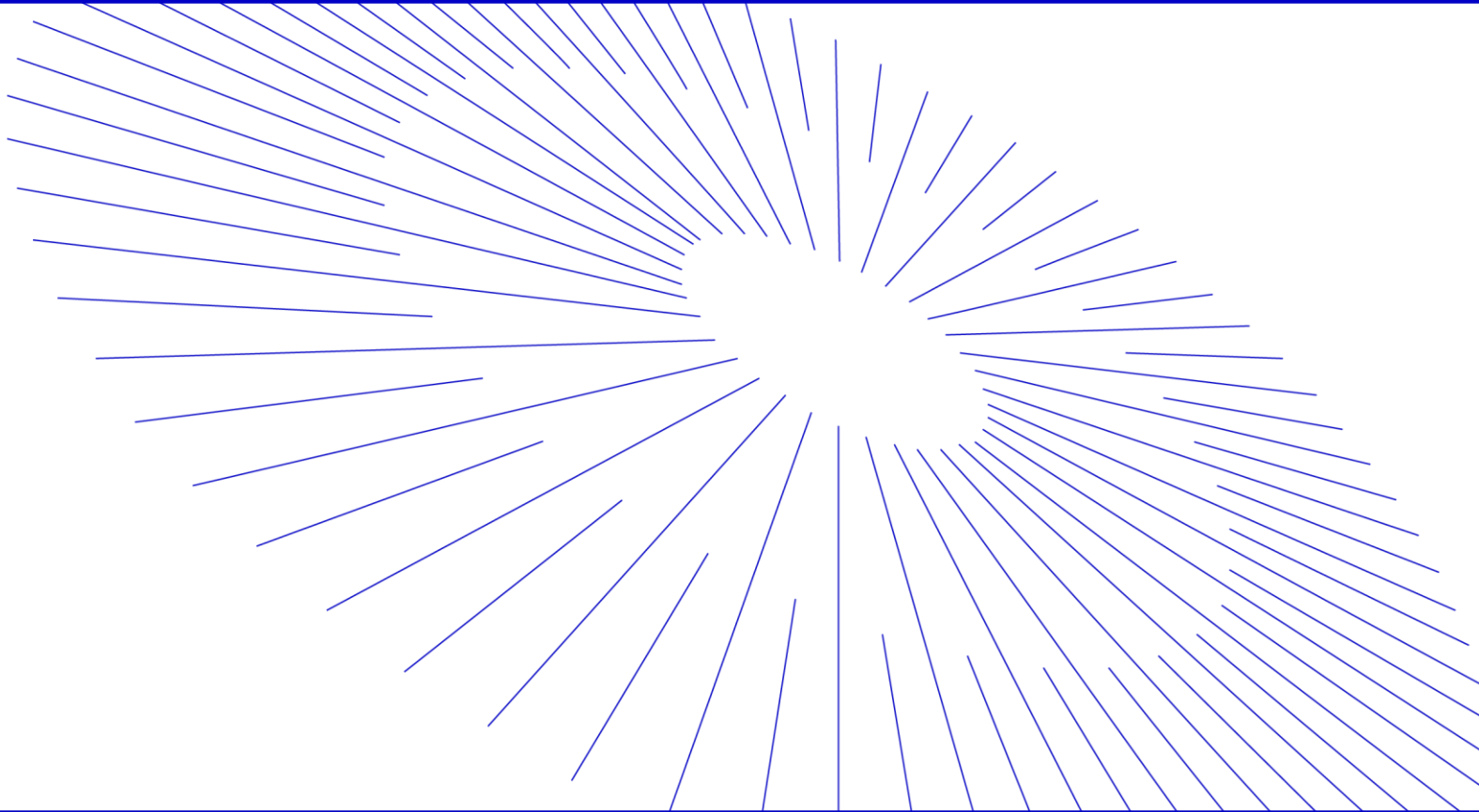


Smart Construction Groupware Release information 24.12.2024



EARTHBRAIN

- We will release these contents on the following schedule

Release Schedule : JST 24th, Dec (expected) 14:00~17:00

No.	Functions	Summary	Details
1	Groupware Viewer	[New features added] An edit mode has been added that allows point cloud editing.	Please refer to the explanation on the next page. * Please note that a separate " Smart Construction Groupware Point Cloud Editing Function ID License" is required
2	Groupware Viewer	[New features added] It is now possible to save edits in	Please refer to the explanation on the next page. * Please note that a separate " Smart Construction Groupware Point Cloud Editing Function ID License" is required
3	Project files	[New features added] It is now possible to create empty project files from within	Please refer to the explanation on the next page. * Please note that a separate " Smart Construction Groupware Point Cloud Editing Function ID License" is required
4	Project files	[New features added] the Groupware viewer, you can now create a project file that includes the displayed point cloud data.	Please refer to the explanation on the next page. * Please note that a separate " Smart Construction Groupware Point Cloud Editing Function ID License" is required
5	Project files	[New features added] A single project file can be viewed by multiple people, but only one person can edit	Please refer to the explanation on the next page. * Please note that a separate " Smart Construction Groupware Point Cloud Editing Function ID License" is required
6	Data Management	[New features added] It is now possible to load	Please refer to the explanation on the next page. * Please note that a separate " Smart Construction Groupware Point Cloud Editing Function ID License" is required
7	Point Cloud Editing	[New features added] You can edit the displayed point cloud data by selecting the Point Cloud tab and selecting an editing tool.	Please refer to the explanation on the next page. * Please note that a separate " Smart Construction Groupware Point Cloud Editing Function ID License" is required

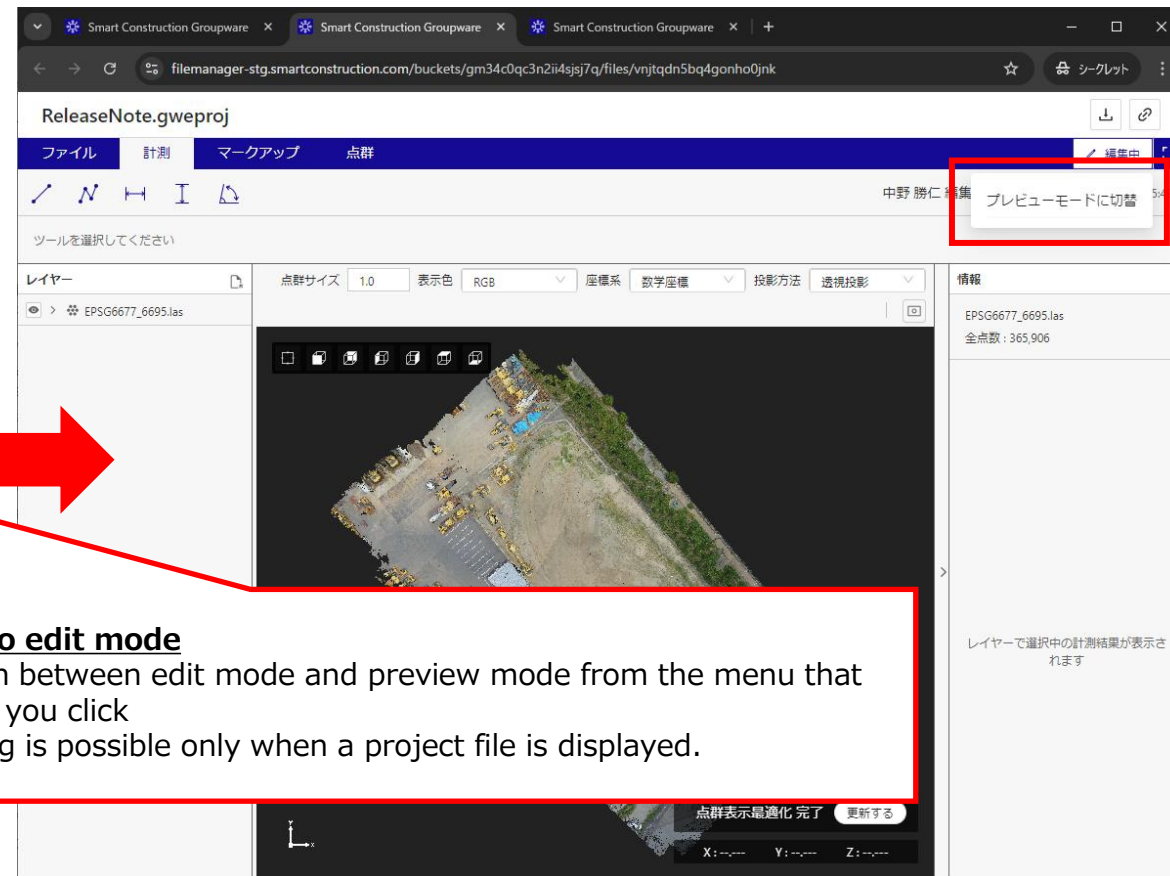
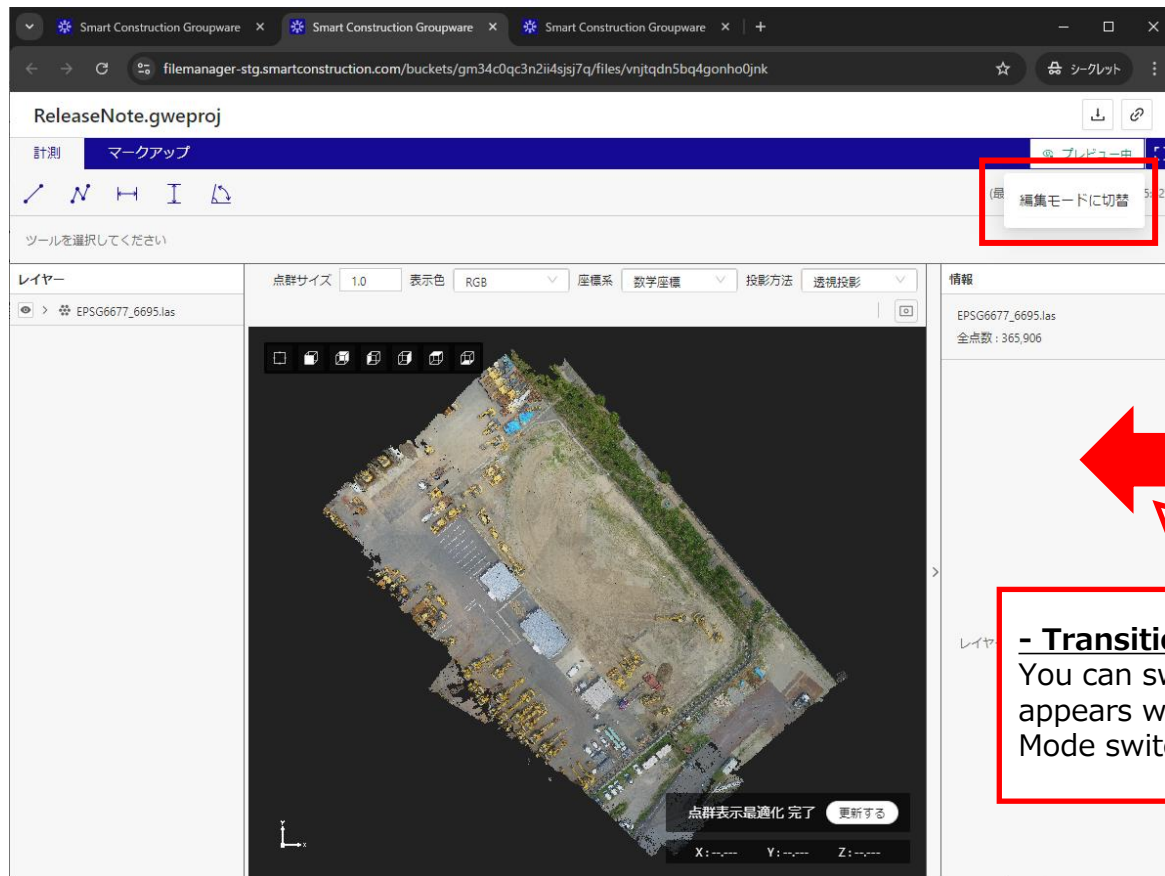
- We will release these contents on the following schedule

Release Schedule : JST 24th, Dec (expected) 14:00~17:00

No.	Functions	Summary	Details
8	Undoing an edit	[New features added] By pressing the Undo button, you can cancel any point cloud editing operations that have already been performed.	Please refer to the explanation on the next page. * Please note that a separate " Smart Construction Groupware Point Cloud Editing Function ID License" is required
9	clipping	[New features added] Added clipping function to display point clouds only within a specified range.	Please refer to the explanation on the next page. * Please note that a separate " Smart Construction Groupware Point Cloud Editing Function ID License" is required
10	Point Cloud Removal	[New features added] A point cloud removal function has been added that allows you to delete point clouds within a specified range.	Please refer to the explanation on the next page. * Please note that a separate " Smart Construction Groupware Point Cloud Editing Function ID License" is required
11	Point Cloud Interpolation	[New features added] A point cloud interpolation function has been added that interpolates points at regular intervals within a specified range.	Please refer to the explanation on the next page. * Please note that a separate " Smart Construction Groupware Point Cloud Editing Function ID License" is required
12	Square grid thinning	[New features added] A square grid thinning function has been added, which thins out	Please refer to the explanation on the next page. * Please note that a separate " Smart Construction Groupware Point Cloud Editing Function ID License" is required
13	Point Cloud Movement	[New features added] Added a point cloud movement function that moves selected point cloud data .	Please refer to the explanation on the next page. * Please note that a separate " Smart Construction Groupware Point Cloud Editing Function ID License" is required
14	Point Cloud Composition	[New features added] point cloud merge function has been added, which merges	Please refer to the explanation on the next page. * Please note that a separate " Smart Construction Groupware Point Cloud Editing Function ID License" is required

No.1

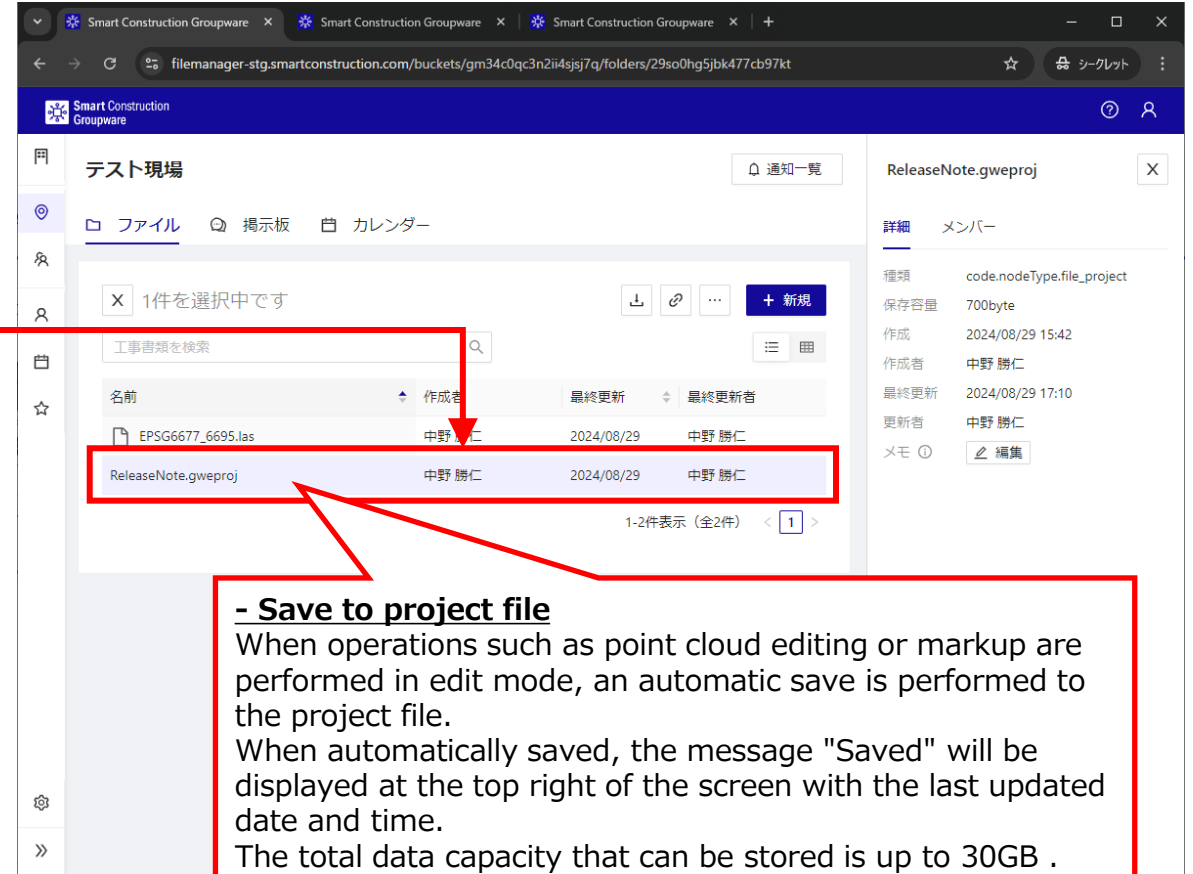
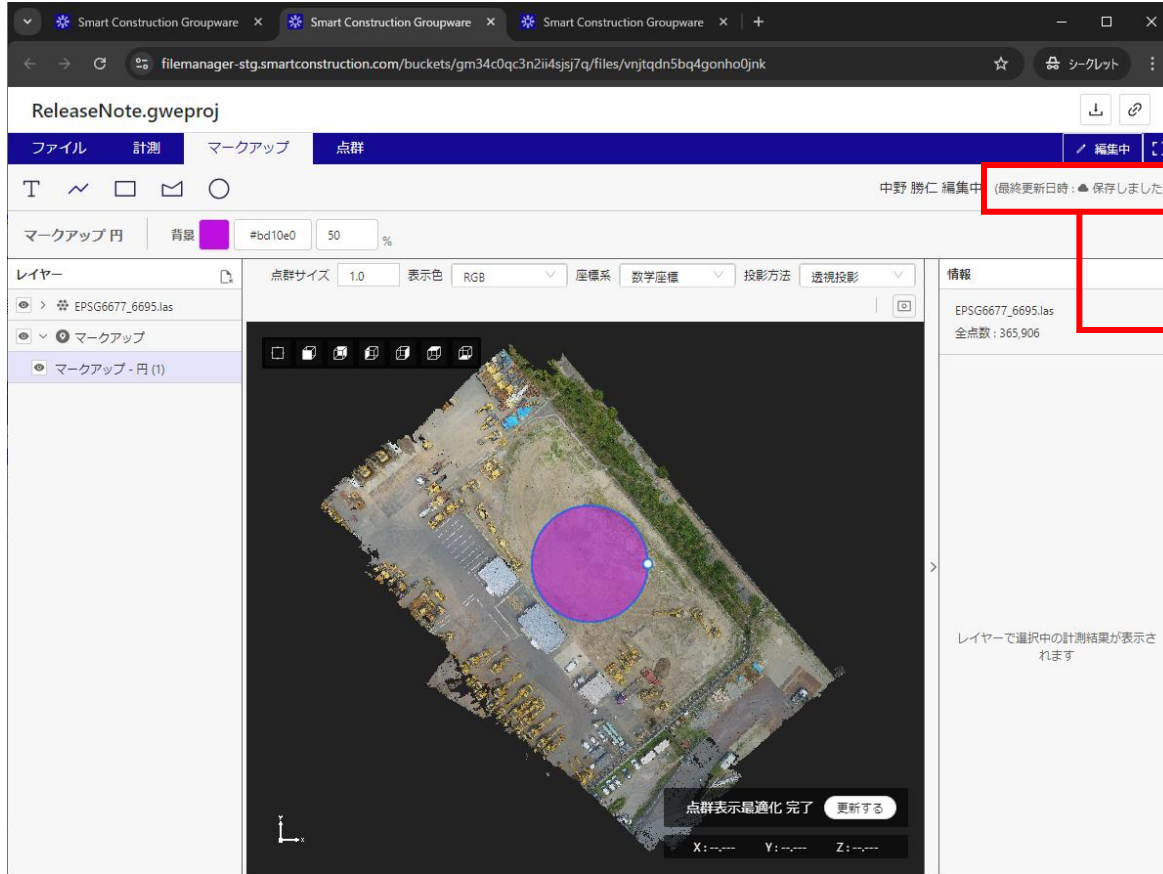
An edit mode has been added that allows point cloud editing.



- Transition to edit mode
 You can switch between edit mode and preview mode from the menu that appears when you click
 Mode switching is possible only when a project file is displayed.

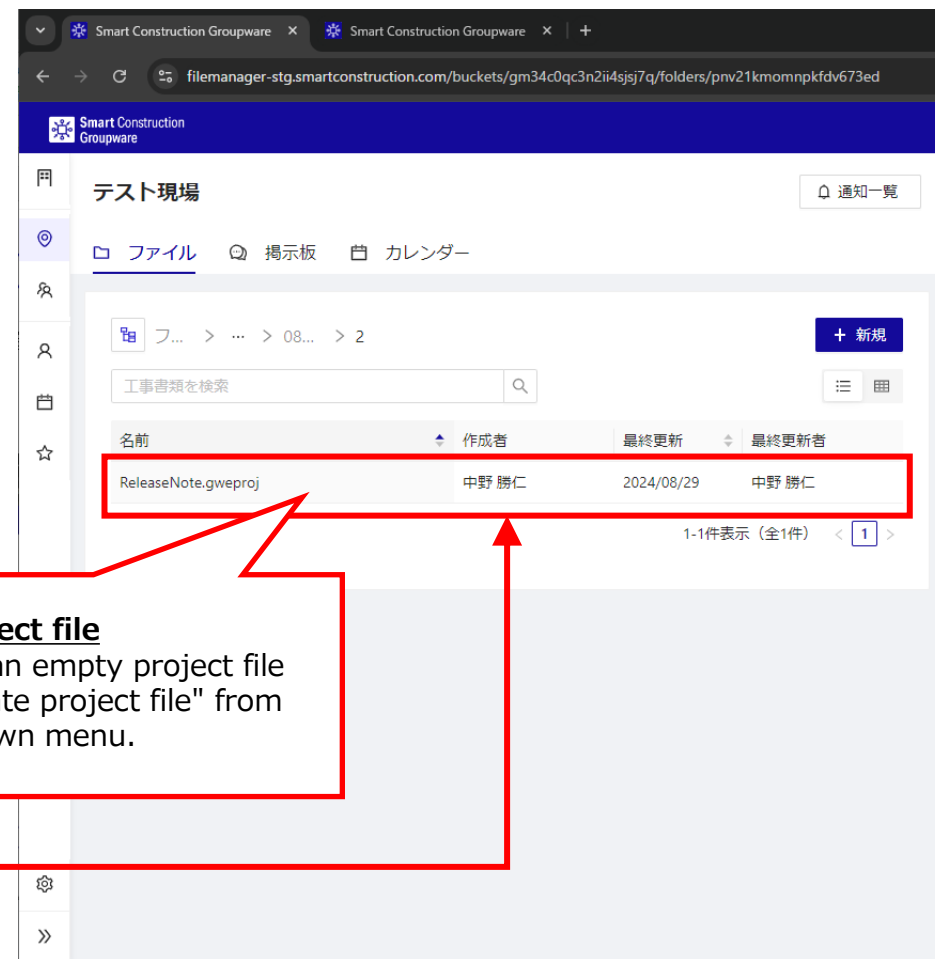
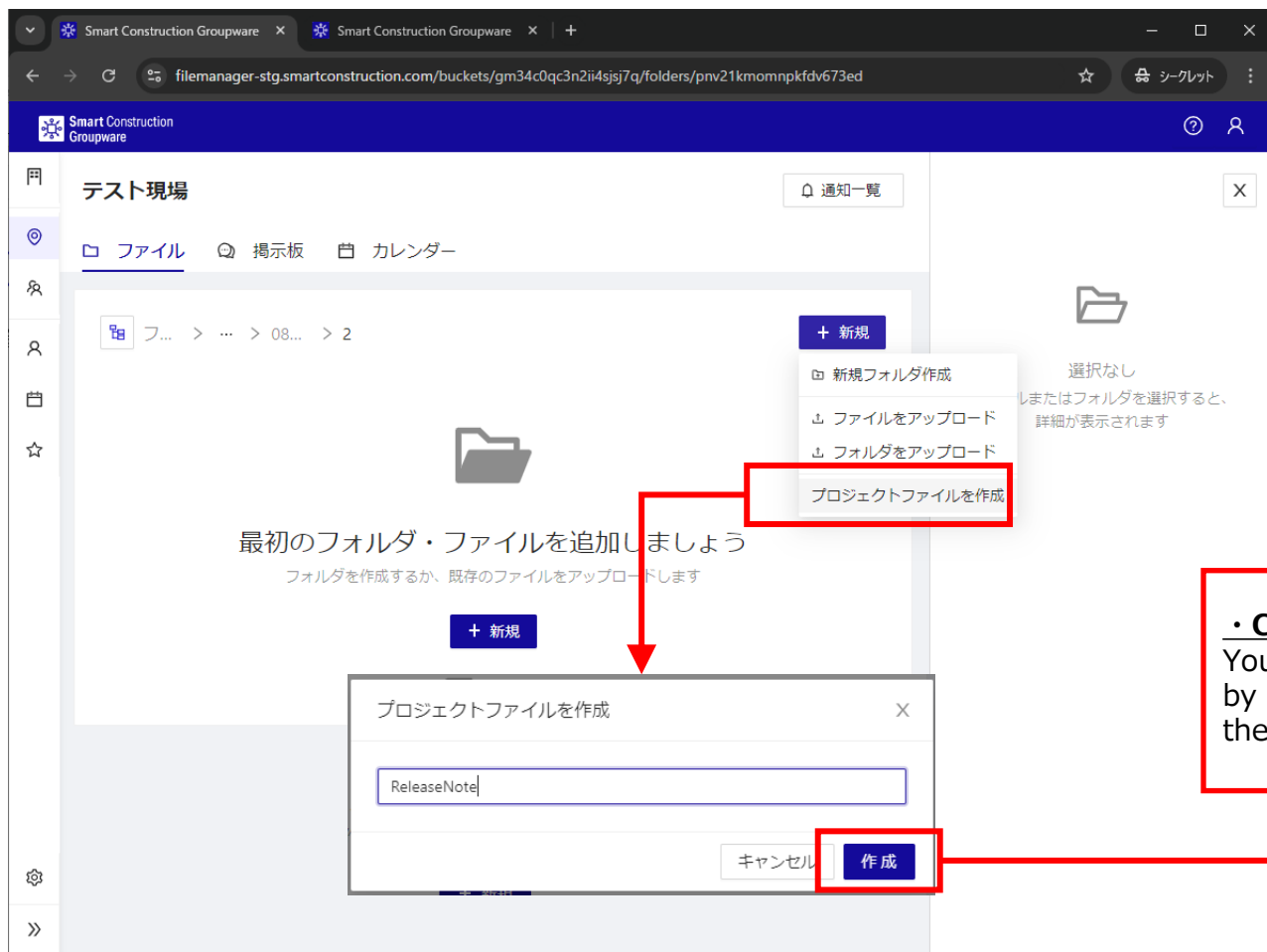
No.2

You can now save edits to your project file.



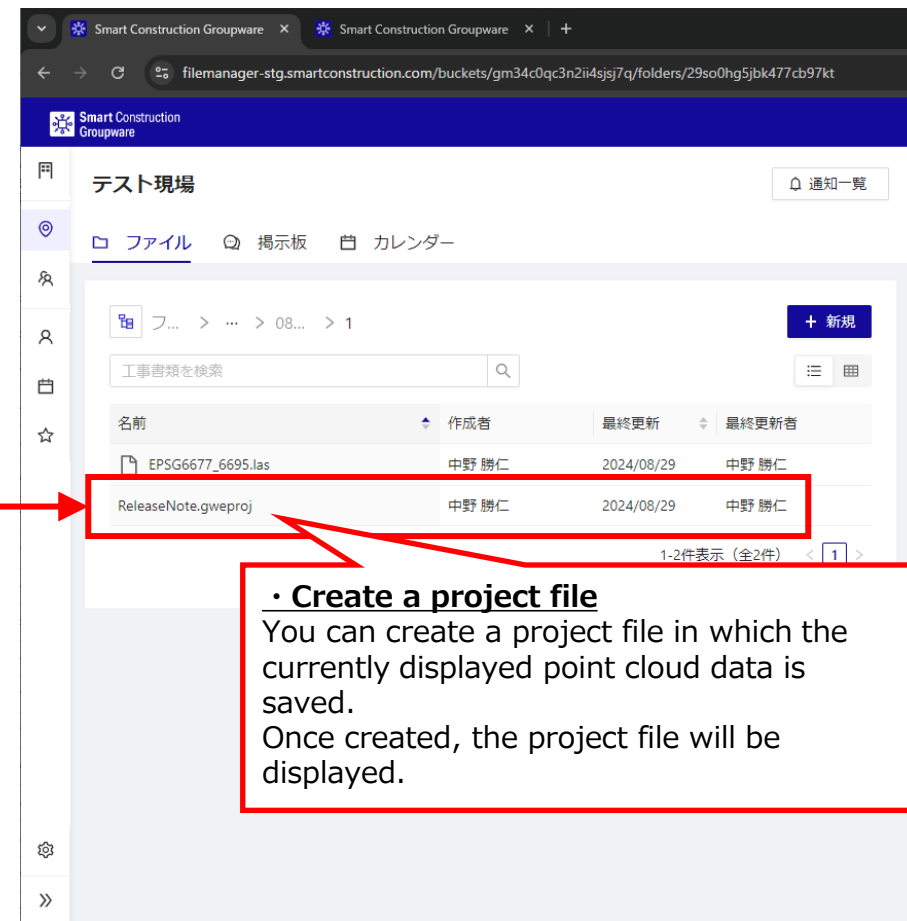
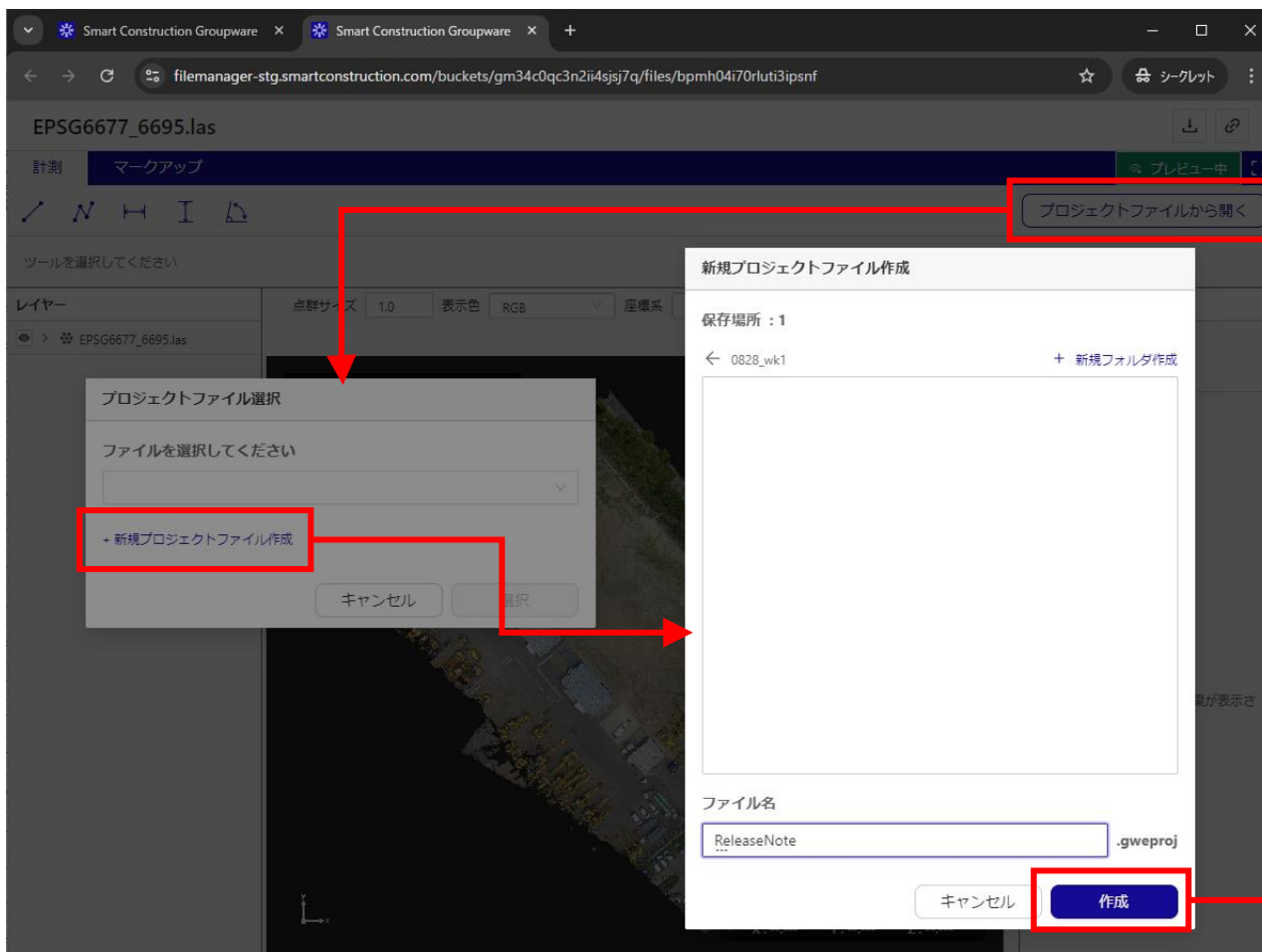
No.3

You can create an empty project file from the site in

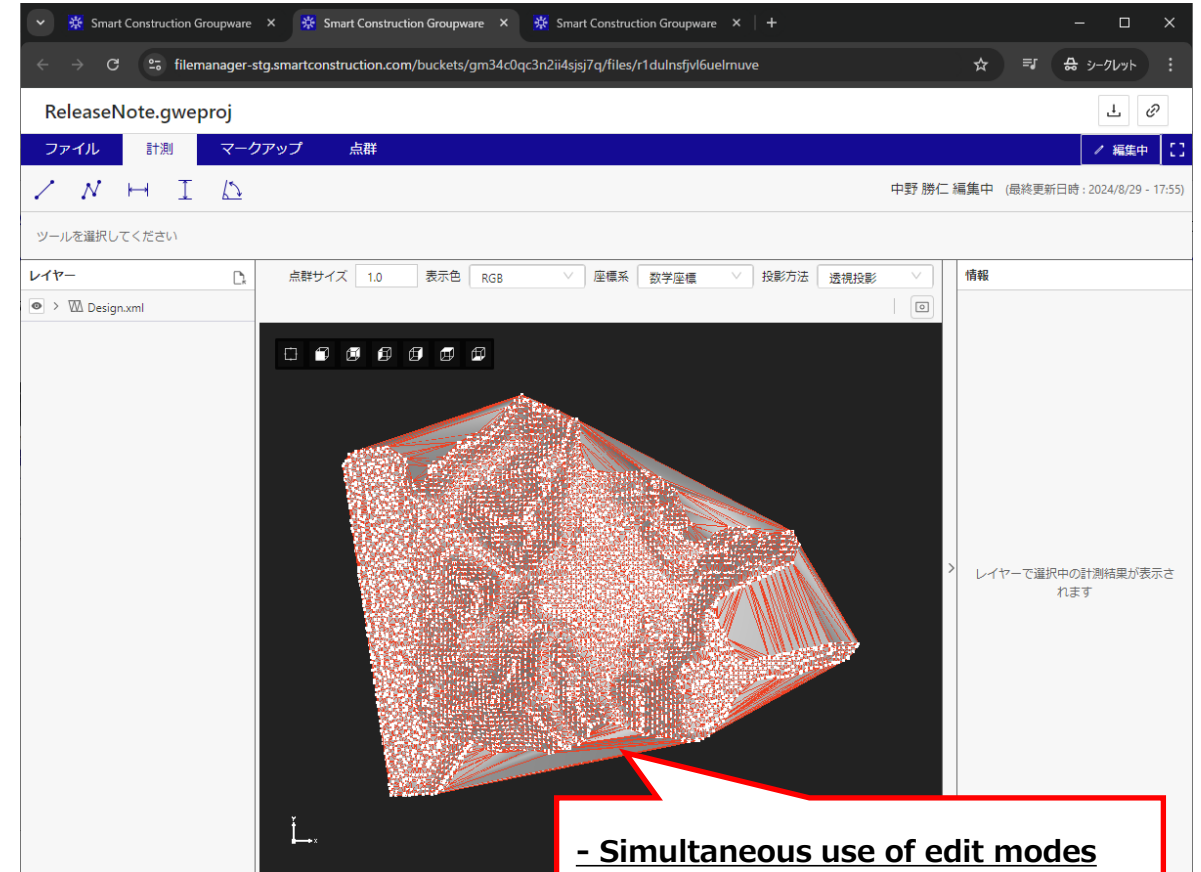
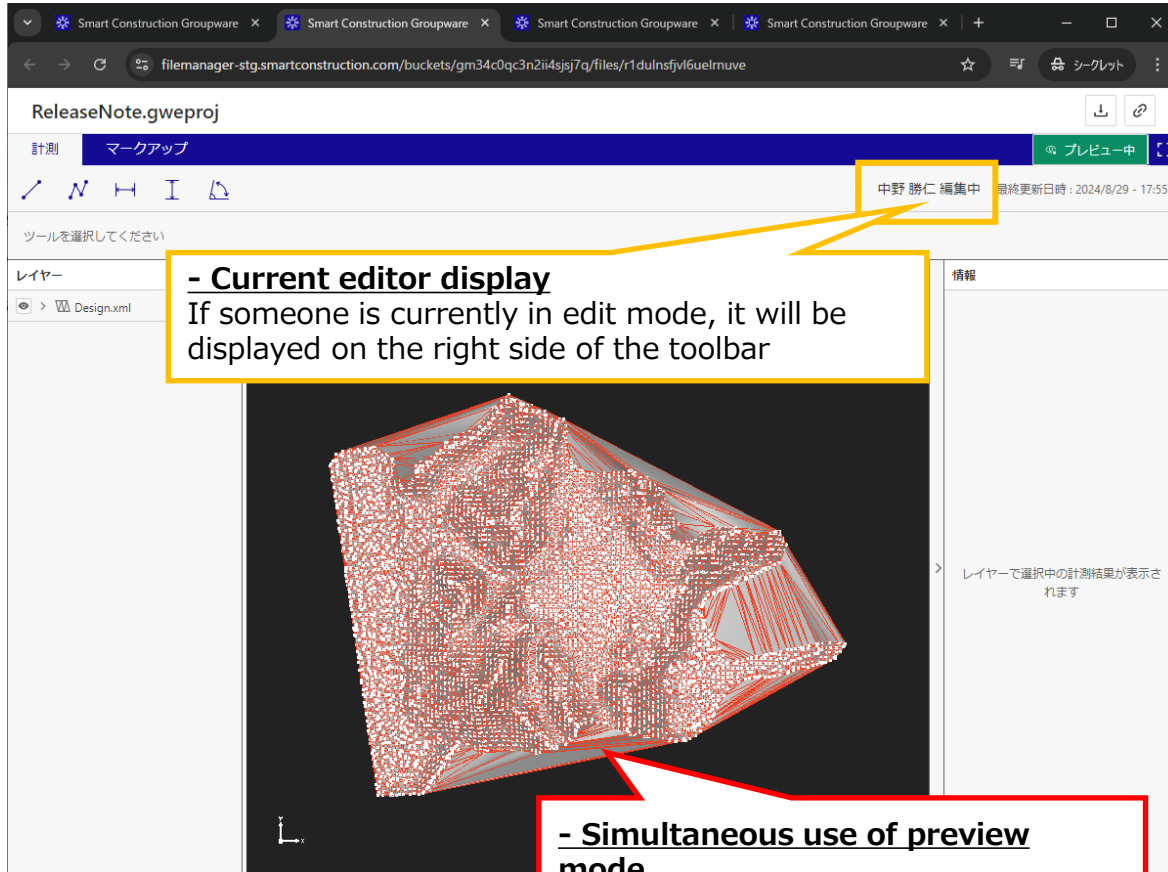


No.4

You can create a project file in which the currently displayed point cloud data is saved from the

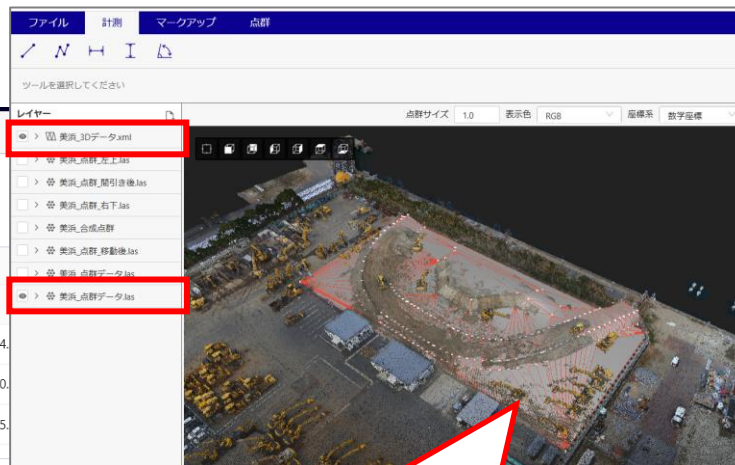
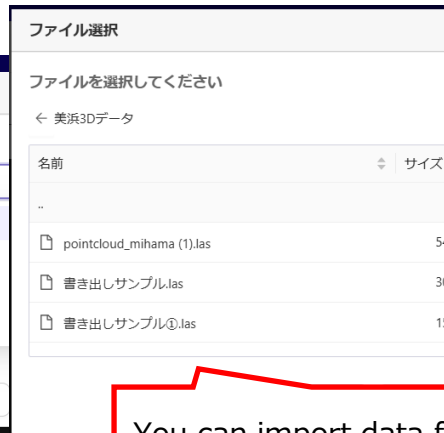
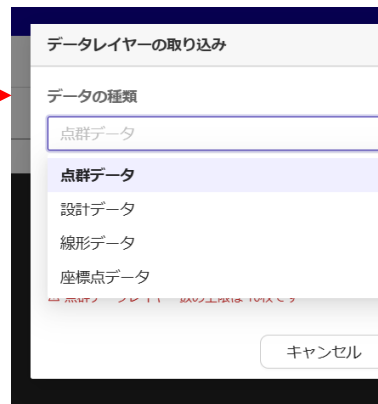
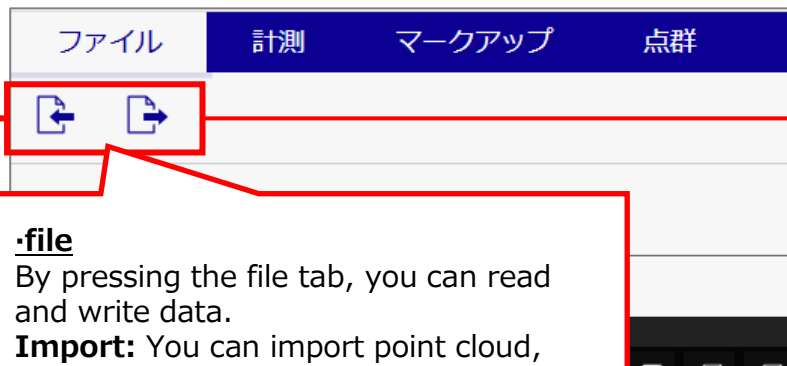


No.5
 A single project file can be viewed by multiple people, but only one person can edit



No.6

You can read and write data by selecting the File tab.



.file

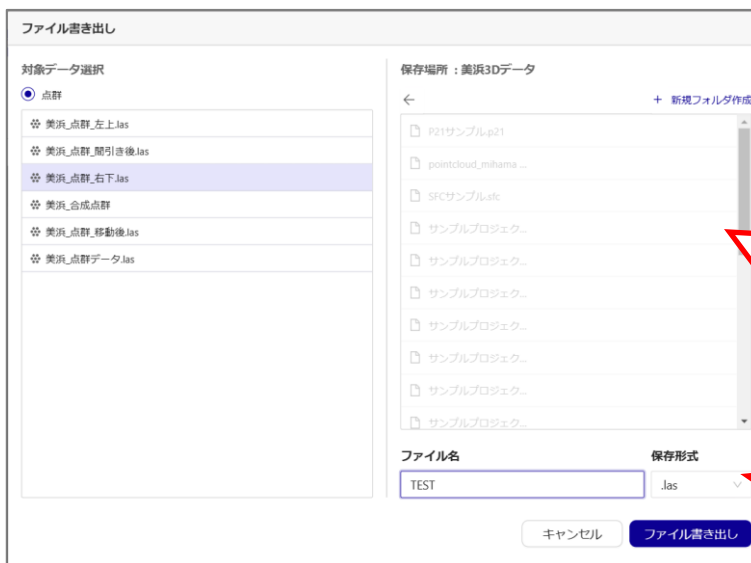
By pressing the file tab, you can read and write data.

Import: You can import point cloud, design, alignment, and coordinate point data into a layer.

Export: You can export the point cloud data of a layer as new data.

You can import data files from Groupware file storage

The imported layers can be displayed overlapping each other on the viewer.

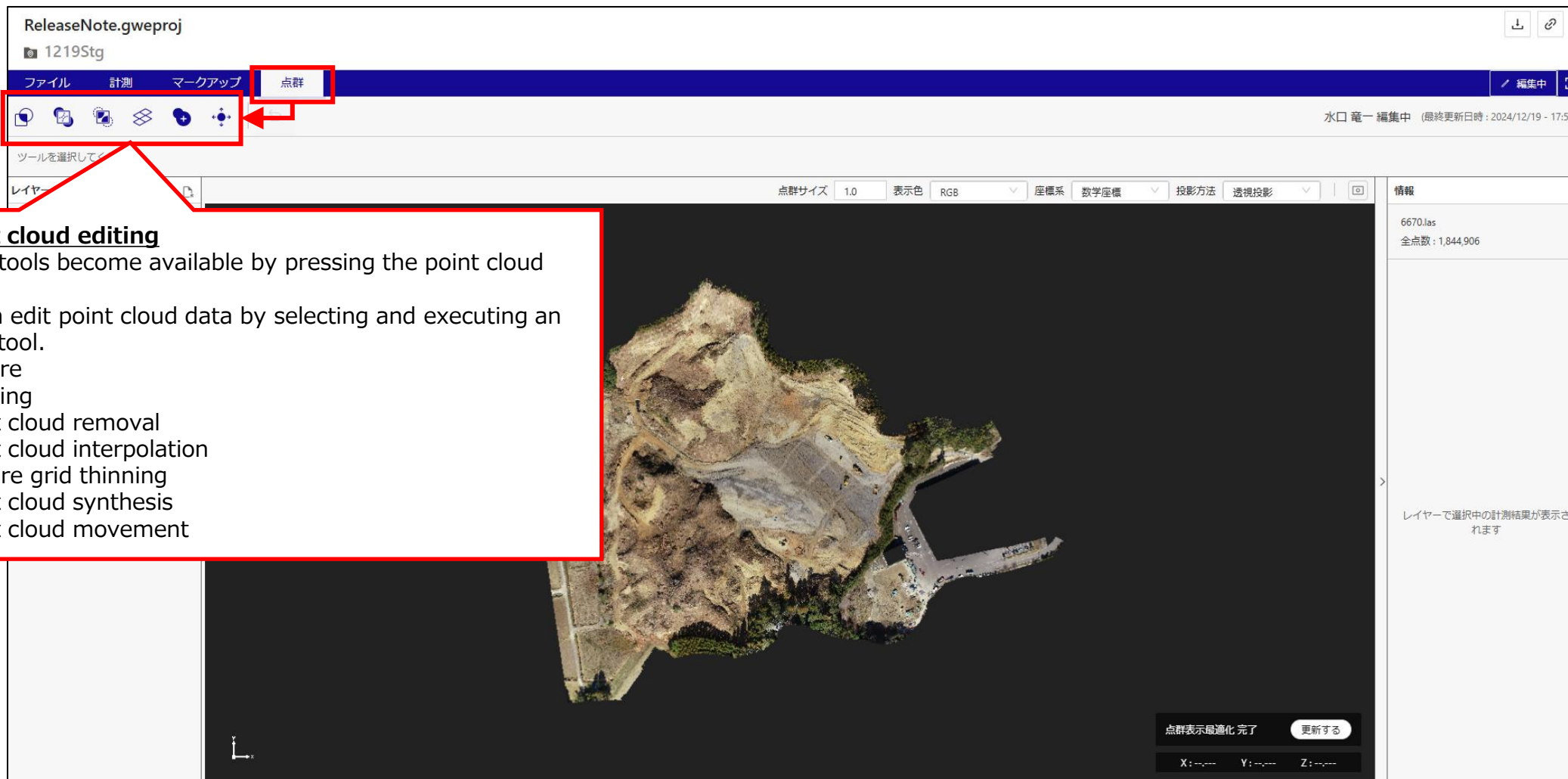


You can export the point cloud by selecting the save location and file name.

You choose a layer to export When outputting in txt or csv format, you need to select a format such as ENZ, NEZRGB

No.7

You can edit the displayed point cloud data by selecting the Point Cloud tab and selecting an editing tool.



The screenshot displays the Earth Brain software interface. At the top, the menu bar includes 'ファイル', '計測', 'マークアップ', and '点群'. The '点群' (Point Cloud) tab is selected and highlighted with a red box. Below the menu bar, a toolbar contains several icons, with the point cloud editing tool (a blue circle with a white dot) highlighted by a red box and an arrow. The main view shows a 3D point cloud of a terrain. The right sidebar contains information for the file '6670.las', including the total number of points: 1,844,906. A status bar at the bottom right indicates '点群表示最適化 完了' (Point cloud display optimization complete) and '更新する' (Update).

ReleaseNote.gweproj
1219Stg

ファイル 計測 マークアップ **点群** 編集

水口 竜一 編集 中 (最終更新日時: 2024/12/19 - 17:59)

ツールを選択して

レイヤー

点群サイズ 1.0 表示色 RGB 座標系 数学座標 投影方法 透視投影

情報

6670.las
全点数: 1,844,906

レイヤーで選択中の計測結果が表示されます

点群表示最適化 完了 更新する

X: --- Y: --- Z: ---

・ Point cloud editing

Editing tools become available by pressing the point cloud tab.

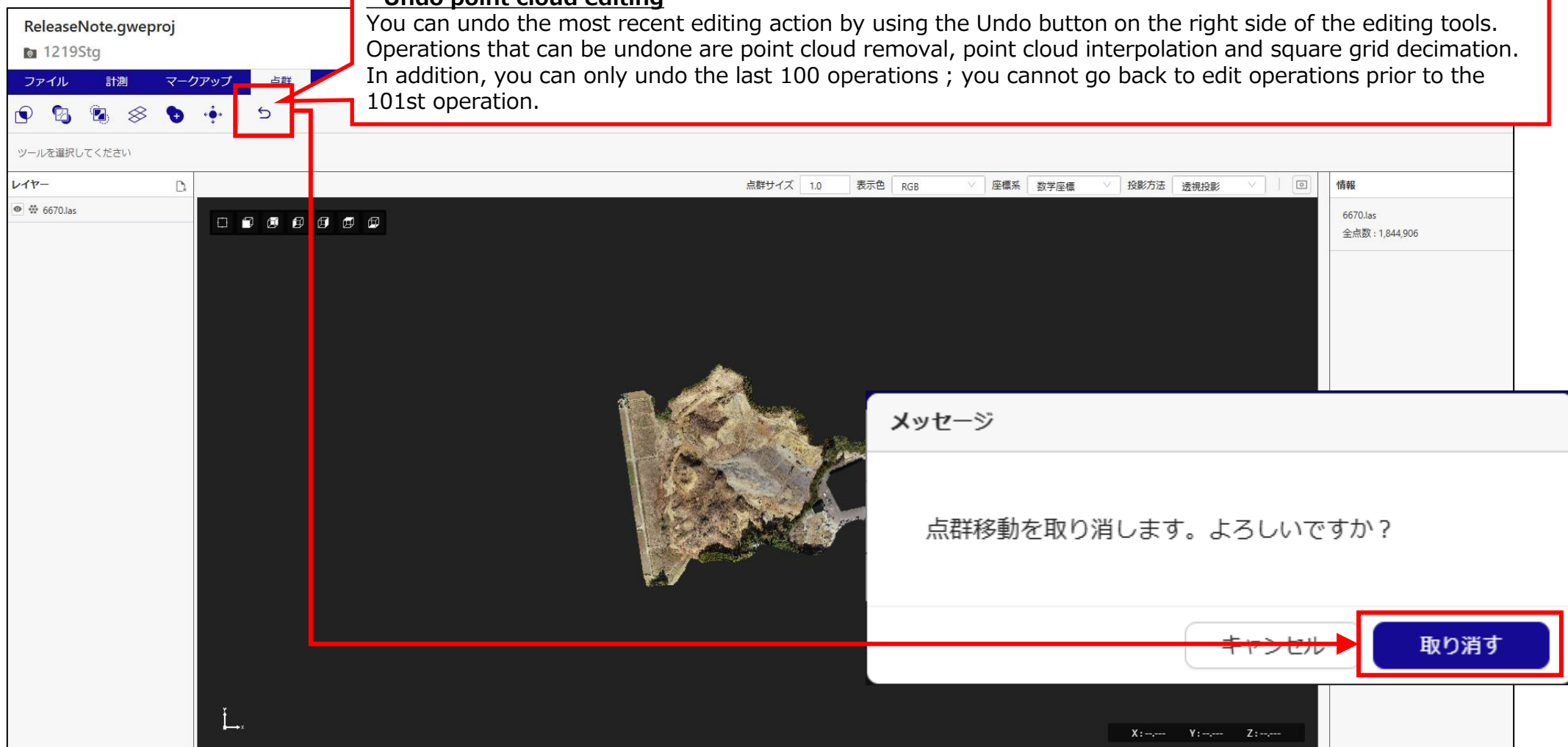
You can edit point cloud data by selecting and executing an editing tool.

There are

- ① Clipping
- ② Point cloud removal
- ③ Point cloud interpolation
- ④ Square grid thinning
- ⑤ Point cloud synthesis
- ⑥ Point cloud movement

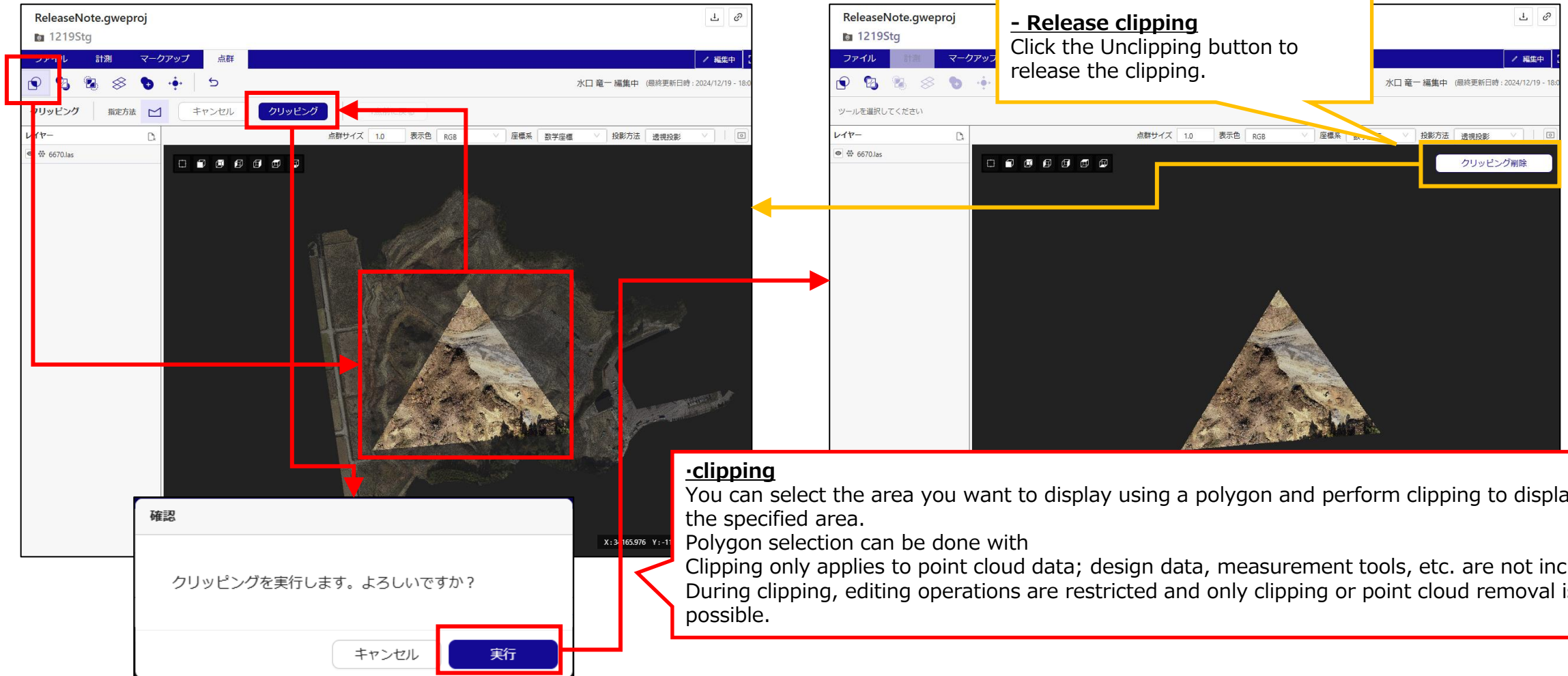
No.8
 You can cancel any point cloud editing operations that have already been performed.

- Undo point cloud editing
 You can undo the most recent editing action by using the Undo button on the right side of the editing tools. Operations that can be undone are point cloud removal, point cloud interpolation and square grid decimation. In addition, you can only undo the last 100 operations ; you cannot go back to edit operations prior to the 101st operation.



The screenshot shows the Earth Brain software interface. The top toolbar includes a menu with 'ファイル', '計測', 'マークアップ', and '点群'. The '点群' menu is open, and the 'Undo' button (represented by a left-pointing arrow) is highlighted with a red box. A dialog box titled 'メッセージ' is displayed in the foreground, asking '点群移動を取り消します。よろしいですか?' (Do you want to cancel point cloud movement?). The '取り消す' (Cancel) button is highlighted with a red box, and a red arrow points from the 'Undo' button in the toolbar to this button.

No.9
Clipping is a function that allows you to display only the area specified by polygon selection.



- Release clipping
Click the Unclipping button to release the clipping.

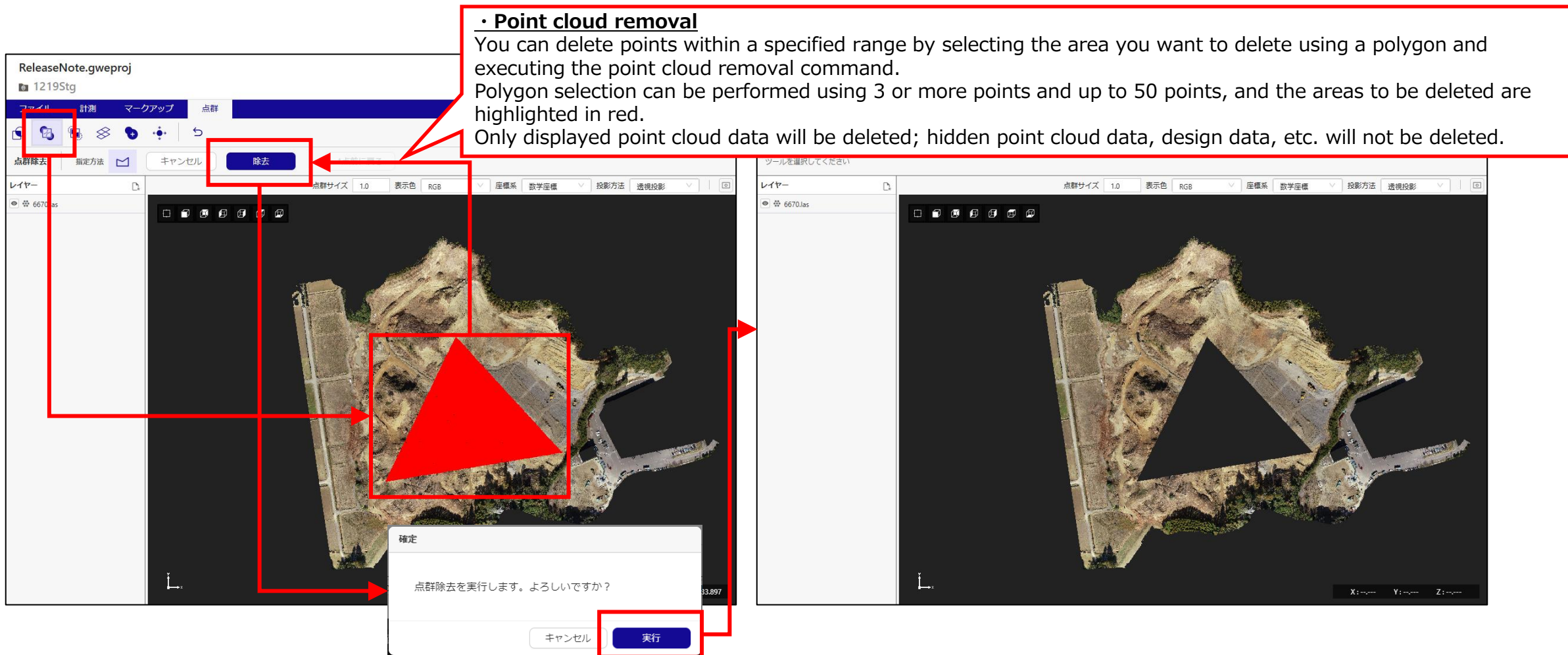
-clipping
You can select the area you want to display using a polygon and perform clipping to display only the specified area.
Polygon selection can be done with
Clipping only applies to point cloud data; design data, measurement tools, etc. are not included.
During clipping, editing operations are restricted and only clipping or point cloud removal is possible.

確認
クリッピングを実行します。よろしいですか?
キャンセル 実行

No.10

The point cloud removal function allows you to delete points within a specified area using polygon selection.

・ Point cloud removal
 You can delete points within a specified range by selecting the area you want to delete using a polygon and executing the point cloud removal command.
 Polygon selection can be performed using 3 or more points and up to 50 points, and the areas to be deleted are highlighted in red.
 Only displayed point cloud data will be deleted; hidden point cloud data, design data, etc. will not be deleted.



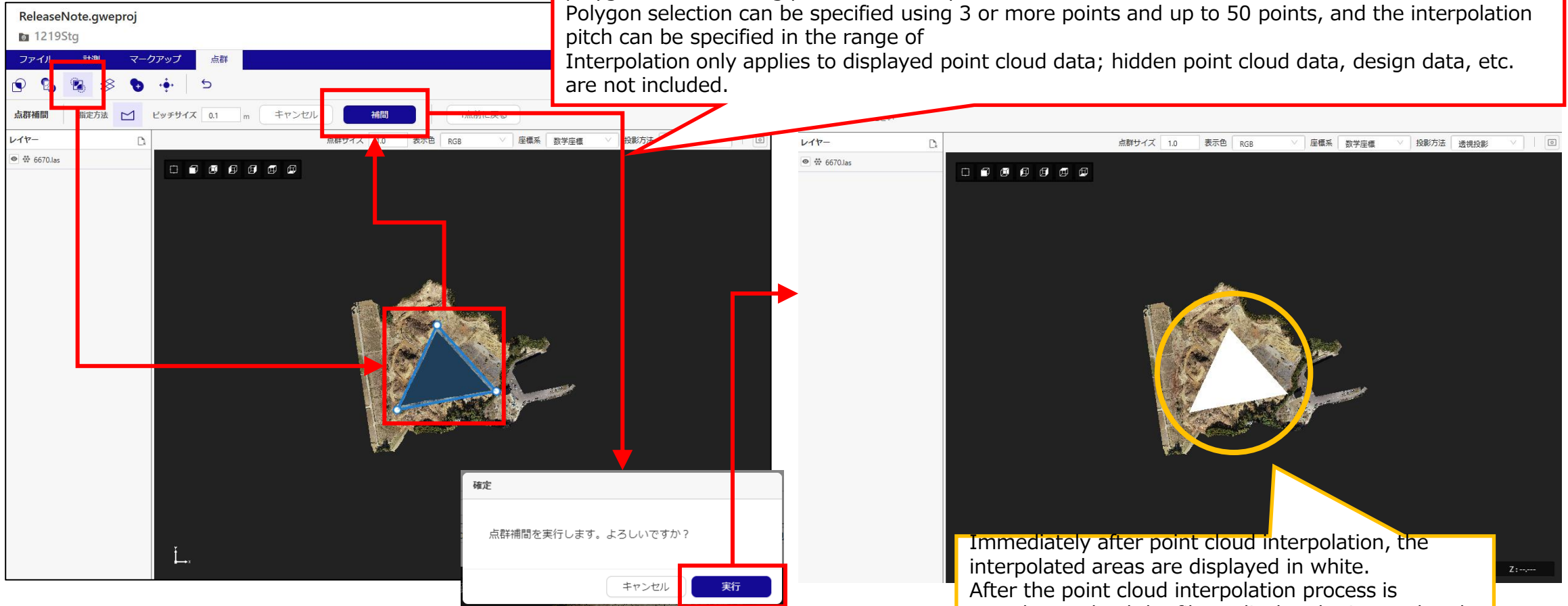
The image displays two side-by-side screenshots of the Earth Brain software interface. The left screenshot shows a 3D point cloud model of a terrain. A red polygon is drawn over a specific area of the terrain. A red box highlights the '削除' (Delete) button in the software's toolbar. A dialog box is open at the bottom, asking '点群除去を実行します。よろしいですか?' (Execute point cloud removal. Is it okay?). The right screenshot shows the same point cloud model, but the area previously highlighted by the red polygon is now black, indicating it has been removed. Red arrows connect the '削除' button to the dialog box, and the dialog box to the final result.

No.11

Point cloud interpolation is a function that interpolates points within a range specified by polygon selection at the pitch set in the tool options.

・ Point cloud interpolation

You can interpolate points at a specified pitch by selecting the range you want to interpolate using a polygon and executing point cloud interpolation. Polygon selection can be specified using 3 or more points and up to 50 points, and the interpolation pitch can be specified in the range of [0.1, 10]. Interpolation only applies to displayed point cloud data; hidden point cloud data, design data, etc. are not included.



Immediately after point cloud interpolation, the interpolated areas are displayed in white. After the point cloud interpolation process is complete, reload the file to display the interpolated point cloud.

No.12

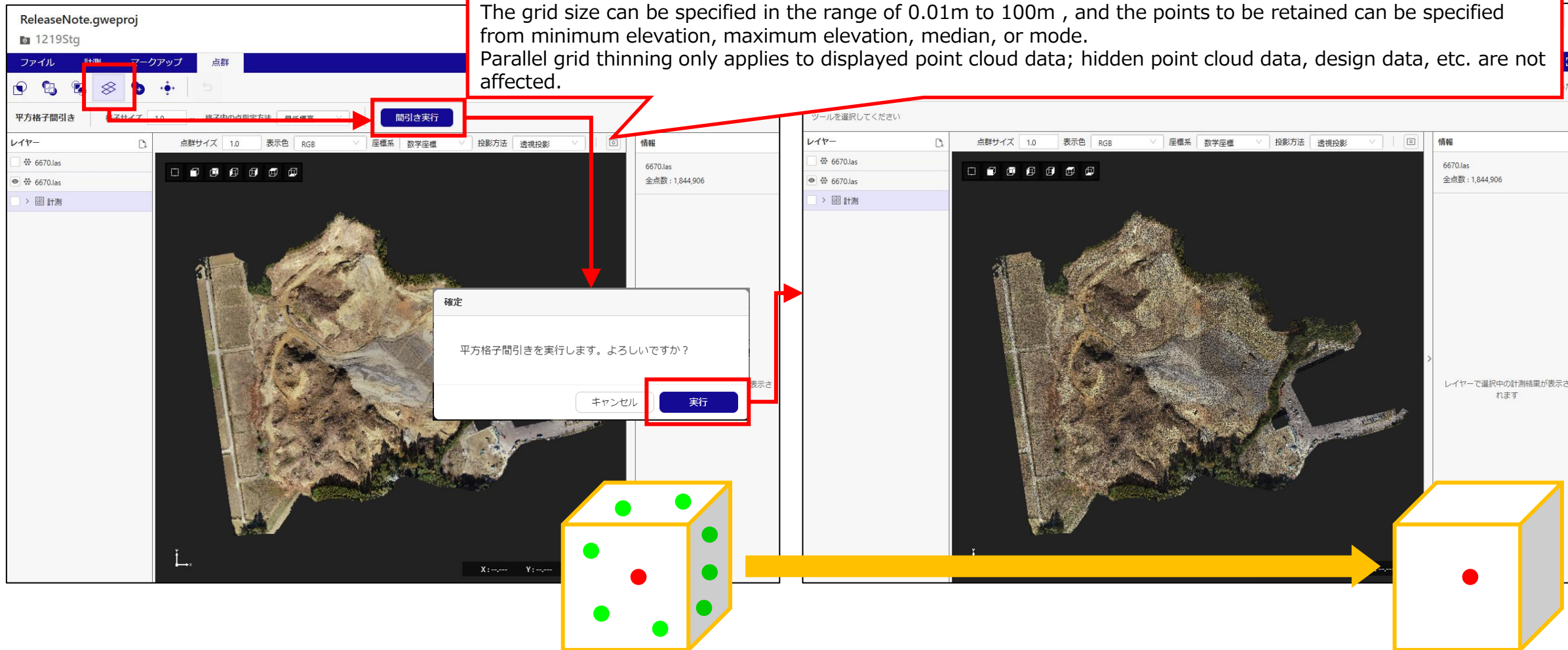
is a function that thins out points so that only

・ Square grid thinning

it is possible to thin out the points so that only

The grid size can be specified in the range of 0.01m to 100m , and the points to be retained can be specified from minimum elevation, maximum elevation, median, or mode.

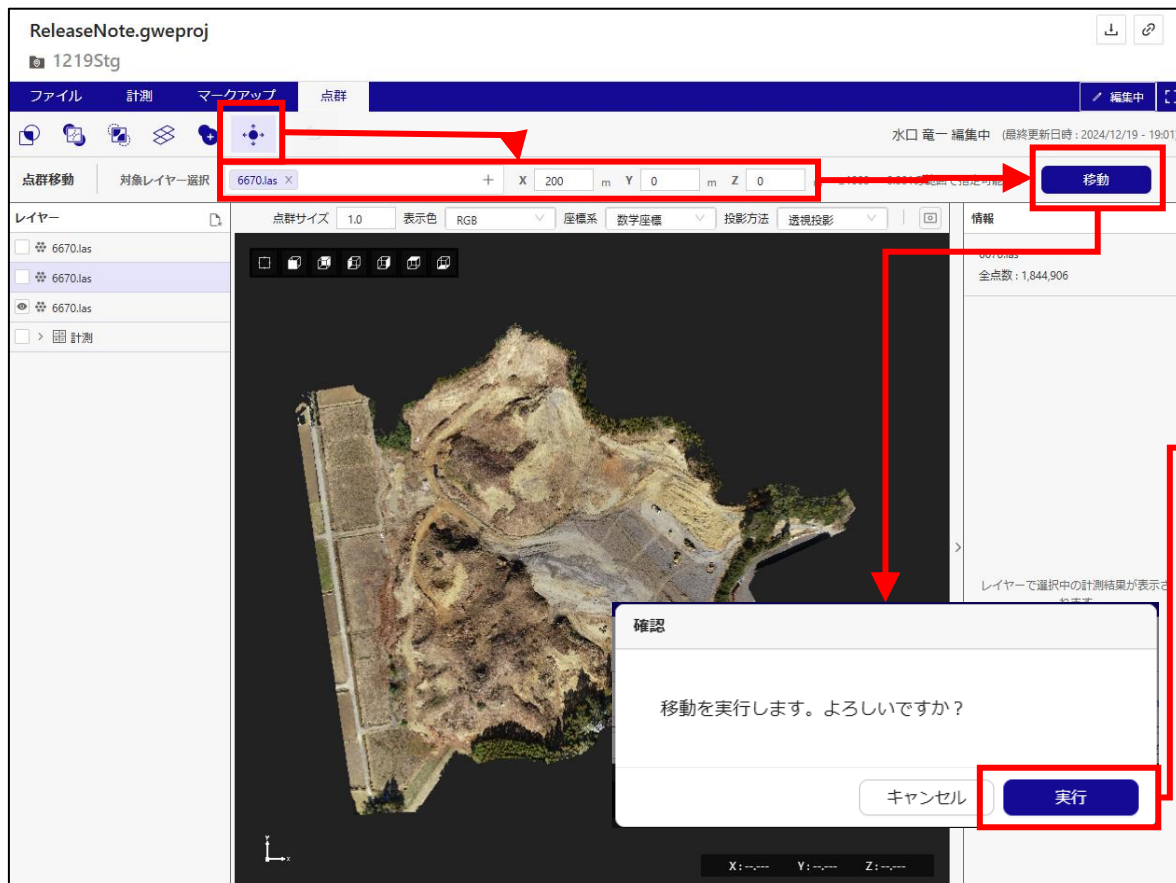
Parallel grid thinning only applies to displayed point cloud data; hidden point cloud data, design data, etc. are not affected.



The screenshot shows the Earth Brain software interface. The top menu bar includes 'ファイル', 'マークアップ', and '点群'. The '平方格子間引き' (Square Grid Thinning) function is highlighted in the 'マークアップ' menu. A red box highlights the '間引き実行' (Execute Thinning) button. A dialog box appears with the text '平方格子間引きを実行します。よろしいですか?' (Execute square grid thinning. Is it okay?). The '実行' (Execute) button is highlighted. A yellow arrow points from a 3D cube containing multiple points to a 3D cube containing a single point, illustrating the thinning process.

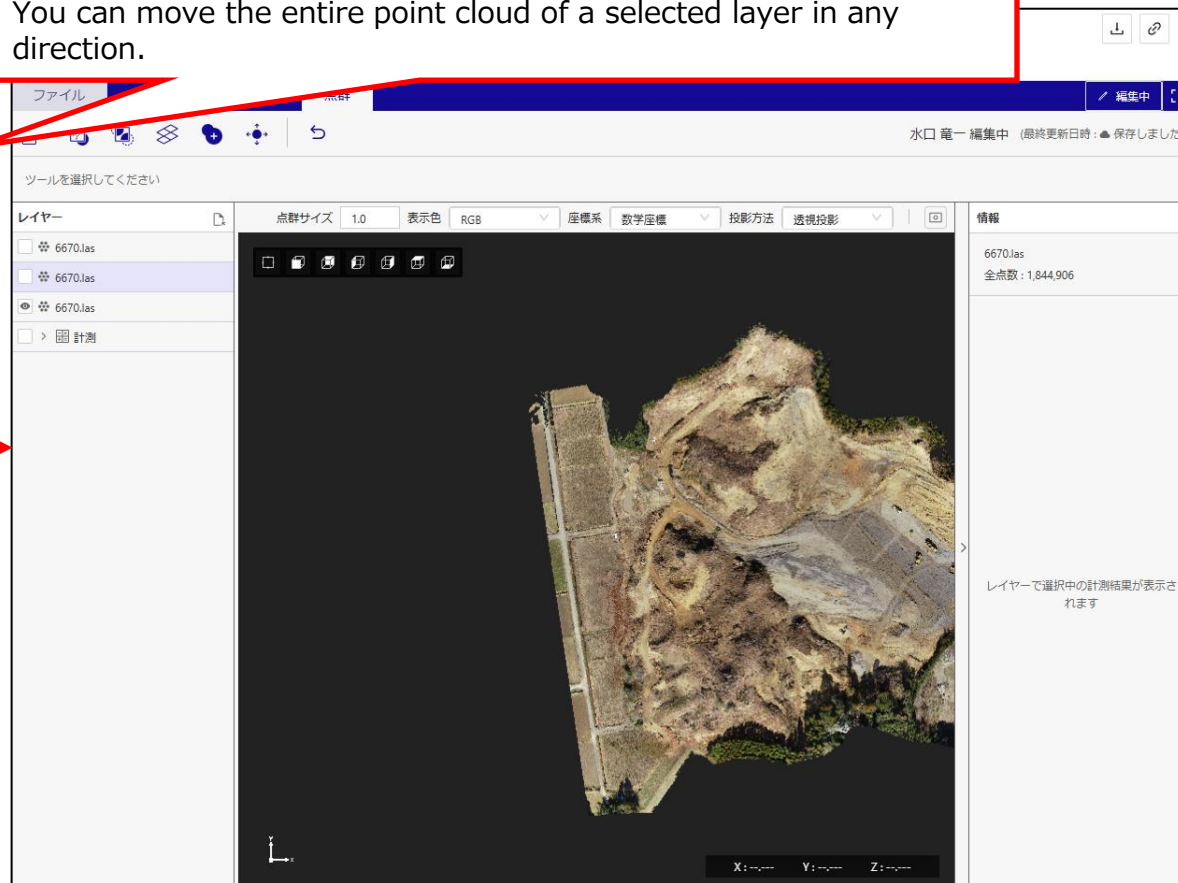
No.13

Point Cloud Move is a function that allows you to translate a specific layer in each XYZ direction .



・ Point cloud movement

By selecting
You can move the entire point cloud of a selected layer in any direction.



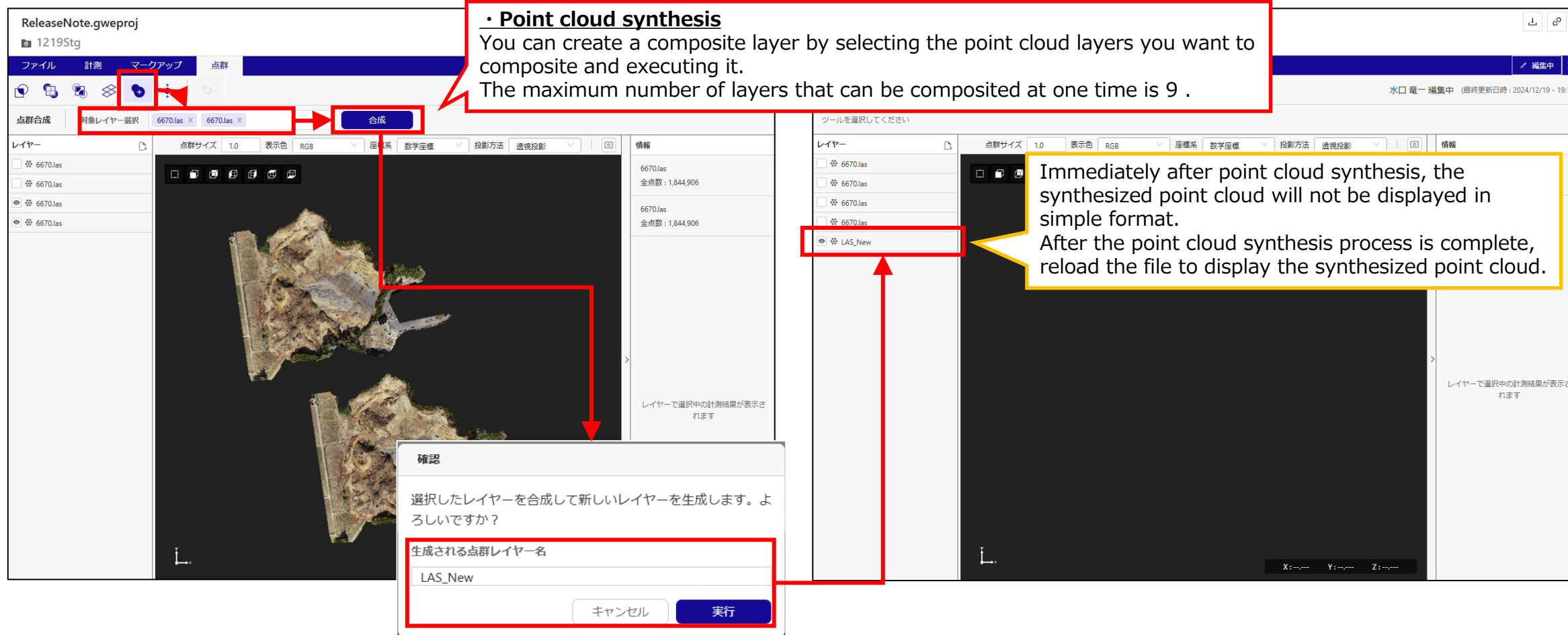
No.14

Point cloud merging is a function that creates new point cloud data by merging multiple point cloud data .

・ Point cloud synthesis

You can create a composite layer by selecting the point cloud layers you want to composite and executing it.

The maximum number of layers that can be composited at one time is 9 .



The screenshot shows the Earth Brain software interface during a point cloud synthesis operation. The top menu bar includes 'ファイル', '計測', 'マークアップ', and '点群'. The toolbar contains various icons, with the '合成' (Synthesis) button highlighted in a red box. Below the toolbar, the '点群合成' (Point Cloud Synthesis) dialog is open, showing '対象レイヤー選択' (Select target layers) with two '6670.las' files selected. A red arrow points from this dialog to the '合成' button. The main interface shows a 3D view of a point cloud model. A red box highlights the 'LAS_New' layer in the layer list on the right. A yellow box highlights the 'LAS_New' layer and the 3D view. A confirmation dialog box is open, asking '確認' (Confirmation) and '選択したレイヤーを合成して新しいレイヤーを生成します。よろしいですか?' (Synthesize the selected layers and generate a new layer. Is it okay?). The dialog shows '生成される点群レイヤー名' (Generated point cloud layer name) as 'LAS_New'. The dialog has 'キャンセル' (Cancel) and '実行' (Execute) buttons.

Immediately after point cloud synthesis, the synthesized point cloud will not be displayed in simple format. After the point cloud synthesis process is complete, reload the file to display the synthesized point cloud.

