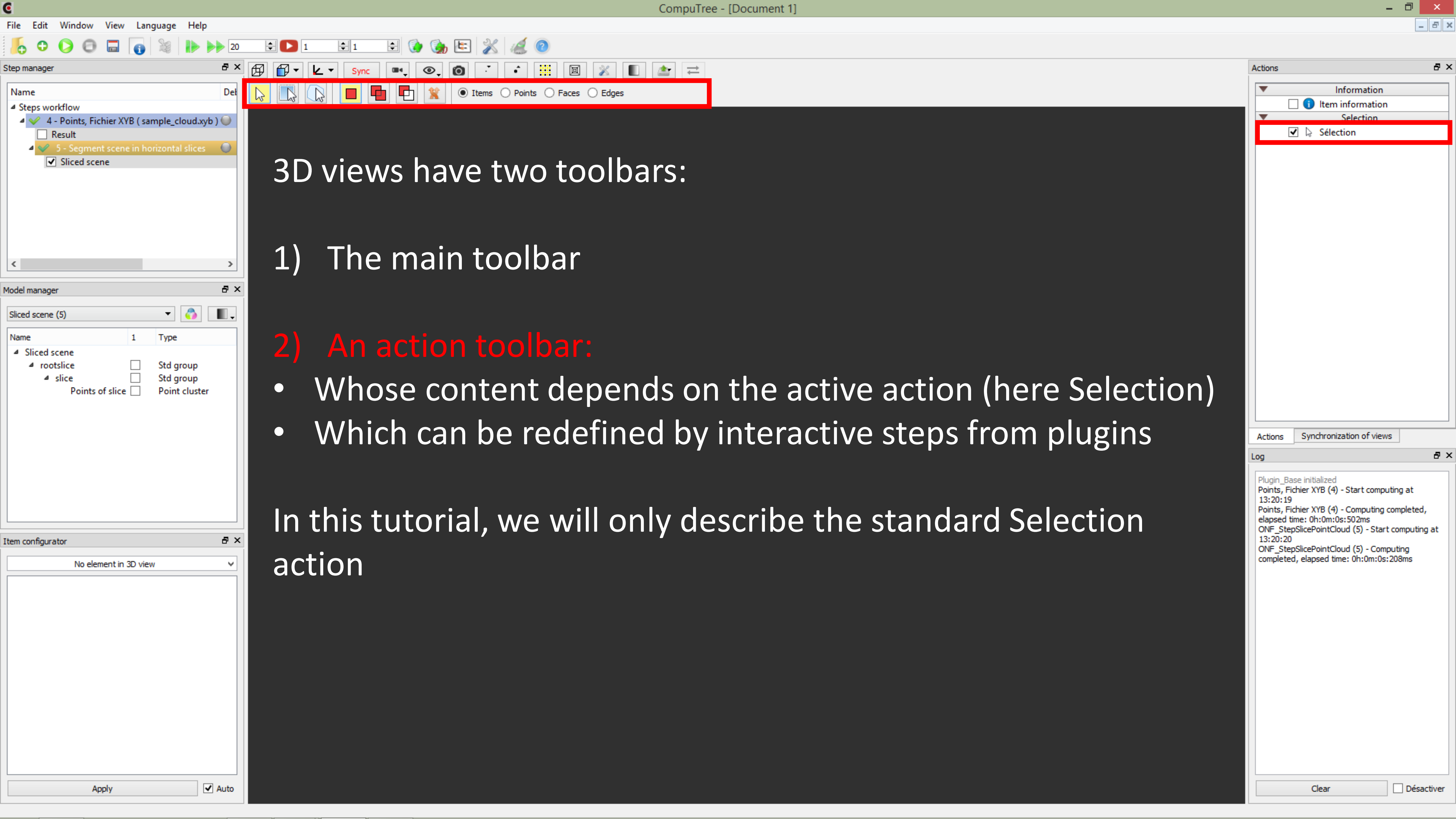
1
Sync
Items
Points
Faces
Edges
Step manager
Name
Del
Steps workflow
4 - Points, Fichier XYB (sample_cloud.xyb)
Result
5 - Segment scene in horizontal slices
Sliced scene
Model manager
Sliced scene (5)
Name
1
Type
Sliced scene
rootslice
Std group
slice
Std group
Points of slice
Point cluster
Item configurator
No element in 3D view
Apply
Auto
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
Clear
Désactiver

```
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
```

3D views have two toolbars:

1) The main toolbar, always present, which manages
- Everything related to the camera
- The options for displaying objects
- Standard interactive features, such as selection and data export


CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
Step manager
Name
Steps workflow
4 - Points, Fichier XYB (sample_cloud.xyb)
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No element in 3D view
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```
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ONF_StepSlicePointCloud (5) - Computing completed, elapsed time: 0h:0m:0s:208ms
```

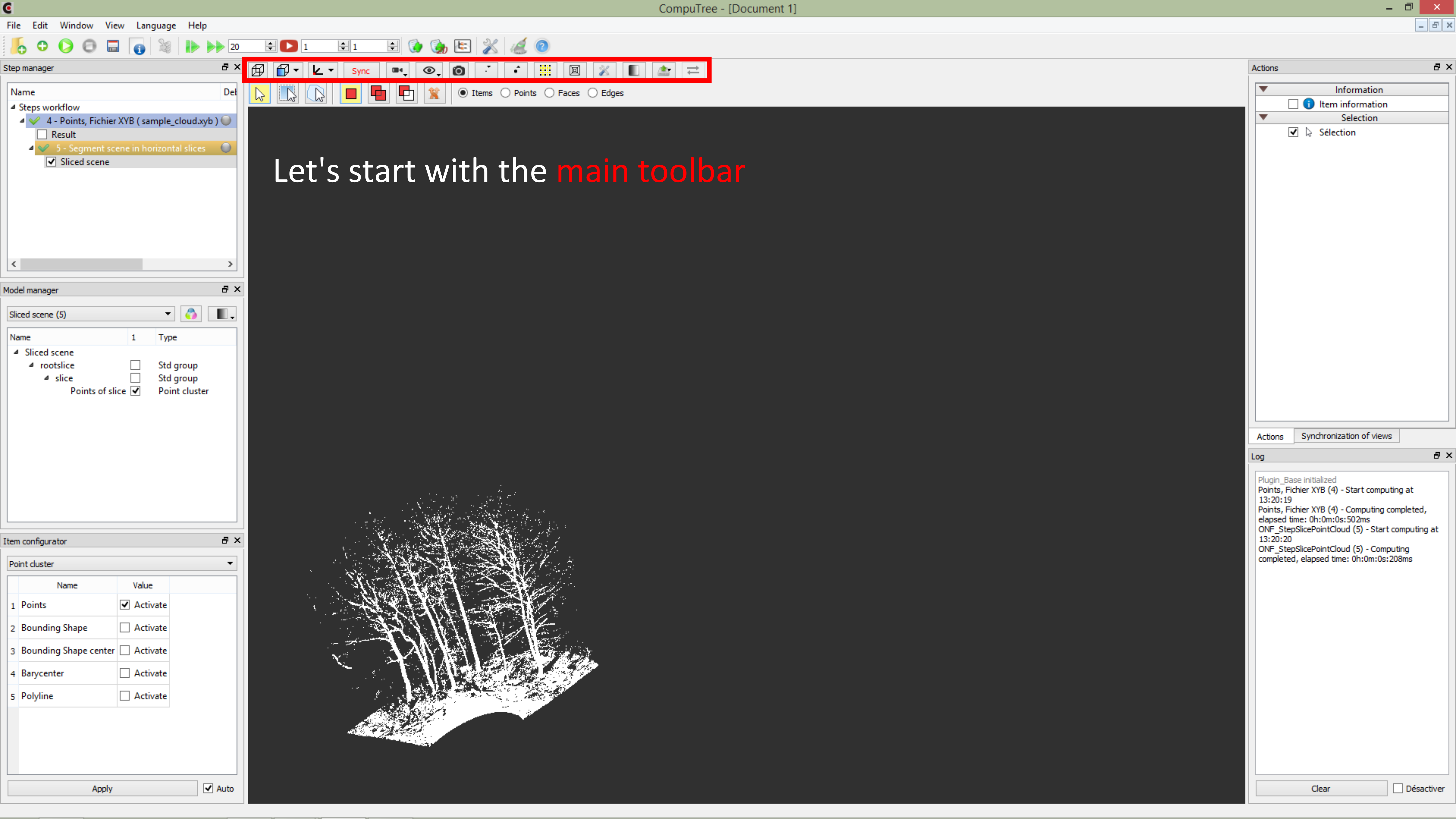
3D views have two toolbars:

1) The main toolbar

2) An action toolbar:

- Whose content depends on the active action (here Selection)
- Which can be redefined by interactive steps from plugins

In this tutorial, we will only describe the standard Selection action



Let's start with the main toolbar

CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
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1
Step manager
Name
Del
Steps workflow
4 - Points, Fichier XYB (sample_cloud.xyb)
☐ Result
5 - Segment scene in horizontal slices
☑ Sliced scene
Sync
● Items
○ Points
○ Faces
○ Edges
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 ☑ Activate
2 Bounding Shape ☐ Activate
3 Bounding Shape center ☐ Activate
4 Barycenter ☐ Activate
5 Polyline ☐ Activate
Apply
☑ Auto
Actions
Information
☐ Item information
Selection
☑ Sélection
Actions
Synchronization of views
Log
Clear
☐ Désactiver

```
Plugin_Base initialized
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ONF_StepSlicePointCloud (5) - Computing
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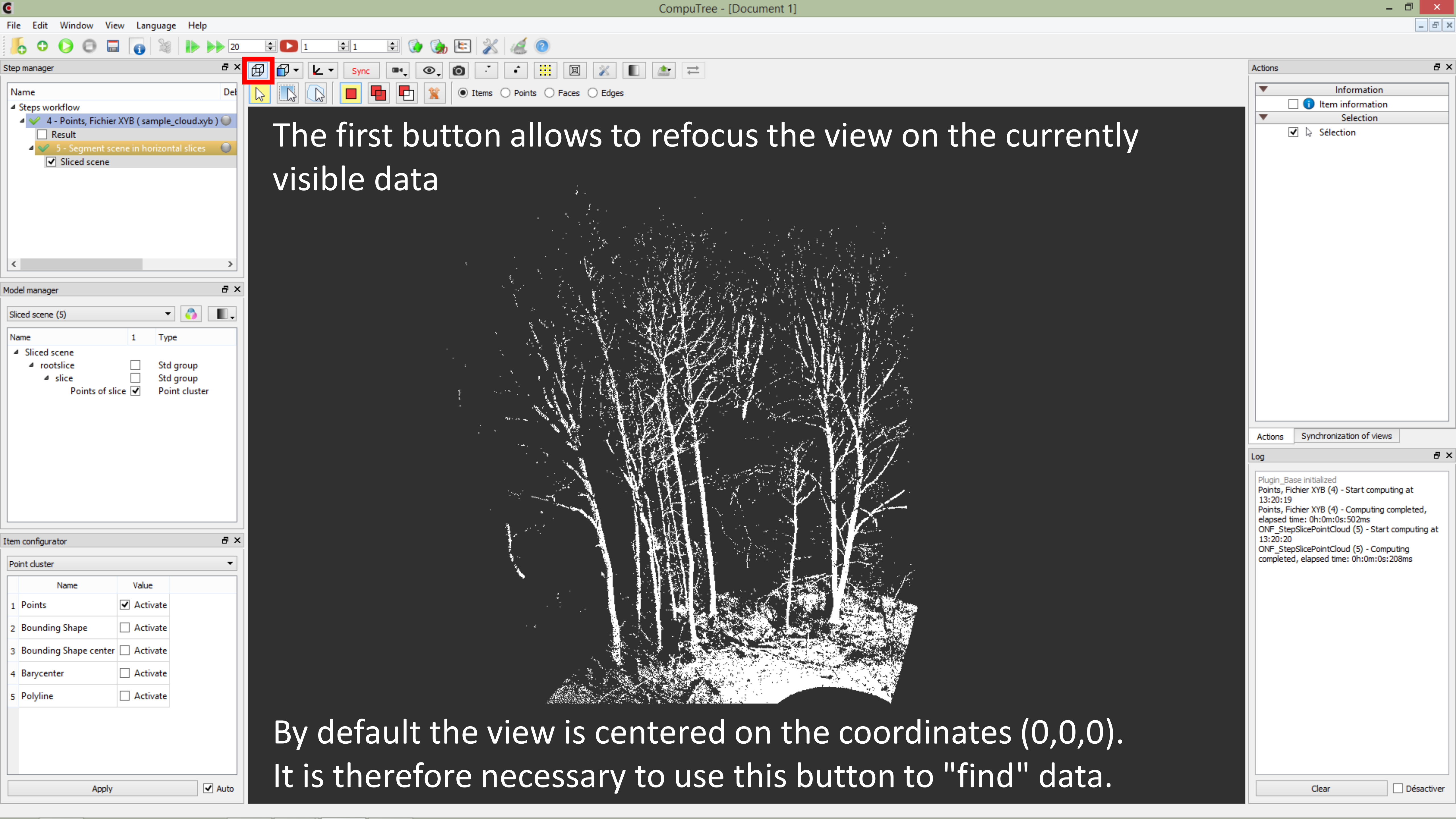
```


CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
Sync
Items
Points
Faces
Edges
Step manager
Model manager
Item configurator
Actions
Information
Item information
Selection
Sélection
Synchronization of views
Log
Clear
Désactiver
Apply
Auto

The first button allows to refocus the view on the currently visible data

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

Steps workflow
- 4 - Points, Fichier XYB (sample_cloud.xyb)
  - ☐ Result
  - 5 - Segment scene in horizontal slices
    - ☑ Sliced scene

Sliced scene (5)

Name	1	Type
Sliced scene		
rootslice	☐	Std group
slice	☐	Std group
Points of slice	☑	Point cluster

Point cluster

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate
4	Barycenter	☐ Activate
5	Polyline	☐ Activate

```
Plugin_Base initialized
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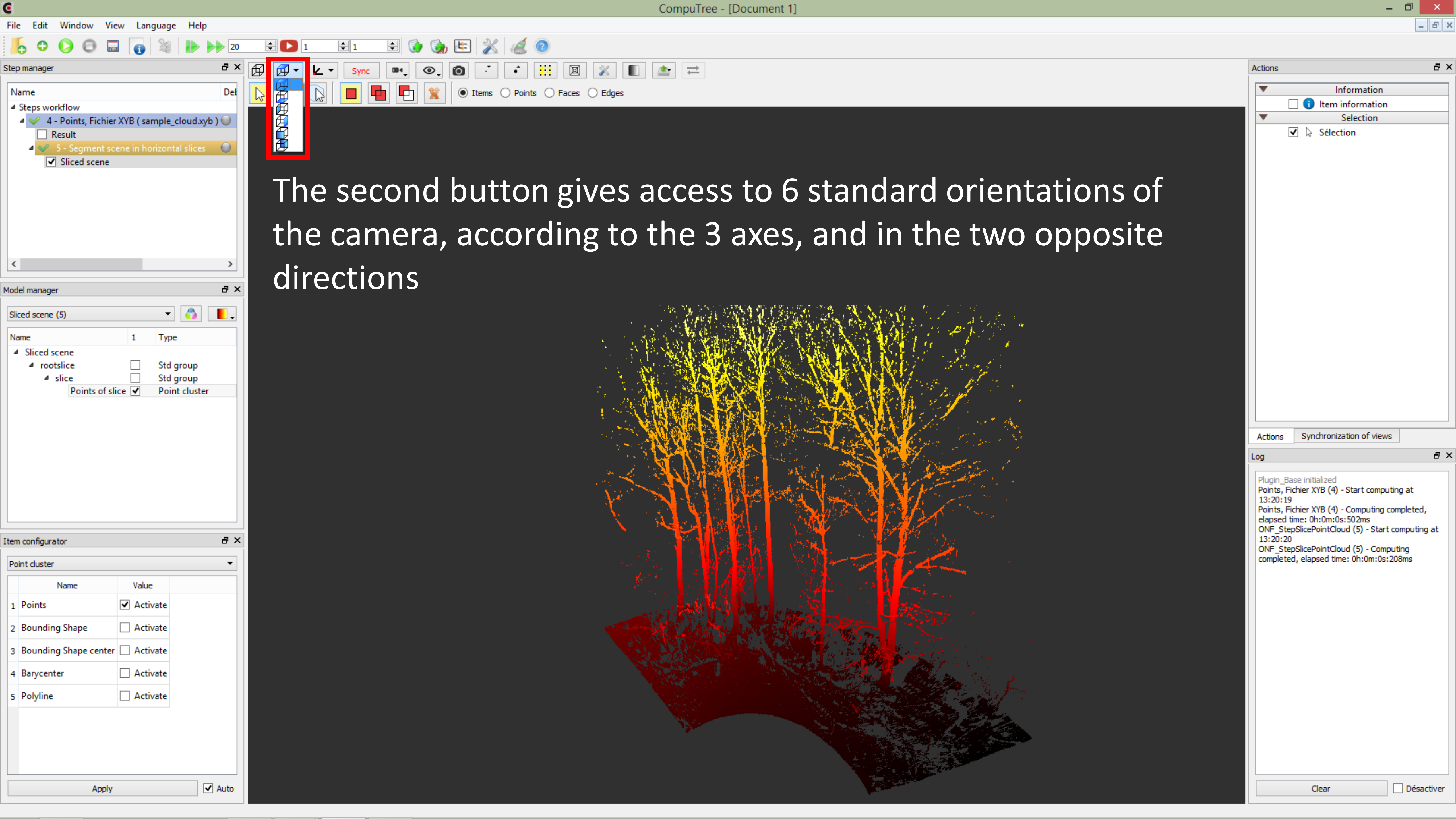

The second button gives access to 6 standard orientations of the camera, according to the 3 axes, and in the two opposite directions

CompuTree - [Document 1]
File
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Window
View
Language
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Sync
Items
Points
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Edges
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)
Item configurator
Point cluster
Apply
Auto
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
Clear
Désactiver

Name	1	Type
Sliced scene		
rootslice	☐	Std group
slice	☐	Std group
Points of slice	☑	Point cluster

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate
4	Barycenter	☐ Activate
5	Polyline	☐ Activate

```
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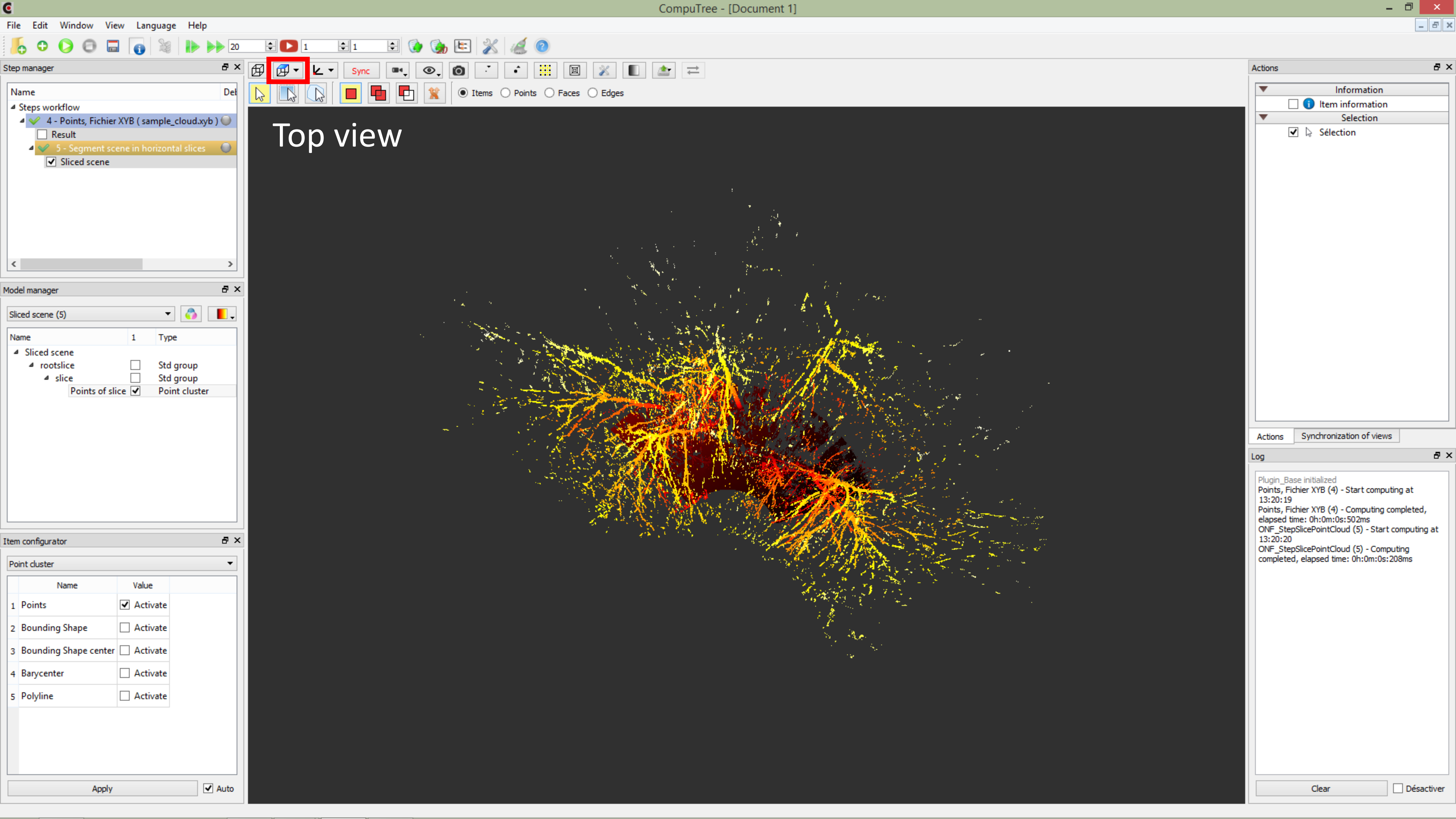
ONF_StepSlicePointCloud (5) - Computing
completed, elapsed time: 0h:0m:0s:208ms
```


CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
20
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1
Sync
Items
Points
Faces
Edges
Step manager
Name
Del
Model manager
Item configurator
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
Apply
Auto
Clear
Désactiver

Top view

Steps workflow
- ☑ 4 - Points, Fichier XYB (sample_cloud.xyb)
  - ☐ Result
- ☑ 5 - Segment scene in horizontal slices
  - ☑ Sliced scene

Sliced scene (5)

Name	1	Type
Sliced scene		
rootslice	☐	Std group
slice	☐	Std group
Points of slice	☑	Point cluster

Point cluster

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate
4	Barycenter	☐ Activate
5	Polyline	☐ Activate

```
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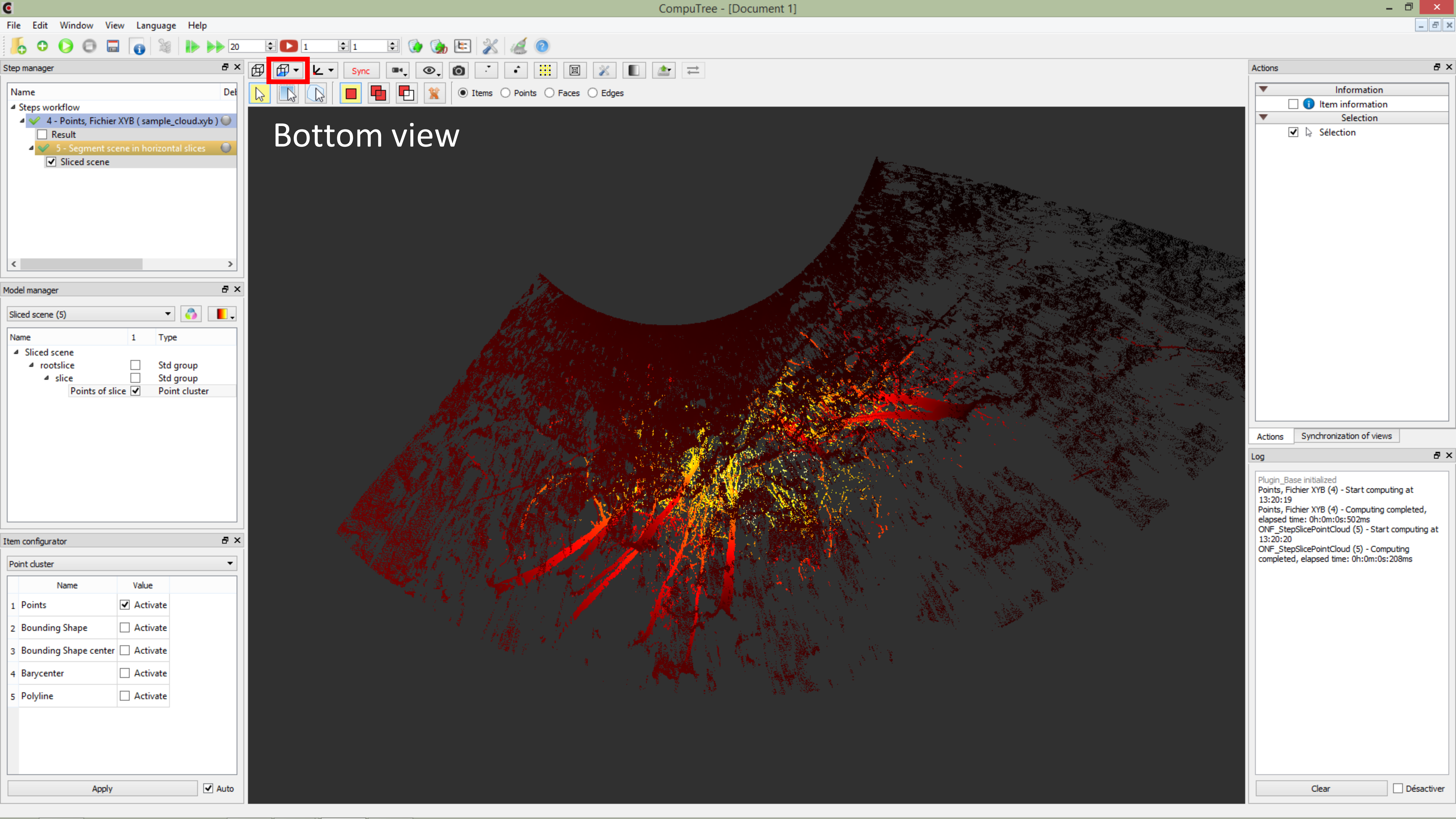
CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
Step manager
Model manager
Item configurator
Actions
Sync
Items
Points
Faces
Edges
Information
Item information
Selection
Sélection
Synchronization of views
Log
Apply
Auto
Clear
Désactiver

Bottom view

Steps workflow
- 4 - Points, Fichier XYB (sample_cloud.xyb)
  - ☐ Result
  - 5 - Segment scene in horizontal slices
    - ☑ Sliced scene

Sliced scene (5)

Name	1	Type
Sliced scene		
rootslice	☐	Std group
slice	☐	Std group
Points of slice	☑	Point cluster

Point cluster

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate
4	Barycenter	☐ Activate
5	Polyline	☐ Activate

```
Plugin_Base initialized
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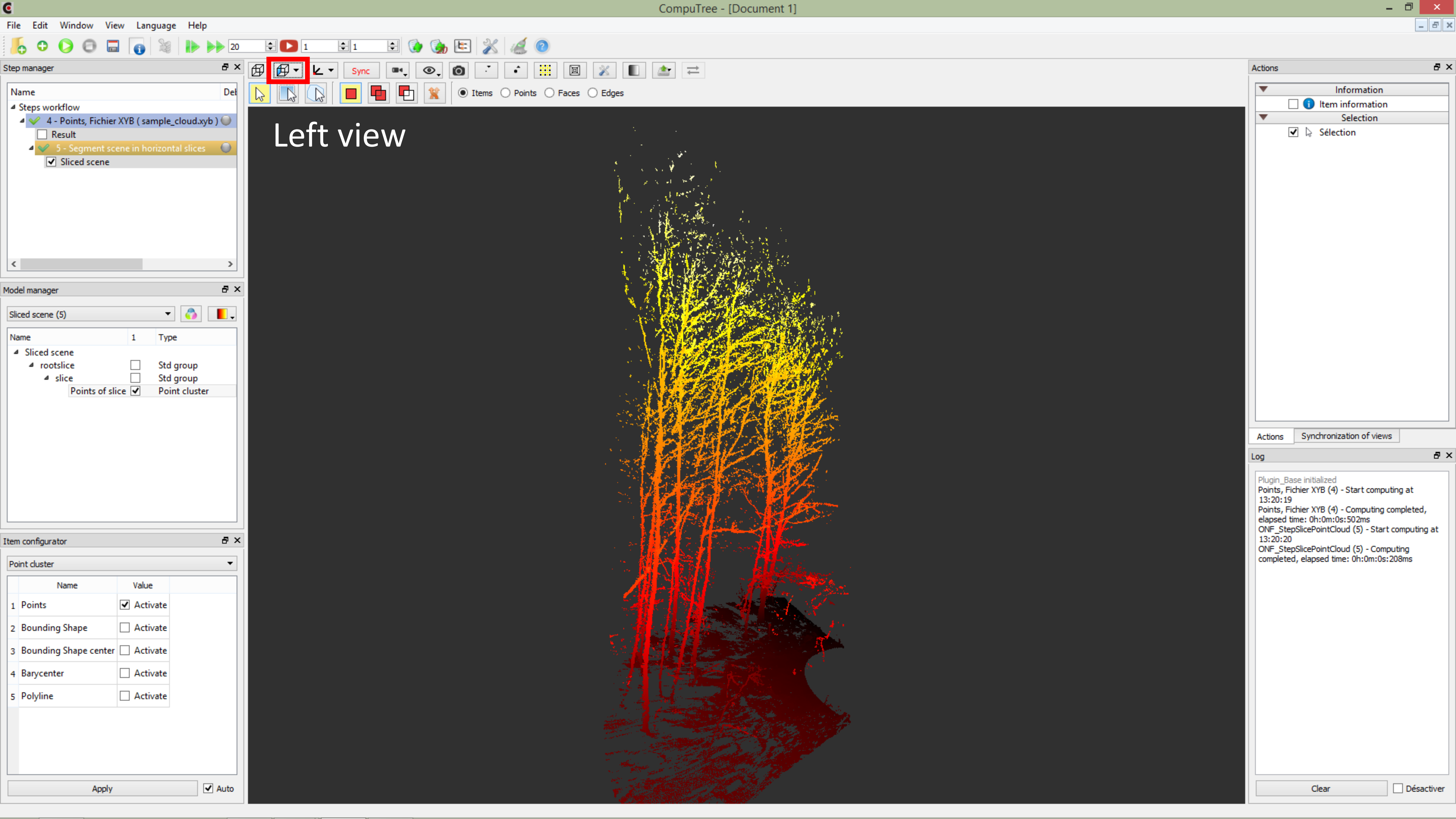

Left view

CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
20
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Sync
Items
Points
Faces
Edges
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
Apply
Auto
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
Clear
Désactiver

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate
4	Barycenter	☐ Activate
5	Polyline	☐ Activate

```
Plugin_Base initialized
Points, Fichier XYB (4) - Start computing at 13:20:19
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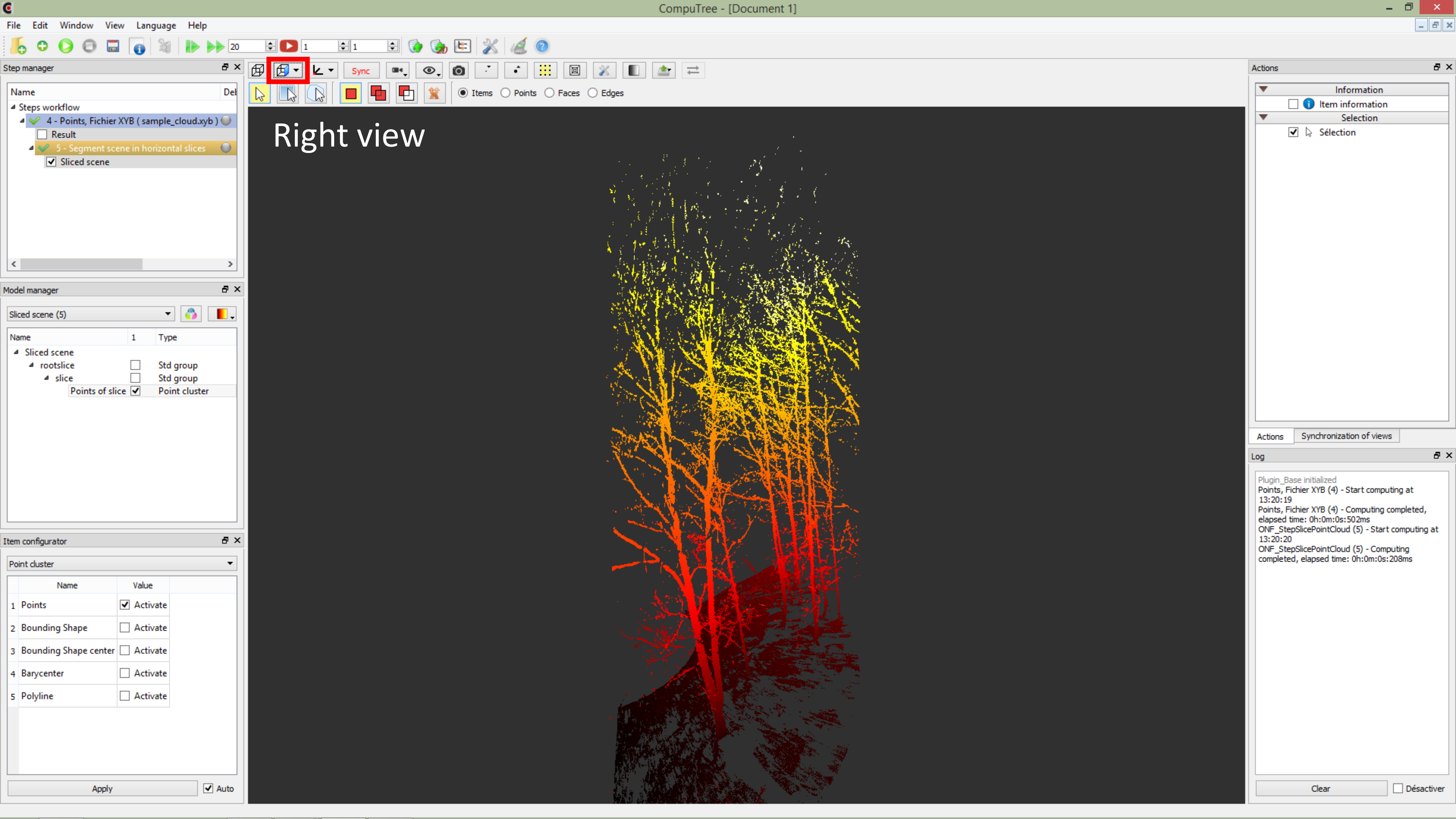
CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
Sync
Items
Points
Faces
Edges
Step manager
Model manager
Item configurator
Actions
Synchronization of views
Log
Apply
Clear

Right view

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	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate
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☑ Auto

Actions

Information
☐ Item information
Selection
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Log

```
Plugin_Base initialized
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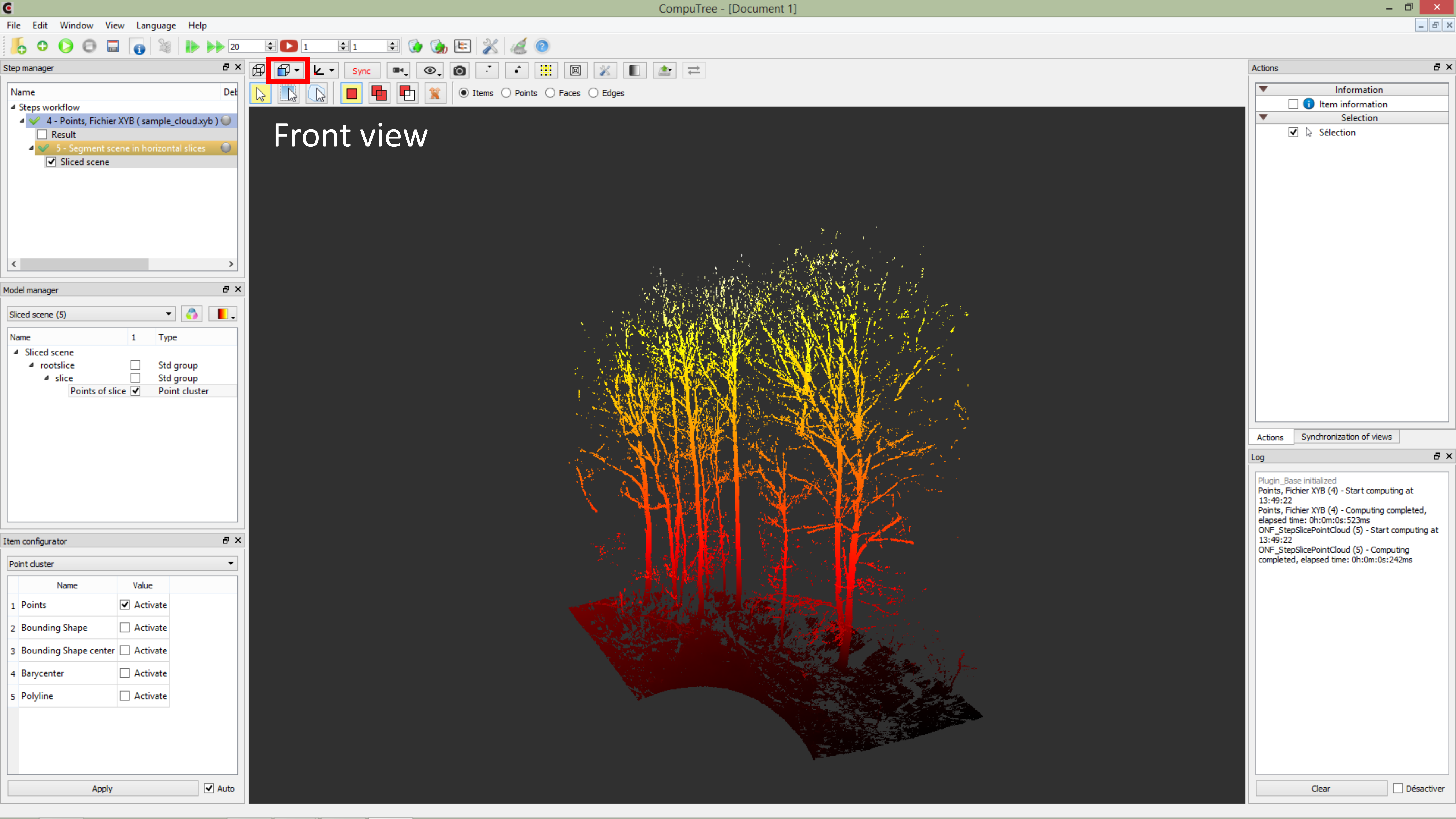
```

☐ Désactiver


CompuTree - [Document 1]
File
Edit
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View
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Help
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Sync
Items
Points
Faces
Edges
Step manager
Model manager
Item configurator
Actions
Information
Selection
Synchronization of views
Log
Apply
Auto
Clear
Désactiver

Front view

Step manager

Name	Deb
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

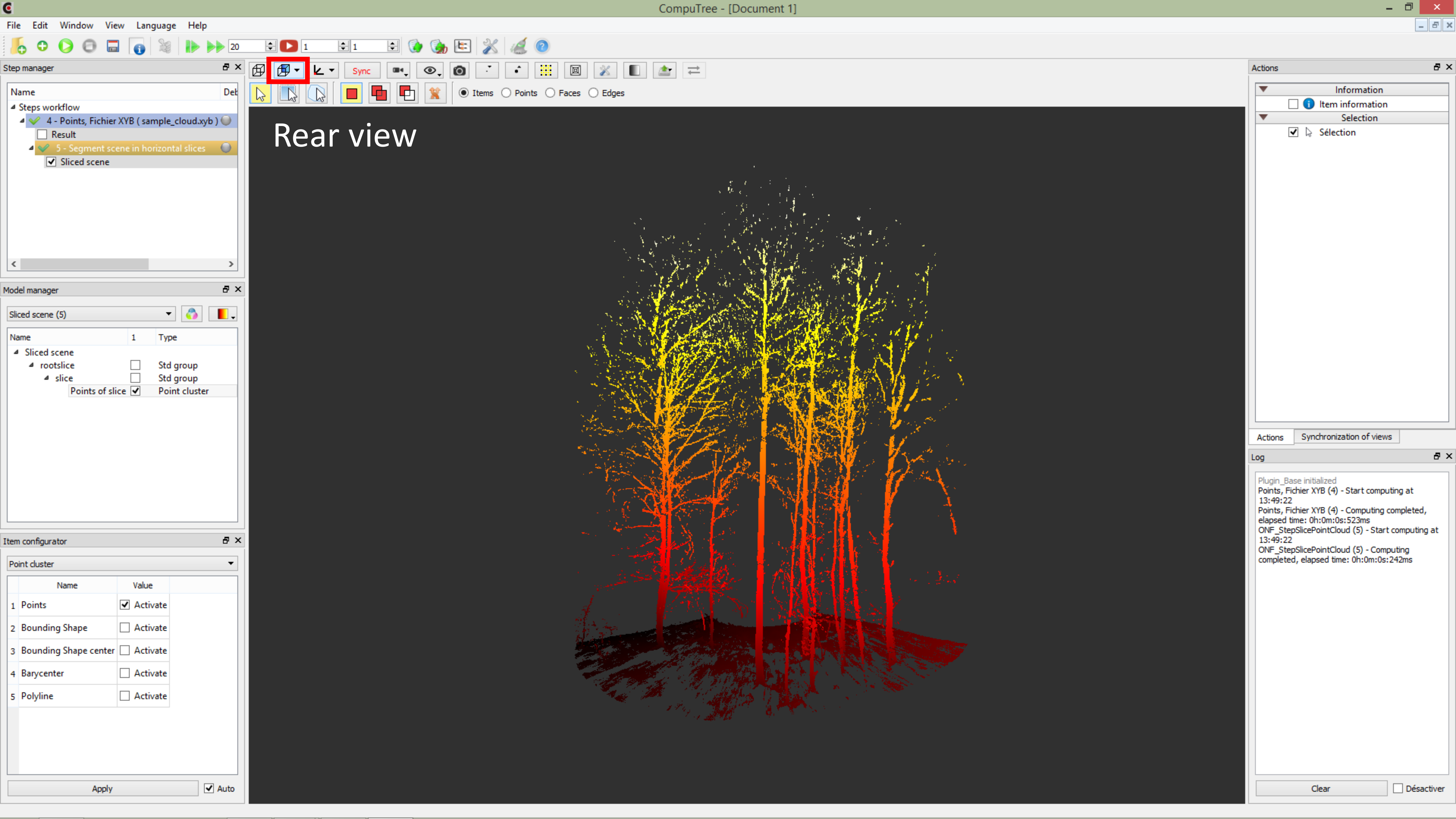
Item configurator: Point cluster

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate
4	Barycenter	☐ Activate
5	Polyline	☐ Activate

Actions

- Information
  - ☐ Item information
- Selection
  - ☑ Sélection

```
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
```


CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
20
1
1
Sync
Items
Points
Faces
Edges
Step manager
Model manager
Item configurator
Actions
Log
Apply
Auto
Clear
Désactiver

Rear view

Step manager

Name | Deb

- 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	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate
4	Barycenter	☐ Activate
5	Polyline	☐ Activate

Actions

- Information
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Actions | Synchronization of views

Log

```
Plugin_Base initialized
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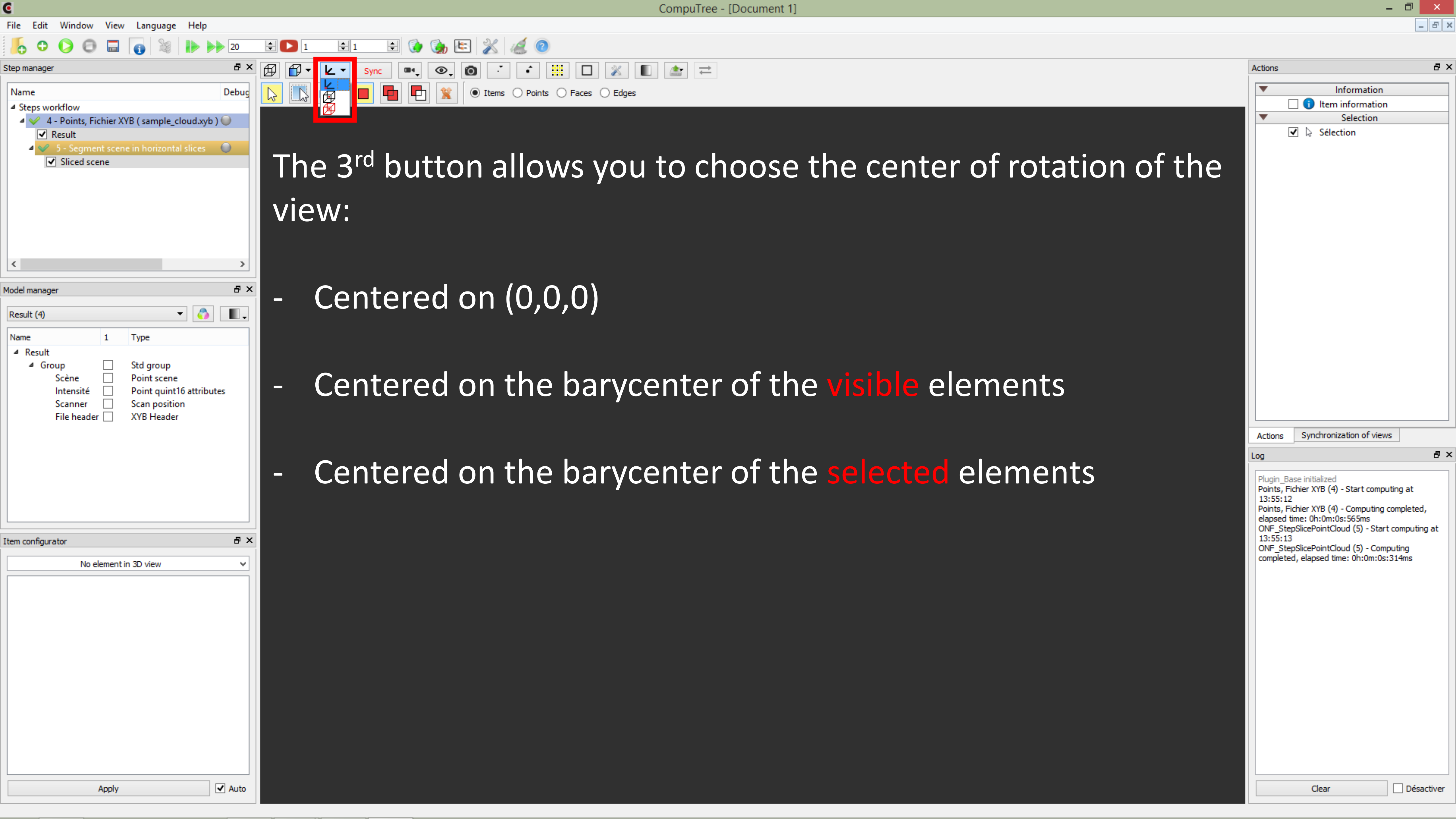
completed, elapsed time: 0h:0m:0s:242ms
```

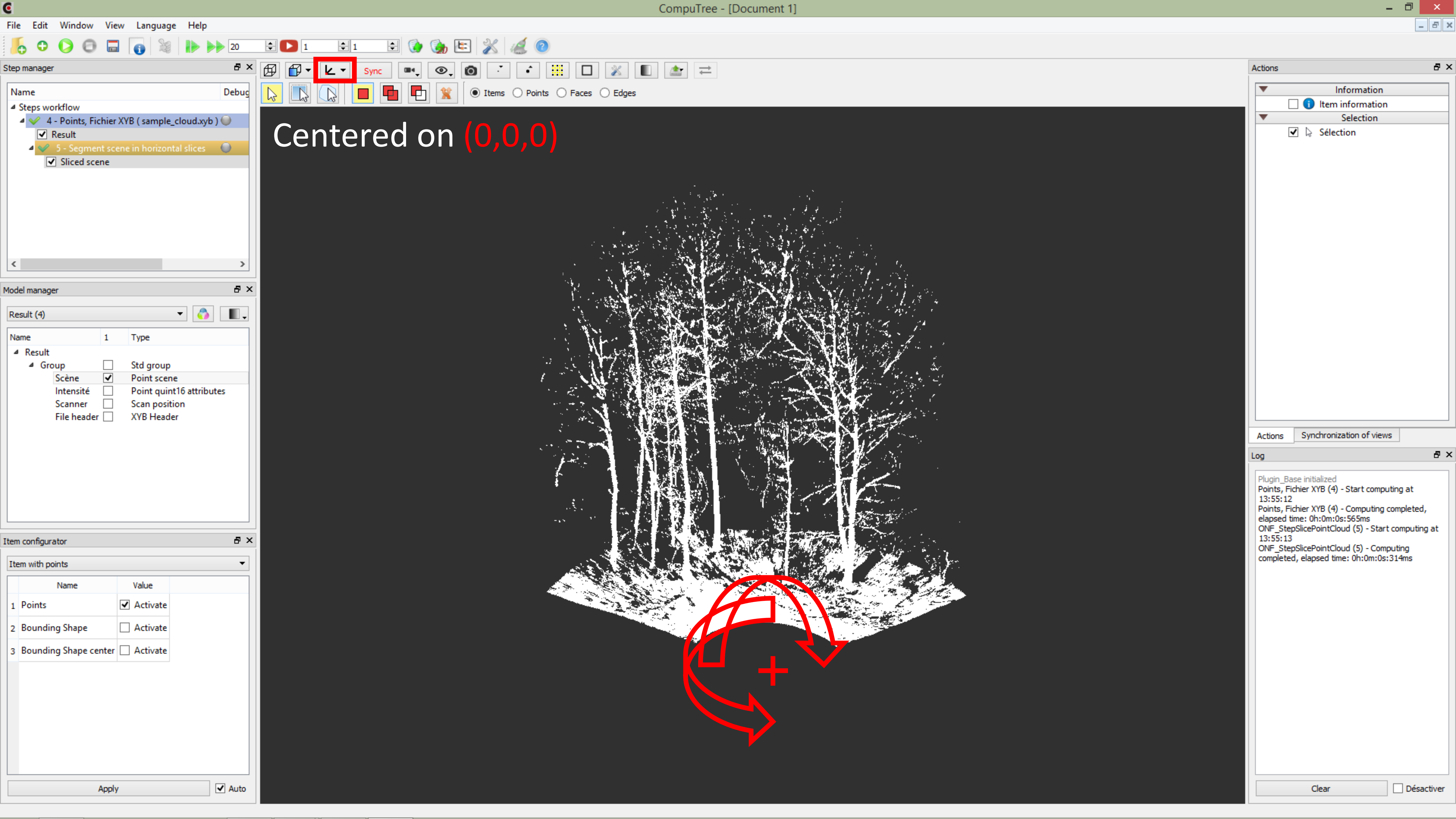

CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
20
1
1
Step manager
Name
Debug
Steps workflow
4 - Points, Fichier XYB (sample_cloud.xyb)
Result
5 - Segment scene in horizontal slices
Sliced scene
Sync
Items
Points
Faces
Edges
Model manager
Result (4)
Item configurator
No element in 3D view
Apply
Auto
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
Clear
Désactiver

Name	1	Type
Result		
Group	☐	Std group
Scène	☐	Point scene
Intensité	☐	Point quint16 attributes
Scanner	☐	Scan position
File header	☐	XYB Header

```
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
```

The 3rd 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
20
1
1
Sync
Items
Points
Faces
Edges
Step manager
Model manager
Item configurator
Actions
Log
Clear
Apply
Synchronization of views

Centered on (0,0,0)

Steps workflow

Name	Debug
Steps workflow	
4 - Points, Fichier XYB (sample_cloud.xyb)	
☑ Result	
5 - Segment scene in horizontal slices	
☑ Sliced scene	

Result (4)

Name	1	Type
Result		
Group	☐	Std group
Scène	☑	Point scene
Intensité	☐	Point quint16 attributes
Scanner	☐	Scan position
File header	☐	XYB Header

Item with points

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate

☑ Auto

Information

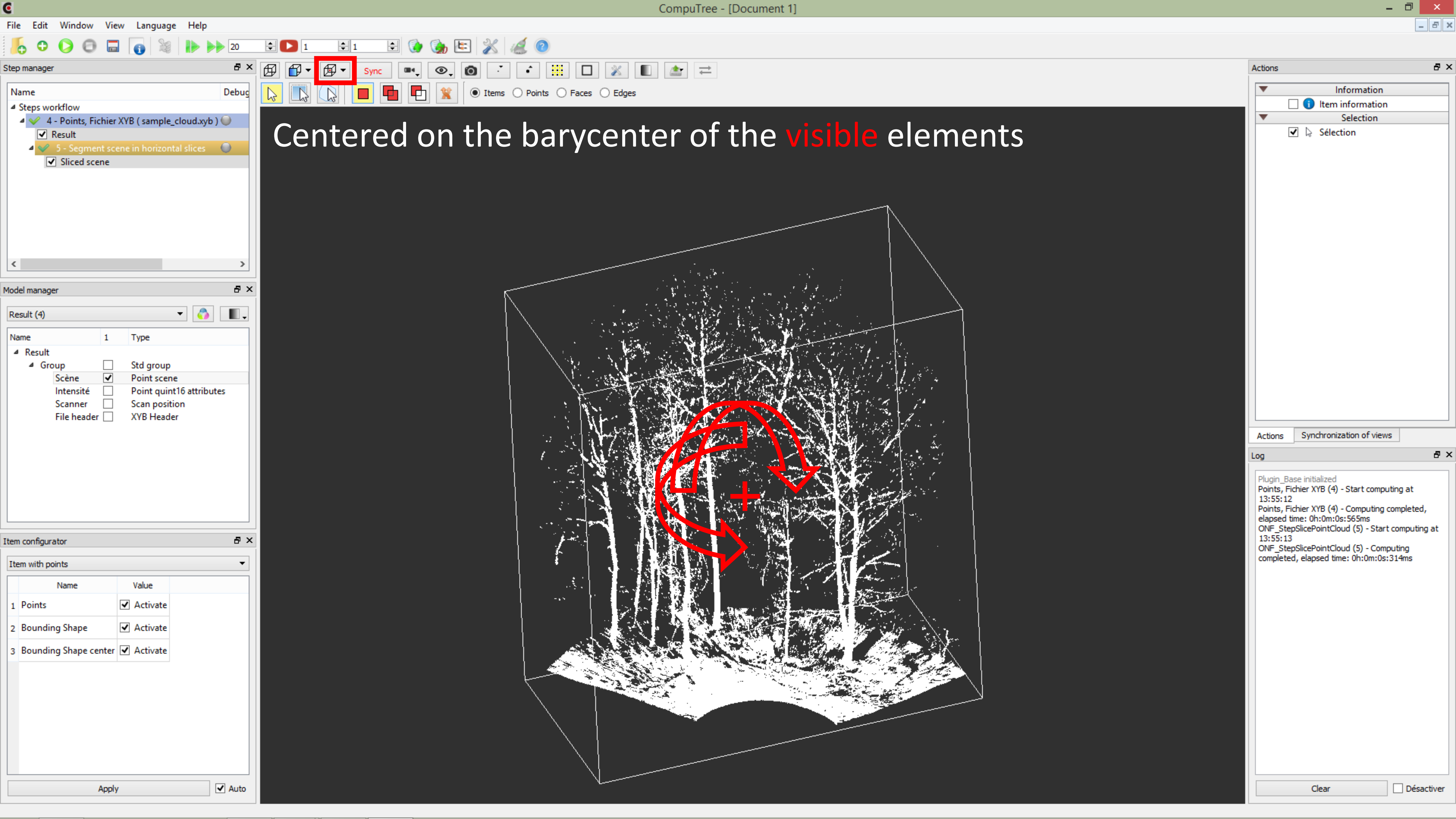
☐ Item information

Selection

☑ Sélection

```
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
```

☐ Désactiver



CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
Sync
Items
Points
Faces
Edges
Step manager
Model manager
Item configurator
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
Apply
Auto
Clear
Désactiver

Centered on the barycenter of the visible elements

Name	Debug
Steps workflow	
✓ 4 - Points, Fichier XYB (sample_cloud.xyb)	
☑ Result	
✓ 5 - Segment scene in horizontal slices	
☑ Sliced scene	

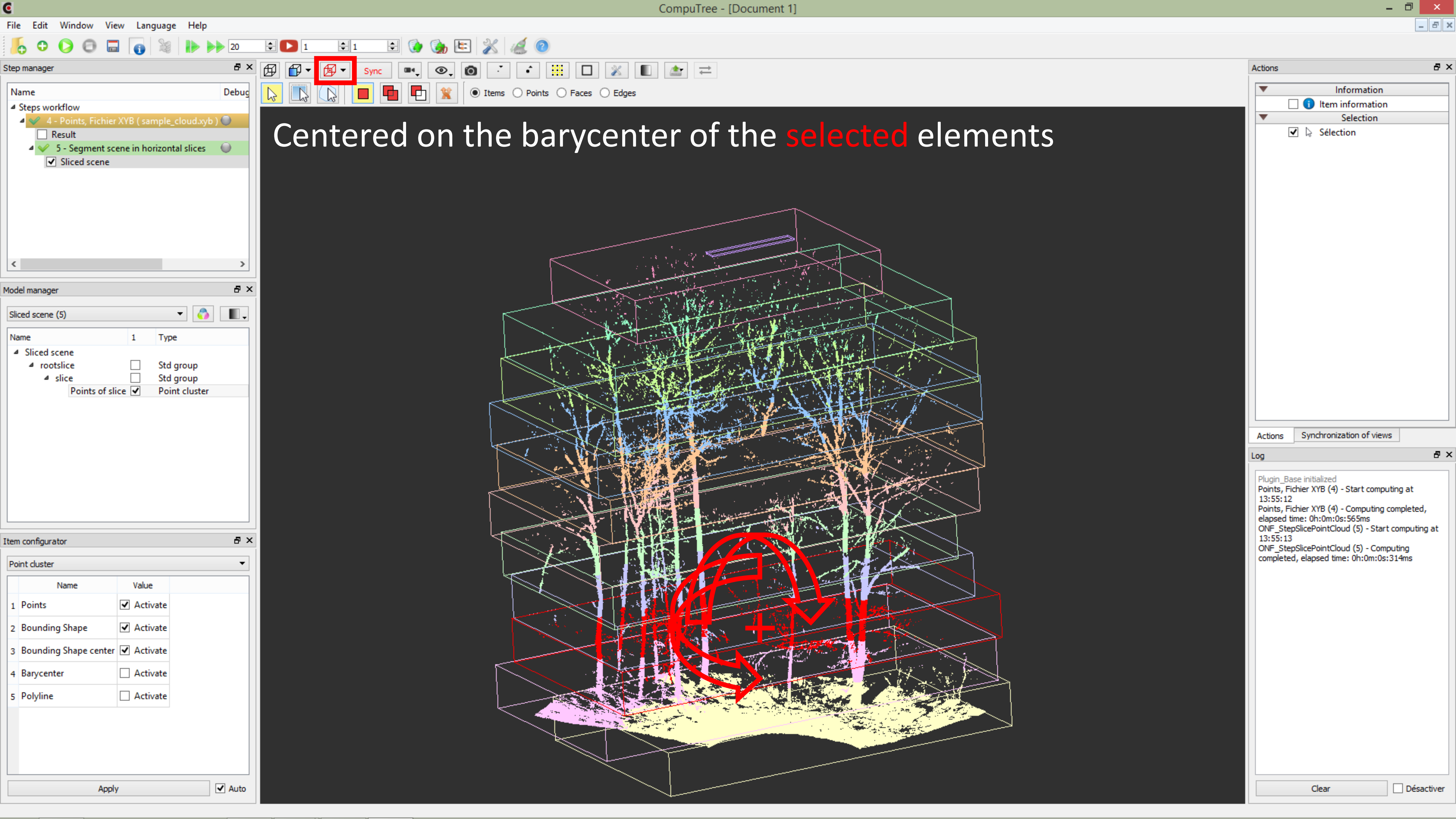
Result (4)

Name	1	Type
Result		
Group	☐	Std group
Scène	☑	Point scene
Intensité	☐	Point quint16 attributes
Scanner	☐	Scan position
File header	☐	XYB Header

Item with points

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☑ Activate
3	Bounding Shape center	☑ Activate

```
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
```


CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
Step manager
Model manager
Item configurator
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
Sync
Items
Points
Faces
Edges
Apply
Auto
Clear
Désactiver

Centered on the barycenter of the selected elements

Steps workflow
- 4 - Points, Fichier XYB (sample_cloud.xyb)
  - ☐ Result
  - 5 - Segment scene in horizontal slices
    - ☑ Sliced scene

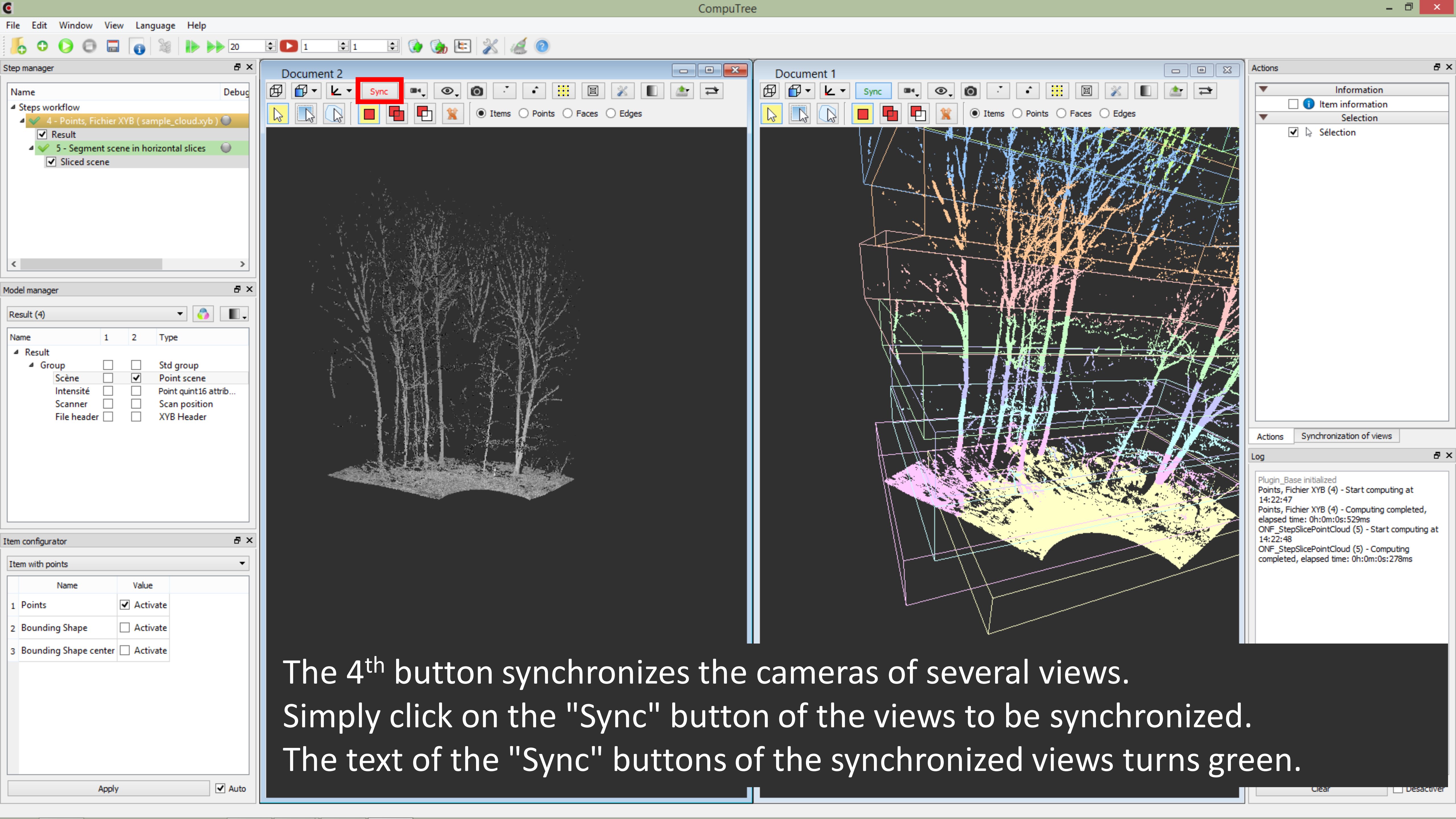
Sliced scene (5)

Name	1	Type
Sliced scene		
rootslice	☐	Std group
slice	☐	Std group
Points of slice	☑	Point cluster

Point cluster

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☑ Activate
3	Bounding Shape center	☑ Activate
4	Barycenter	☐ Activate
5	Polyline	☐ Activate

```
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
```


CompuTree
File
Edit
Window
View
Language
Help
Step manager
Model manager
Item configurator
Document 2
Document 1
Sync
Items
Points
Faces
Edges
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
Apply
Auto
Clear
Desactiver

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

Result (4)

Name	1	2	Type
Result			
Group	☐	☐	Std group
Scène	☐	☑	Point scene
Intensité	☐	☐	Point quint16 attrib...
Scanner	☐	☐	Scan position
File header	☐	☐	XYB Header

Item with points

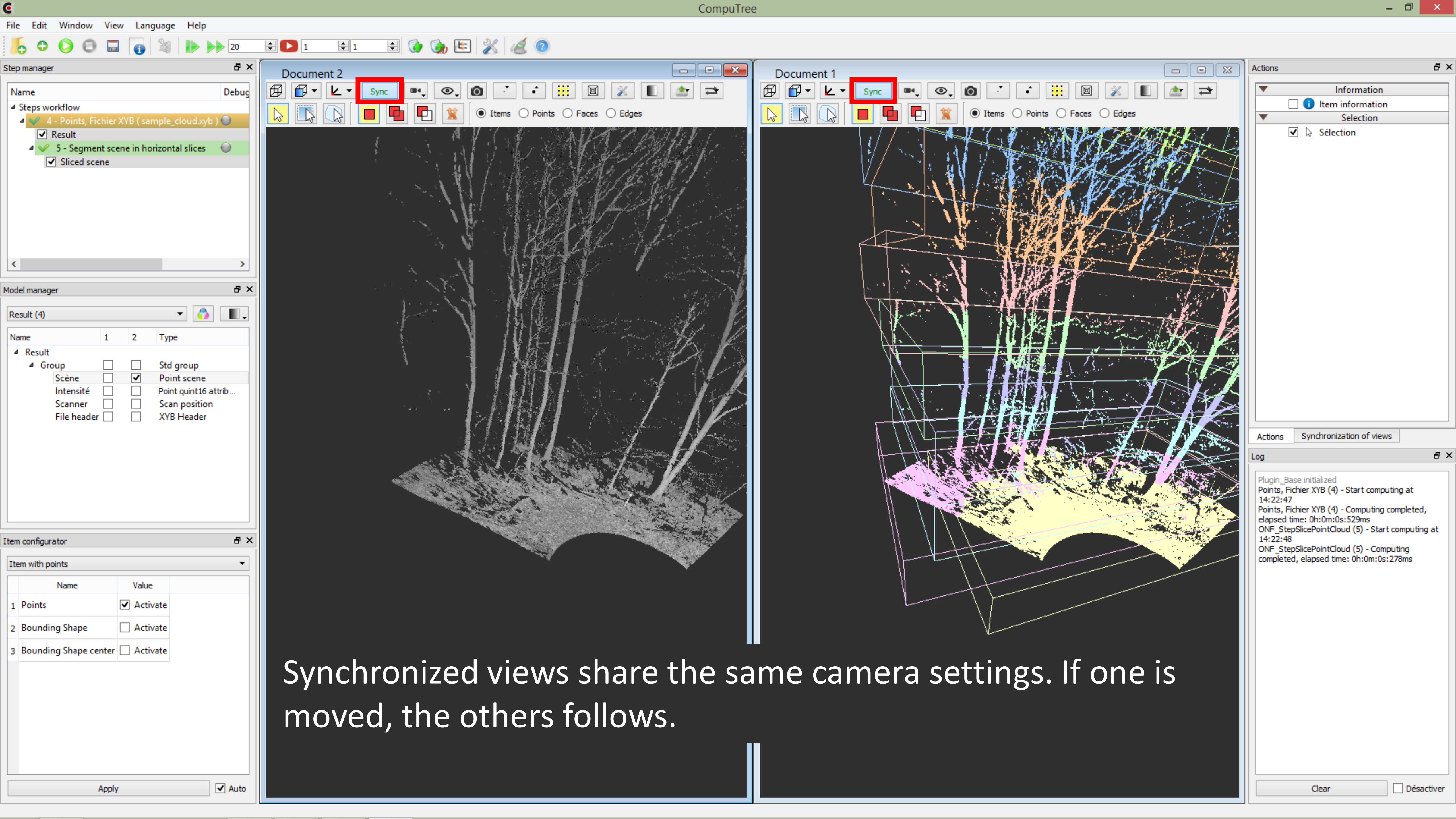
	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate

```
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
```

The 4th button synchronizes the cameras of several views.

Simply click on the "Sync" button of the views to be synchronized.

The text of the "Sync" buttons of the synchronized views turns green.


CompuTree
File
Edit
Window
View
Language
Help
Step manager
Document 2
Document 1
Sync
Sync
● Items ○ Points ○ Faces ○ Edges
● Items ○ Points ○ Faces ○ Edges
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
Clear
Désactiver
Model manager
Result (4)
Item configurator
Item with points
Apply
Auto

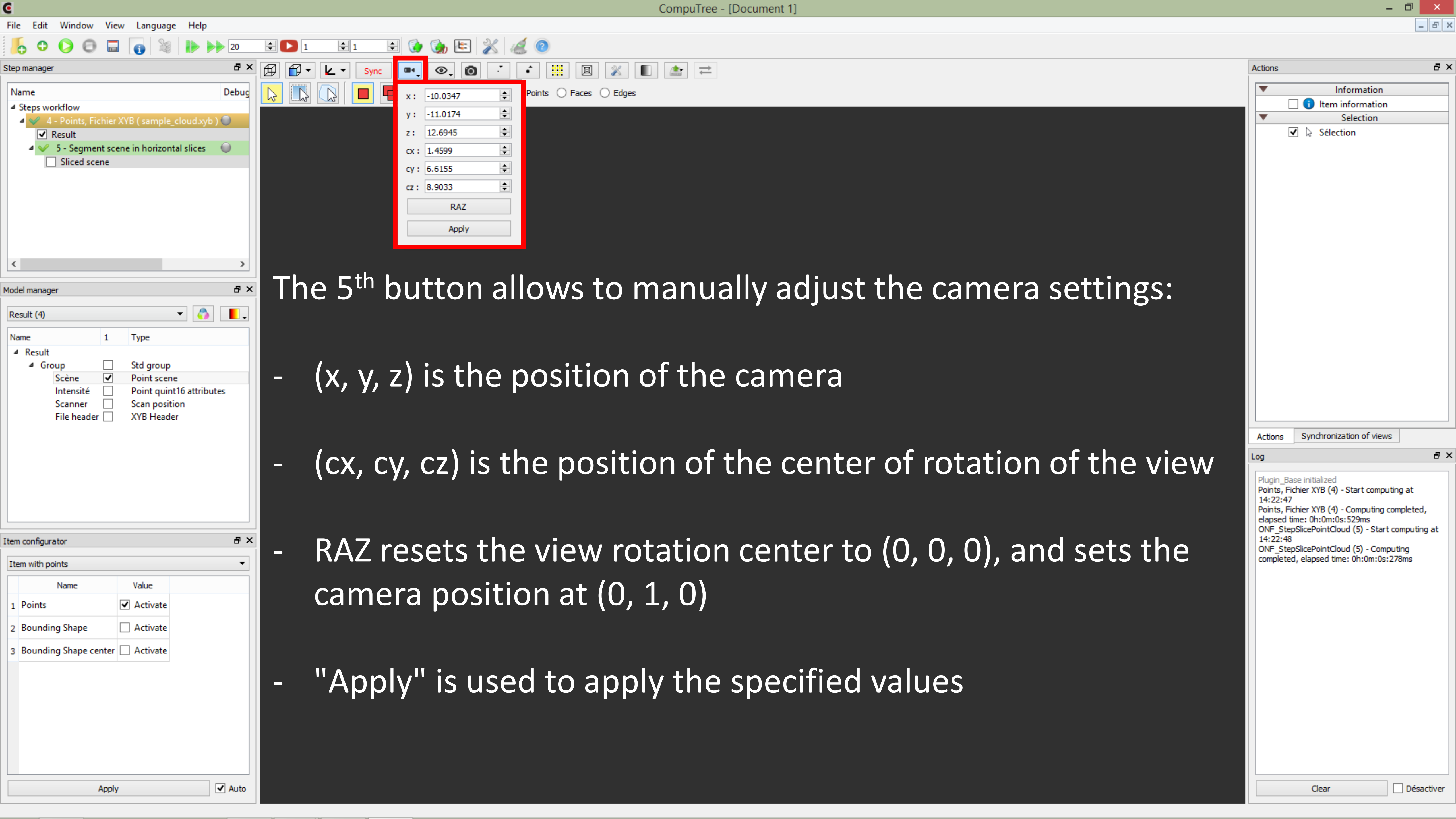
Steps workflow
- 4 - Points, Fichier XYB (sample_cloud.xyb)
  - ☑ Result
  - 5 - Segment scene in horizontal slices
    - ☑ Sliced scene

Name	1	2	Type
Result			
Group	☐	☐	Std group
Scène	☐	☑	Point scene
Intensité	☐	☐	Point quint16 attrib...
Scanner	☐	☐	Scan position
File header	☐	☐	XYB Header

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate

```
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
```

Synchronized views share the same camera settings. If one is moved, the others follows.


CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
Step manager
Model manager
Item configurator
Actions
Log
Sync
Points
Faces
Edges
RAZ
Apply
Clear
Désactiver
Actions
Synchronization of views

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

The 5th 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

Steps workflow
- 4 - Points, Fichier XYB (sample_cloud.xyb)
  - ☑ Result
  - 5 - Segment scene in horizontal slices
    - ☐ Sliced scene

Result (4)

Name	1	Type
Result		
Group	☐	Std group
Scène	☑	Point scene
Intensité	☐	Point quint16 attributes
Scanner	☐	Scan position
File header	☐	XYB Header

Item with points

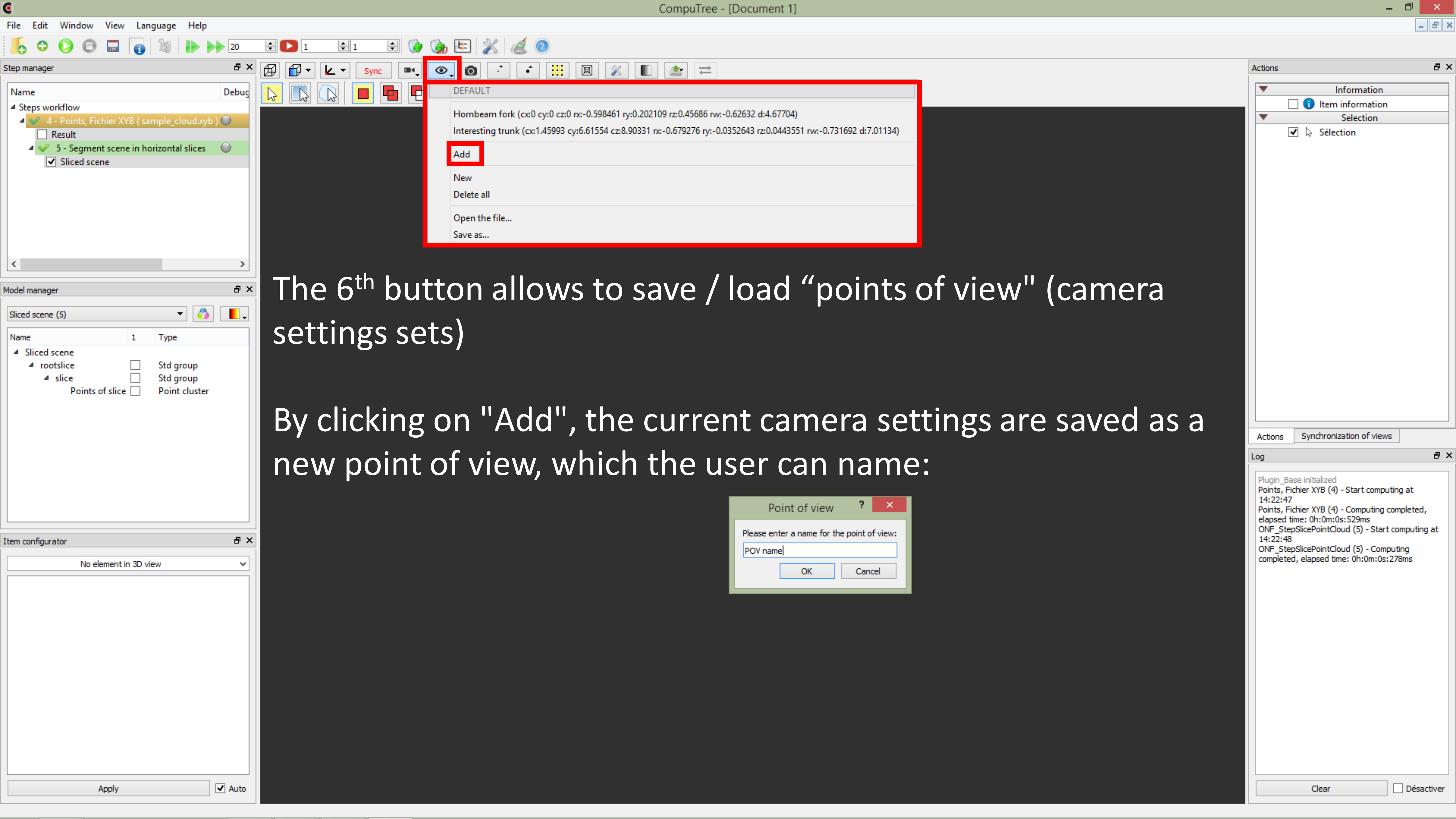
	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate

☑ Auto

Information
- ☐ Item information

Selection
- ☑ Sélection

```
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
```



The 6th 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:

DEFAULT

Hornbeam fork (cx:0 cy:0 cz:0 rx:-0.598461 ry:0.202109 rz:0.45686 rw:-0.62632 d:4.67704)

Interesting trunk (cx:1.45993 cy:6.61554 cz:8.90331 rx:-0.679276 ry:-0.0352643 rz:0.0443551 rw:-0.731692 d:7.01134)

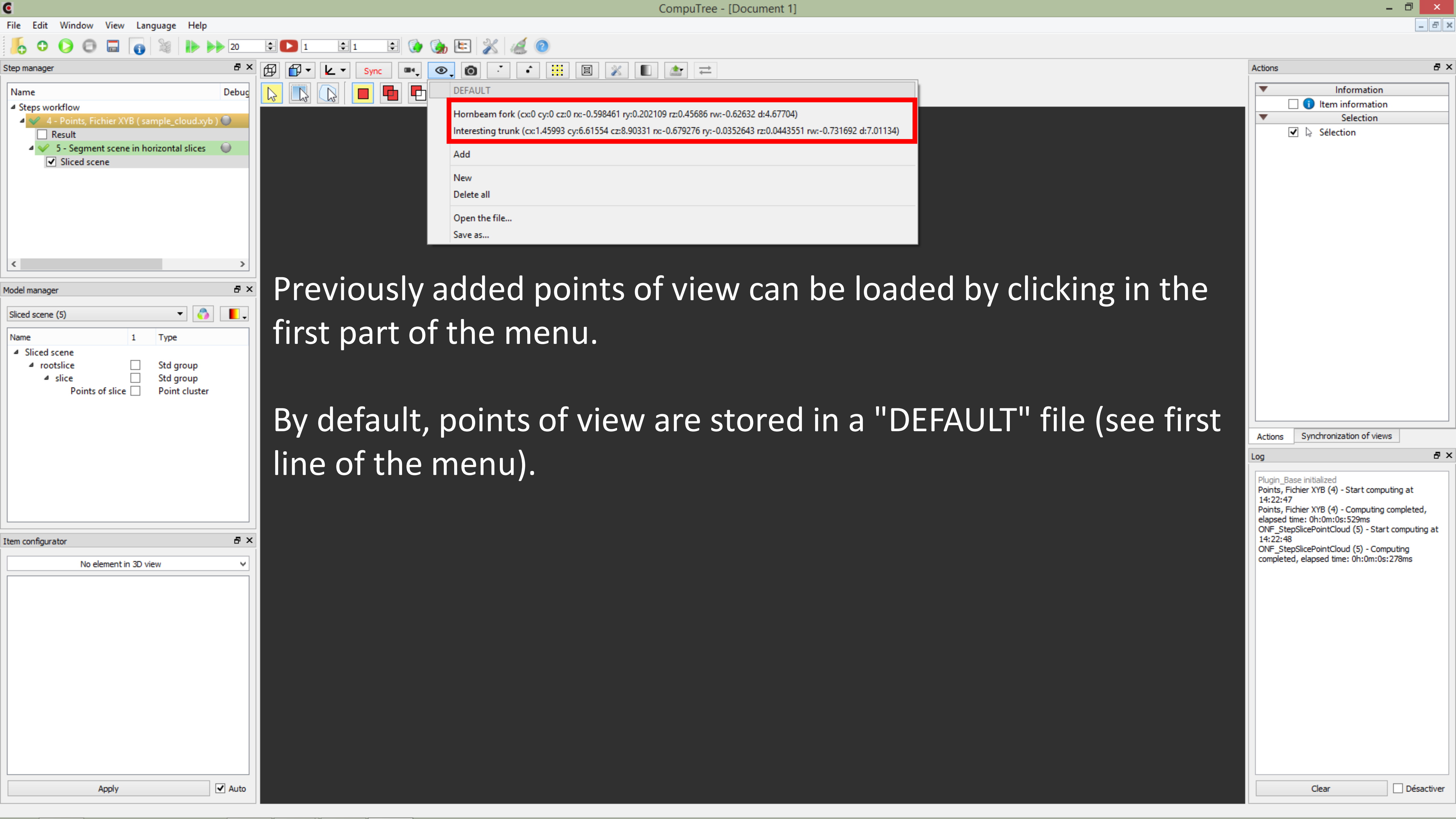
Point of view

Please enter a name for the point of view:

POV name

```
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
```

CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
20
1
1
Sync
Step manager
Name
Debug
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
No element in 3D view
Apply
☑ Auto
Add
New
Delete all
Open the file...
Save as...
OK
Cancel
Actions
Information
☐ Item information
Selection
☑ Sélection
Actions
Synchronization of views
Log
Clear
☐ Désactiver


CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
Step manager
Steps workflow
4 - Points, Fichier XYB (sample_cloud.xyb)
Result
5 - Segment scene in horizontal slices
Sliced scene
Model manager
Sliced scene (5)
Item configurator
No element in 3D view
Apply
Auto
Sync
DEFAULT
Add
New
Delete all
Open the file...
Save as...
Actions
Information
Item information
Selection
Sélection
Synchronization of views
Log
Clear
Désactiver

Hornbeam fork (cx:0 cy:0 cz:0 rx:-0.598461 ry:0.202109 rz:0.45686 rw:-0.62632 d:4.67704)

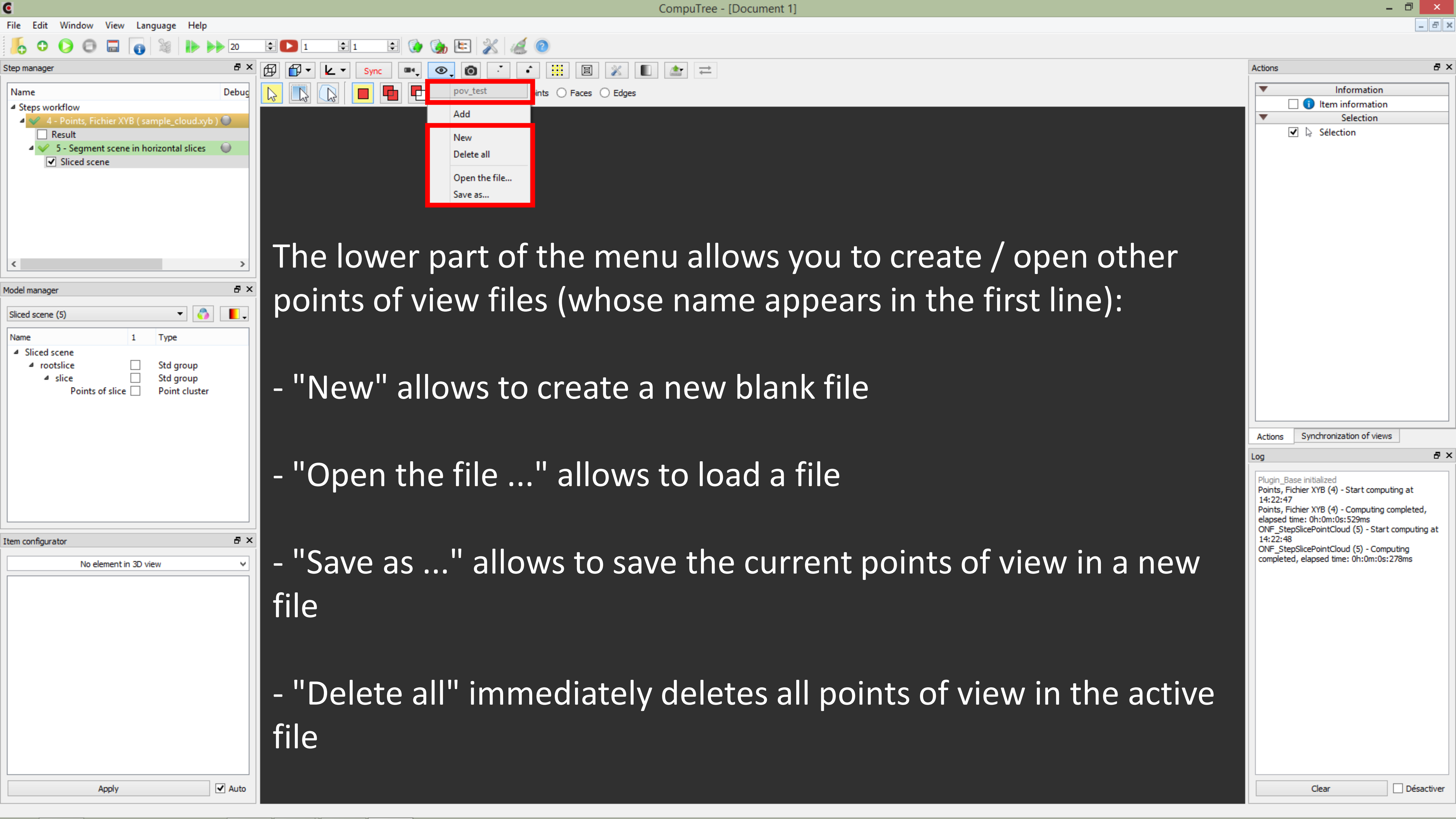
Interesting trunk (cx:1.45993 cy:6.61554 cz:8.90331 rx:-0.679276 ry:-0.0352643 rz:0.0443551 rw:-0.731692 d:7.01134)

Name	1	Type
Sliced scene		
rootslice	☐	Std group
slice	☐	Std group
Points of slice	☐	Point cluster

```
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
```

Previously added points of view can be loaded by clicking in the first part of the menu.

By default, points of view are stored in a "DEFAULT" file (see first line of the menu).


CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
20
1
1
Step manager
Name
Debug
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
No element in 3D view
Apply
☑ Auto
Sync
pov_test
Add
New
Delete all
Open the file...
Save as...
ints
○ Faces
○ Edges
Actions
Information
☐ Item information
Selection
☑ Sélection
Actions
Synchronization of views
Log
Clear
☐ Désactiver

```
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
```

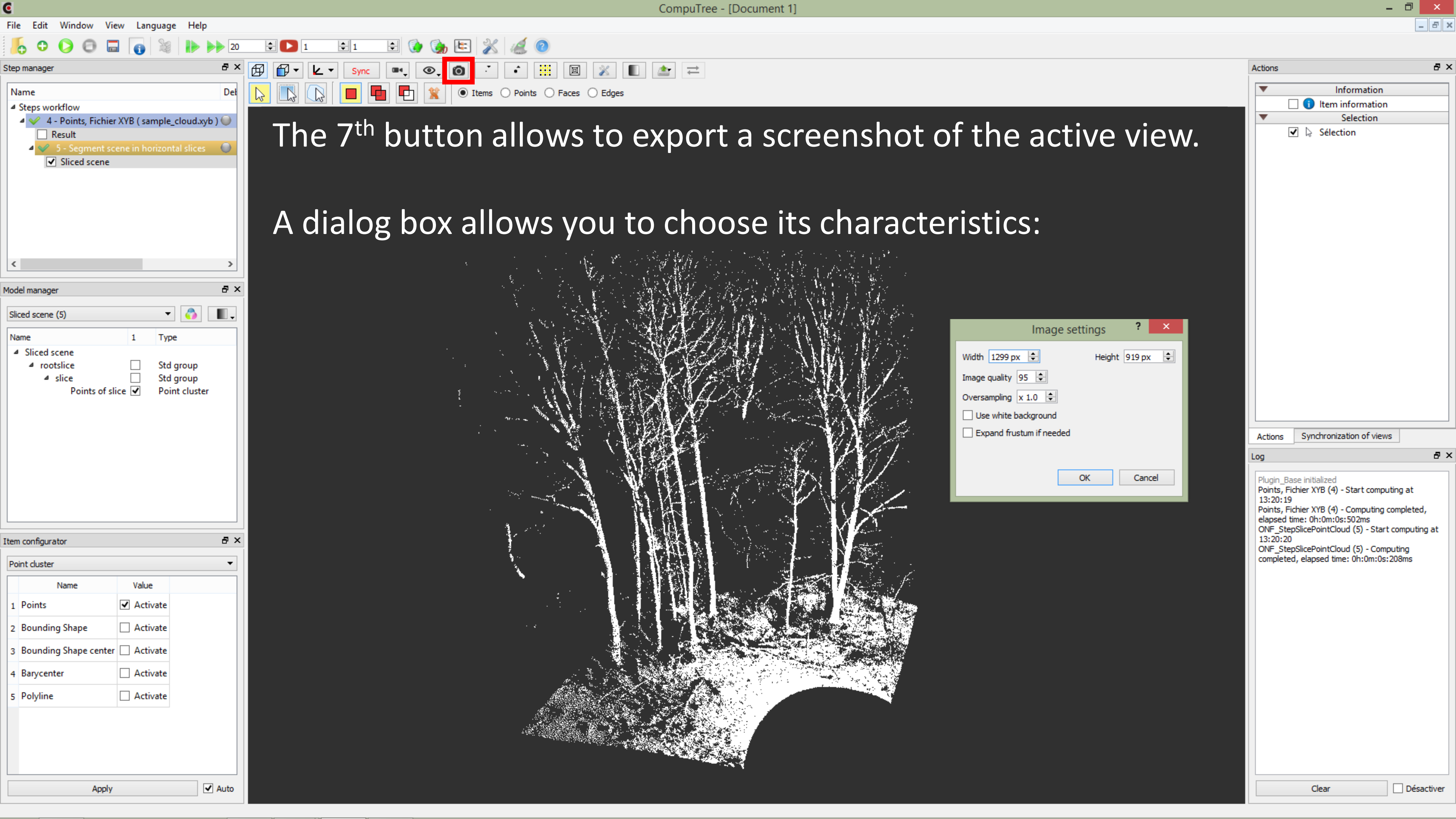
The lower part of the menu allows you to create / open other points of view files (whose name appears in the first line):

- "New" allows to create a new blank file

- "Open the file ..." allows to load a file

- "Save as ..." allows to save the current points of view in a new file

- "Delete all" immediately deletes all points of view in the active file



The 7th button allows to export a screenshot of the active view.

A dialog box allows you to choose its characteristics:

Image settings

Width 1299 px Height 919 px

Image quality 95

Oversampling x 1.0

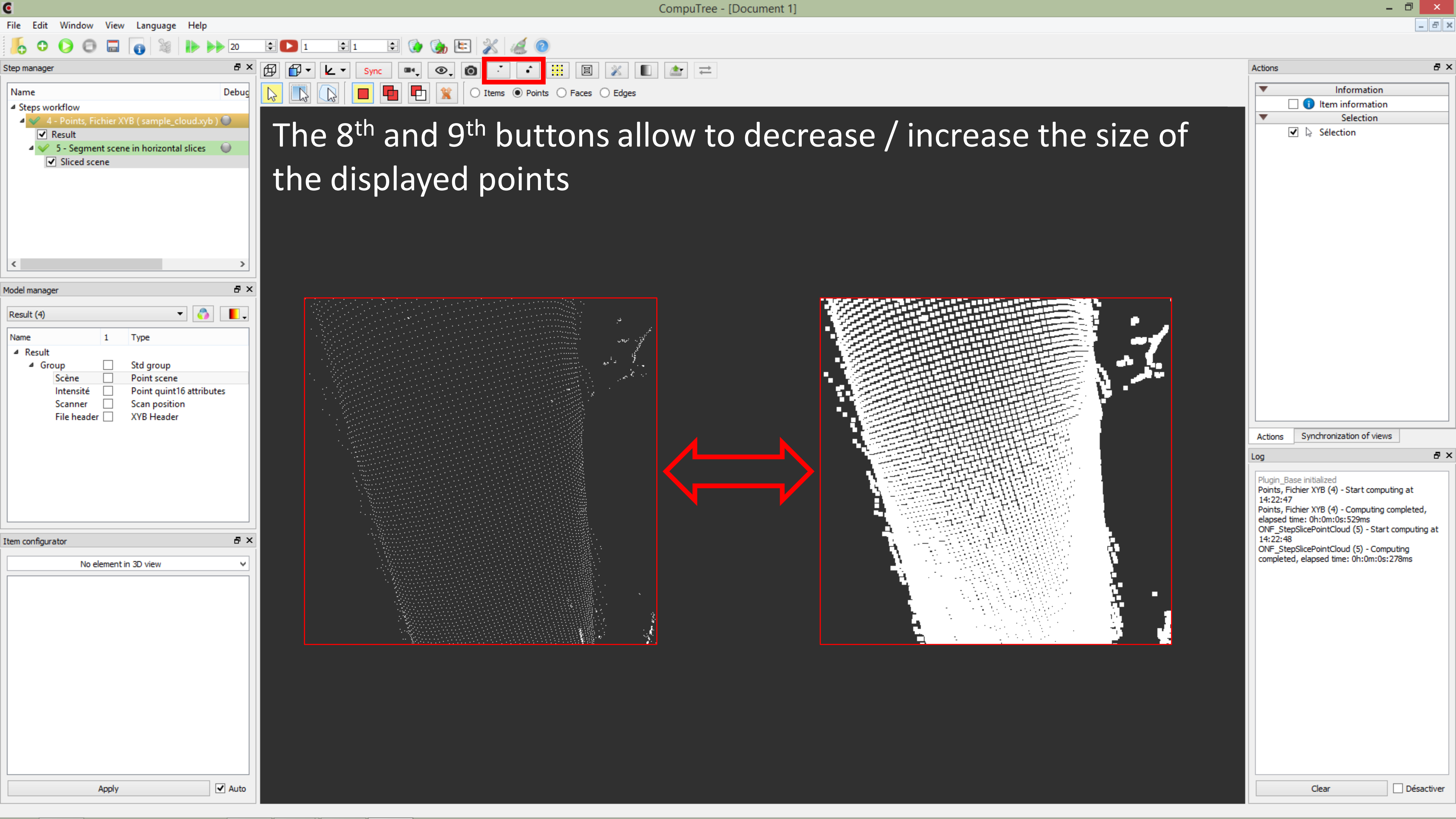
☐ Use white background

☐ Expand frustum if needed

OK Cancel

```
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
```

CompuTree - [Document 1]
File Edit Window View Language Help
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 ☑ Activate
2 Bounding Shape ☐ Activate
3 Bounding Shape center ☐ Activate
4 Barycenter ☐ Activate
5 Polyline ☐ Activate
Apply ☑ Auto
Sync
● Items ○ Points ○ Faces ○ Edges
Actions
Information
☐ Item information
Selection
☑ Sélection
Actions Synchronization of views
Log
Clear ☐ Désactiver



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

CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
Step manager
Name
Debug
Model manager
Item configurator
Sync
Items
Points
Faces
Edges
Actions
Information
Selection
Actions
Synchronization of views
Log
Apply
Auto
Clear
Désactiver

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

Result (4)

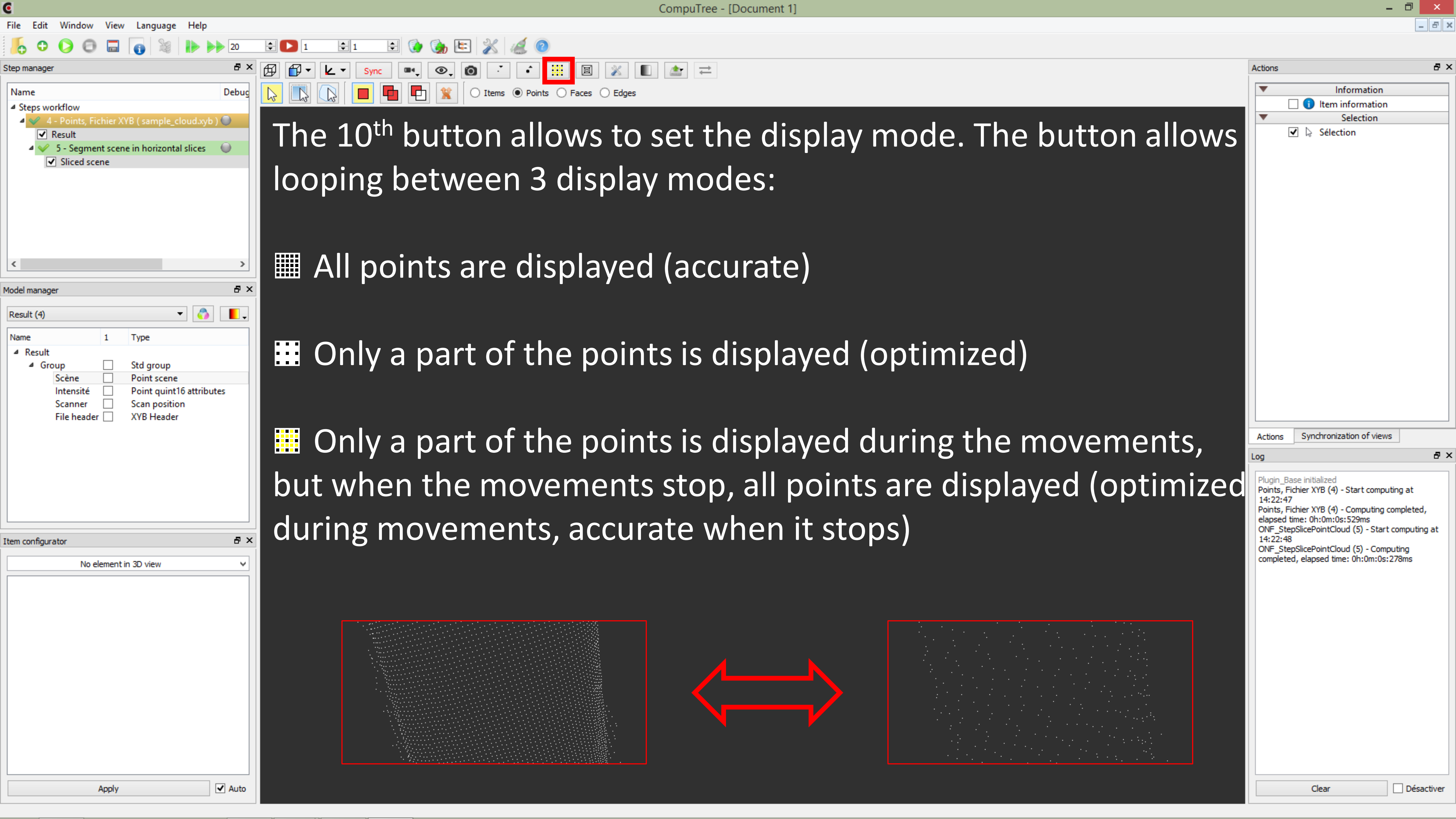
Name	1	Type
Result		
Group	☐	Std group
Scène	☐	Point scene
Intensité	☐	Point quint16 attributes
Scanner	☐	Scan position
File header	☐	XYB Header

No element in 3D view

Information
- ☐ Item information

Selection
- ☑ Sélection

```
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
```



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

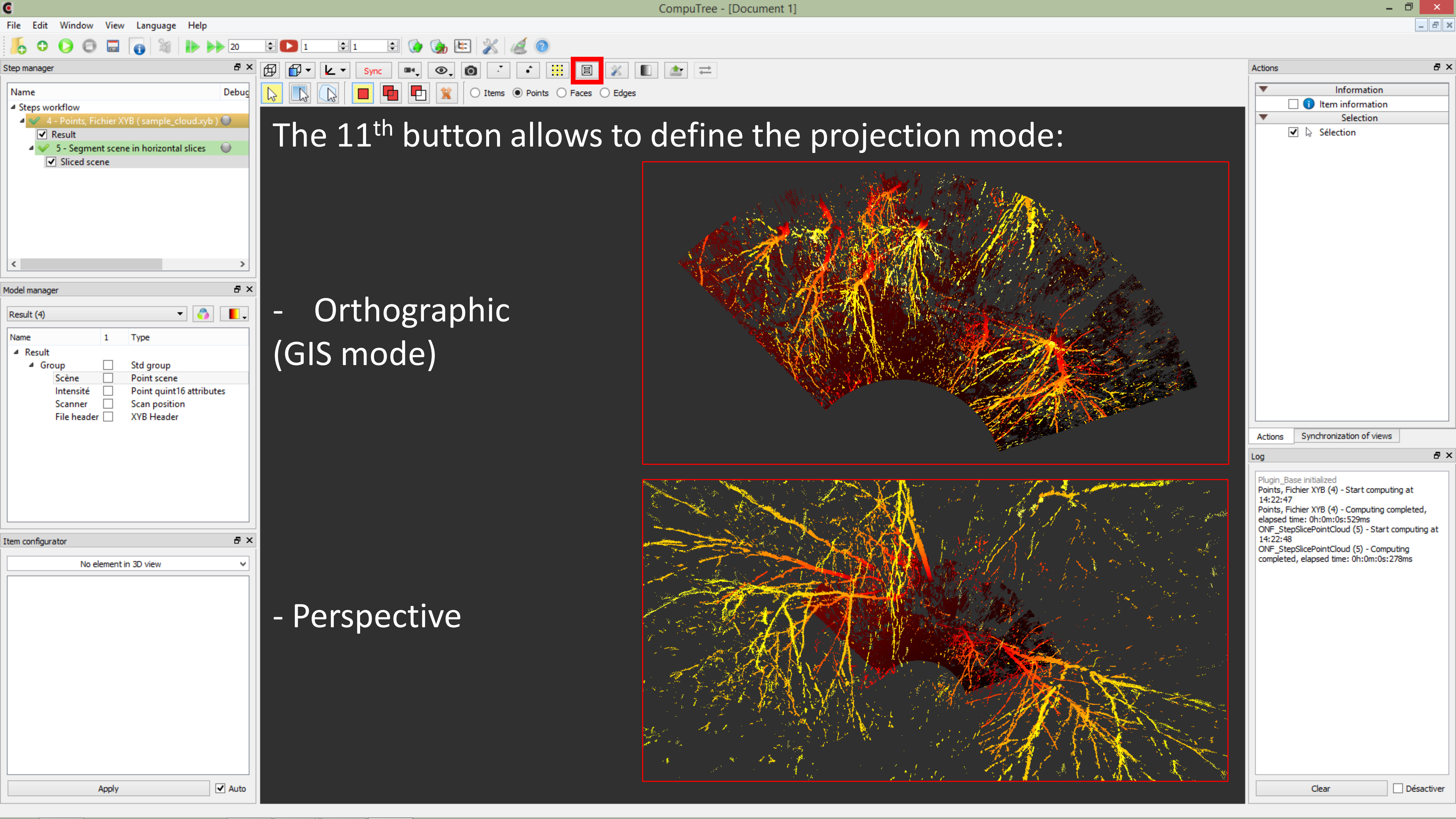
▦ All points are displayed (accurate)

⁙ 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)

```
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
```

CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
20
1
1
Step manager
Name
Debug
Steps workflow
4 - Points, Fichier XYB (sample_cloud.xyb)
☑ Result
5 - Segment scene in horizontal slices
☑ Sliced scene
Sync
○ Items
● Points
○ Faces
○ Edges
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
Apply
☑ Auto
Actions
Information
☐ Item information
Selection
☑ Sélection
Actions
Synchronization of views
Log
Clear
☐ Désactiver

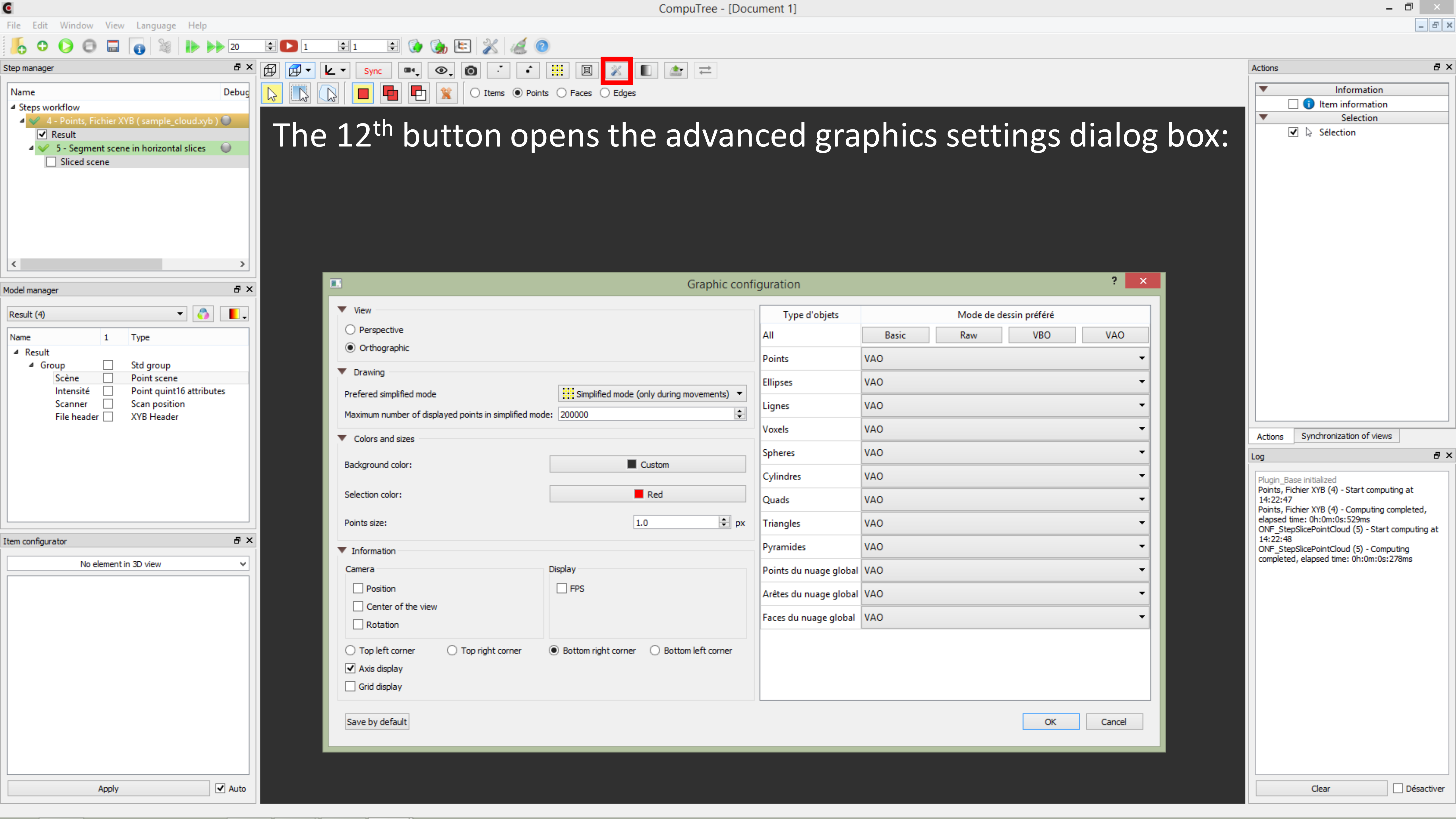

CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
20
1
1
Step manager
Name
Debug
Steps workflow
4 - Points, Fichier XYB (sample_cloud.xyb)
☑ Result
5 - Segment scene in horizontal slices
☑ Sliced scene
Model manager
Result (4)
Name
1
Type
Result
Group ☐ Std group
Scène ☐ Point scene
Intensité ☐ Point quint16 attributes
Scanner ☐ Scan position
File header ☐ XYB Header
Item configurator
No element in 3D view
Apply
☑ Auto
Sync
○ Items
● Points
○ Faces
○ Edges
Actions
Information
☐ Item information
Selection
☑ Sélection
Actions
Synchronization of views
Log
Clear
☐ Désactiver

The 11th button allows to define the projection mode:

- Orthographic (GIS mode)

- Perspective

```
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
```


CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
Step manager
Model manager
Item configurator
No element in 3D view
Apply
Auto
Actions
Information
Item information
Selection
Sélection
Synchronization of views
Sync
Items
Points
Faces
Edges
Clear
Désactiver

The 12th button opens the advanced graphics settings dialog box:

Steps workflow
- 4 - Points, Fichier XYB (sample_cloud.xyb)
  - ☑ Result
- 5 - Segment scene in horizontal slices
  - ☐ Sliced scene

Result (4)

Name	1	Type
Result		
Group	☐	Std group
Scène	☐	Point scene
Intensité	☐	Point quint16 attributes
Scanner	☐	Scan position
File header	☐	XYB Header

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
```

Graphic configuration

View
- ○ Perspective
- ● Orthographic

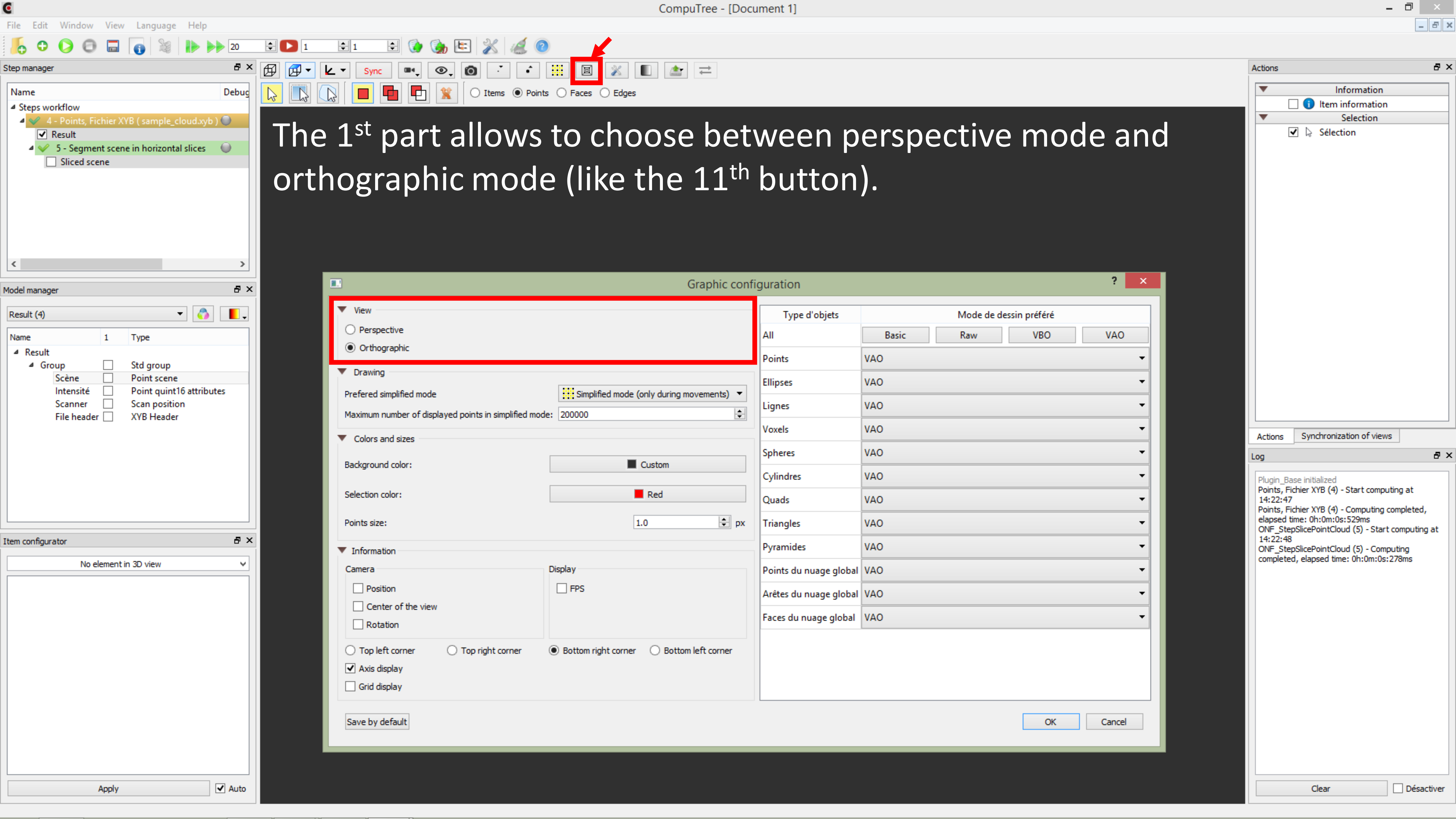
Drawing
- Prefered simplified mode: Simplified mode (only during movements)
- Maximum number of displayed points in simplified mode: 200000

Colors and sizes
- Background color: Custom
- Selection color: Red
- Points size: 1.0 px

Information
- Camera: ☐ Position ☐ Center of the view ☐ Rotation
- Display: ☐ FPS
- ○ Top left corner ○ Top right corner ● Bottom right corner ○ Bottom left corner
- ☑ Axis display
- ☐ Grid display

Type d'objets	Mode de dessin préféré
All	Basic / Raw / VBO / VAO
Points	VAO
Ellipses	VAO
Lignes	VAO
Voxels	VAO
Spheres	VAO
Cylindres	VAO
Quads	VAO
Triangles	VAO
Pyramides	VAO
Points du nuage global	VAO
Arêtes du nuage global	VAO
Faces du nuage global	VAO

Save by default | OK | Cancel



The 1st part allows to choose between perspective mode and orthographic mode (like the 11th button).

CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
Sync
Items
Points
Faces
Edges
Step manager
Model manager
Item configurator
Actions
Synchronization of views
Log
Apply
Auto
Clear
Désactiver
Save by default
OK
Cancel

Step manager

- 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

Graphic configuration

View
- ○ Perspective
- ● Orthographic

Drawing
- Prefered simplified mode: Simplified mode (only during movements)
- Maximum number of displayed points in simplified mode: 200000

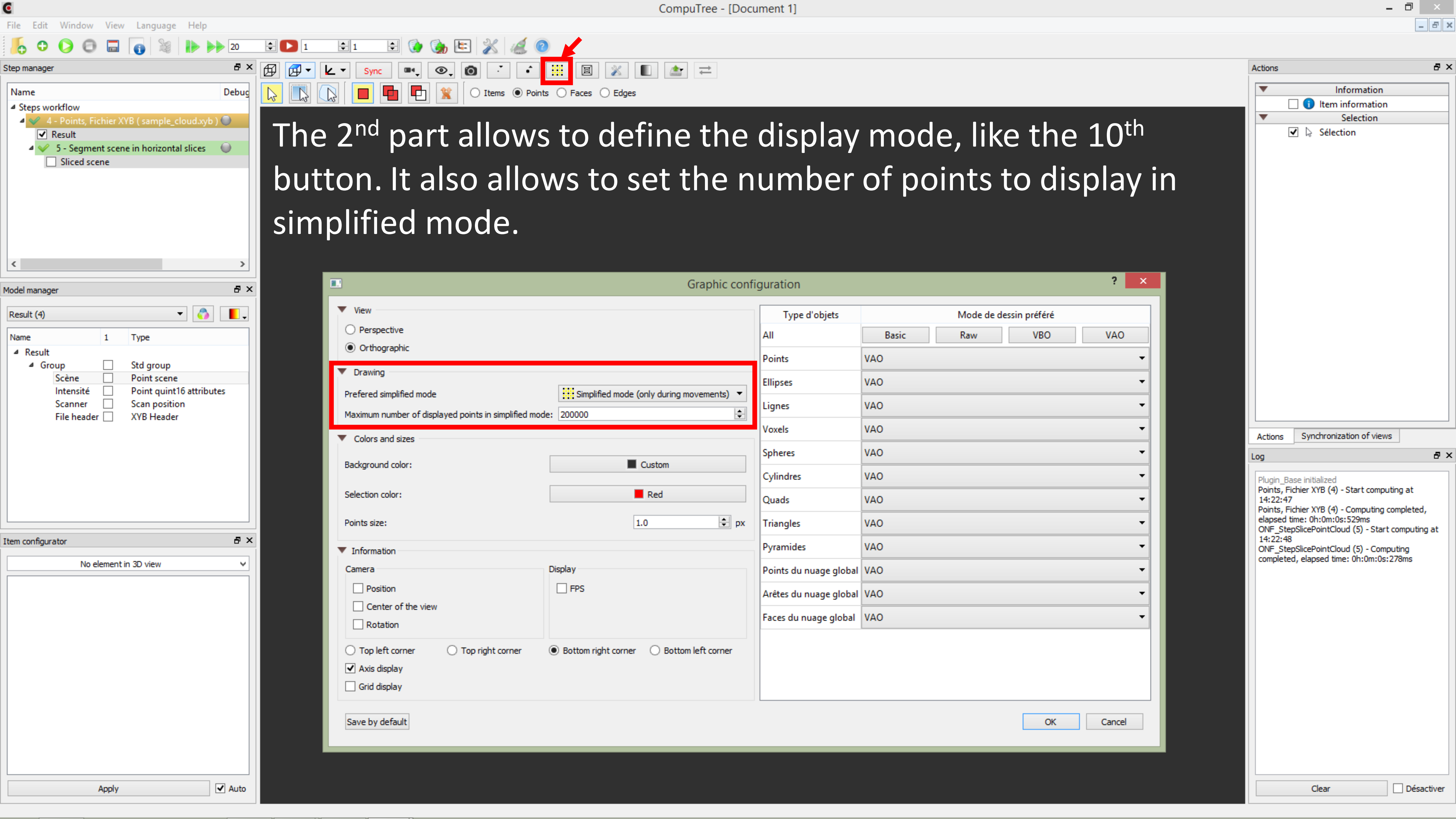
Colors and sizes
- Background color: Custom
- Selection color: Red
- Points size: 1.0 px

Information
- Camera: ☐ Position ☐ Center of the view ☐ Rotation
- Display: ☐ FPS
- ○ Top left corner ○ Top right corner ● Bottom right corner ○ Bottom left corner
- ☑ Axis display
- ☐ Grid display

Type d'objets	Mode de dessin préféré
All	Basic Raw VBO VAO
Points	VAO
Ellipses	VAO
Lignes	VAO
Voxels	VAO
Spheres	VAO
Cylindres	VAO
Quads	VAO
Triangles	VAO
Pyramides	VAO
Points du nuage global	VAO
Arêtes du nuage global	VAO
Faces du nuage global	VAO

Actions
- Information
  - ☐ Item information
- Selection
  - ☑ Sélection

```
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
```



The 2nd part allows to define the display mode, like the 10th button. It also allows to set the number of points to display in simplified mode.

Graphic configuration

View
- ○ Perspective
- ● Orthographic

Drawing
- Prefered simplified mode: Simplified mode (only during movements)
- Maximum number of displayed points in simplified mode: 200000

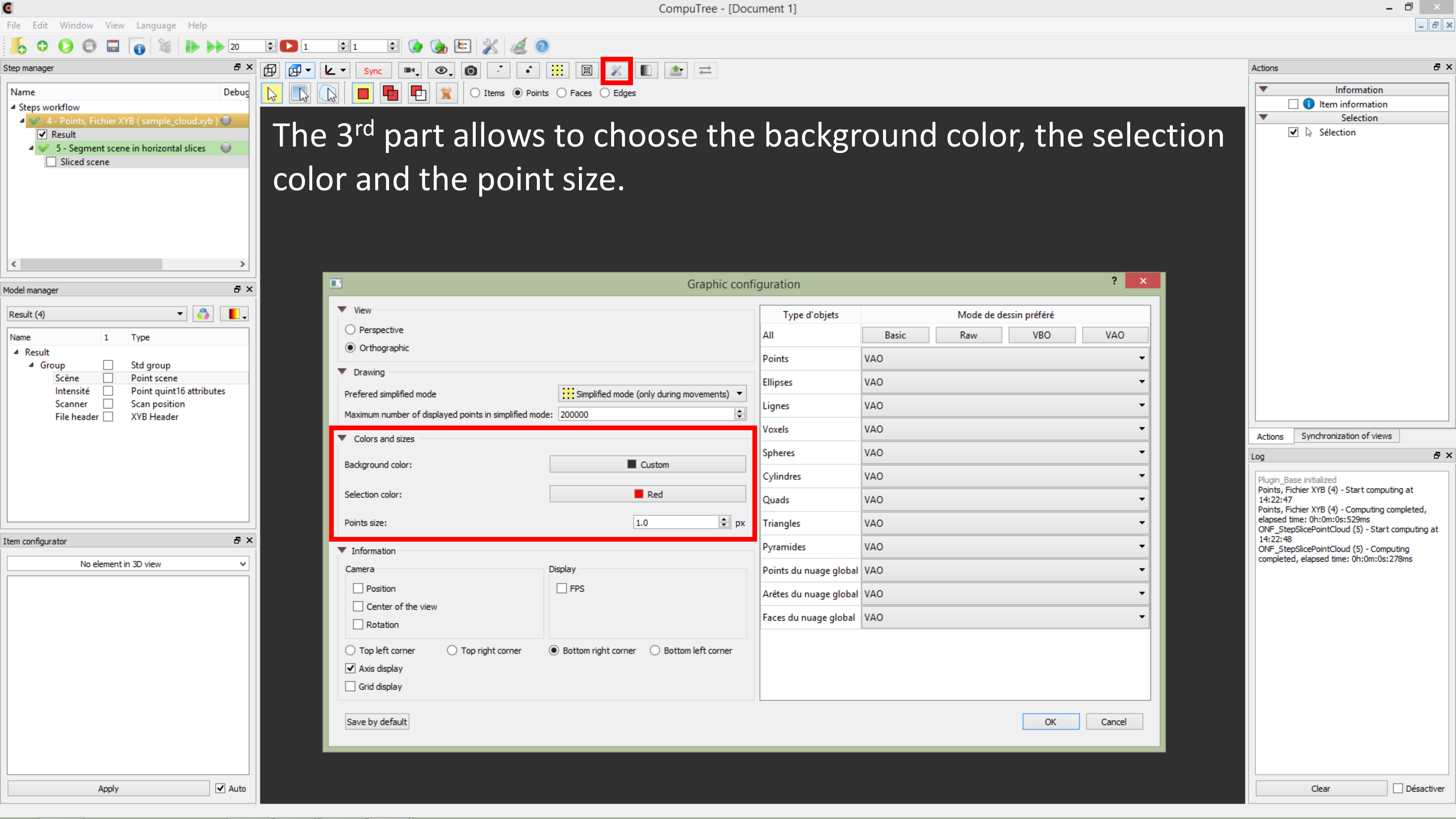
Colors and sizes
- Background color: Custom
- Selection color: Red
- Points size: 1.0 px

Information
- Camera: ☐ Position ☐ Center of the view ☐ Rotation
- Display: ☐ FPS
- ○ Top left corner ○ Top right corner ● Bottom right corner ○ Bottom left corner
- ☑ Axis display
- ☐ Grid display

Type d'objets	Mode de dessin préféré
All	Basic / Raw / VBO / VAO
Points	VAO
Ellipses	VAO
Lignes	VAO
Voxels	VAO
Spheres	VAO
Cylindres	VAO
Quads	VAO
Triangles	VAO
Pyramides	VAO
Points du nuage global	VAO
Arêtes du nuage global	VAO
Faces du nuage global	VAO

```
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
```

CompuTree - [Document 1]
File Edit Window View Language Help
20 1 1
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
Apply ☑ Auto
Sync
○ Items ● Points ○ Faces ○ Edges
Save by default
OK
Cancel
Actions
Information
☐ Item information
Selection
☑ Sélection
Actions Synchronization of views
Log
Clear ☐ Désactiver


CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
Step manager
Model manager
Item configurator
Actions
Information
Item information
Selection
Sélection
Synchronization of views
Log
Clear
Désactiver
Sync
Items
Points
Faces
Edges
Apply
Auto
Graphic configuration
Save by default
OK
Cancel

The 3rd part allows to choose the background color, the selection color and the point size.

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

Graphic configuration

View
- ○ Perspective
- ● Orthographic

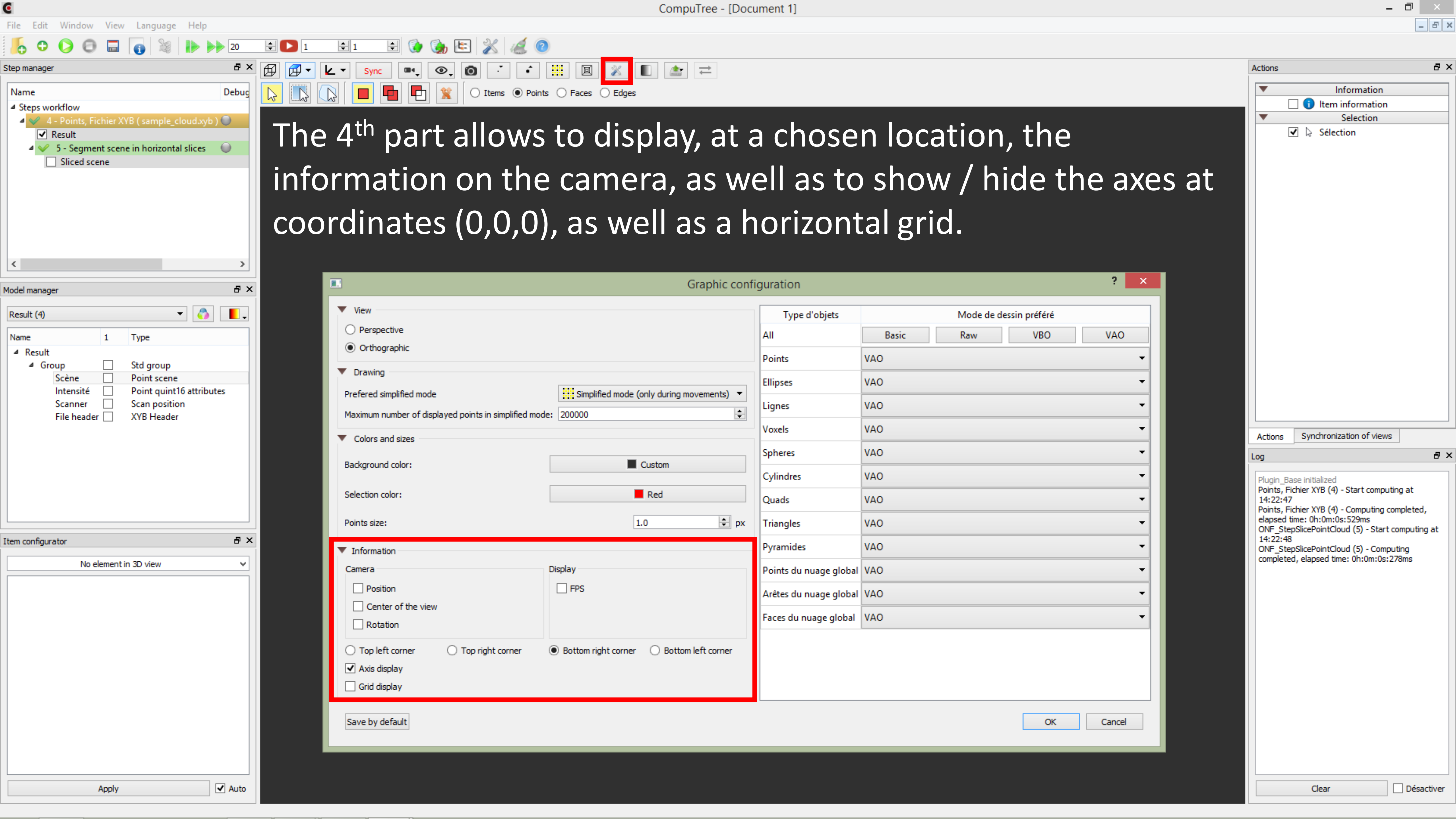
Drawing
- Prefered simplified mode: Simplified mode (only during movements)
- Maximum number of displayed points in simplified mode: 200000

Colors and sizes
- Background color: Custom
- Selection color: Red
- Points size: 1.0 px

Information
- Camera: ☐ Position ☐ Center of the view ☐ Rotation
- Display: ☐ FPS
- ○ Top left corner ○ Top right corner ● Bottom right corner ○ Bottom left corner
- ☑ Axis display
- ☐ Grid display

Type d'objets	Mode de dessin préféré
All	Basic / Raw / VBO / VAO
Points	VAO
Ellipses	VAO
Lignes	VAO
Voxels	VAO
Spheres	VAO
Cylindres	VAO
Quads	VAO
Triangles	VAO
Pyramides	VAO
Points du nuage global	VAO
Arêtes du nuage global	VAO
Faces du nuage global	VAO

```
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
```


CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
Step manager
Model manager
Item configurator
Actions
Log
Sync
Items
Points
Faces
Edges
Apply
Auto
Clear
Désactiver
Synchronization of views
Save by default
OK
Cancel

The 4th part allows to display, at a chosen location, the information on the camera, as well as to show / hide the axes at coordinates (0,0,0), as well as a horizontal grid.

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

Actions

- Information
  - ☐ Item information
- Selection
  - ☑ Sélection

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
```

Graphic configuration

View
- ○ Perspective
- ● Orthographic

Drawing
- Prefered simplified mode: Simplified mode (only during movements)
- Maximum number of displayed points in simplified mode: 200000

Colors and sizes
- Background color: Custom
- Selection color: Red
- Points size: 1.0 px

Information

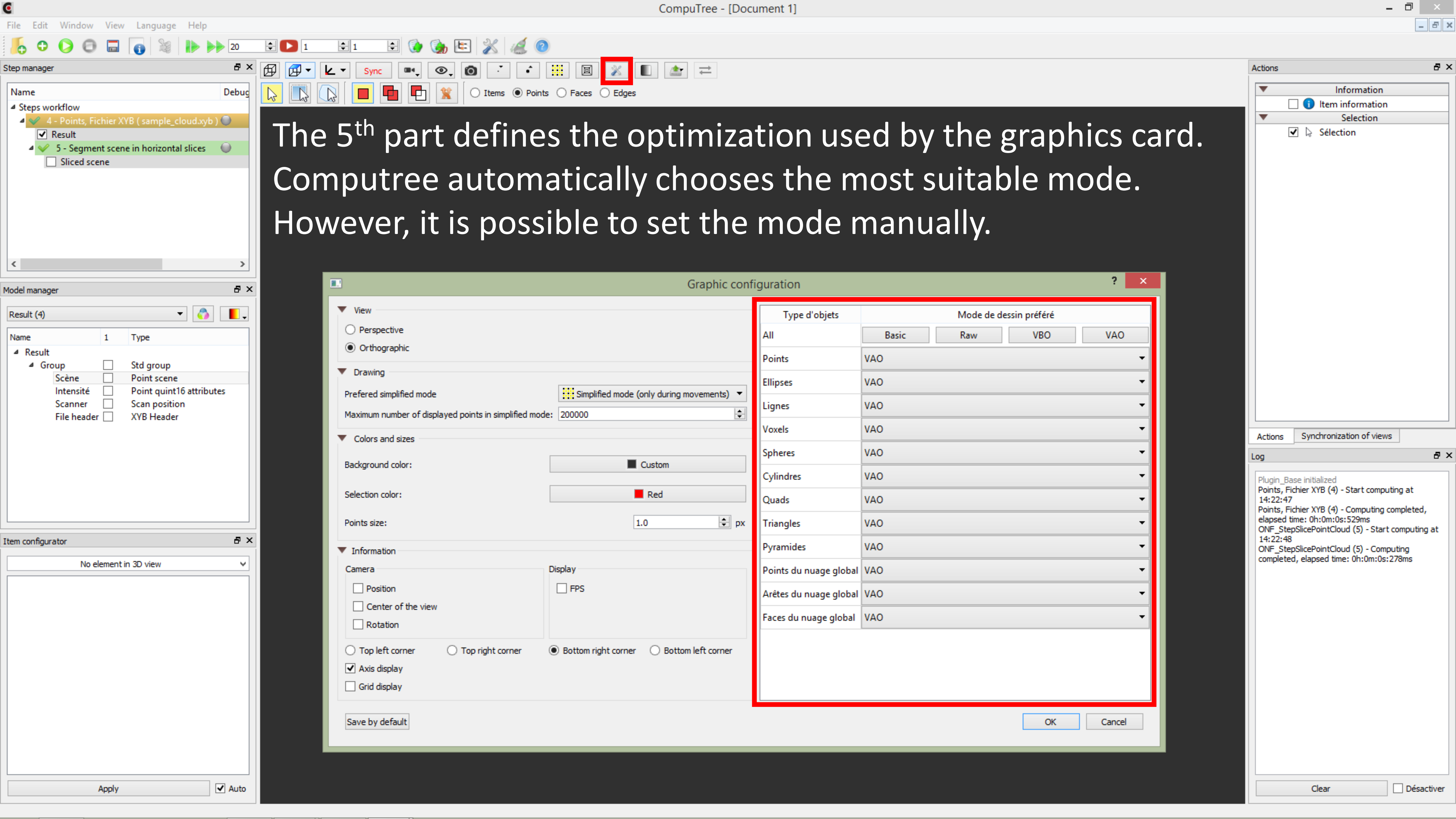
Camera
- ☐ Position
- ☐ Center of the view
- ☐ Rotation

Display
- ☐ FPS

○ Top left corner ○ Top right corner ● Bottom right corner ○ Bottom left corner

- ☑ Axis display
- ☐ Grid display

Type d'objets	Mode de dessin préféré
All	Basic / Raw / VBO / VAO
Points	VAO
Ellipses	VAO
Lignes	VAO
Voxels	VAO
Spheres	VAO
Cylindres	VAO
Quads	VAO
Triangles	VAO
Pyramides	VAO
Points du nuage global	VAO
Arêtes du nuage global	VAO
Faces du nuage global	VAO



The 5th part defines the optimization used by the graphics card. Computree automatically chooses the most suitable mode. However, it is possible to set the mode manually.

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)
Item configurator
No element in 3D view
Apply
☑ Auto
Sync
○ Items
● Points
○ Faces
○ Edges
Actions
Information
☐ Item information
Selection
☑ Sélection
Actions
Synchronization of views
Log
Clear
☐ Désactiver

Name	1	Type
Result		
Group	☐	Std group
Scène	☐	Point scene
Intensité	☐	Point quint16 attributes
Scanner	☐	Scan position
File header	☐	XYB Header

```
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
```

Graphic configuration

View

○ Perspective
● Orthographic

Drawing

Prefered simplified mode: Simplified mode (only during movements)
Maximum number of displayed points in simplified mode: 200000

Colors and sizes

Background color: Custom
Selection color: Red
Points size: 1.0 px

Information

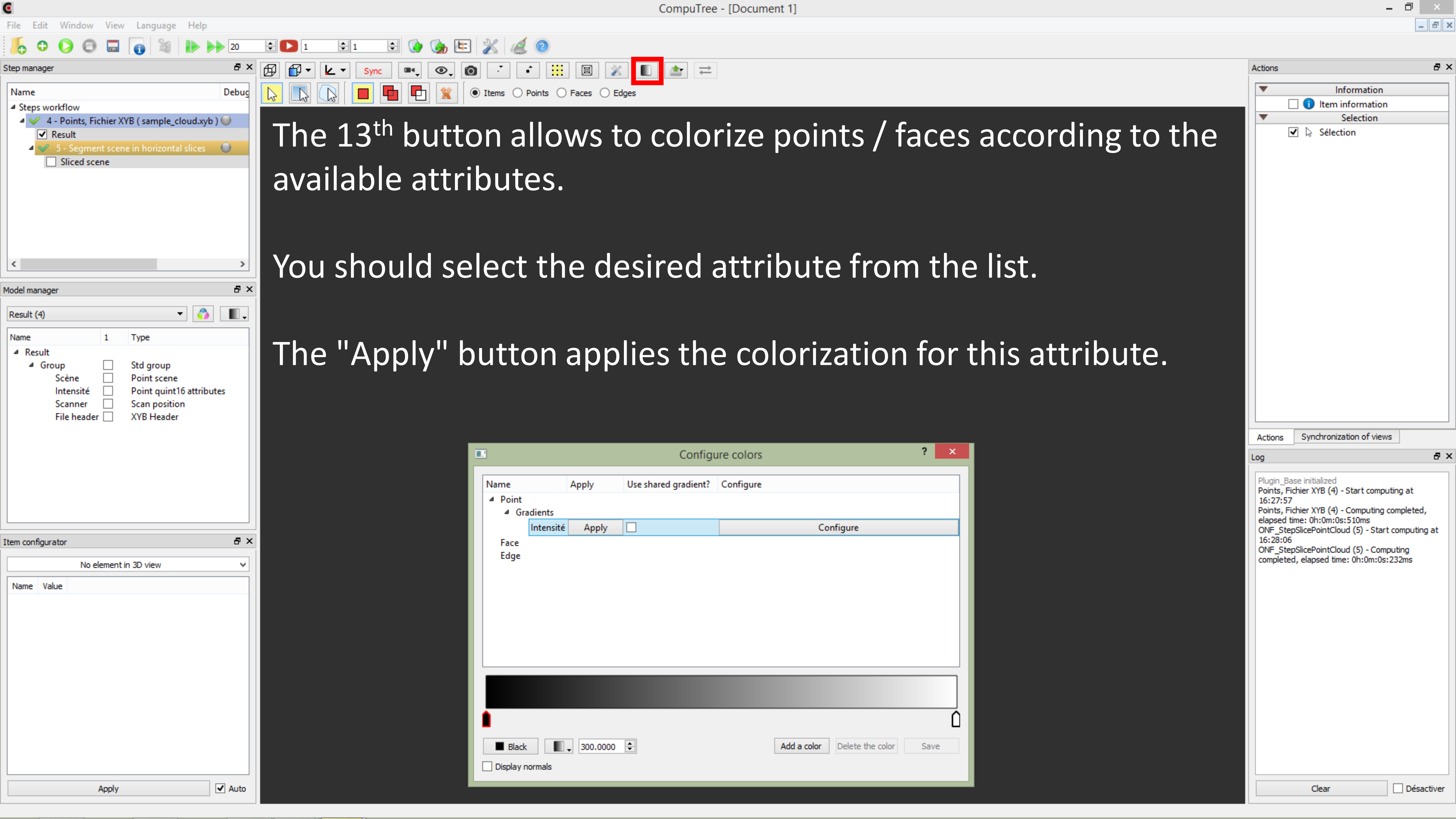
Camera
☐ Position
☐ Center of the view
☐ Rotation

Display
☐ FPS

○ Top left corner ○ Top right corner ● Bottom right corner ○ Bottom left corner
☑ Axis display
☐ Grid display

Type d'objets	Mode de dessin préféré
All	Basic Raw VBO VAO
Points	VAO
Ellipses	VAO
Lignes	VAO
Voxels	VAO
Spheres	VAO
Cylindres	VAO
Quads	VAO
Triangles	VAO
Pyramides	VAO
Points du nuage global	VAO
Arêtes du nuage global	VAO
Faces du nuage global	VAO

Save by default
OK
Cancel



The 13th button allows to colorize points / faces according to the available attributes.

You should select the desired attribute from the list.

The "Apply" button applies the colorization for this attribute.

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

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

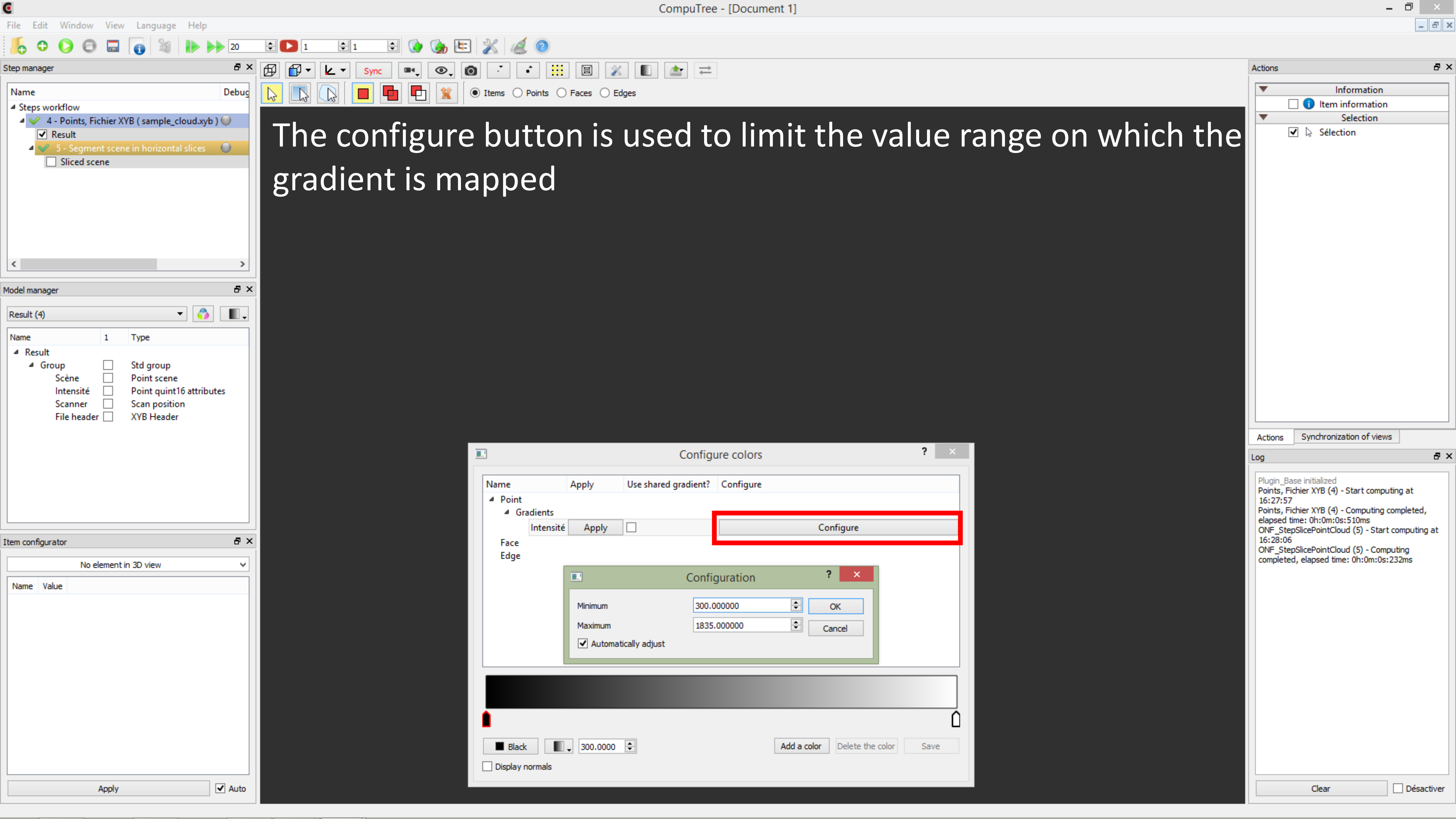
No element in 3D view

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
```

CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
20
1
1
Sync
Items
Points
Faces
Edges
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Name
Value
Apply
Auto
Clear
Désactiver

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


CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
Step manager
Steps workflow
4 - Points, Fichier XYB (sample_cloud.xyb)
Result
5 - Segment scene in horizontal slices
Sliced scene
Model manager
Result (4)
Item configurator
No element in 3D view
Apply
Auto
Items
Points
Faces
Edges
Actions
Information
Item information
Selection
Sélection
Synchronization of views
Log
Clear
Désactiver
Configure colors
Name
Apply
Use shared gradient?
Configure
Point
Gradients
Intensité
Face
Edge
Configuration
OK
Cancel
Black
Add a color
Delete the color
Save
Display normals

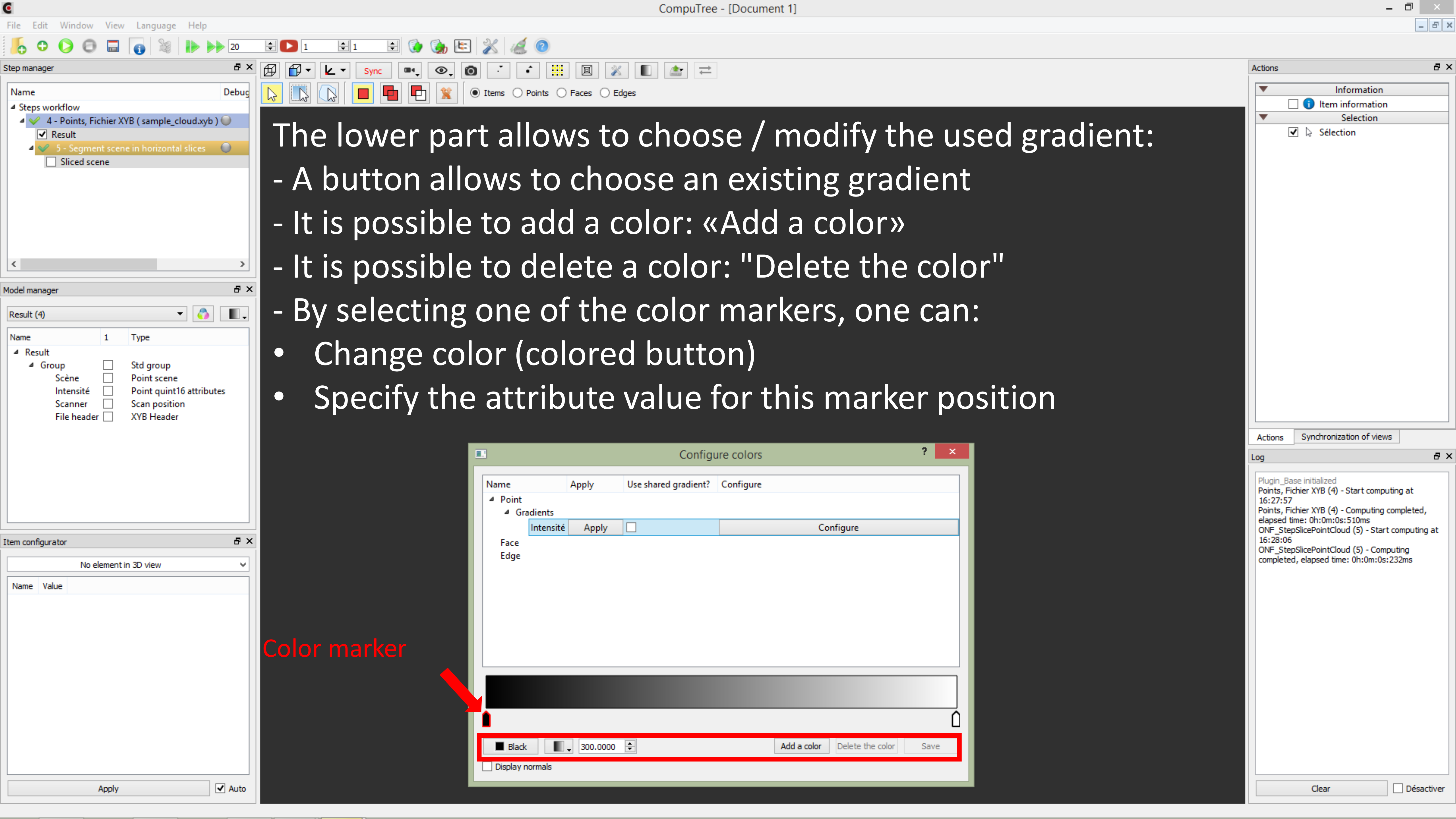
Minimum 300.000000

Maximum 1835.000000

☑ Automatically adjust

Name	1	Type
Result		
Group	☐	Std group
Scène	☐	Point scene
Intensité	☐	Point quint16 attributes
Scanner	☐	Scan position
File header	☐	XYB Header

```
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
```



CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
20
1
1
Sync
Items
Points
Faces
Edges
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)
Item configurator
No element in 3D view
Name
Value
Apply
Auto
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
Clear
Désactiver
Configure colors
Display normals

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

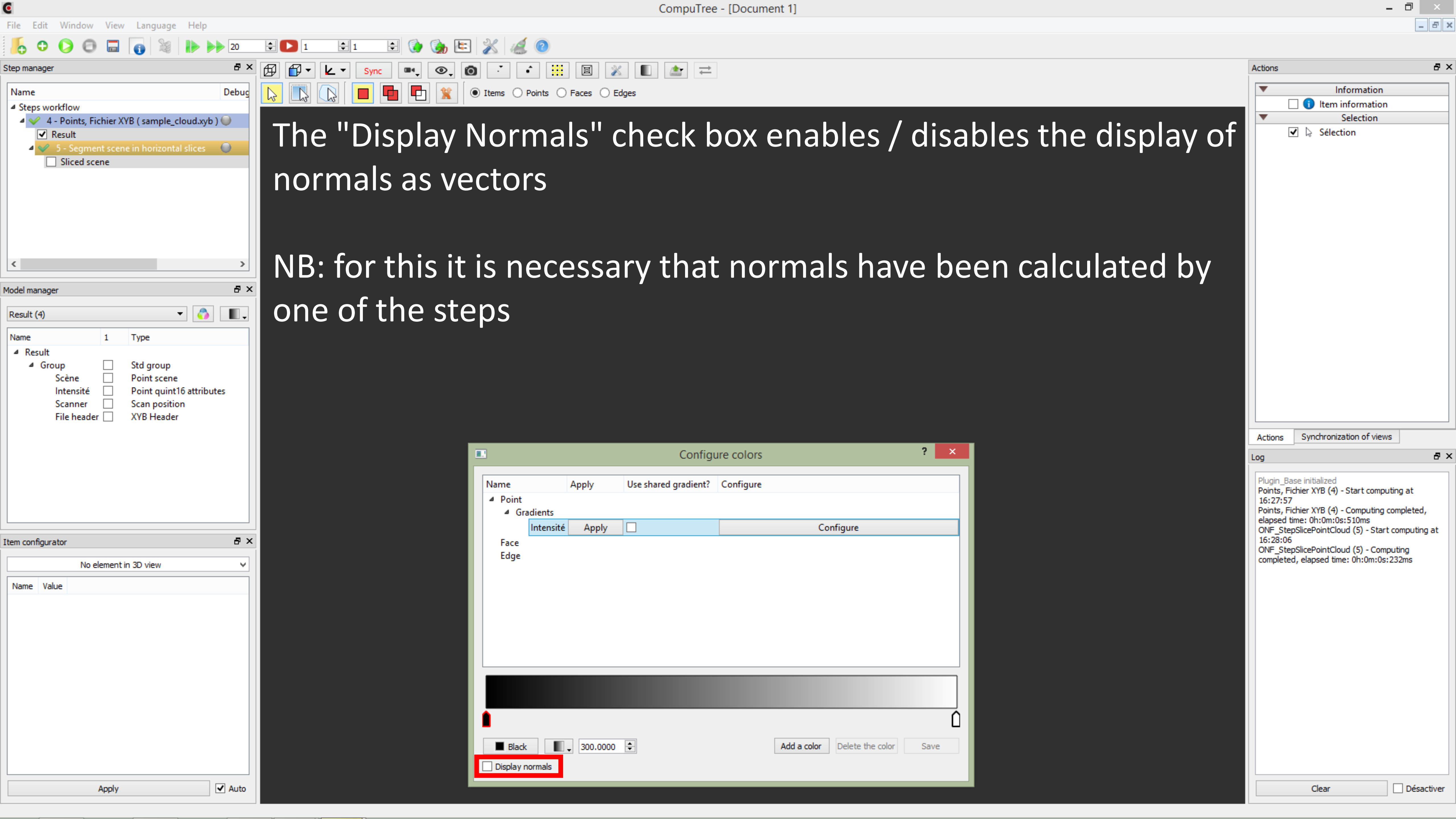
Color marker

Name	1	Type
Result		
Group	☐	Std group
Scène	☐	Point scene
Intensité	☐	Point quint16 attributes
Scanner	☐	Scan position
File header	☐	XYB Header

Name	Apply	Use shared gradient?	Configure
Point			
Gradients			
Intensité	Apply	☐	Configure
Face			
Edge			

■ Black | 300.0000 | Add a color | Delete the color | Save

```
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
```



The "Display Normals" check box enables / disables the display of normals as vectors

NB: for this it is necessary that normals have been calculated by one of the steps

CompuTree - [Document 1]
File Edit Window View Language Help
Step manager
Steps workflow
4 - Points, Fichier XYB (sample_cloud.xyb)
Result
5 - Segment scene in horizontal slices
Sliced scene
Model manager
Item configurator
No element in 3D view
Apply
Auto
Actions
Information
Item information
Selection
Sélection
Synchronization of views
Log
Clear
Désactiver
Configure colors
Name
Apply
Use shared gradient?
Configure
Point
Gradients
Intensité
Face
Edge
Black
Add a color
Delete the color
Save

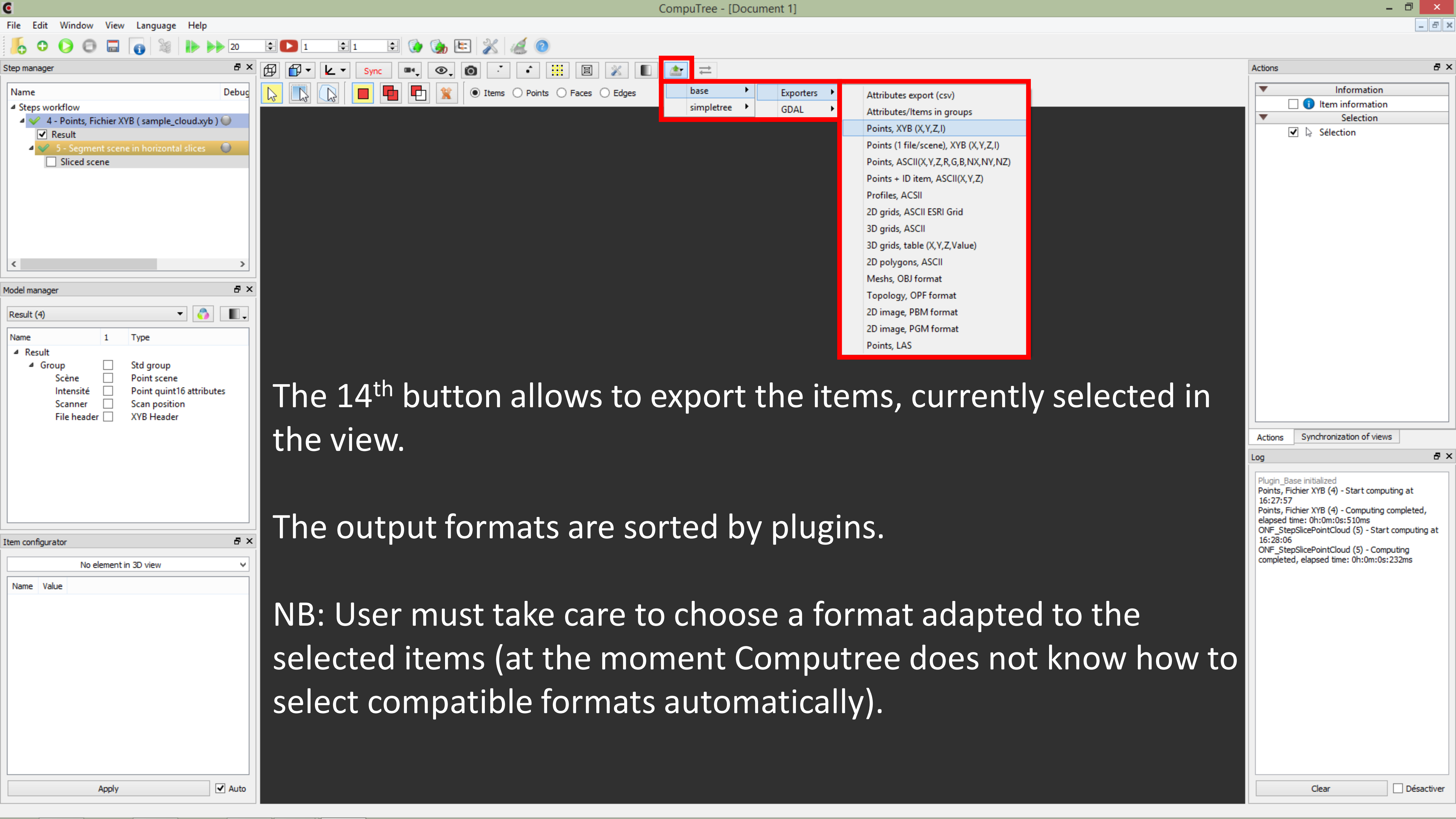
Result (4)

Name	1	Type
Result		
Group	☐	Std group
Scène	☐	Point scene
Intensité	☐	Point quint16 attributes
Scanner	☐	Scan position
File header	☐	XYB Header

300.0000

☐ Display normals

```
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
```

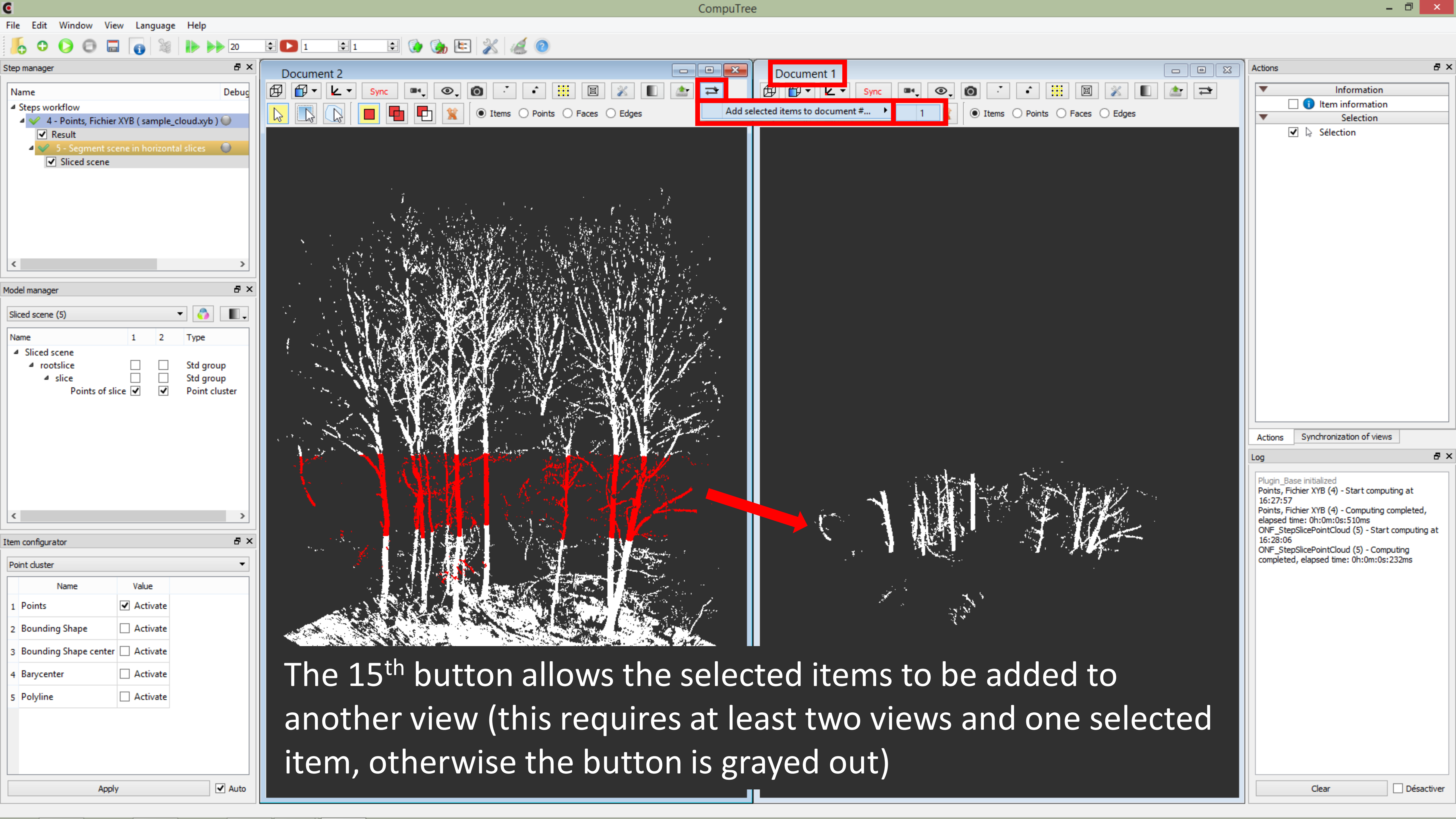

CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
Step manager
Name
Debug
Steps workflow
4 - Points, Fichier XYB (sample_cloud.xyb)
Result
5 - Segment scene in horizontal slices
Sliced scene
Model manager
Result (4)
Name
1
Type
Result
Group
Std group
Scène
Point scene
Intensité
Point quint16 attributes
Scanner
Scan position
File header
XYB Header
Item configurator
No element in 3D view
Name
Value
Apply
Auto
Sync
Items
Points
Faces
Edges
base
simpletree
Exporters
GDAL
Attributes export (csv)
Attributes/Items in groups
Points, XYB (X,Y,Z,I)
Points (1 file/scene), XYB (X,Y,Z,I)
Points, ASCII(X,Y,Z,R,G,B,NX,NY,NZ)
Points + ID item, ASCII(X,Y,Z)
Profiles, ACSII
2D grids, ASCII ESRI Grid
3D grids, ASCII
3D grids, table (X,Y,Z,Value)
2D polygons, ASCII
Meshs, OBJ format
Topology, OPF format
2D image, PBM format
2D image, PGM format
Points, LAS
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
Clear
Désactiver

```
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
```

The 14th 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).

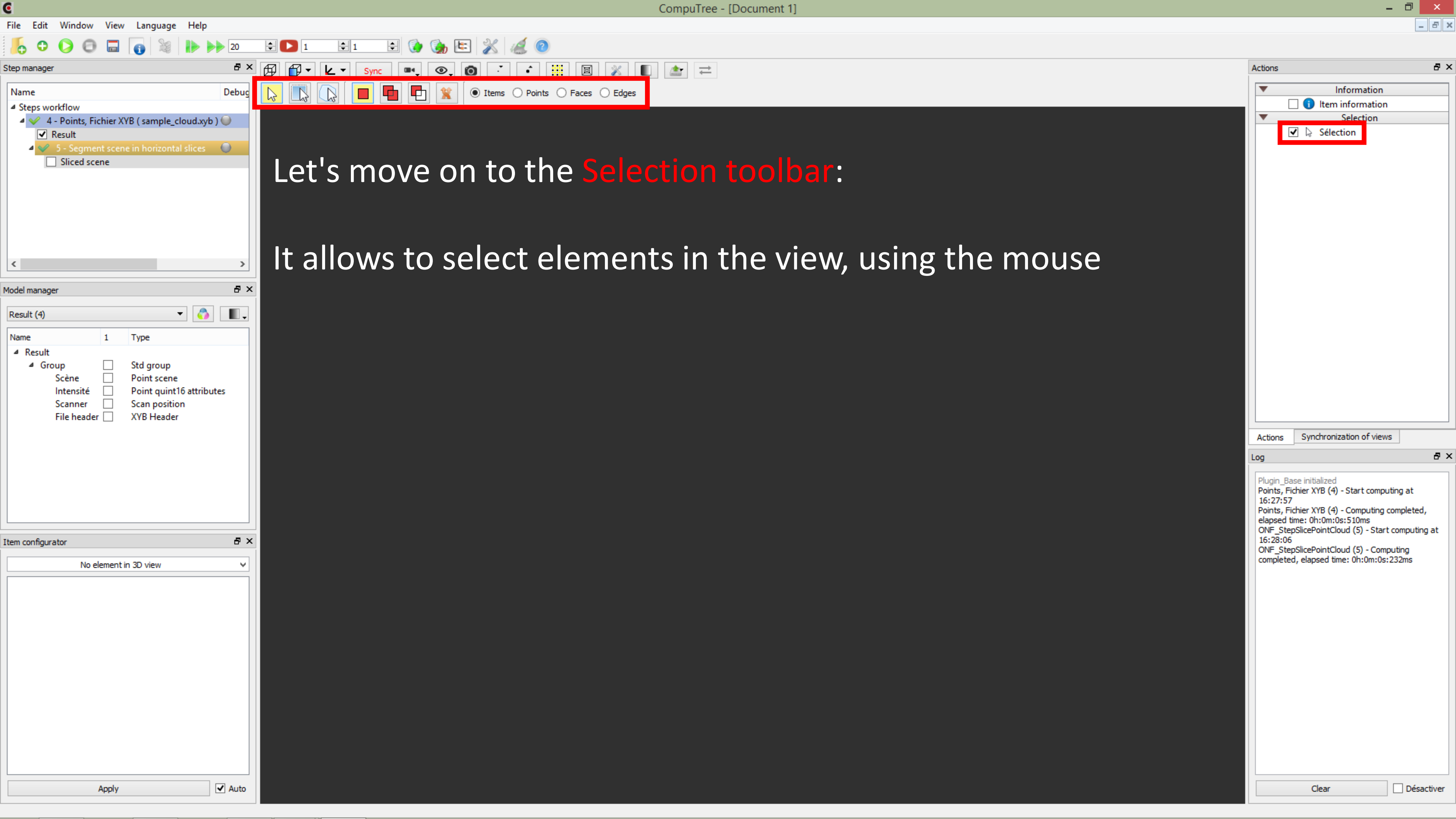

CompuTree
File Edit Window View Language Help
Step manager
Name
Debug
Steps workflow
4 - Points, Fichier XYB (sample_cloud.xyb)
Result
5 - Segment scene in horizontal slices
Sliced scene
Model manager
Sliced scene (5)
Item configurator
Point cluster
Apply
Auto
Document 2
Document 1
Sync
Add selected items to document #...
1
Items
Points
Faces
Edges
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
Clear
Désactiver

Name	1	2	Type
Sliced scene			
rootslice	☐	☐	Std group
slice	☐	☐	Std group
Points of slice	☑	☑	Point cluster

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate
4	Barycenter	☐ Activate
5	Polyline	☐ Activate

```
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
```

The 15th button allows the selected items to be added to another view (this requires at least two views and one selected item, otherwise the button is grayed out)



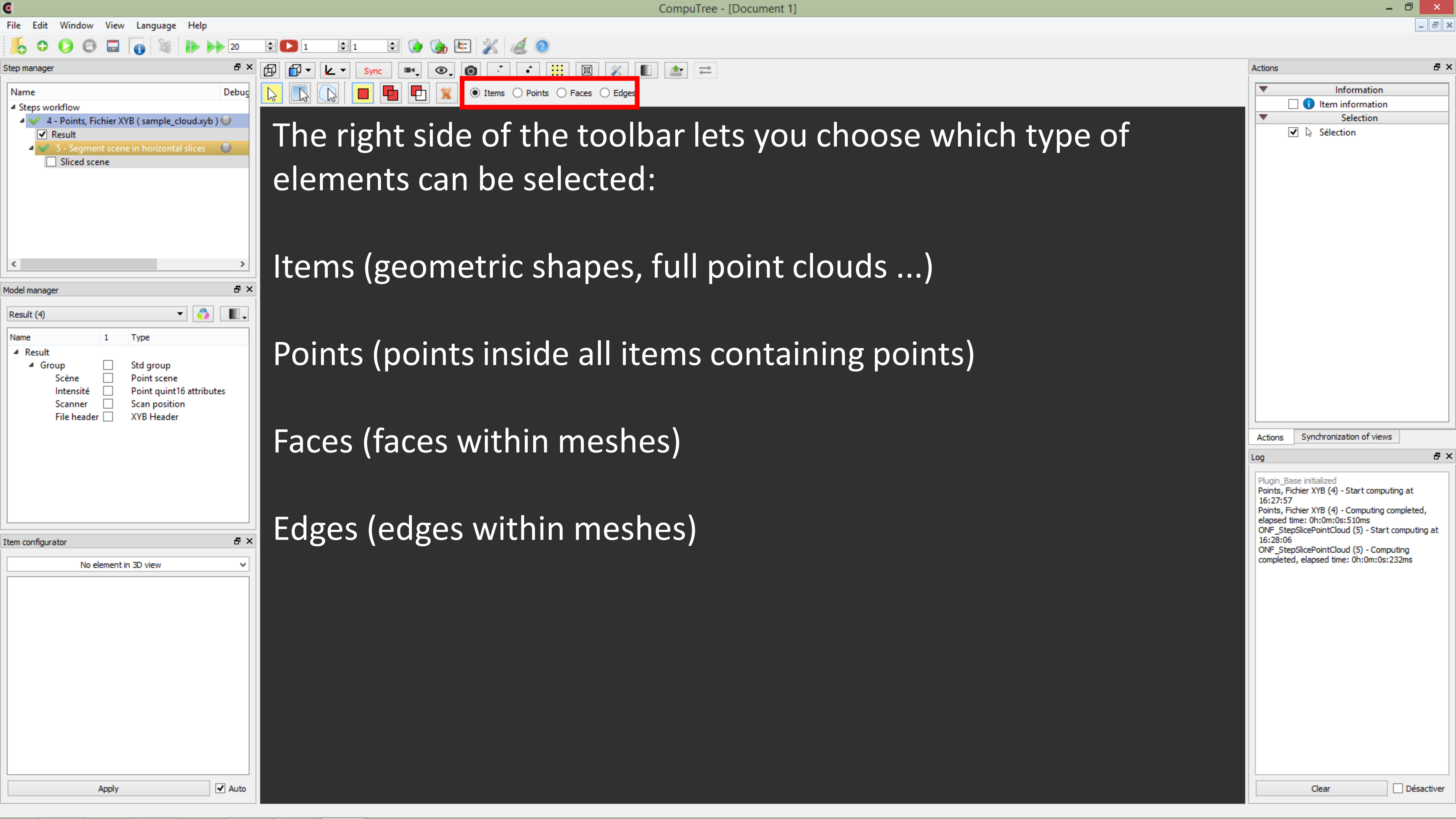
Let's move on to the Selection toolbar:

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

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)
Item configurator
No element in 3D view
Apply
☑ Auto
Sync
● Items ○ Points ○ Faces ○ Edges
Actions
Information
☐ Item information
Selection
☑ Sélection
Actions
Synchronization of views
Log
Clear
☐ Désactiver

Name	1	Type
Result		
Group	☐	Std group
Scène	☐	Point scene
Intensité	☐	Point quint16 attributes
Scanner	☐	Scan position
File header	☐	XYB Header

```
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
```


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)
Sync
● Items ○ Points ○ Faces ○ Edges
Actions
Information
☐ Item information
Selection
☑ Sélection
Actions
Synchronization of views
Log
Item configurator
No element in 3D view
Apply
☑ Auto
Clear
☐ Désactiver

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)

Name	1	Type
Result		
Group	☐	Std group
Scène	☐	Point scene
Intensité	☐	Point quint16 attributes
Scanner	☐	Scan position
File header	☐	XYB Header

```
Plugin_Base initialized
Points, Fichier XYB (4) - Start computing at
16:27:57
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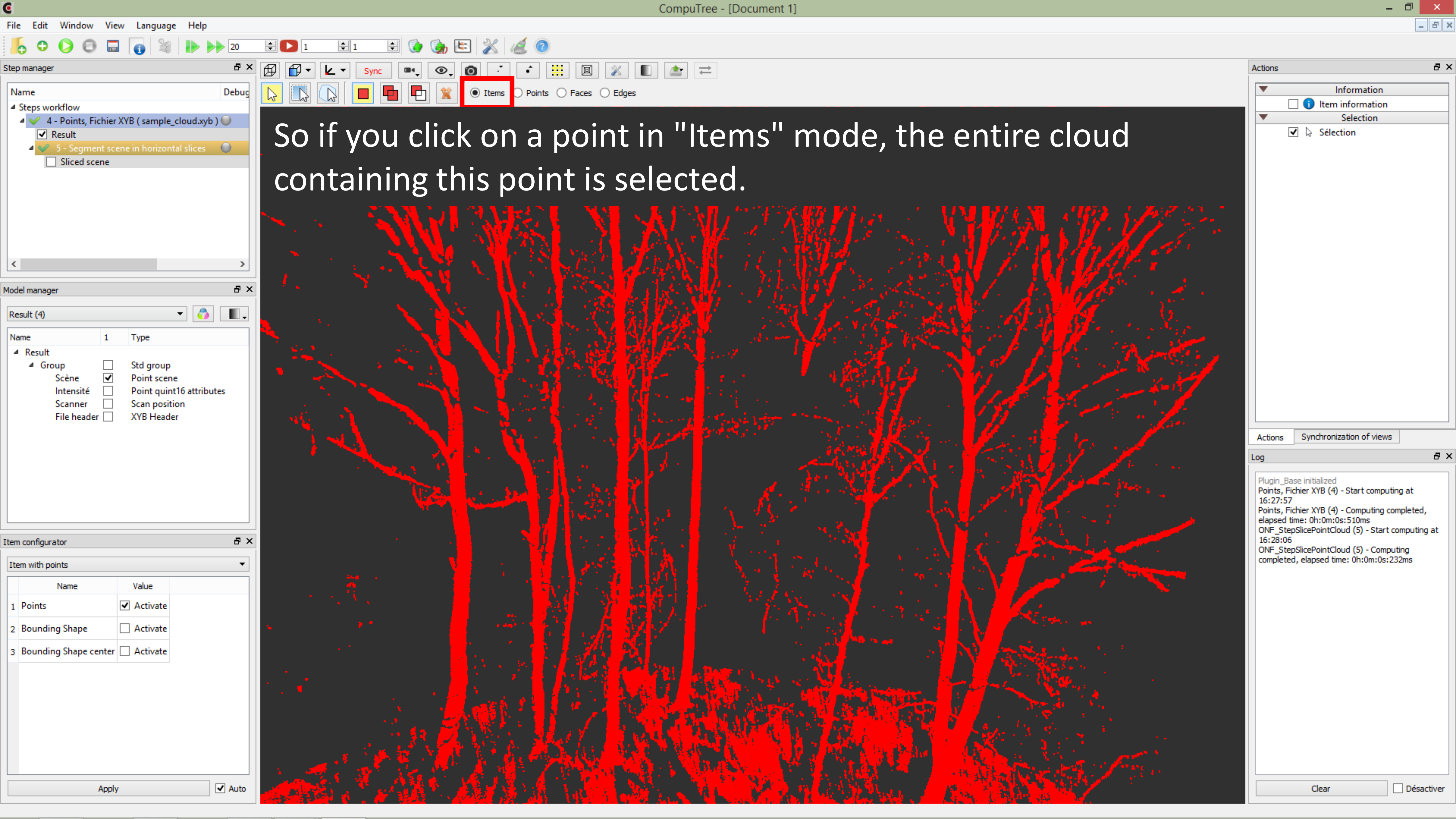
elapsed time: 0h:0m:0s:510ms
ONF_StepSlicePointCloud (5) - Start computing at
16:28:06
ONF_StepSlicePointCloud (5) - Computing
completed, elapsed time: 0h:0m:0s:232ms
```


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
Std group
Scène
Point scene
Intensité
Point quint16 attributes
Scanner
Scan position
File header
XYB Header
Item configurator
Item with points
Sync
Items
Points
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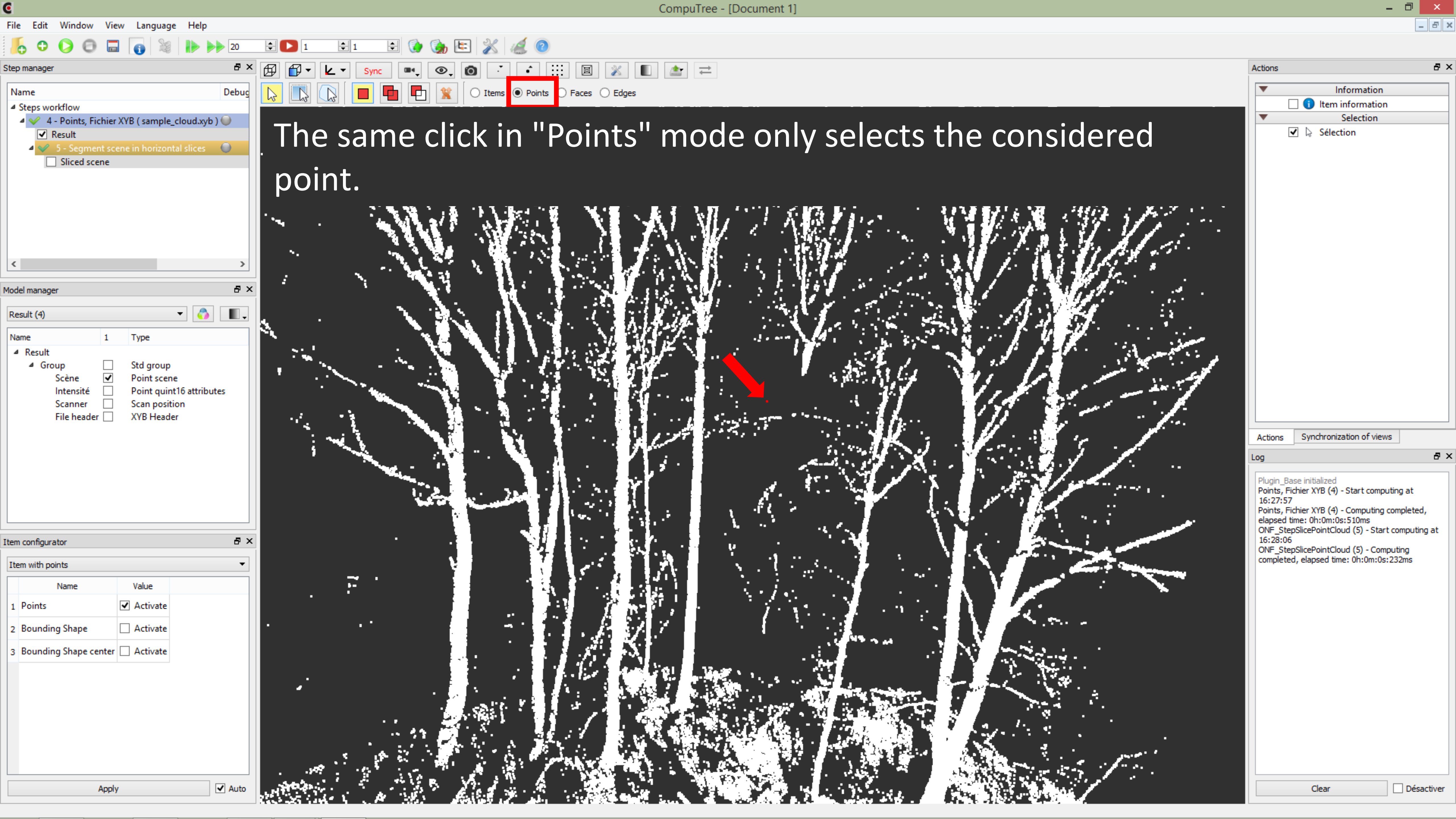
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
Clear
Désactiver
Apply
Auto

So if you click on a point in "Items" mode, the entire cloud containing this point is selected.

● Items ○ Points ○ Faces ○ Edges

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate

```
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
```



The same click in "Points" mode only selects the considered point.

CompuTree - [Document 1]
File
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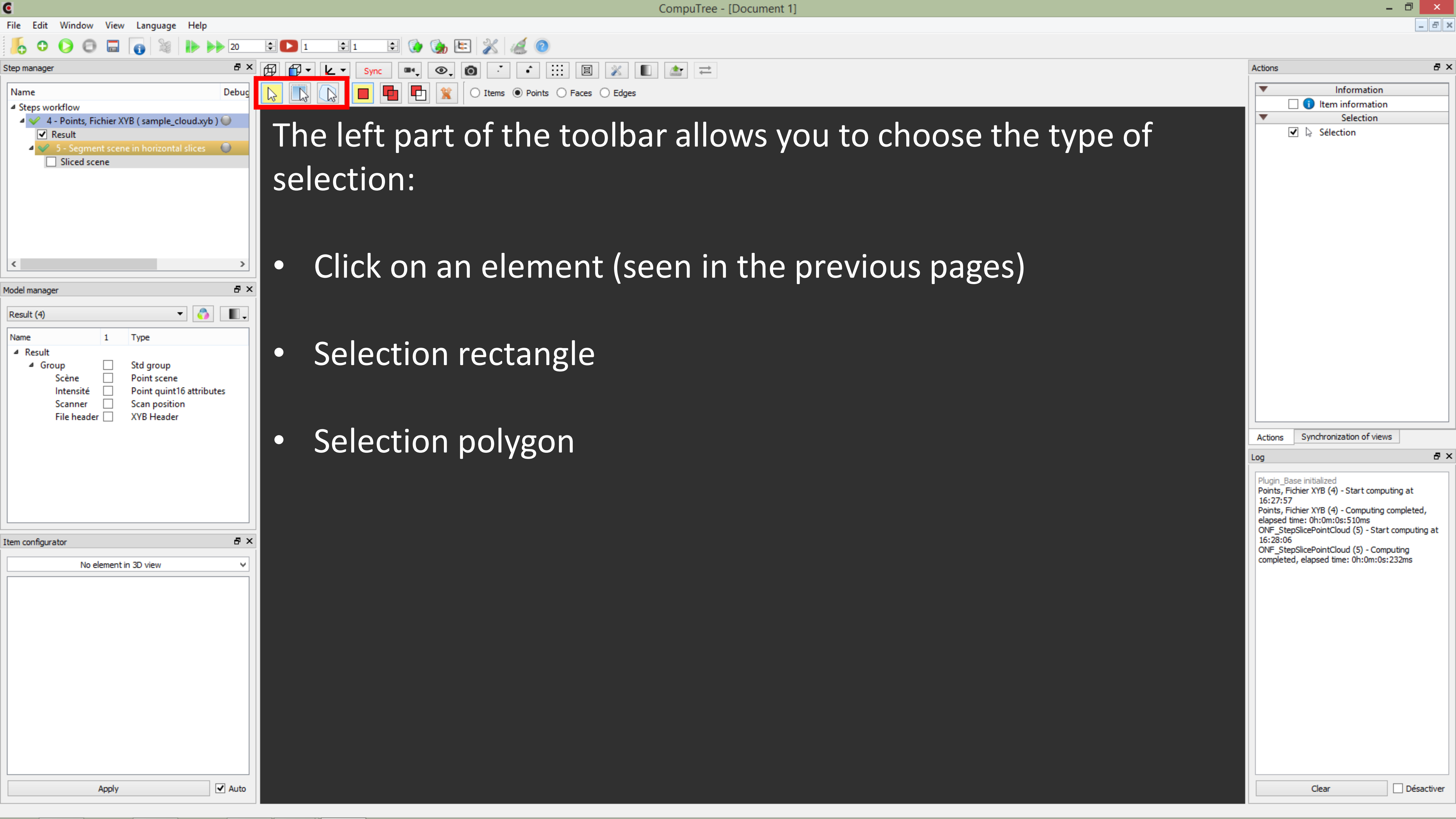
Window
View
Language
Help
Step manager
Name
Debug
Steps workflow
4 - Points, Fichier XYB (sample_cloud.xyb)
☑ Result
5 - Segment scene in horizontal slices
☐ Sliced scene
Sync
○ Items
● Points
○ Faces
○ Edges
Model manager
Result (4)
Name
1
Type
Result
Group
Std group
Scène
Point scene
Intensité
Point quint16 attributes
Scanner
Scan position
File header
XYB Header
Item configurator
Item with points
Name
Value
1 Points ☑ Activate
2 Bounding Shape ☐ Activate
3 Bounding Shape center ☐ Activate
Apply
☑ Auto
Actions
Information
☐ Item information
Selection
☑ Sélection
Actions
Synchronization of views
Log
Clear
☐ Désactiver

```
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
```

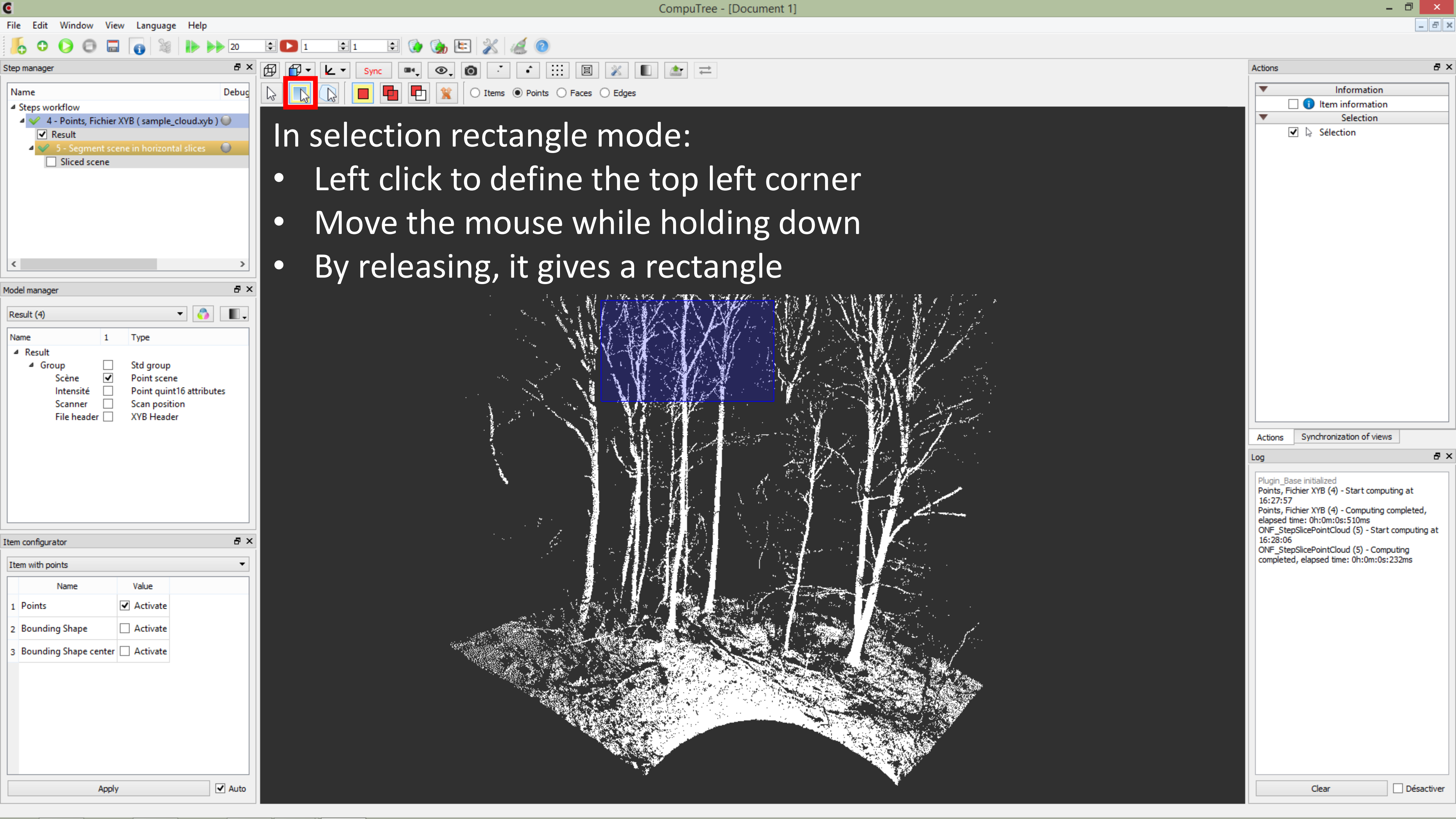

CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
20
1
1
Step manager
Name
Debug
Steps workflow
4 - Points, Fichier XYB (sample_cloud.xyb)
Result
5 - Segment scene in horizontal slices
Sliced scene
Model manager
Result (4)
Item configurator
No element in 3D view
Apply
Auto
Sync
Items
Points
Faces
Edges
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
Clear
Désactiver

The left part of the toolbar allows you to choose the type of selection:

- Click on an element (seen in the previous pages)
- Selection rectangle
- Selection polygon

Name	1	Type
Result		
Group	☐	Std group
Scène	☐	Point scene
Intensité	☐	Point quint16 attributes
Scanner	☐	Scan position
File header	☐	XYB Header

```
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
```



CompuTree - [Document 1]
File
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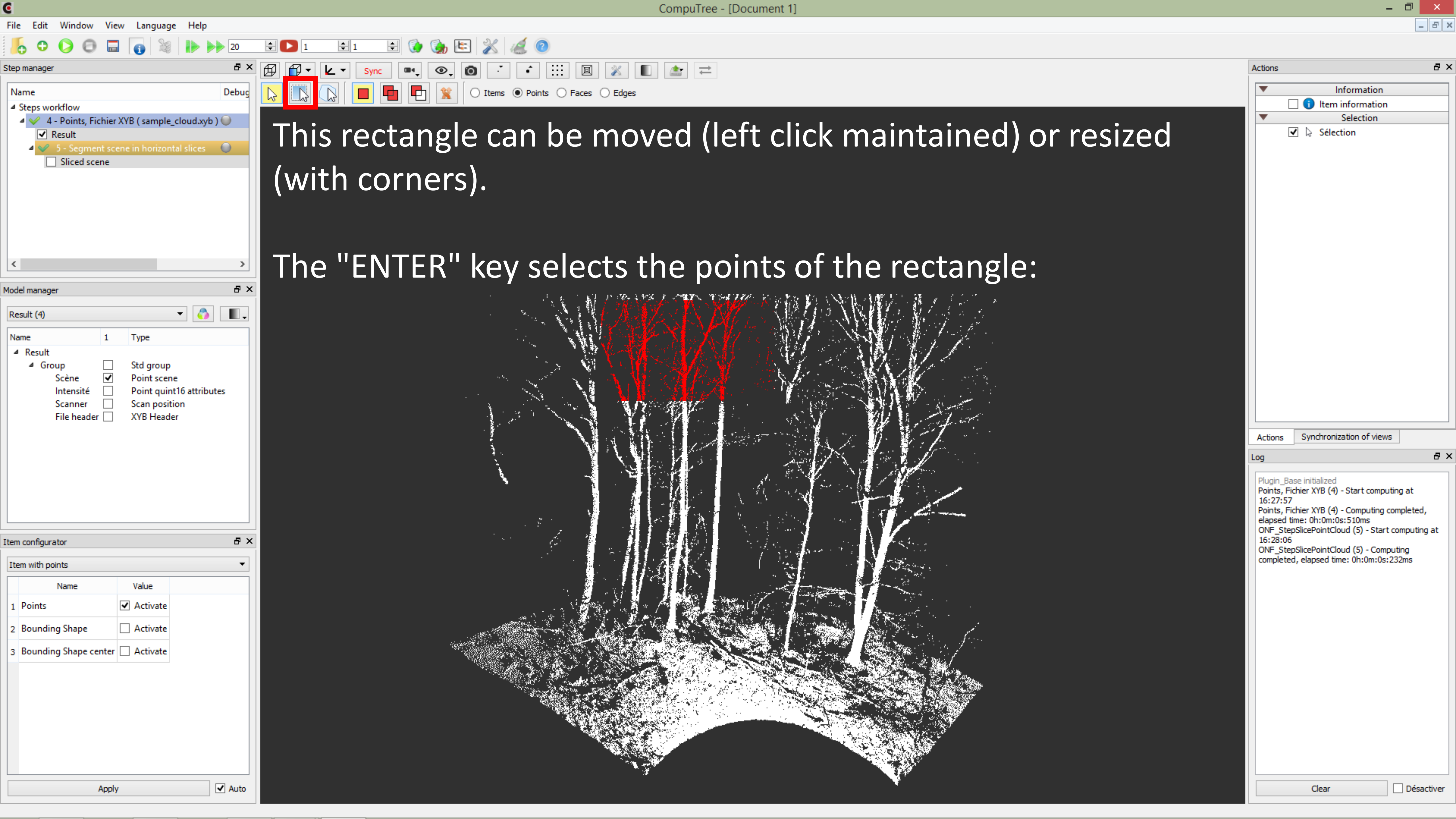
Window
View
Language
Help
Step manager
Name
Debug
Steps workflow
4 - Points, Fichier XYB (sample_cloud.xyb)
Result
5 - Segment scene in horizontal slices
Sliced scene
Model manager
Result (4)
Name
1
Type
Result
Group
Std group
Scène
Point scene
Intensité
Point quint16 attributes
Scanner
Scan position
File header
XYB Header
Item configurator
Item with points
Name
Value
Sync
Items
Points
Faces
Edges
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
Clear
Désactiver
Apply
Auto

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate

```
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
```

In selection rectangle mode:

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



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

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

CompuTree - [Document 1]
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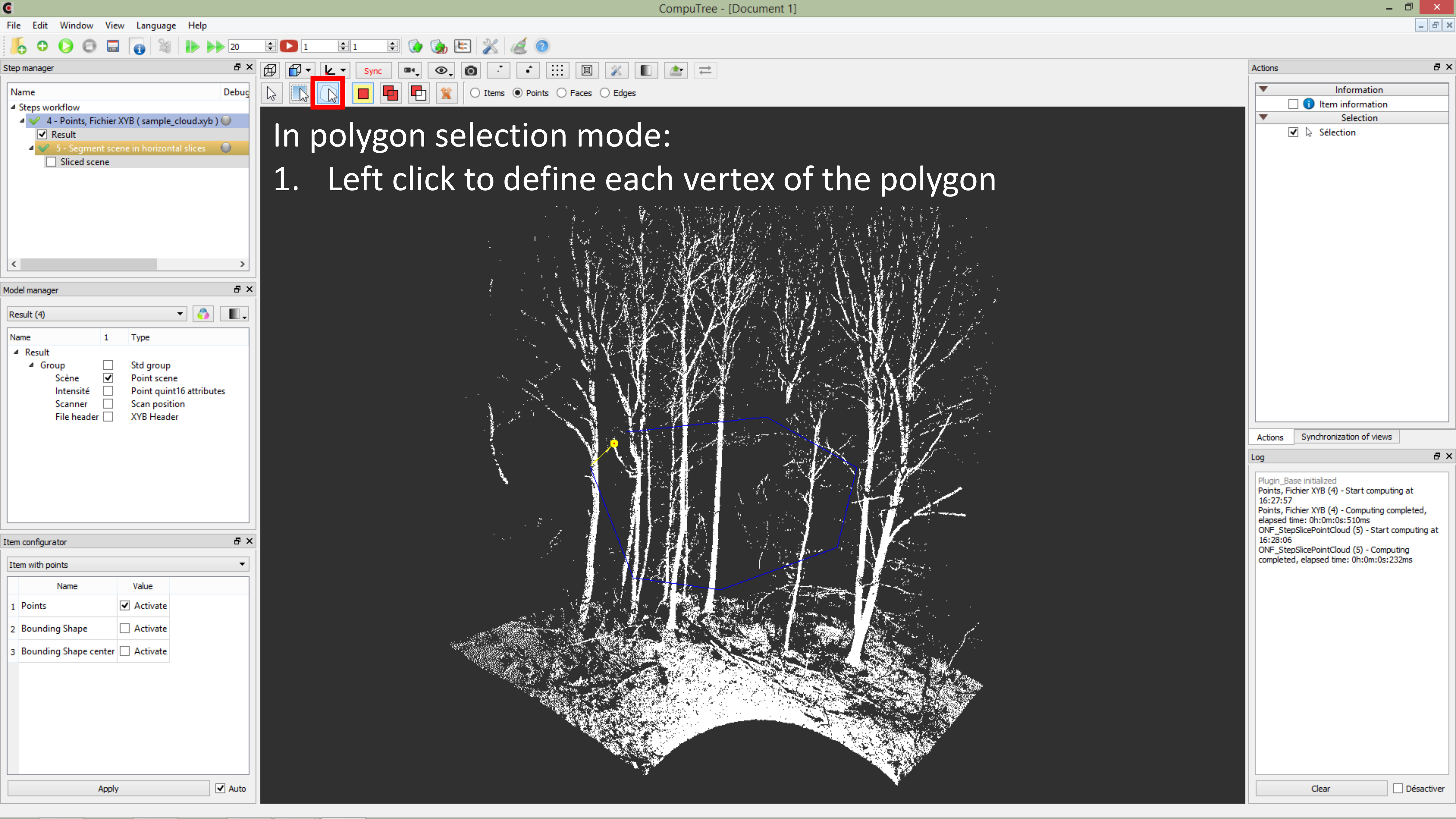
Model manager
Result (4)
Item configurator
Item with points
Apply
☑ Auto
○ Items
● Points
○ Faces
○ Edges
Actions
Information
☐ Item information
Selection
☑ Sélection
Actions
Synchronization of views
Log
Clear
☐ Désactiver

Name	1	Type
Result		
Group	☐	Std group
Scène	☑	Point scene
Intensité	☐	Point quint16 attributes
Scanner	☐	Scan position
File header	☐	XYB Header

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate

```
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
```


CompuTree - [Document 1]
File
Edit
Window
View
Language
Help
Step manager
Name
Debug
Steps workflow
4 - Points, Fichier XYB (sample_cloud.xyb)
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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
Item with points
Name
Value
1 Points ☑ Activate
2 Bounding Shape ☐ Activate
3 Bounding Shape center ☐ Activate
Apply
☑ Auto
Sync
○ Items
● Points
○ Faces
○ Edges
Actions
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☐ Item information
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☑ Sélection
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☐ Désactiver

In polygon selection mode:

1. Left click to define each vertex of the polygon

```
Plugin_Base initialized
Points, Fichier XYB (4) - Start computing at
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Points, Fichier XYB (4) - Computing completed,
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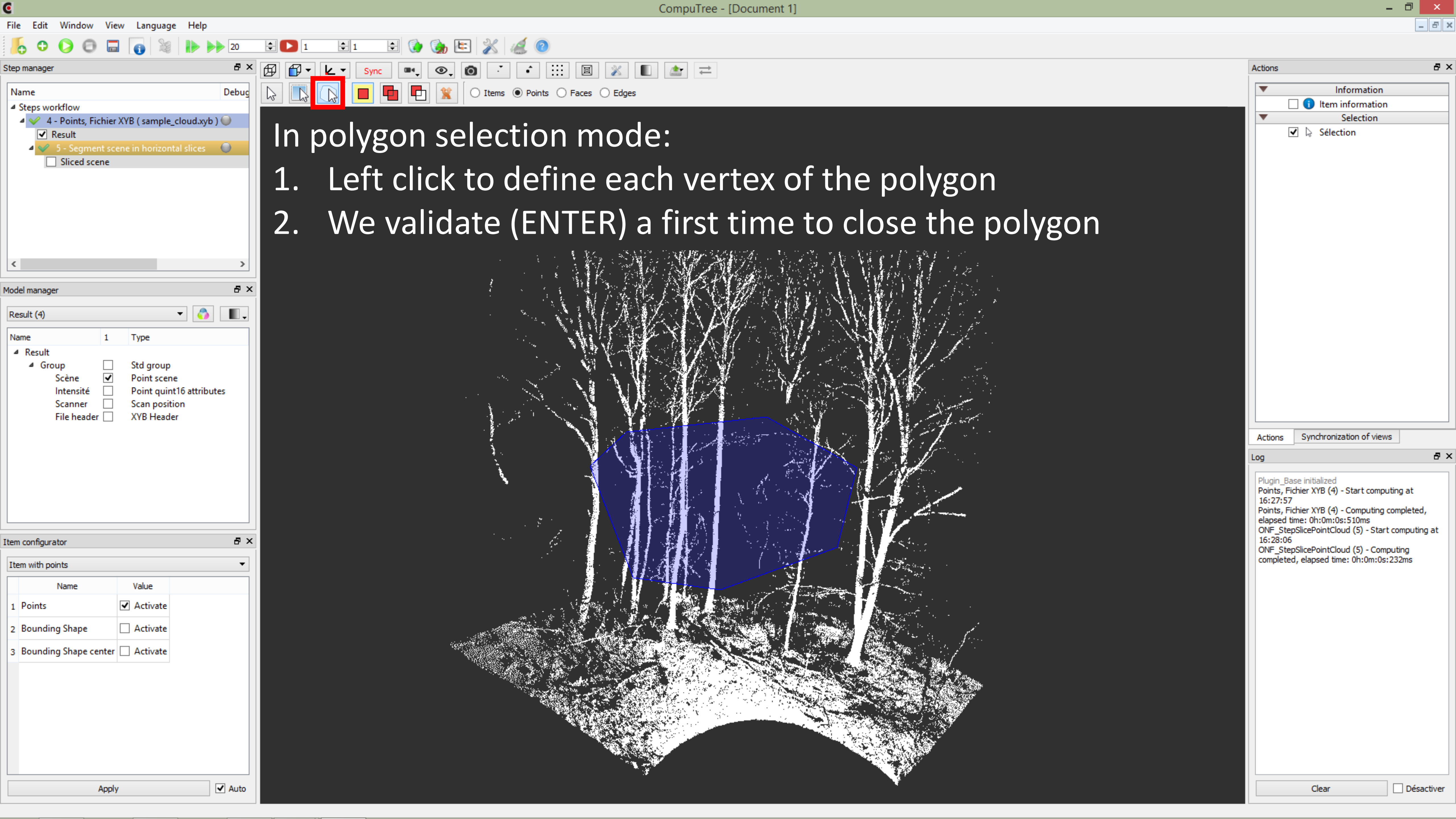
ONF_StepSlicePointCloud (5) - Start computing at
16:28:06
ONF_StepSlicePointCloud (5) - Computing
completed, elapsed time: 0h:0m:0s:232ms
```


CompuTree - [Document 1]
File
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Step manager
Sync
Items
Points
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Edges
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
Clear
Désactiver
Model manager
Item configurator
Apply
Auto

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

Name	Debug
Steps workflow	
4 - Points, Fichier XYB (sample_cloud.xyb)	
☑ Result	
5 - Segment scene in horizontal slices	
☐ Sliced scene	

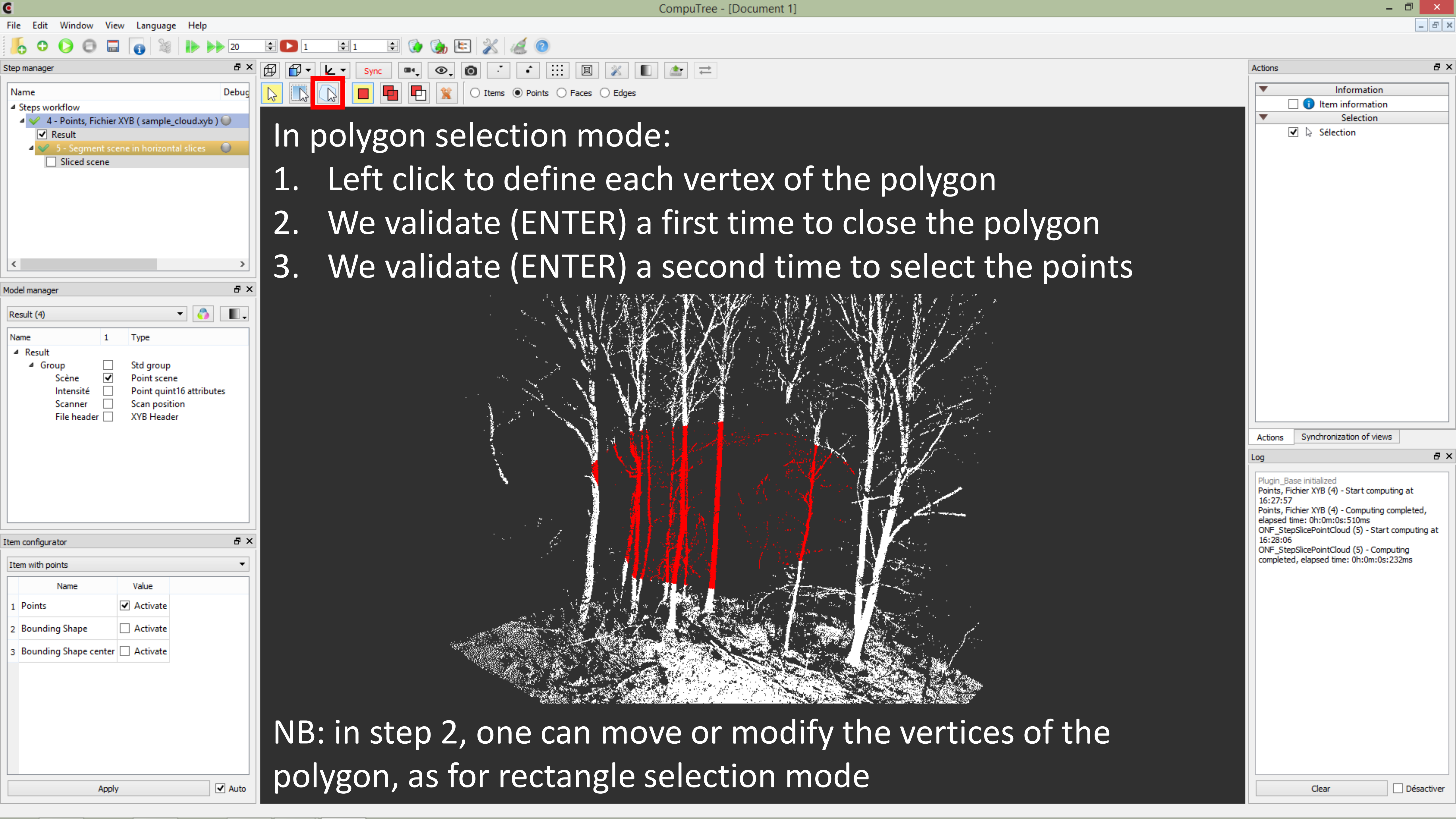
Result (4)

Name	1	Type
Result		
Group	☐	Std group
Scène	☑	Point scene
Intensité	☐	Point quint16 attributes
Scanner	☐	Scan position
File header	☐	XYB Header

Item with points

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate

```
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
```


CompuTree - [Document 1]
File
Edit
Window
View
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Step manager
Name
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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
Item with points
Sync
Items
Points
Faces
Edges
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
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Désactiver

In polygon selection mode:

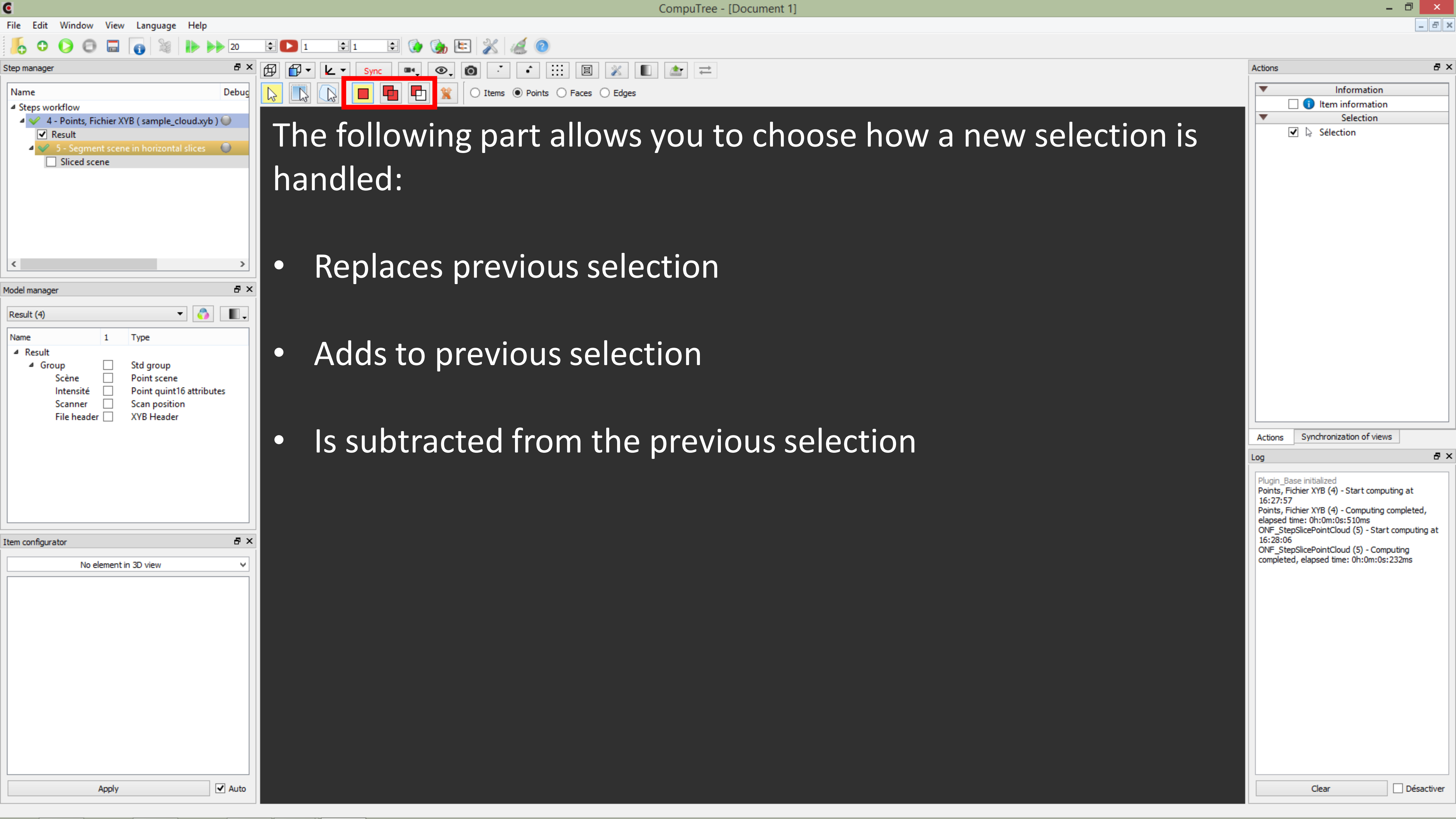
1. Left click to define each vertex of the polygon
2. We validate (ENTER) a first time to close the polygon
3. We validate (ENTER) a second time to select the points

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

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate

Apply ☑ Auto

```
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
```


CompuTree - [Document 1]
File
Edit
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View
Language
Help
Step manager
Name
Debug
Steps workflow
4 - Points, Fichier XYB (sample_cloud.xyb)
Result
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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
Apply
Auto
Sync
Items
Points
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Edges
Actions
Information
Item information
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Sélection
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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

```
Plugin_Base initialized
Points, Fichier XYB (4) - Start computing at
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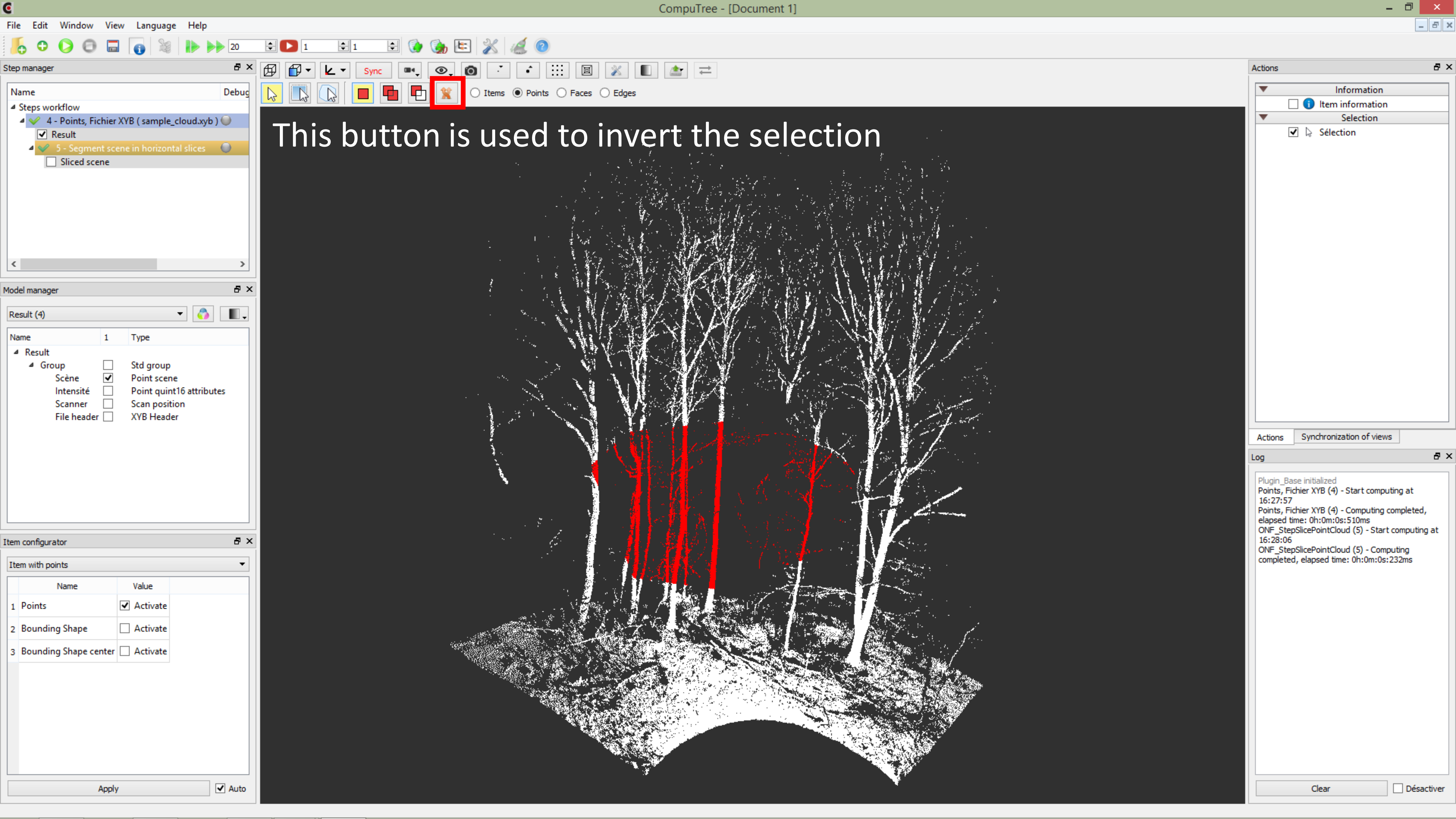
ONF_StepSlicePointCloud (5) - Start computing at
16:28:06
ONF_StepSlicePointCloud (5) - Computing
completed, elapsed time: 0h:0m:0s:232ms
```



This button is used to invert the selection

CompuTree - [Document 1]
File
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Step manager
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Model manager
Actions
Information
Item information
Selection
Sélection
Actions
Synchronization of views
Log
Clear
Désactiver
Item configurator
Item with points
Apply
Auto

Result (4)

Name	1	Type
Result		
Group	☐	Std group
Scène	☑	Point scene
Intensité	☐	Point quint16 attributes
Scanner	☐	Scan position
File header	☐	XYB Header

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate

```
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
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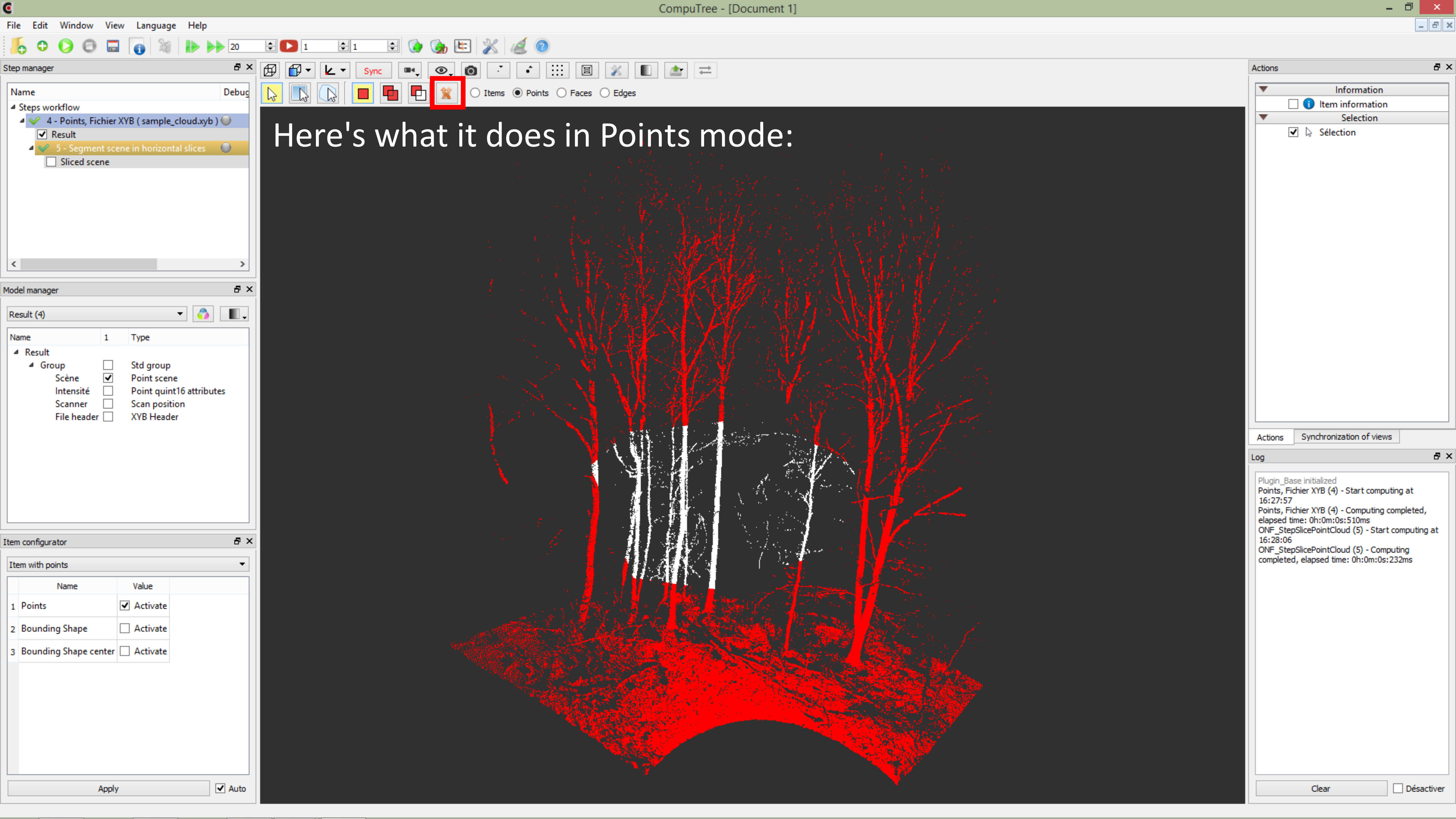
ONF_StepSlicePointCloud (5) - Computing
completed, elapsed time: 0h:0m:0s:232ms
```



CompuTree - [Document 1]
File
Edit
Window
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Language
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Sync
○ Items
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○ Faces
○ Edges
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Apply
☑ Auto
Clear
☐ Désactiver

Here's what it does in Points mode:

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: Item with points

	Name	Value
1	Points	☑ Activate
2	Bounding Shape	☐ Activate
3	Bounding Shape center	☐ Activate

Actions:

- Information
  - ☐ Item information
- Selection
  - ☑ Sélection

```
Plugin_Base initialized
Points, Fichier XYB (4) - Start computing at
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Points, Fichier XYB (4) - Computing completed,
elapsed time: 0h:0m:0s:510ms
ONF_StepSlicePointCloud (5) - Start computing at
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ONF_StepSlicePointCloud (5) - Computing
completed, elapsed time: 0h:0m:0s:232ms
```