

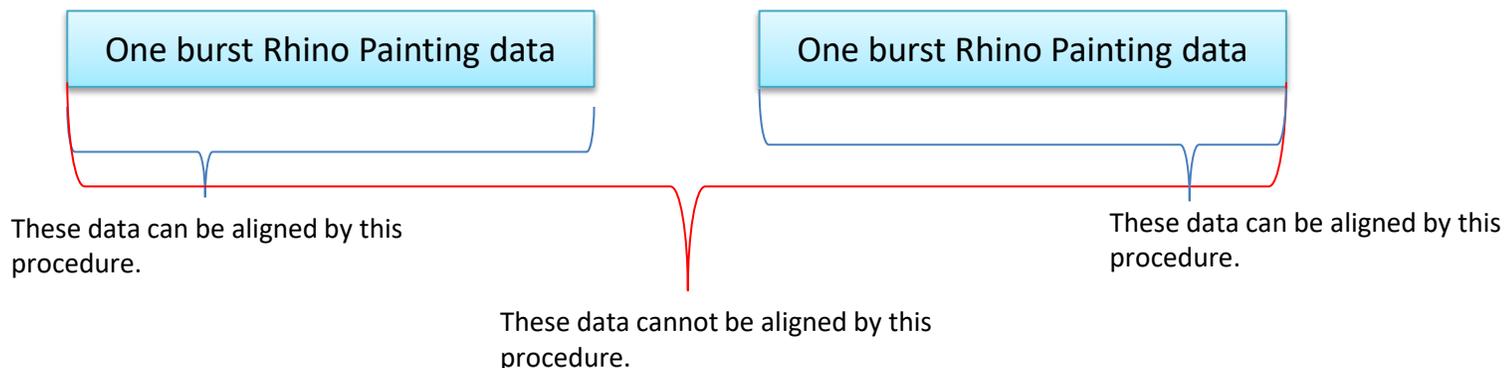


AP35 – Automatic alignment and stitching of Painting Data

July 25, 2021
SEIKOWAVE

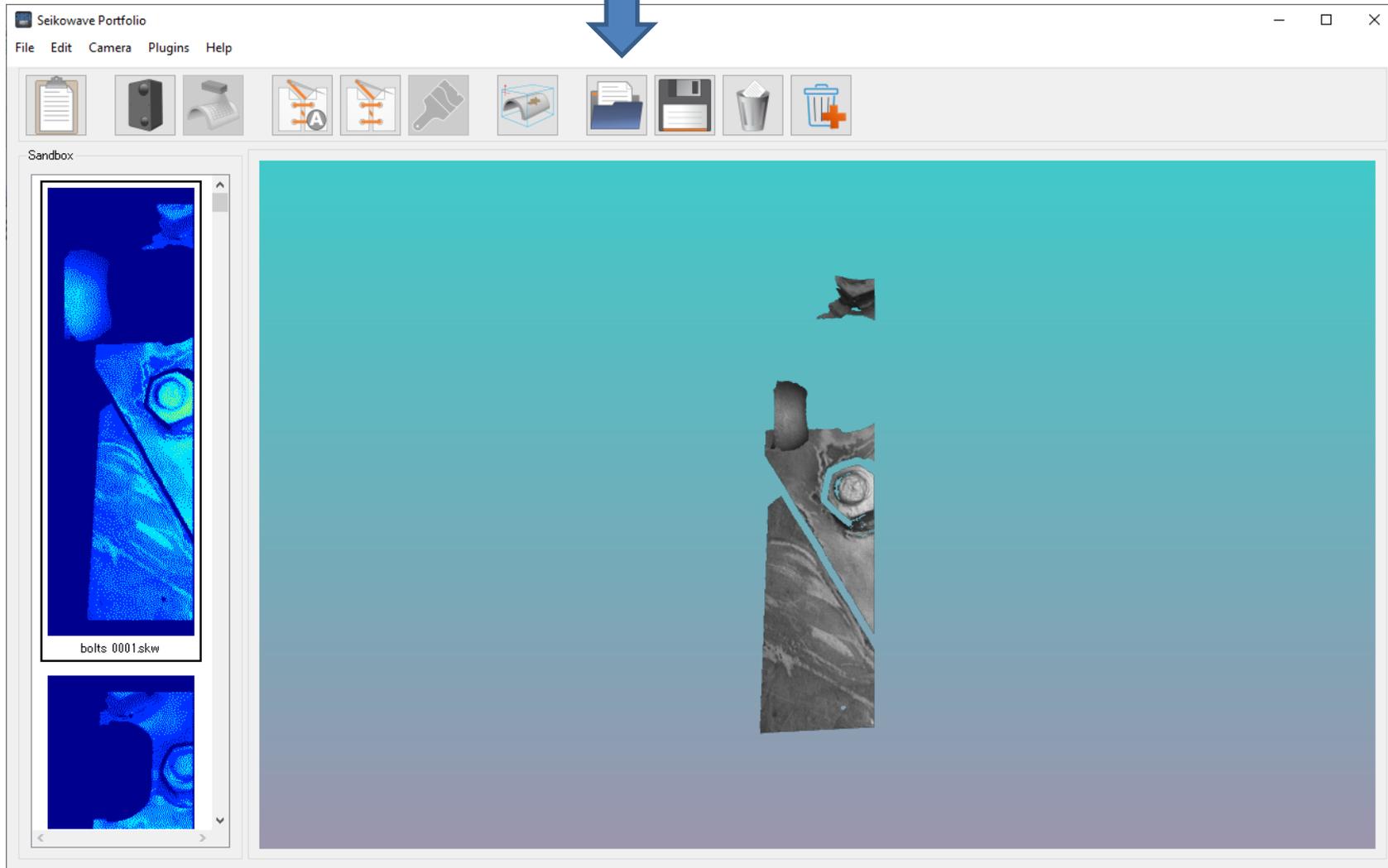
Scope of this application note

- This application note is applicable when you want to align and stitch the data acquired by Rhino Painting, after Painting function is terminated.
 - This application note is also applicable if you want to eliminate some of the stitched data to improve the alignment quality.
- Condition
 - The procedure described in this application note can be applicable to the data acquired by one cycle of Rhino Painting.
 - Once Painting closes its function, the coordinate system stored in the data acquired by Rhino Painting will be different, so that the data acquired by the other cycle of Rhino Painting cannot be aligned.



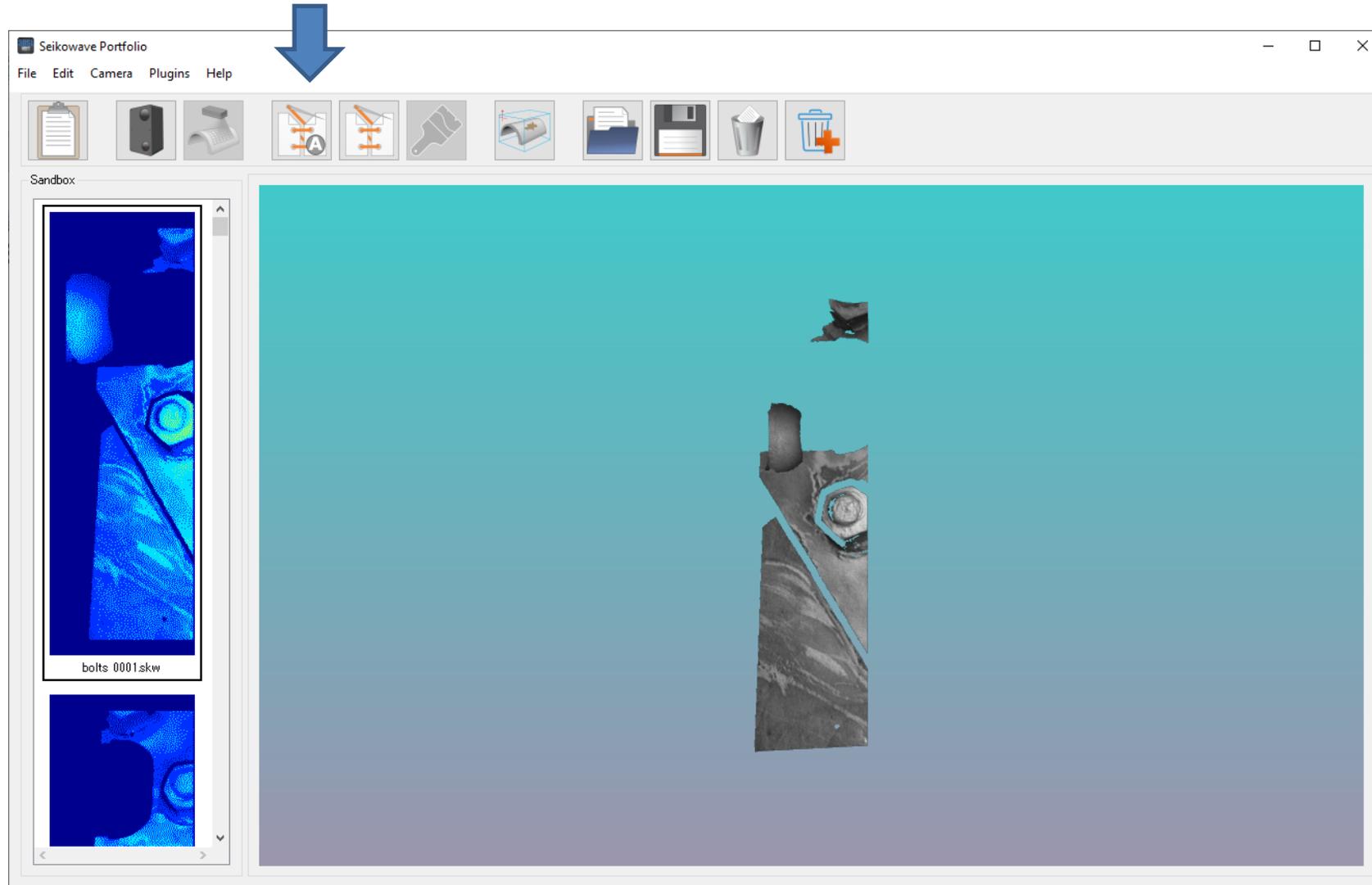


Step 1; Load the data acquired by Rhino Painting

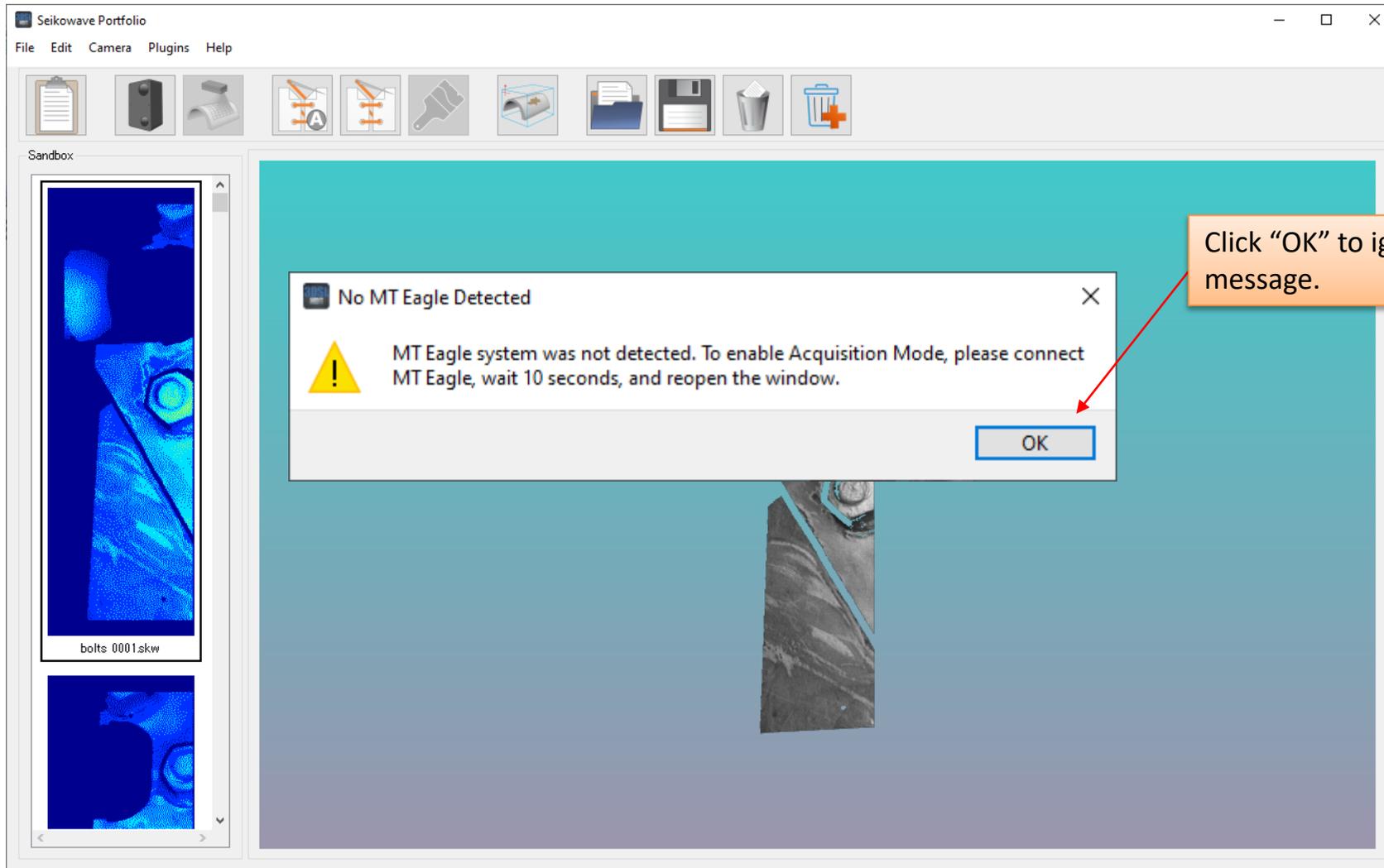




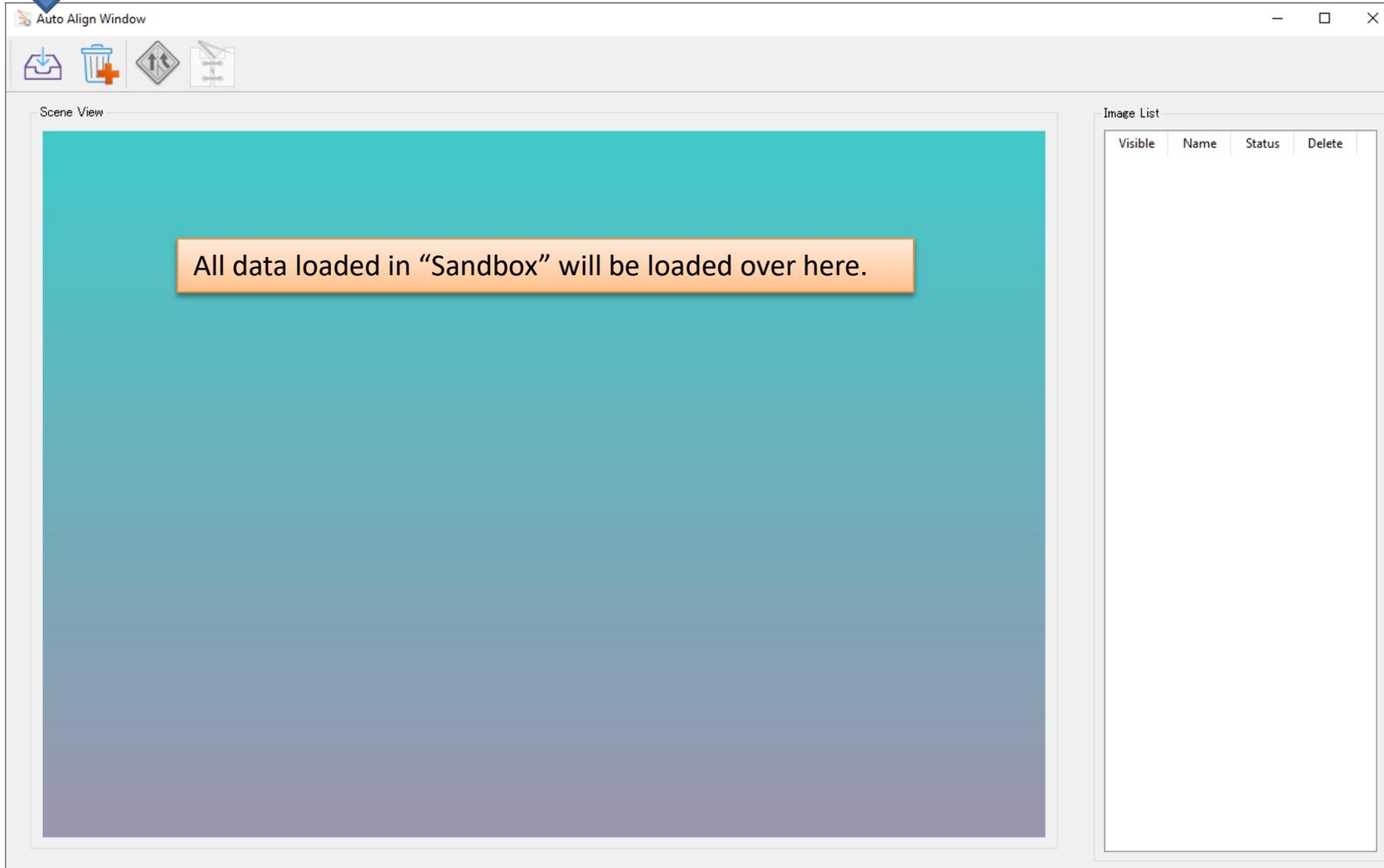
Step 2; Click “automatic align 3D data” icon



Step 3; Ignore error message



Step 4; Load the data



Auto Align Window

Scene View

Image List

| Visible | Name | Status | Delete |
|---------|------|--------|--------|
|---------|------|--------|--------|

All data loaded in "Sandbox" will be loaded over here.

Step 5; confirm the data

Confirm the data if any foreign data are loaded or not.
If there are any foreign data, delete them.

Auto Align Window

Scene View

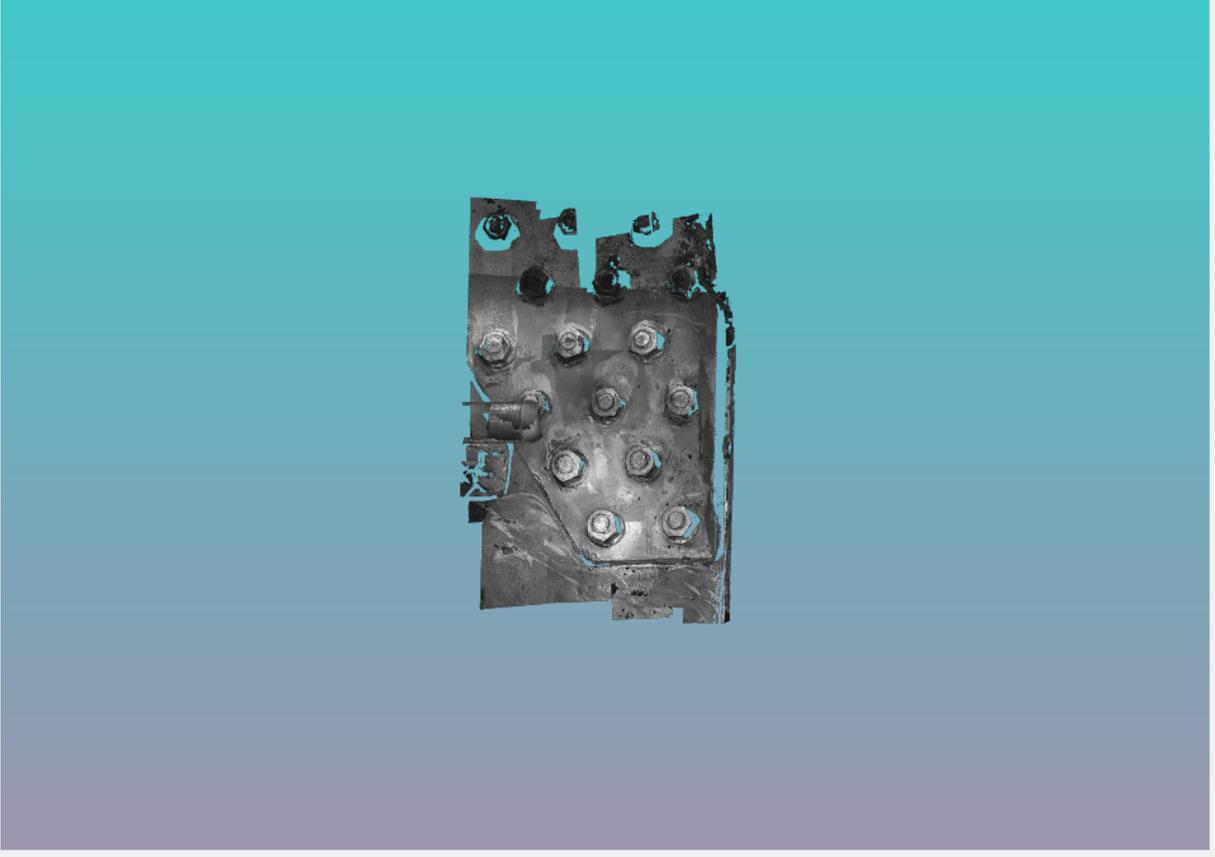


Image List

| Visible | Name | Status | Delete |
|--------------------------|------------|--------|--------|
| <input type="checkbox"/> | bolts 0058 | ? | |
| <input type="checkbox"/> | bolts 0057 | ? | |
| <input type="checkbox"/> | bolts 0056 | ? | |
| <input type="checkbox"/> | bolts 0055 | ? | |
| <input type="checkbox"/> | bolts 0054 | ? | |
| <input type="checkbox"/> | bolts 0053 | ? | |
| <input type="checkbox"/> | bolts 0052 | ? | |
| <input type="checkbox"/> | bolts 0051 | ? | |
| <input type="checkbox"/> | bolts 0050 | ? | |
| <input type="checkbox"/> | bolts 0049 | ? | |
| <input type="checkbox"/> | bolts 0048 | ? | |
| <input type="checkbox"/> | bolts 0047 | ? | |
| <input type="checkbox"/> | bolts 0046 | ? | |
| <input type="checkbox"/> | bolts 0045 | ? | |
| <input type="checkbox"/> | bolts 0044 | ? | |
| <input type="checkbox"/> | bolts 0043 | ? | |
| <input type="checkbox"/> | bolts 0042 | ? | |
| <input type="checkbox"/> | bolts 0041 | ? | |
| <input type="checkbox"/> | bolts 0040 | ? | |
| <input type="checkbox"/> | bolts 0039 | ? | |
| <input type="checkbox"/> | bolts 0038 | ? | |
| <input type="checkbox"/> | bolts 0037 | ? | |

Step 6; confirm the data

Auto Align Window

Scene View

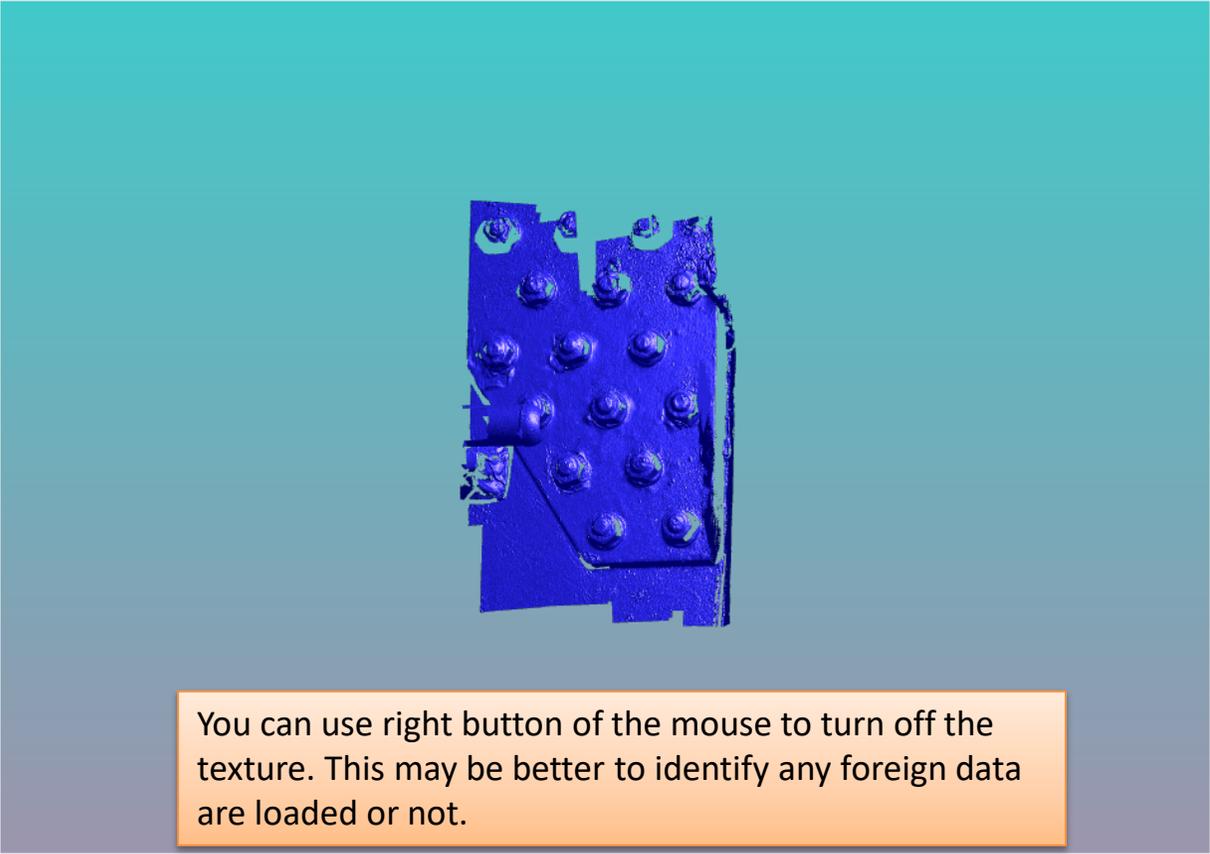
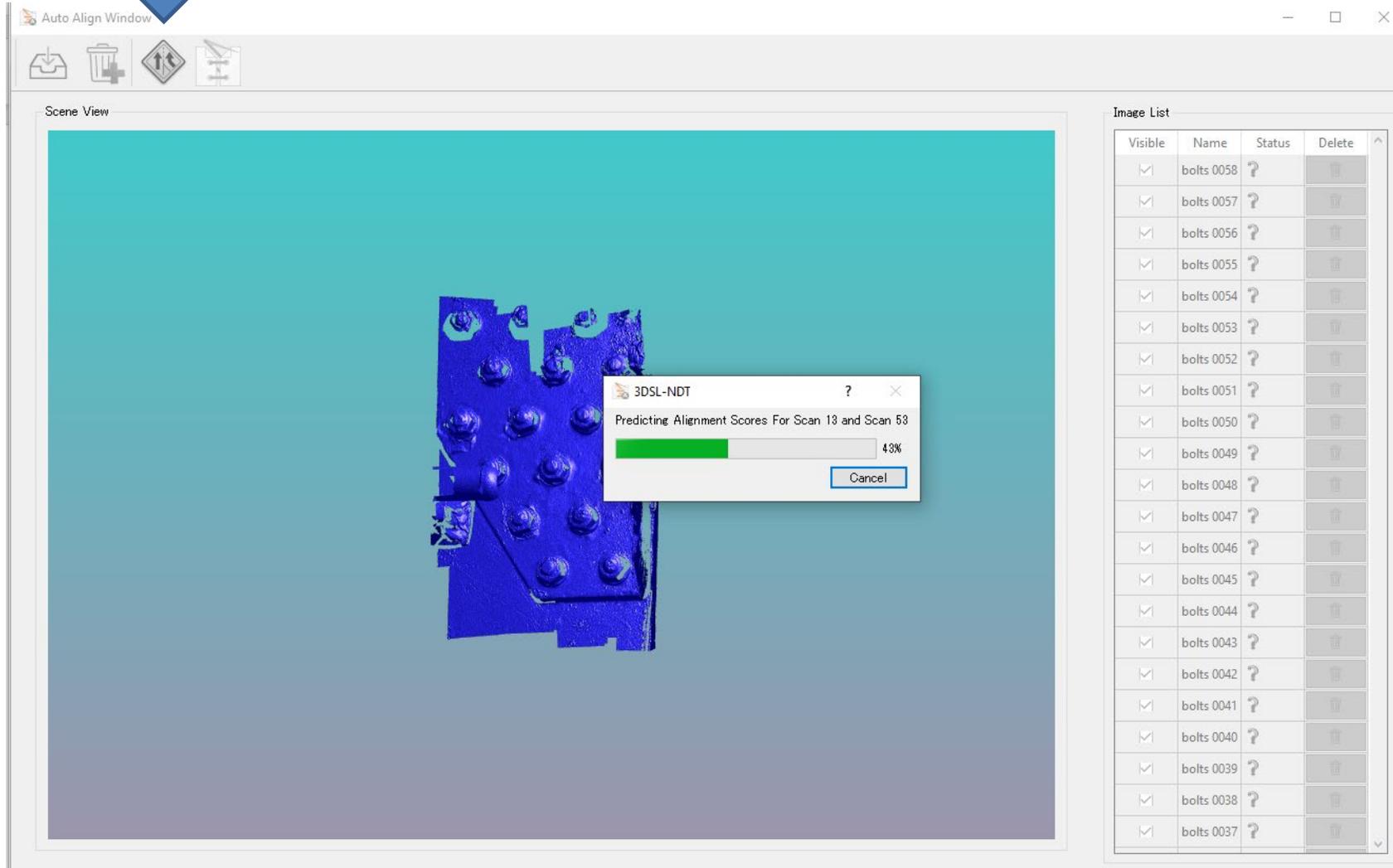


Image List

| Visible | Name | Status | Delete |
|-------------------------------------|------------|--------|--------|
| <input checked="" type="checkbox"/> | bolts 0058 | ? | |
| <input checked="" type="checkbox"/> | bolts 0057 | ? | |
| <input checked="" type="checkbox"/> | bolts 0056 | ? | |
| <input checked="" type="checkbox"/> | bolts 0055 | ? | |
| <input checked="" type="checkbox"/> | bolts 0054 | ? | |
| <input checked="" type="checkbox"/> | bolts 0053 | ? | |
| <input checked="" type="checkbox"/> | bolts 0052 | ? | |
| <input checked="" type="checkbox"/> | bolts 0051 | ? | |
| <input checked="" type="checkbox"/> | bolts 0050 | ? | |
| <input checked="" type="checkbox"/> | bolts 0049 | ? | |
| <input checked="" type="checkbox"/> | bolts 0048 | ? | |
| <input checked="" type="checkbox"/> | bolts 0047 | ? | |
| <input checked="" type="checkbox"/> | bolts 0046 | ? | |
| <input checked="" type="checkbox"/> | bolts 0045 | ? | |
| <input checked="" type="checkbox"/> | bolts 0044 | ? | |
| <input checked="" type="checkbox"/> | bolts 0043 | ? | |
| <input checked="" type="checkbox"/> | bolts 0042 | ? | |
| <input checked="" type="checkbox"/> | bolts 0041 | ? | |
| <input checked="" type="checkbox"/> | bolts 0040 | ? | |
| <input checked="" type="checkbox"/> | bolts 0039 | ? | |
| <input checked="" type="checkbox"/> | bolts 0038 | ? | |
| <input checked="" type="checkbox"/> | bolts 0037 | ? | |

You can use right button of the mouse to turn off the texture. This may be better to identify any foreign data are loaded or not.

Step 7; align the data

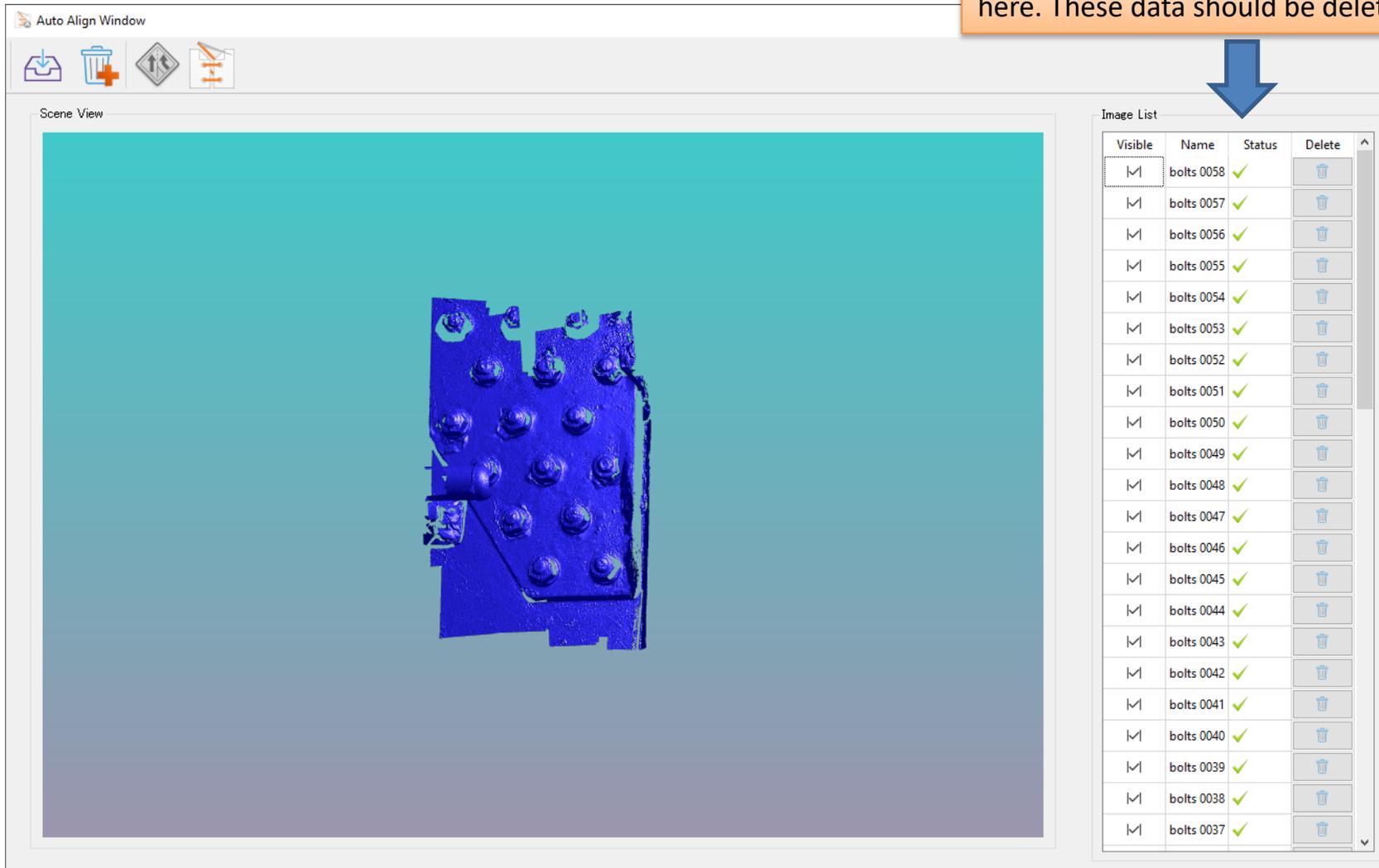


| Visible | Name | Status | Delete |
|-------------------------------------|------------|--------|--------|
| <input checked="" type="checkbox"/> | bolts 0058 | ? | |
| <input checked="" type="checkbox"/> | bolts 0057 | ? | |
| <input checked="" type="checkbox"/> | bolts 0056 | ? | |
| <input checked="" type="checkbox"/> | bolts 0055 | ? | |
| <input checked="" type="checkbox"/> | bolts 0054 | ? | |
| <input checked="" type="checkbox"/> | bolts 0053 | ? | |
| <input checked="" type="checkbox"/> | bolts 0052 | ? | |
| <input checked="" type="checkbox"/> | bolts 0051 | ? | |
| <input checked="" type="checkbox"/> | bolts 0050 | ? | |
| <input checked="" type="checkbox"/> | bolts 0049 | ? | |
| <input checked="" type="checkbox"/> | bolts 0048 | ? | |
| <input checked="" type="checkbox"/> | bolts 0047 | ? | |
| <input checked="" type="checkbox"/> | bolts 0046 | ? | |
| <input checked="" type="checkbox"/> | bolts 0045 | ? | |
| <input checked="" type="checkbox"/> | bolts 0044 | ? | |
| <input checked="" type="checkbox"/> | bolts 0043 | ? | |
| <input checked="" type="checkbox"/> | bolts 0042 | ? | |
| <input checked="" type="checkbox"/> | bolts 0041 | ? | |
| <input checked="" type="checkbox"/> | bolts 0040 | ? | |
| <input checked="" type="checkbox"/> | bolts 0039 | ? | |
| <input checked="" type="checkbox"/> | bolts 0038 | ? | |
| <input checked="" type="checkbox"/> | bolts 0037 | ? | |

Note;
If the number of data exceeds 100, alignment may not work due to memory overflow.

Step 8; check the alignment result

If there are any misaligned data, you will see “x” mark here. These data should be deleted and align again.



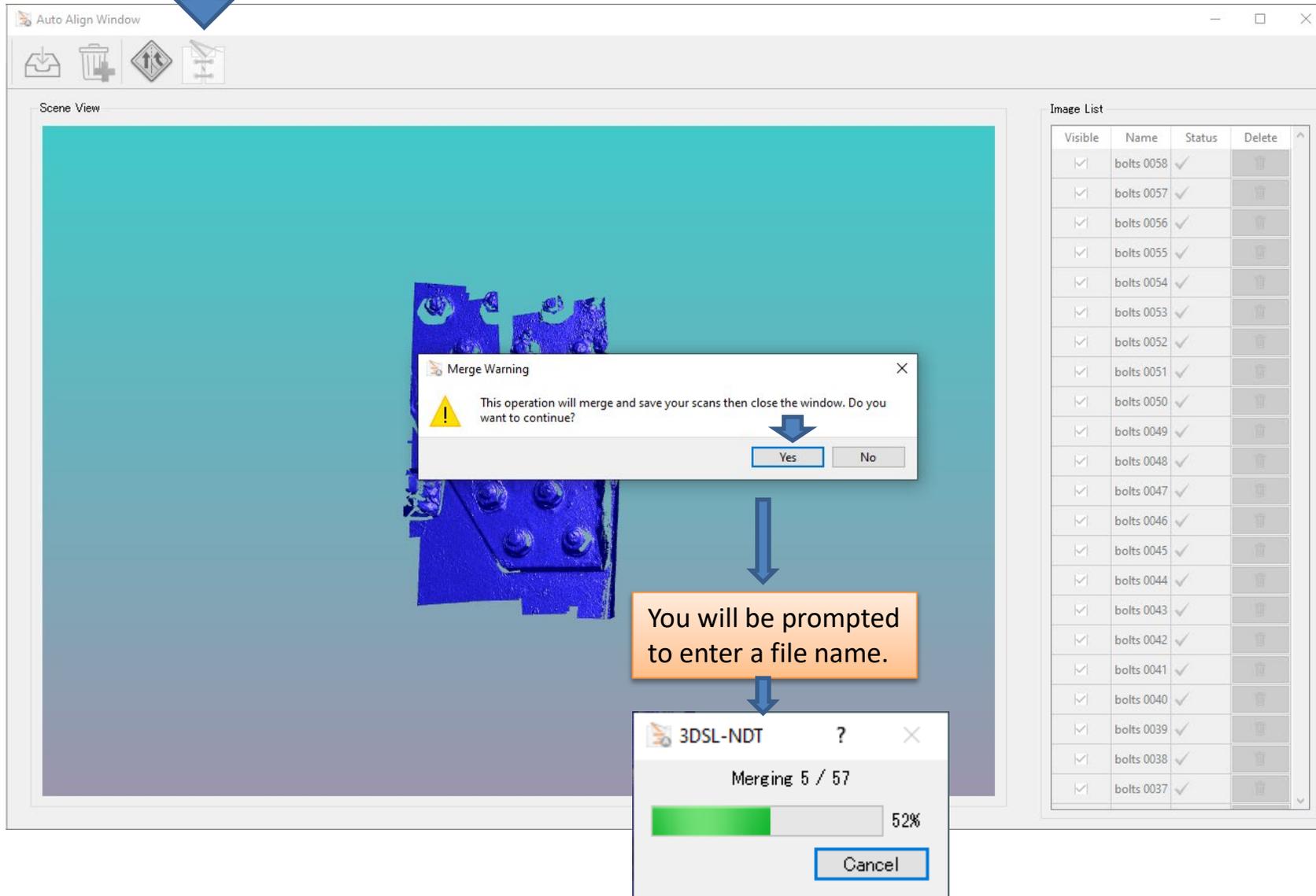
Auto Align Window

Scene View

Image List

| Visible | Name | Status | Delete |
|-------------------------------------|------------|--------|--------|
| <input checked="" type="checkbox"/> | bolts 0058 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0057 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0056 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0055 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0054 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0053 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0052 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0051 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0050 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0049 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0048 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0047 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0046 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0045 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0044 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0043 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0042 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0041 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0040 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0039 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0038 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0037 | ✓ | |

Step 9; stitch (merge) the aligned data



Auto Align Window

Scene View

Image List

| Visible | Name | Status | Delete |
|-------------------------------------|------------|--------|--------|
| <input checked="" type="checkbox"/> | bolts 0058 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0057 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0056 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0055 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0054 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0053 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0052 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0051 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0050 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0049 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0048 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0047 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0046 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0045 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0044 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0043 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0042 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0041 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0040 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0039 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0038 | ✓ | |
| <input checked="" type="checkbox"/> | bolts 0037 | ✓ | |

Merge Warning

! This operation will merge and save your scans then close the window. Do you want to continue?

Yes No

You will be prompted to enter a file name.

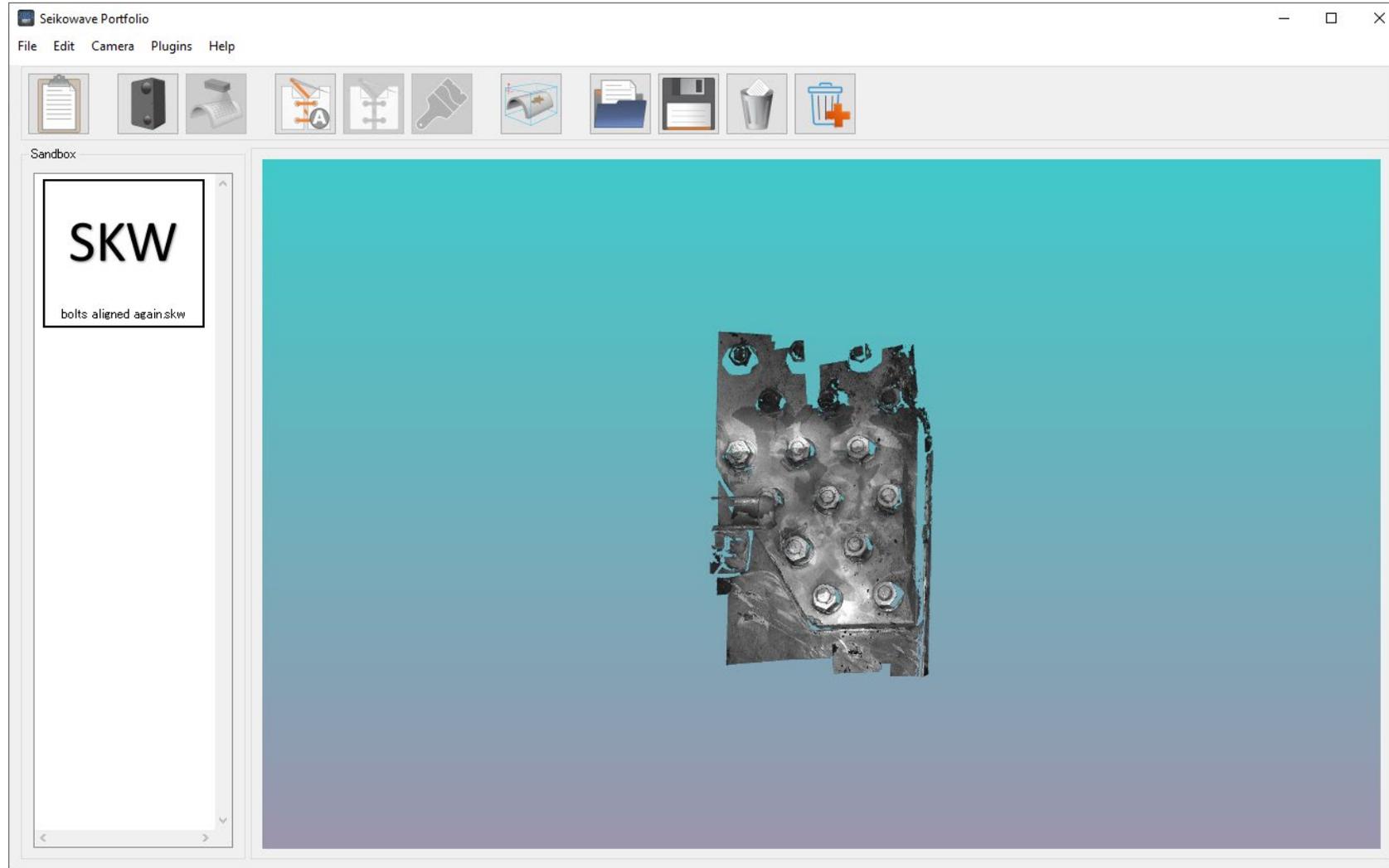
3DSL-NDT ?

Merging 5 / 57

52%

Cancel

Finished



Note;
If the number of data exceeds 100, alignment may not work due to memory overflow.