

3D Contents / 3D Printer: make file

For v1.36

Some 3D printers cannot print data which has plural objects. Or cavity in the object results in unremovable supports inside and may cause bad appearance of the product. To resolve these problems, edit 3D data by "Voxel Process" or "Voxel division".

"Polygon Reduction" is also useful to avoid limits of 3D printer's maximum number of handling polygon. Processed data can be exported as a STL or a OBJ format, standard 3D printer file.

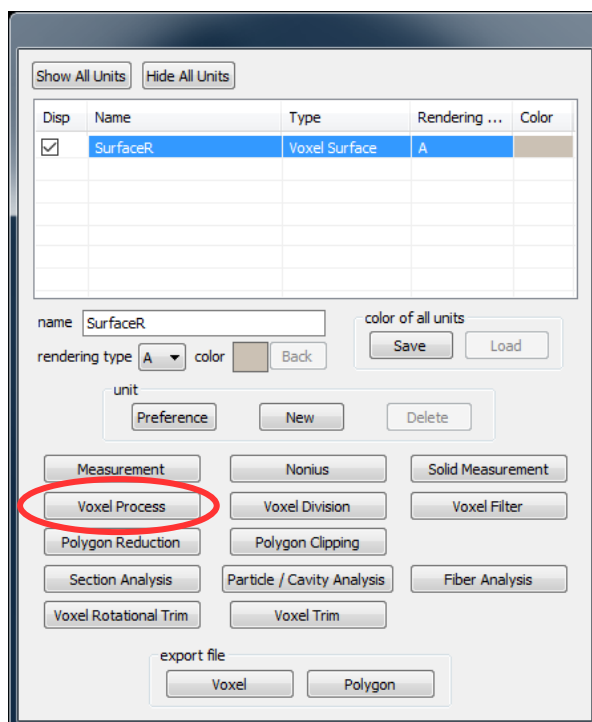
Remove needless objects

Change to "Surface Rendering" and check whether needless objects exist.

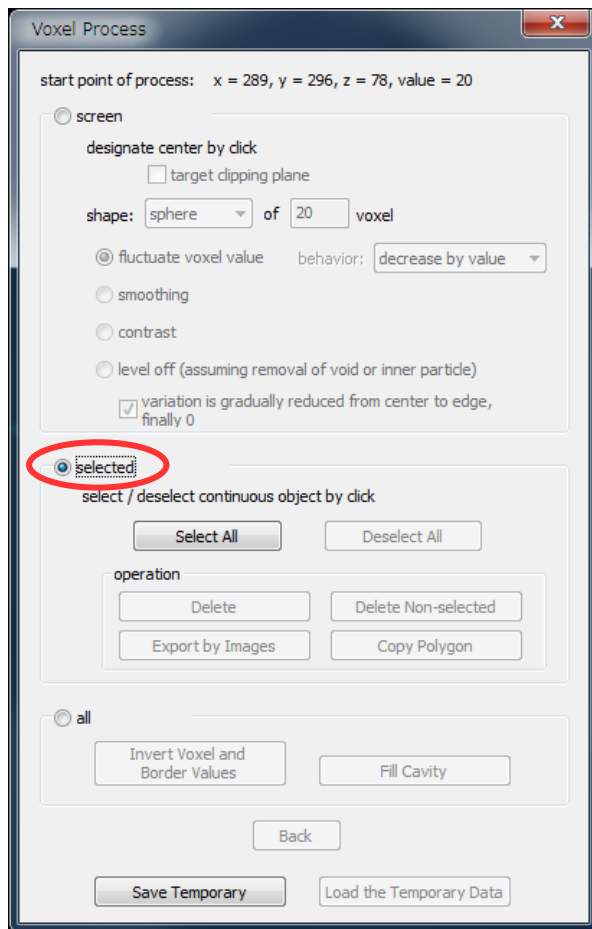


◀ Many noise exist besides fish object.

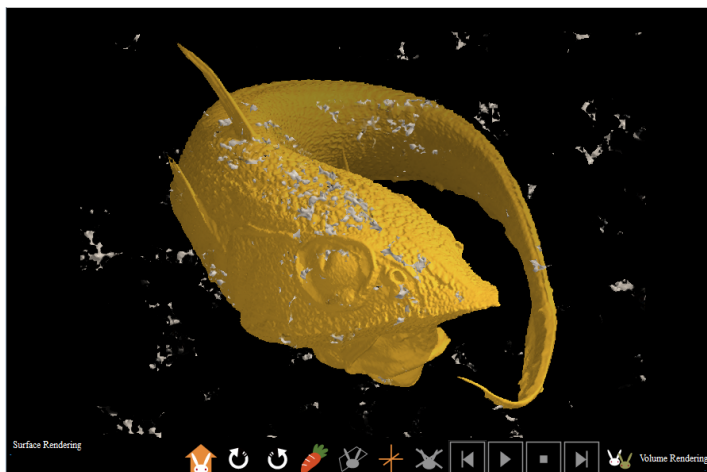
Open "Voxel Process" dialog from "Main Control".



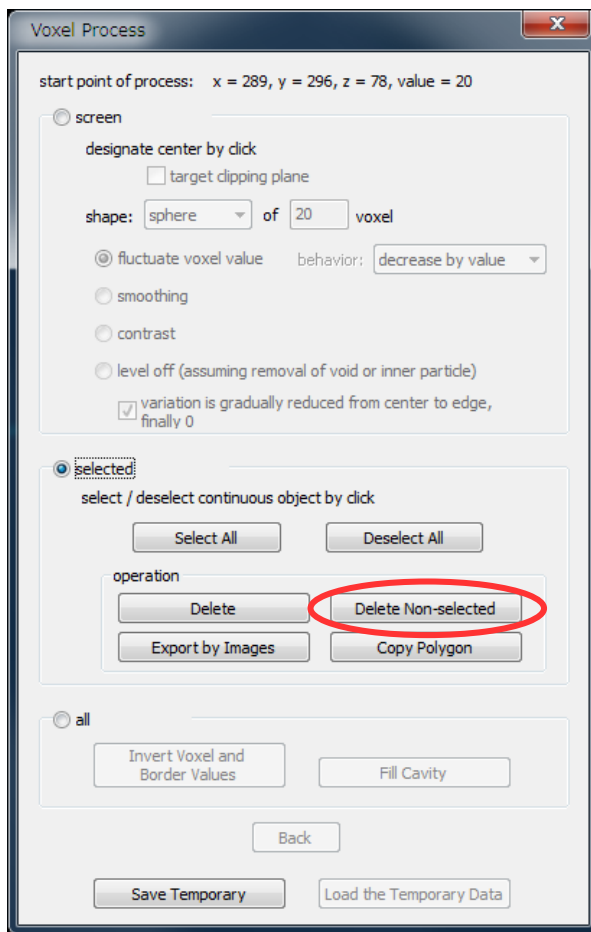
Select "selected".



Select necessary object by click.



Press “Delete Non-selected” button.



Non-selected, needless objects are removed.



Close “Voxel Process” dialog.

Divide space

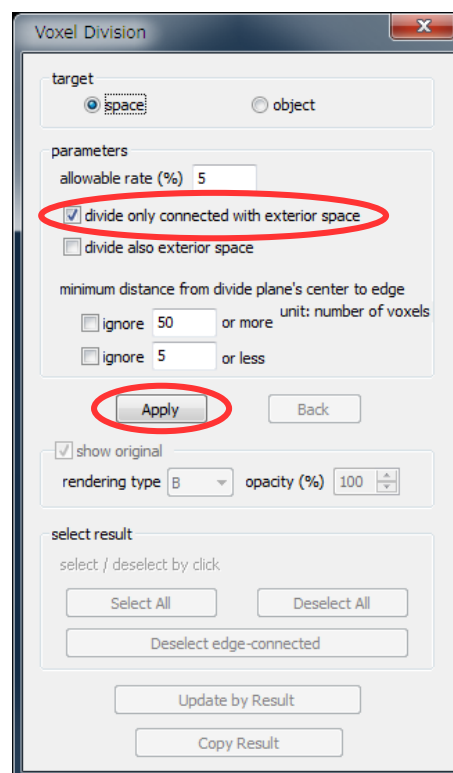
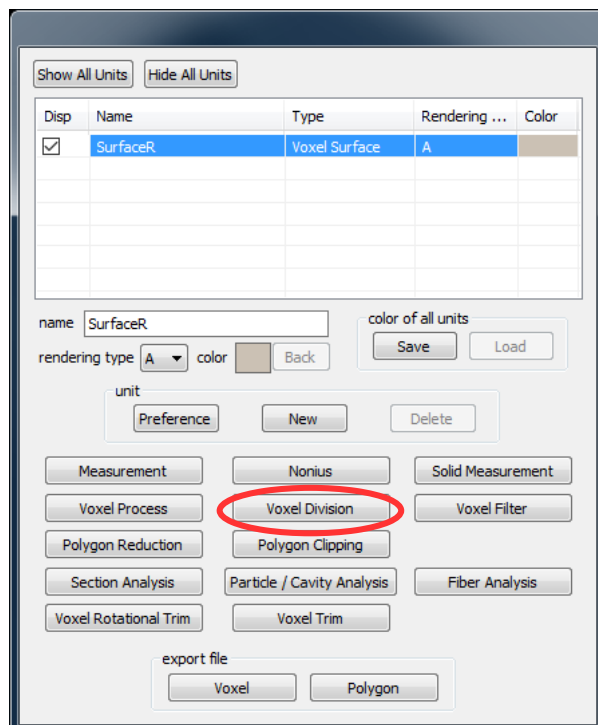
If cavity of the objects is connected with exterior space even a little, cavity is considered as a part of exterior space and function of filling cavity is no more effective. To resolve this problem, make wall at the connecting space to isolate cavity.

Show section of the objects and check if cavity is connected with exterior space.

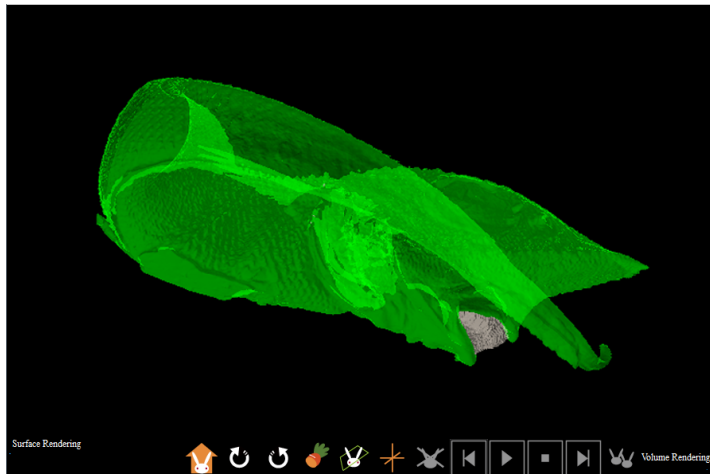


◀ Cavity connected with exterior space exists.

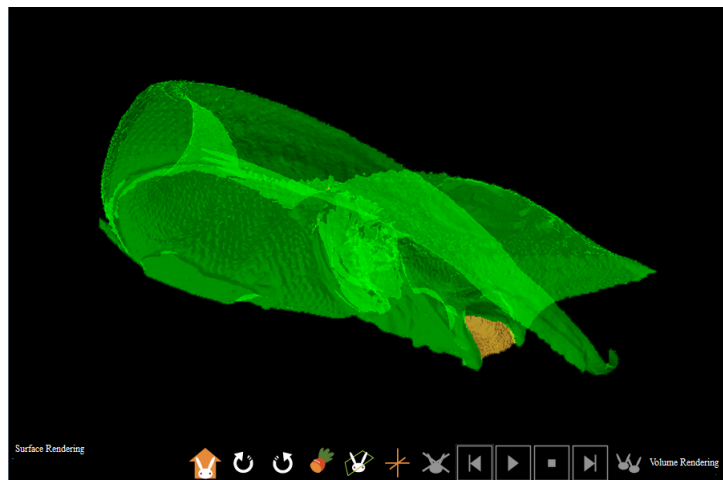
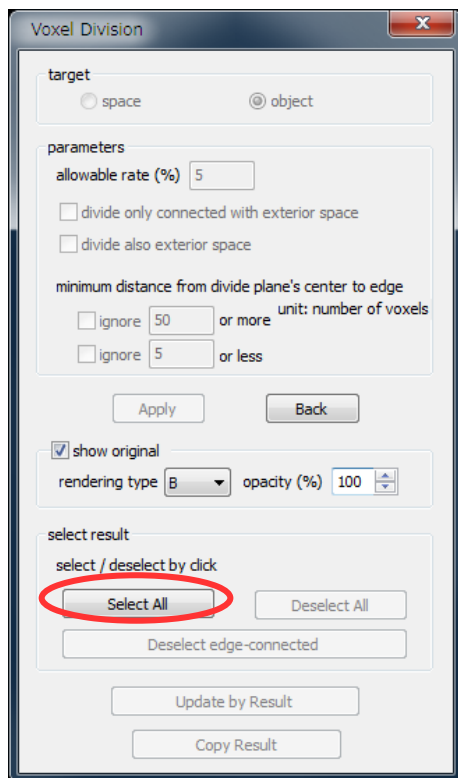
Open “Voxel Division” dialog from “Main Control”. Check “divide only connected with exterior space” and press “Apply” button.



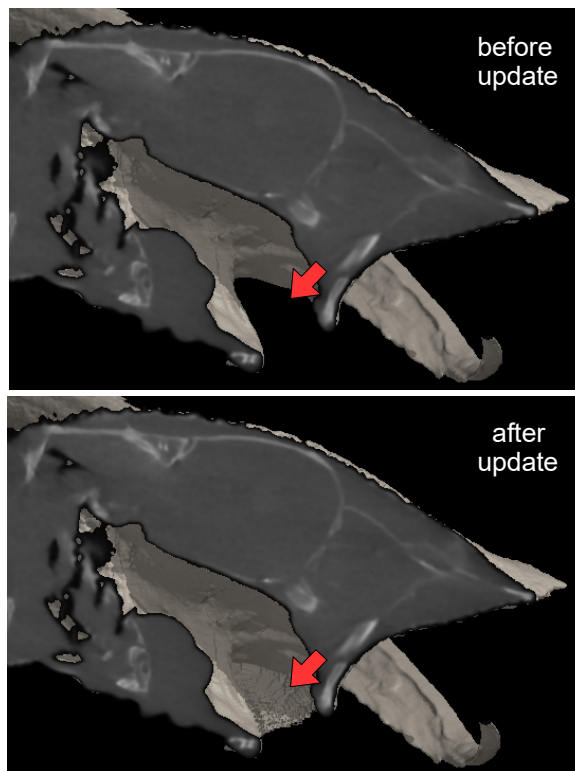
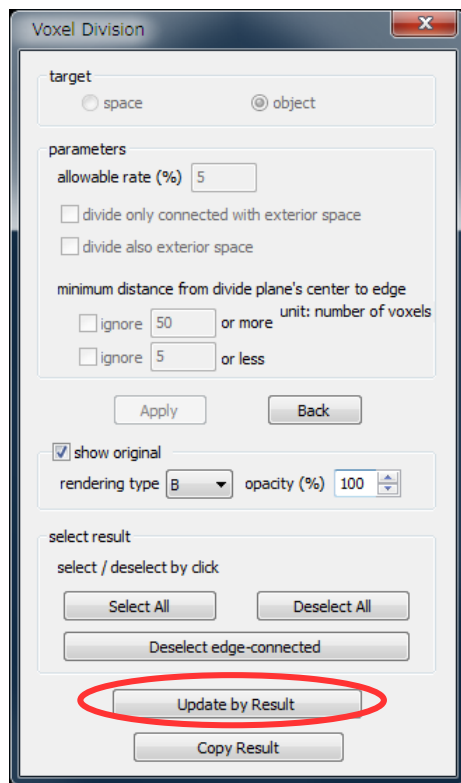
The original objects (green) and selectable results (white) are drawn.



Press "Select All" button. All results are selected.



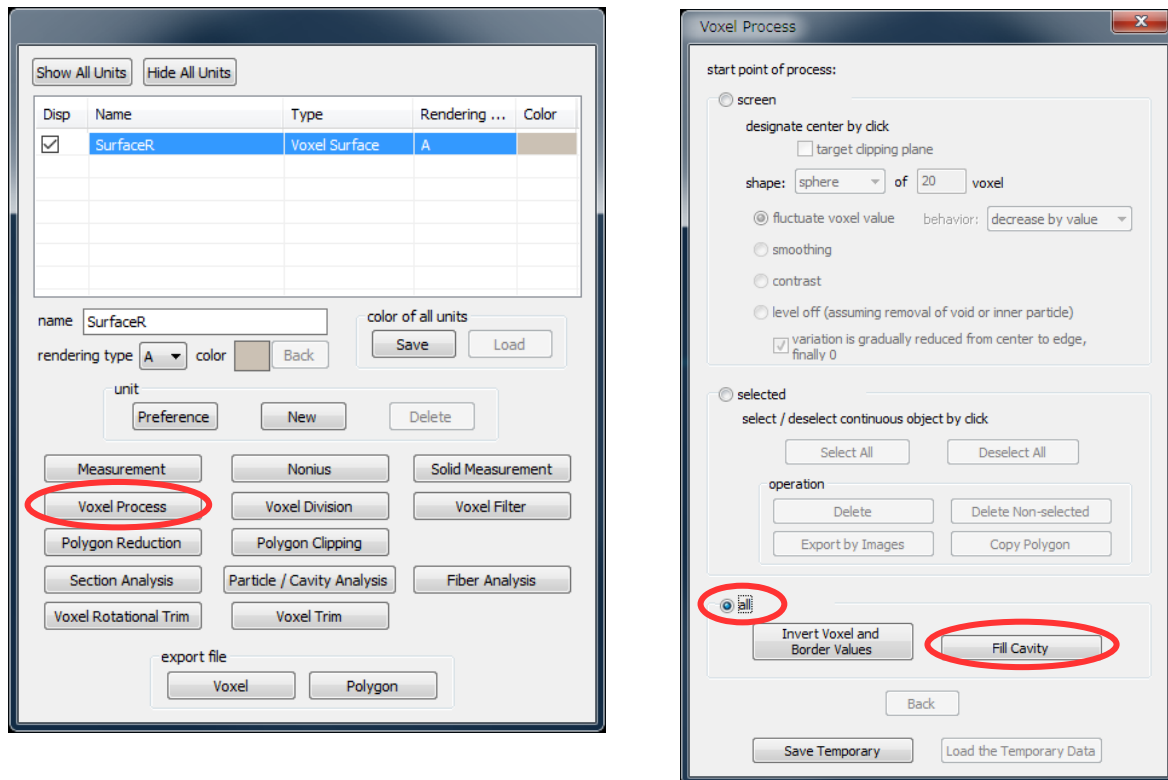
Press “Update by Result” button. Wall is generated and cavity isolated (red arrow).



Close “Voxel Division” dialog.

Fill Cavity

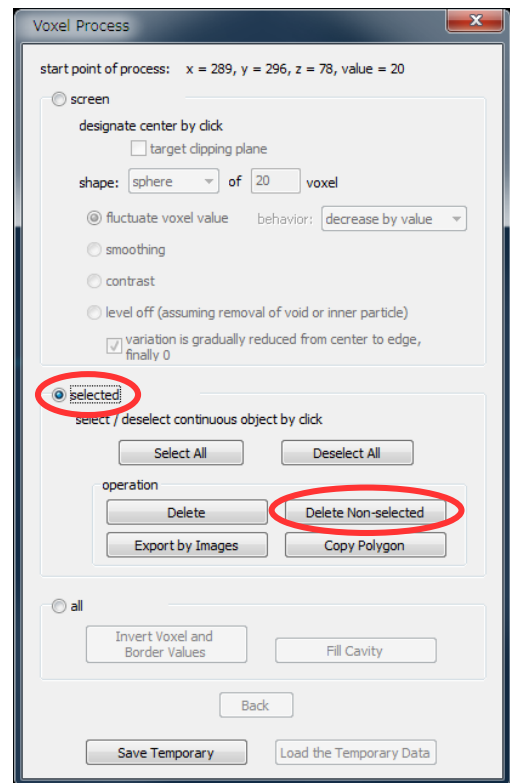
Open “Voxel Process” dialog from “Main Control”, select “all” and press “Fill Cavity” button.



Cavity is filled.

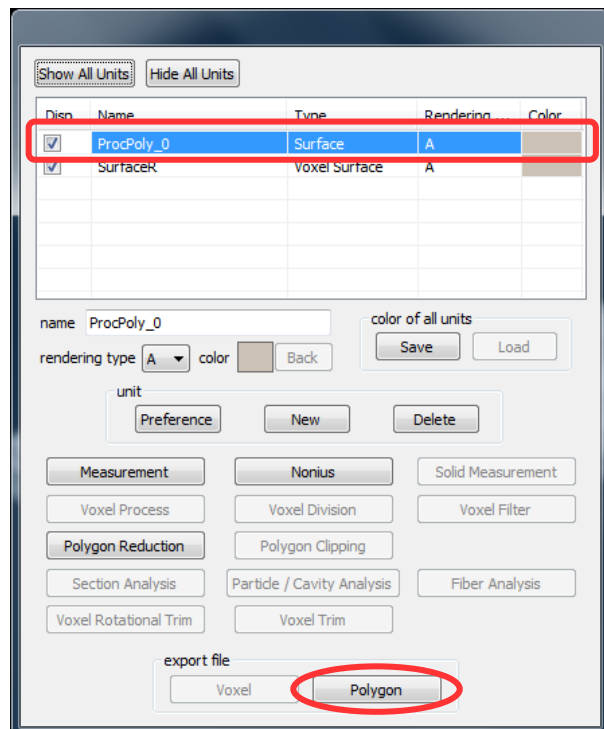
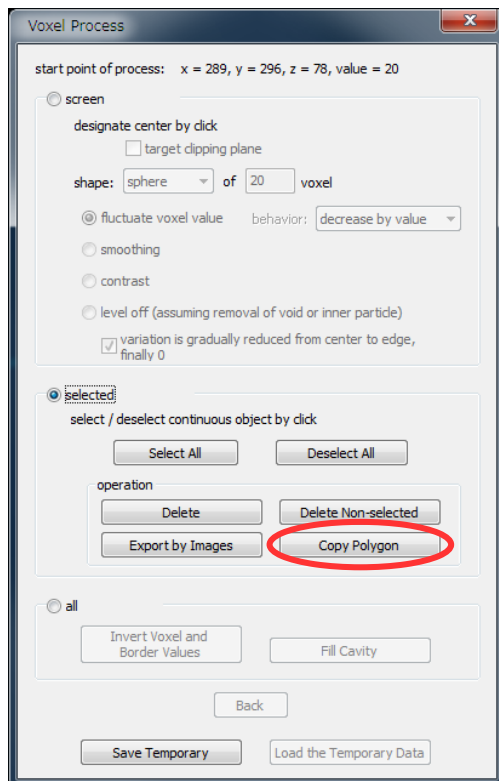


Select “selected”, click necessary objects on the screen and press “Delete Non-selected” button. Selected objects are drawn yellow.



Reselect necessary objects and press “Copy polygon” button to copy selected polygon data to “Main Control”. Close “Voxel Process” dialog.

To export a file for 3D printer at this time, press “Polygon” button of “export file” box selecting copied unit and designate file format.

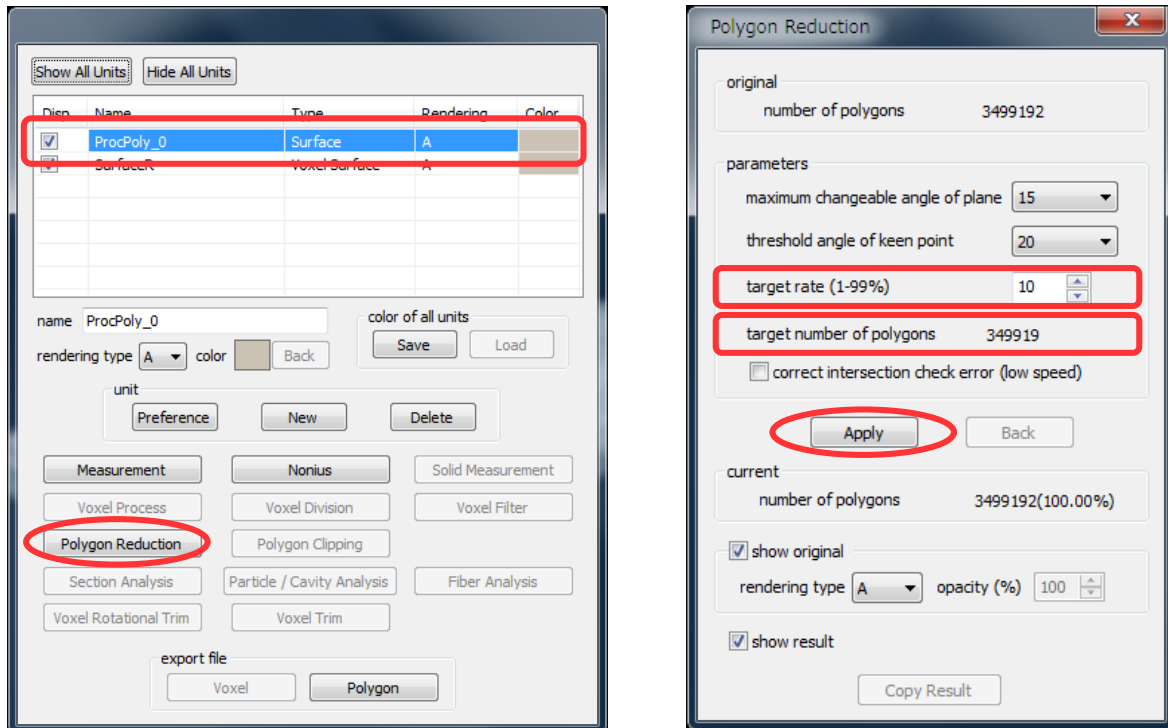


Reduce Polygon

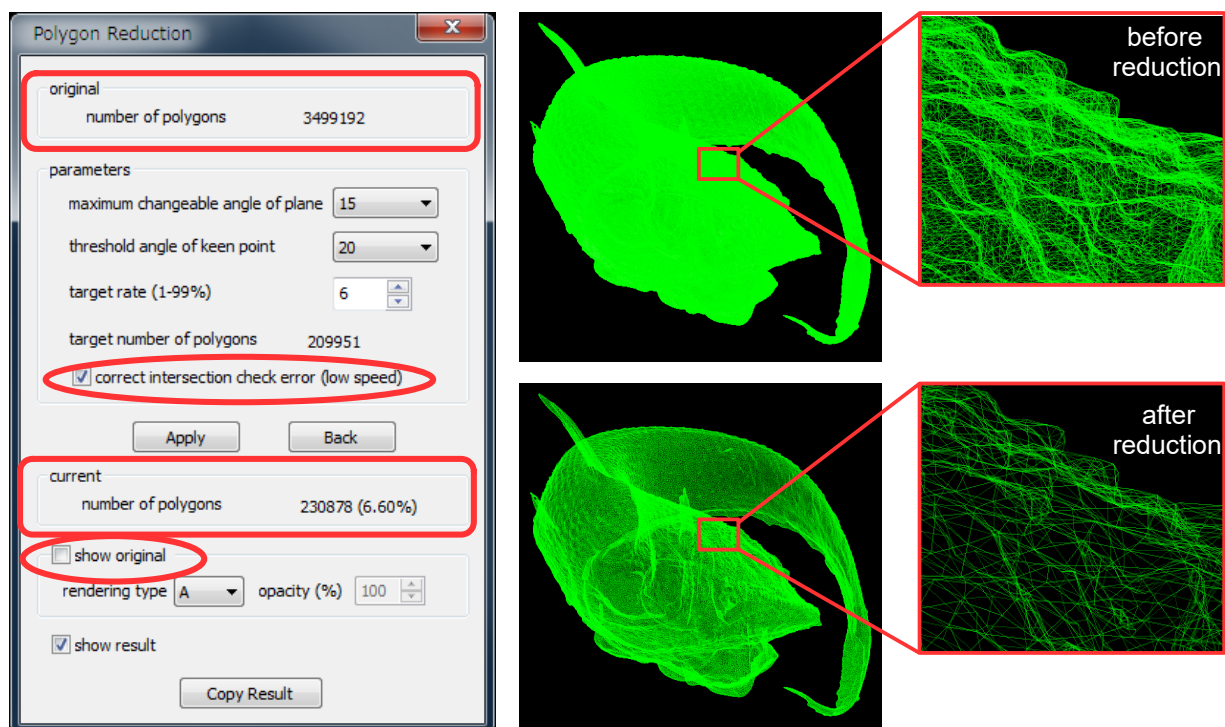
Tremendous polygon data may exceeds 3D printer's maximum number of handling polygon. You can reduce polygons by "Polygon Reduction".

Select objective unit on "Main Control" and press "Polygon Reduction" button.

Settle "target rate" to reach "target number of polygons" and press "Apply" button.



Uncheck "show original" to show reduced polygons only. Now number of polygons is reduced to 6.60% of the original. If "intersect error" occurred, reduction with "correct intersection check error (low speed)" checked may effect.



Press “Copy Result” button to copy reduced polygon data to “Main Control”. After closing “Polygon Reduction” dialog, press “Polygon” button of “export file” box selecting copied unit and designate file format.

