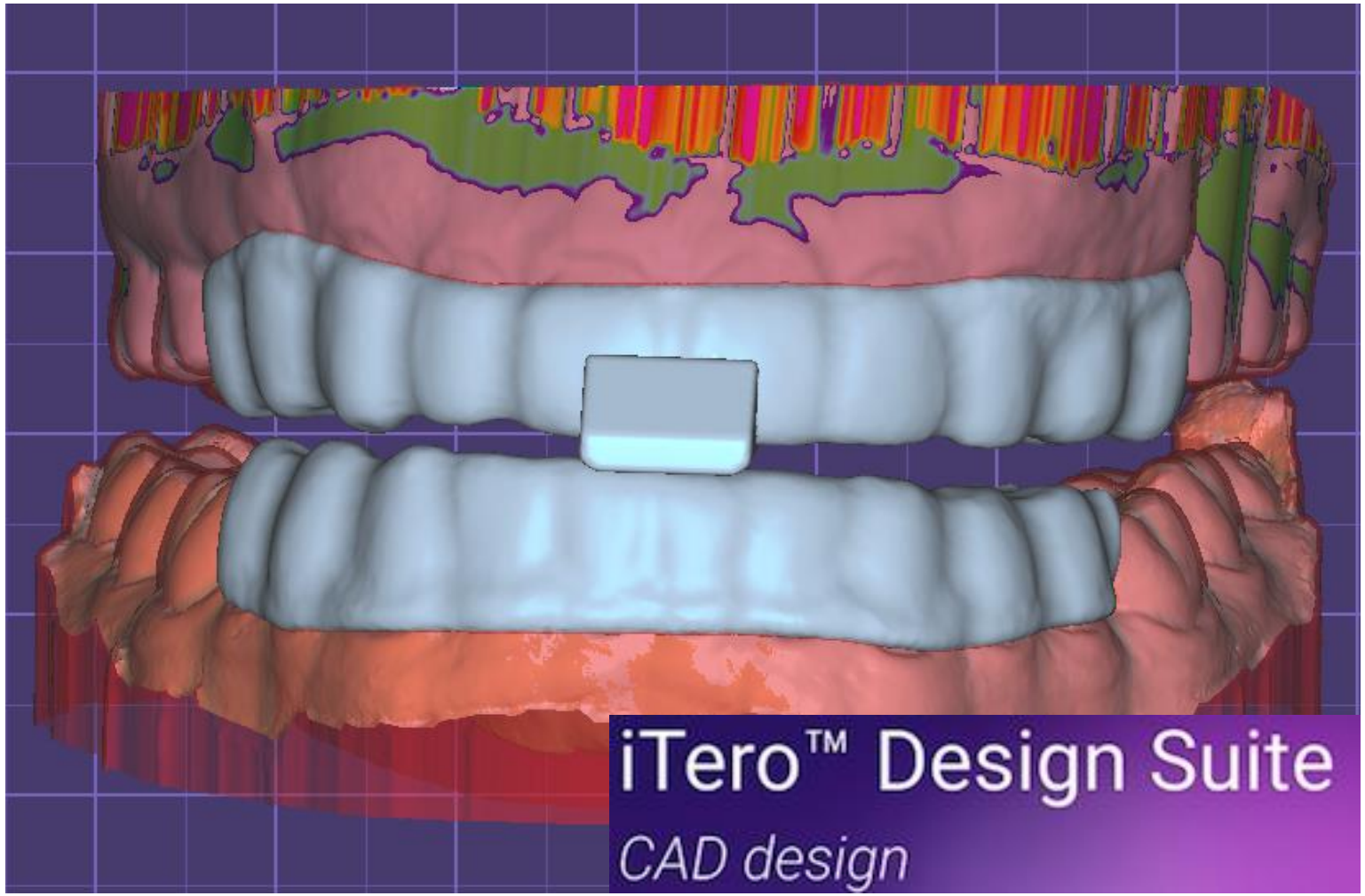
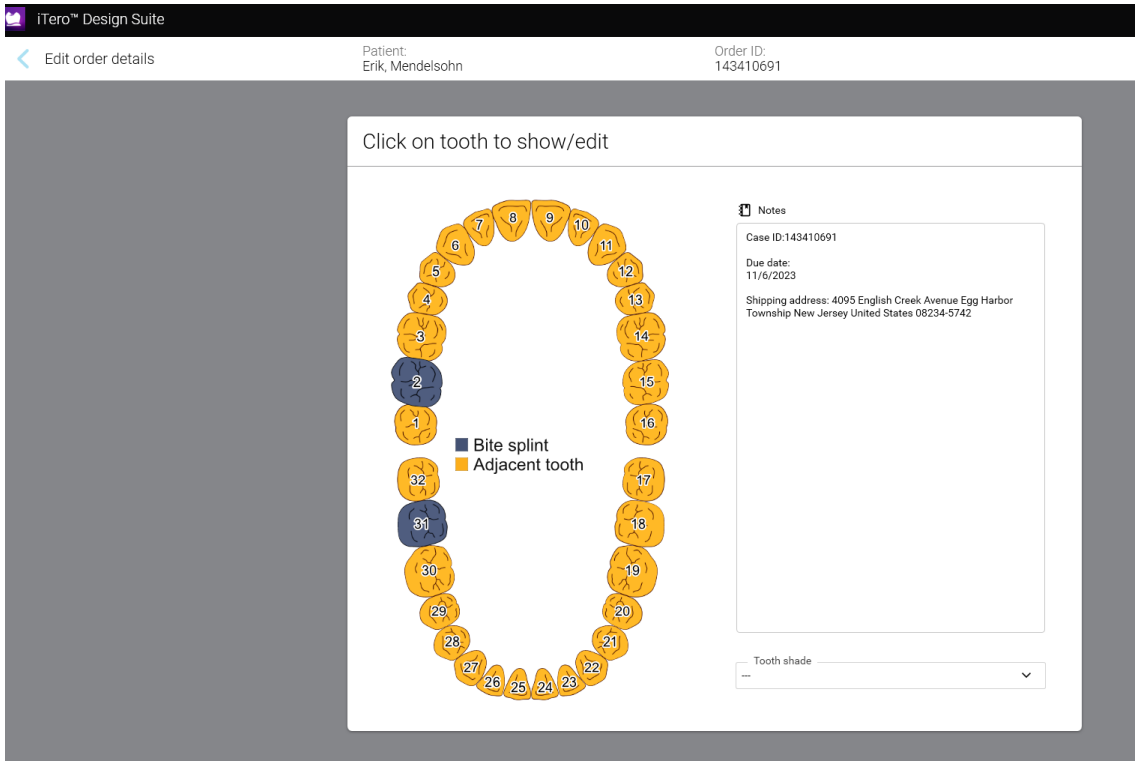
Designing a Dual Arch Anterior Deprogrammer

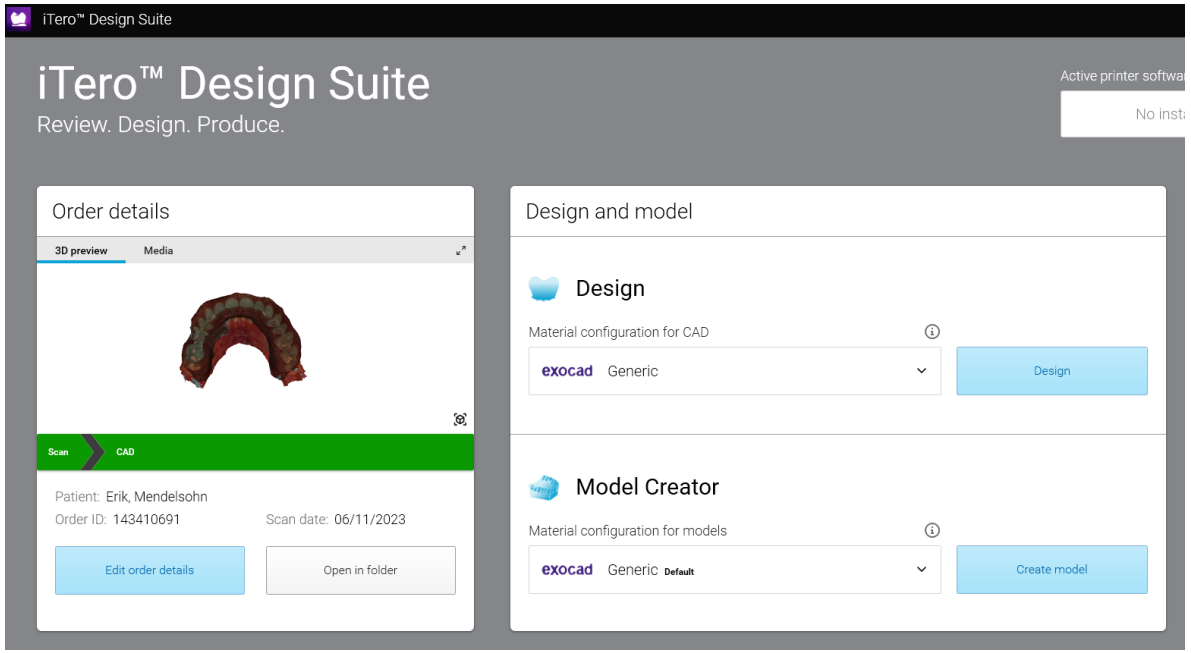


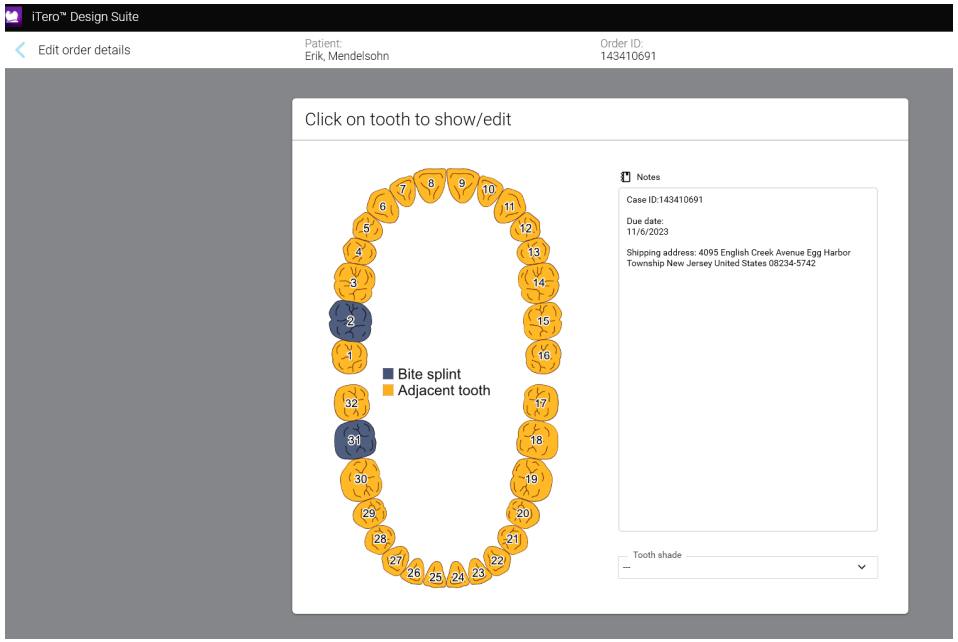
Anterior Deprogrammer & Lower Slider

1. Step 1. Set Work Order
2. Step 2 Segmentation: Skip
3. Step 3. Set Insertion Direction
4. Step 4. Articulator (optional).
5. Step 5. Mark Splint Margins
6. Step 6. Freeform Waxup Model
7. Step 7. Freeform Bite Splint Top
8. Step 8. Save and Export Shells
9. Step 9. Add discluder in Meshmixer
10. Step 10. Export and Print

Step 1. Set Work Order>>Click Design to Open Design Suite.






iTero™ Design Suite
Edit order details
Patient:
Erik, Mendelsohn
Order ID:
143410691
Click on tooth to show/edit
Bite splint
Adjacent tooth
Notes
Case ID:143410691
Due date:
11/6/2023
Shipping address: 4095 English Creek Avenue Egg Harbor Township New Jersey United States 08234-5742
Tooth shade
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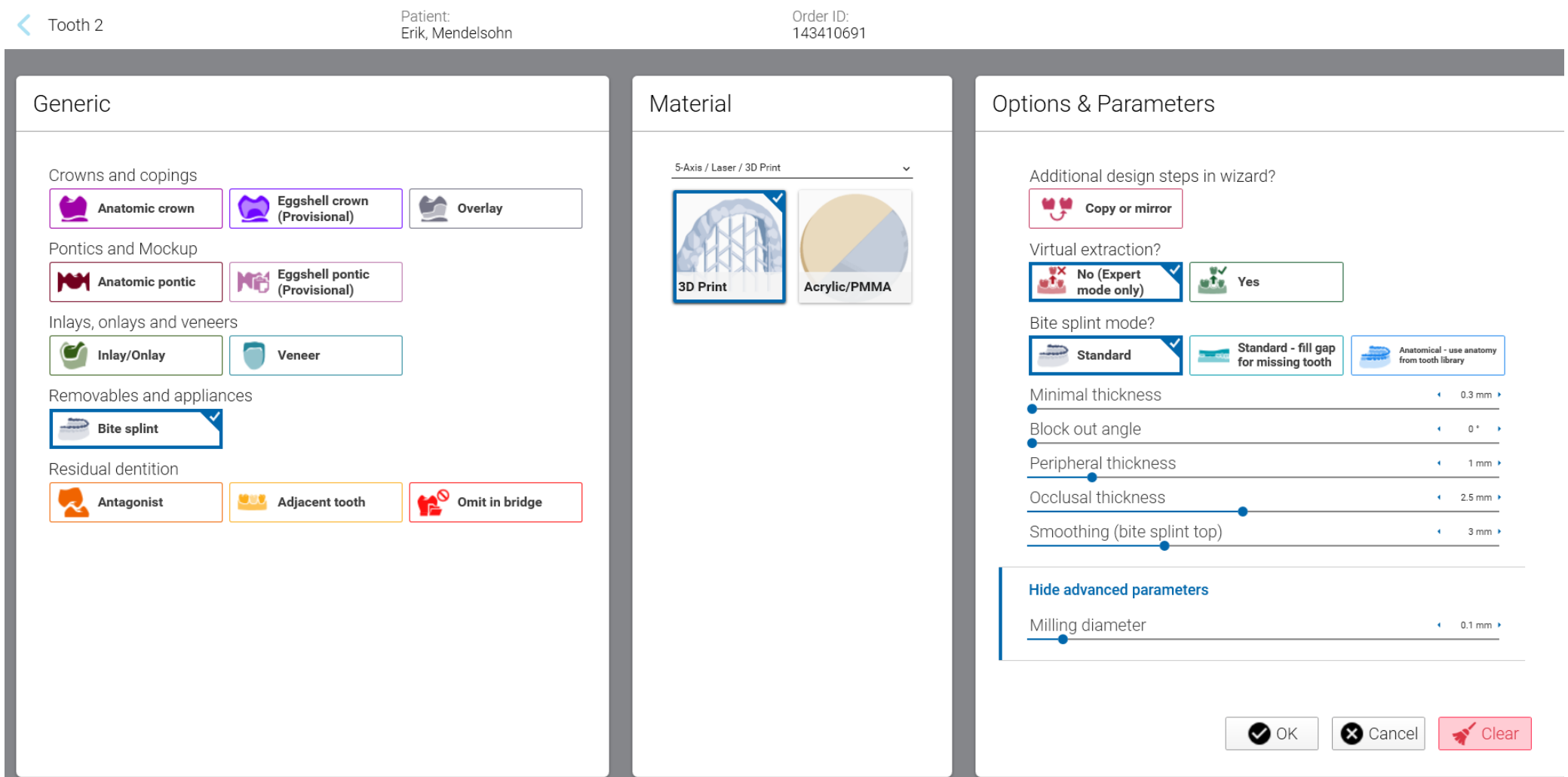
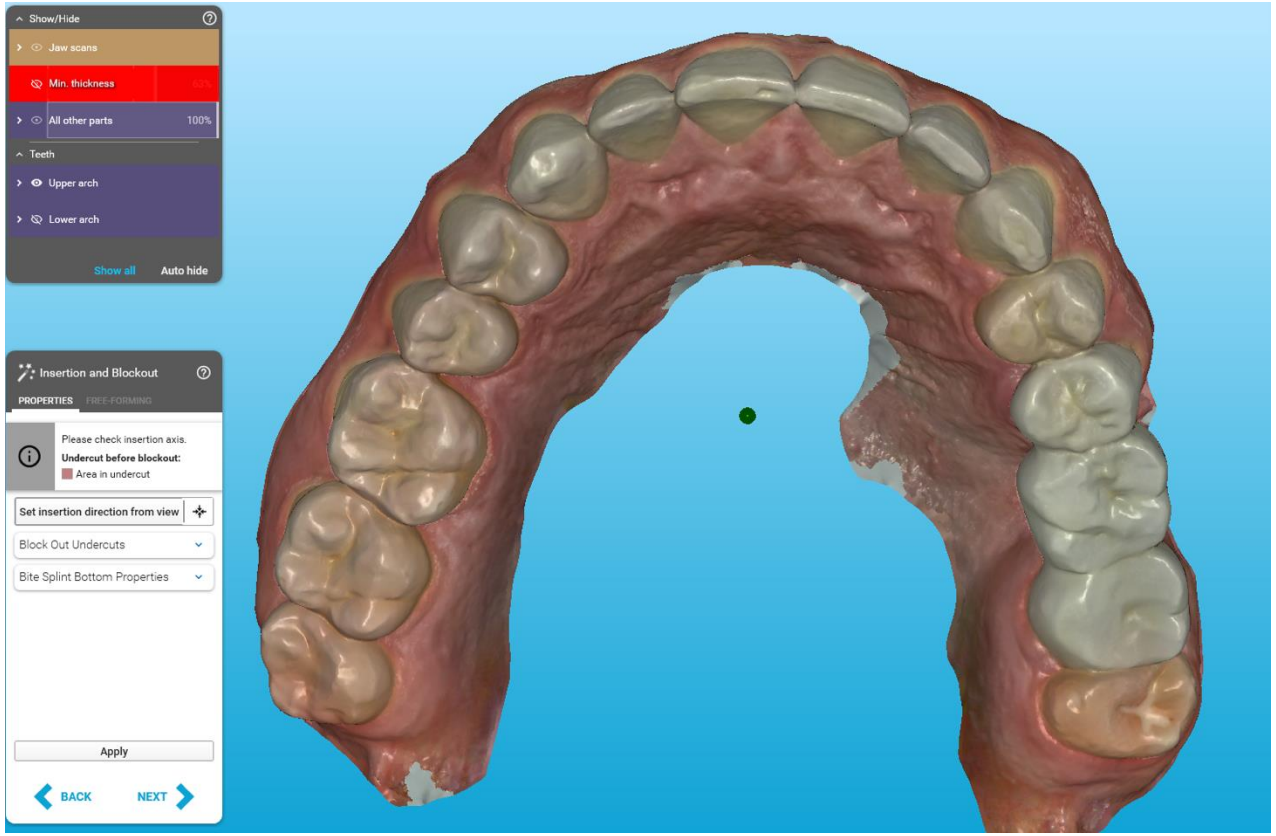
Options and parameters.

- Tip: Adjust these settings to get your ideal fits. If you want a more rigid splint increase the peripheral border to around 1.5mm.

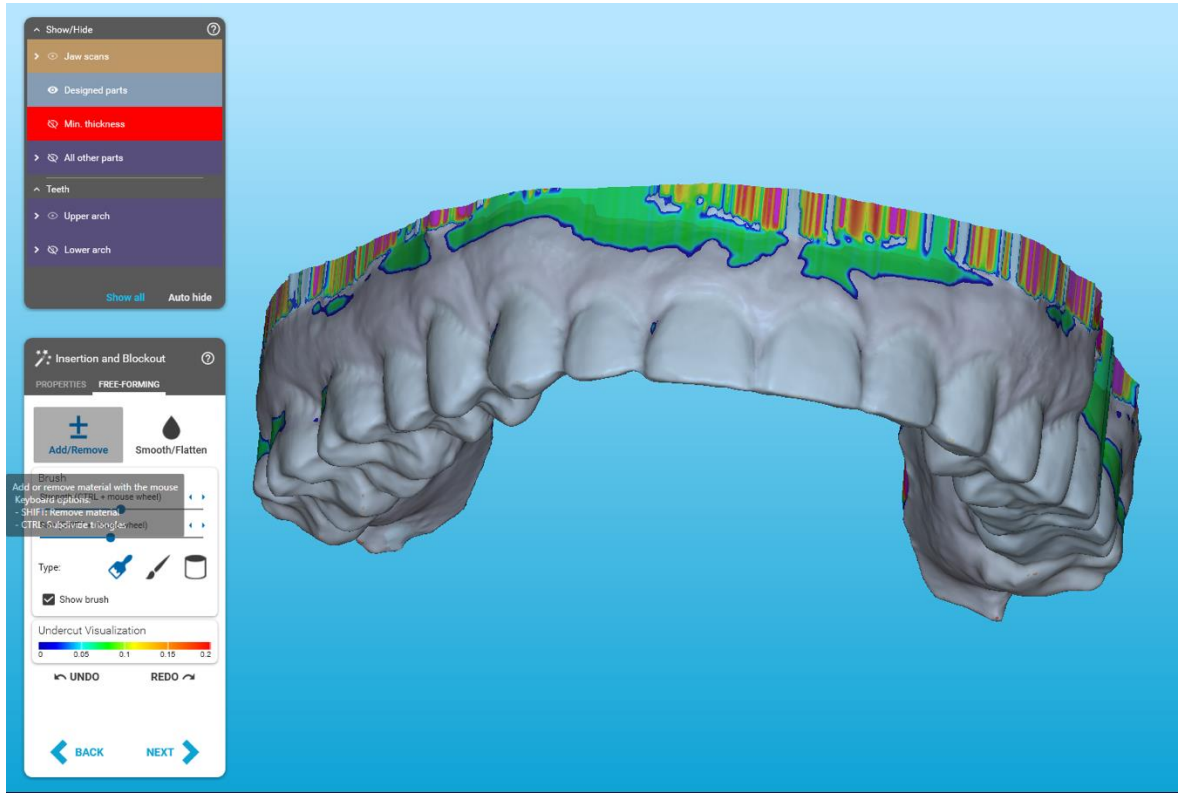


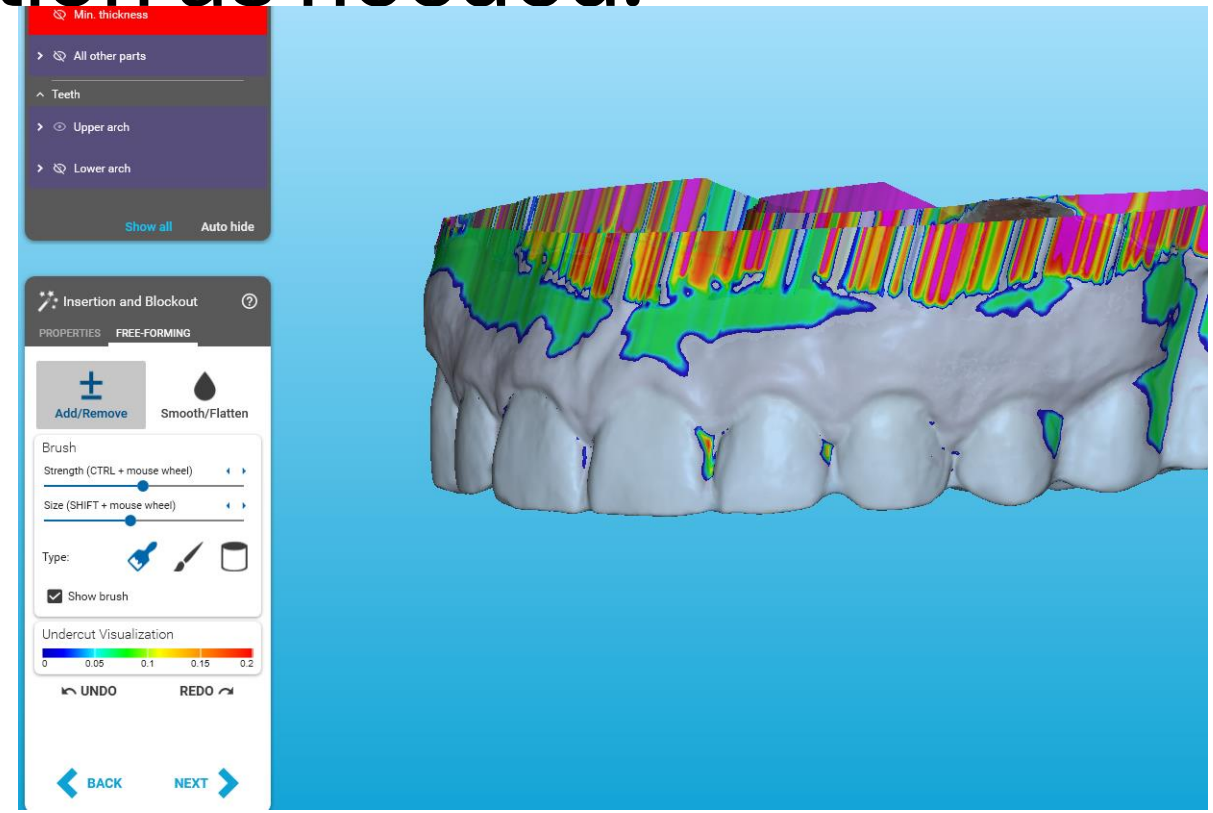
Step 2. Skip auto segmentation.

Step 3. Set insertion direction and hit apply to create blockout model.



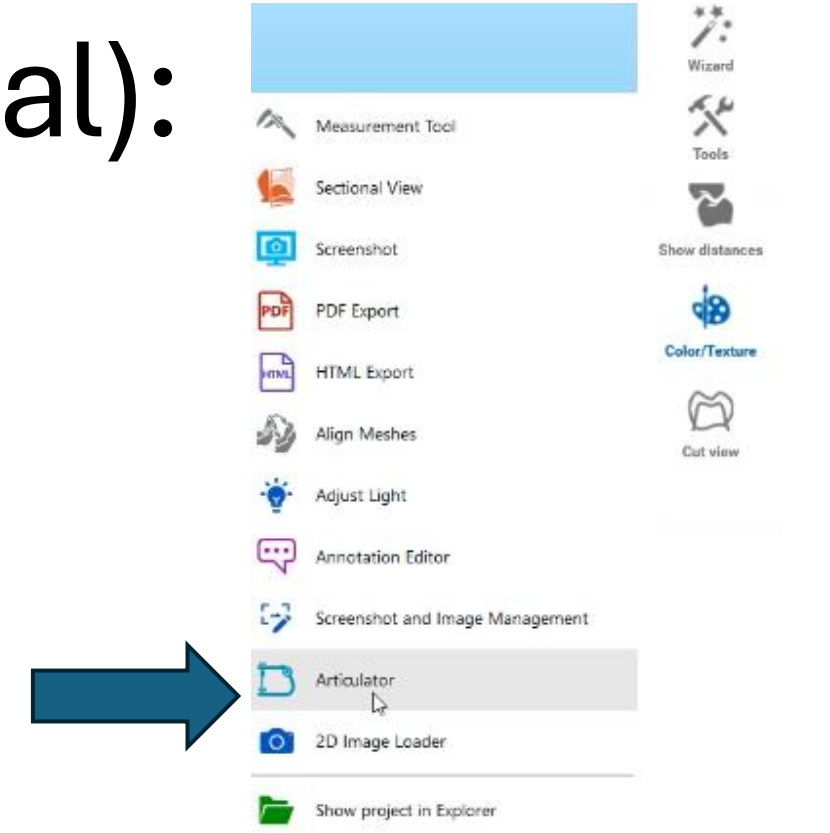
Develop a blockout model and proceed with freeform adjustments to the virtual wax blockout, modifying it to increase or reduce retention as needed.

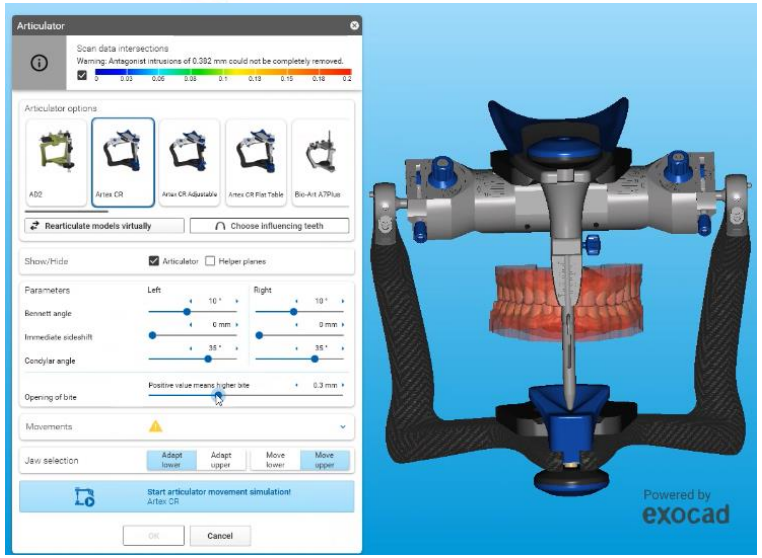




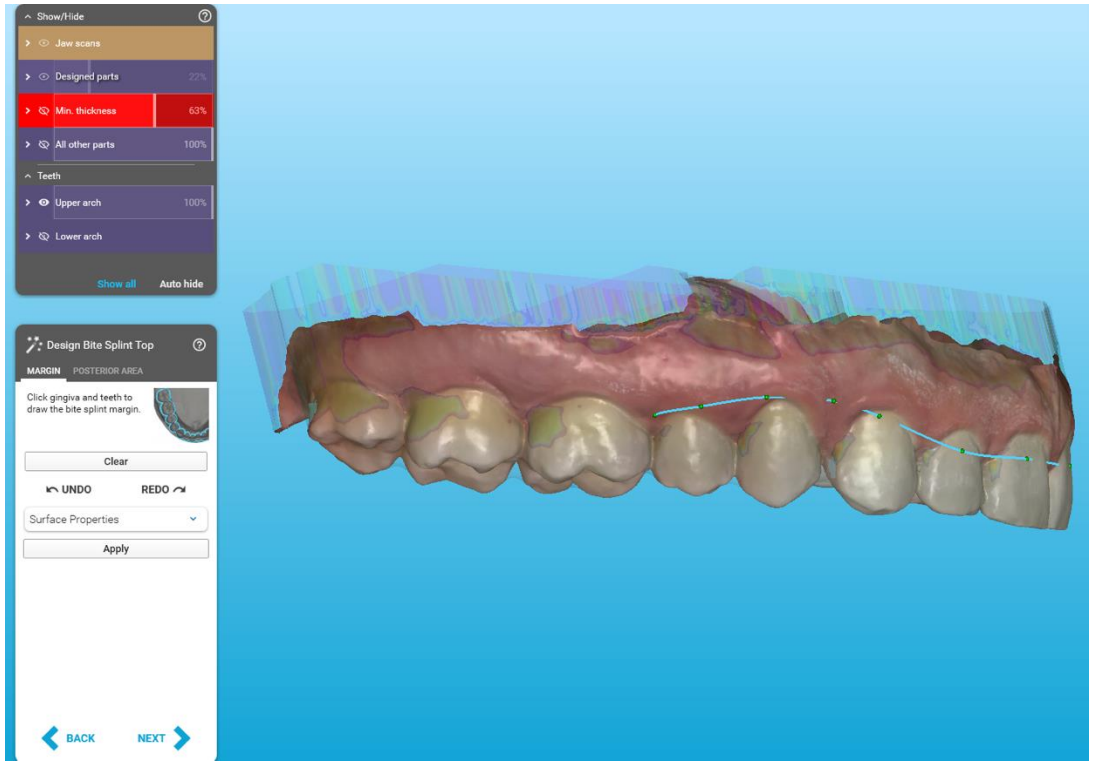
Step 4. Opening VDO (optional):

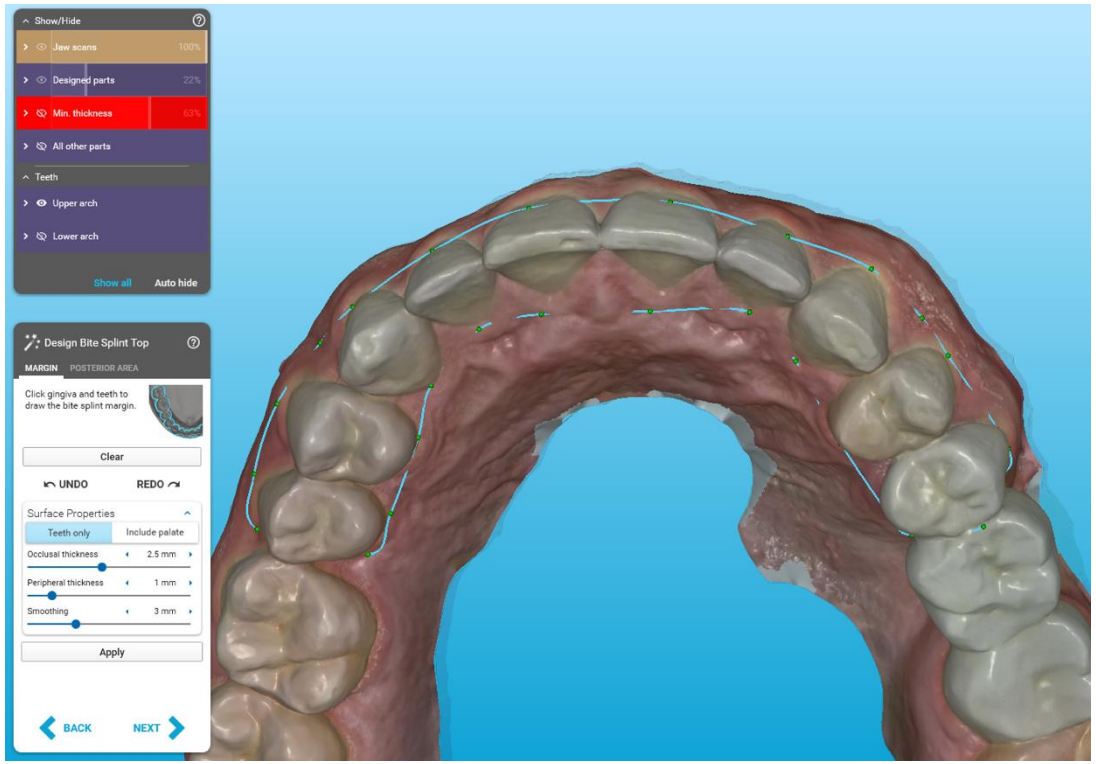
- Mount the models on the articulator
- Open to desired VDO (not necessary if you scanned at an optimal VDO).
- Tip: The Articulator is not accessible until the blockout models are created.



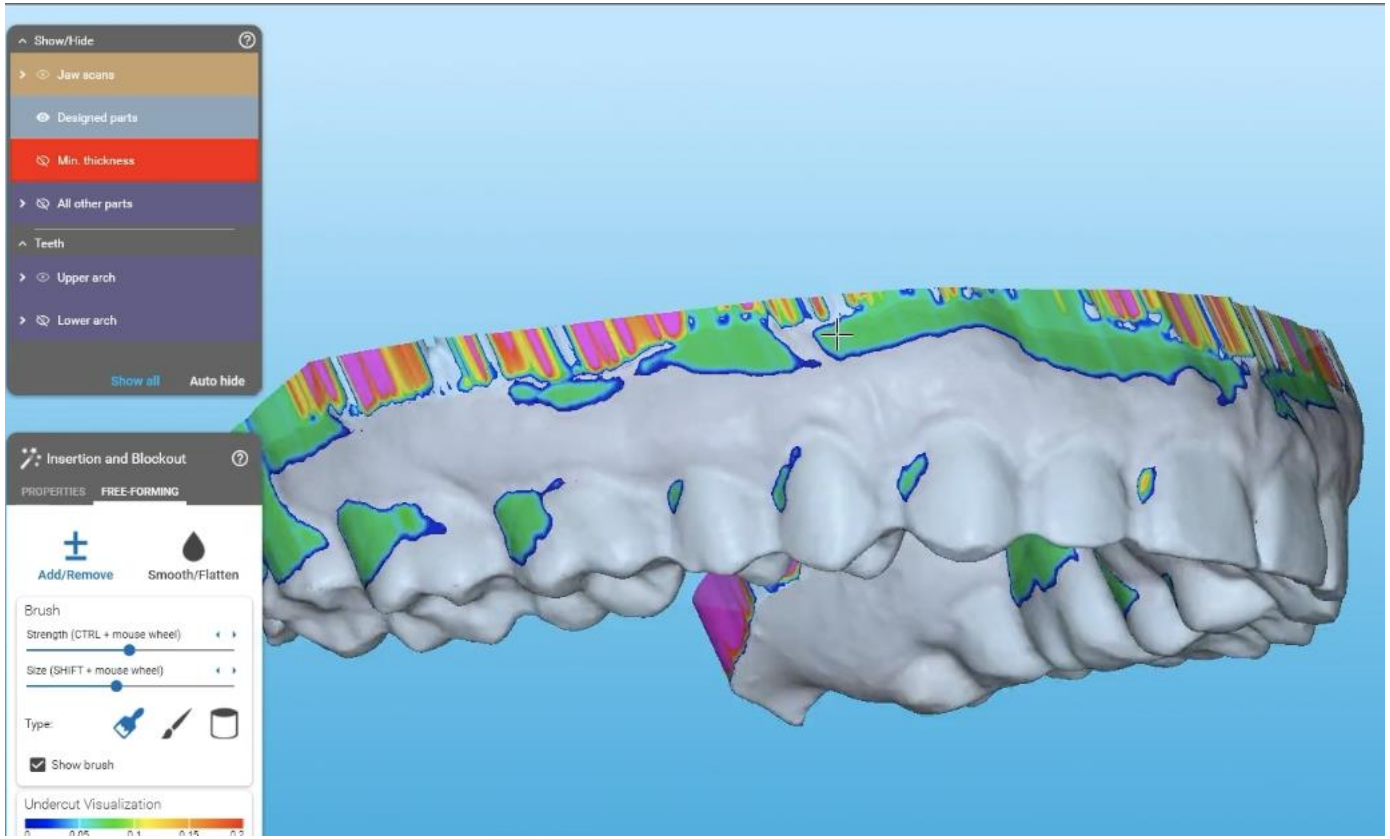


5. Mark Splint Margins.



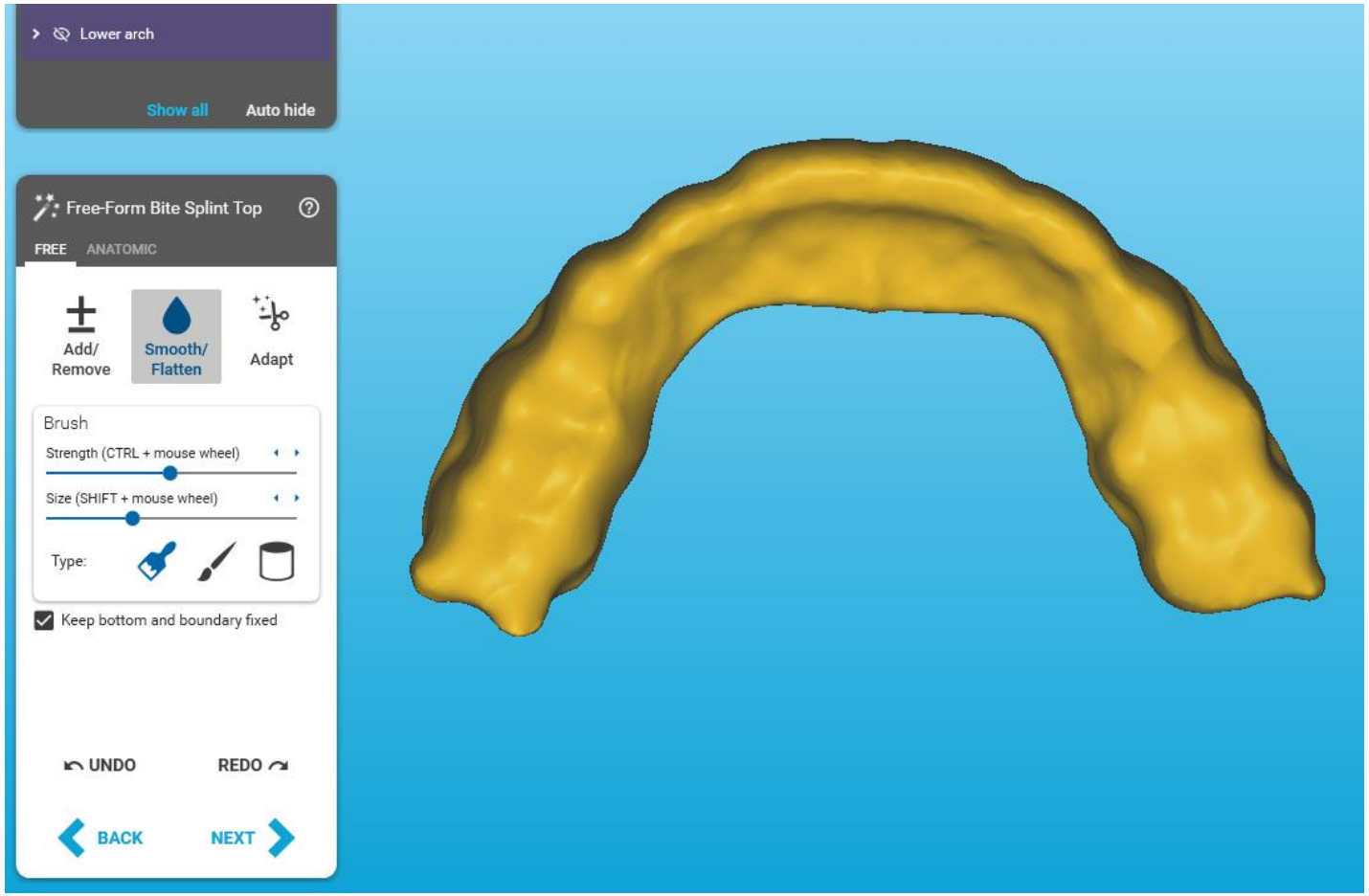


Step 6. Freeform Blockout Model



Tip: Utilizing the freeform tools enables you to add or remove virtual blackout material. Removing material enhances retention, while adding blackout material reduces retention.
Use the add/remove tool to make adjustments. Holding the Shift key removes blackout material.

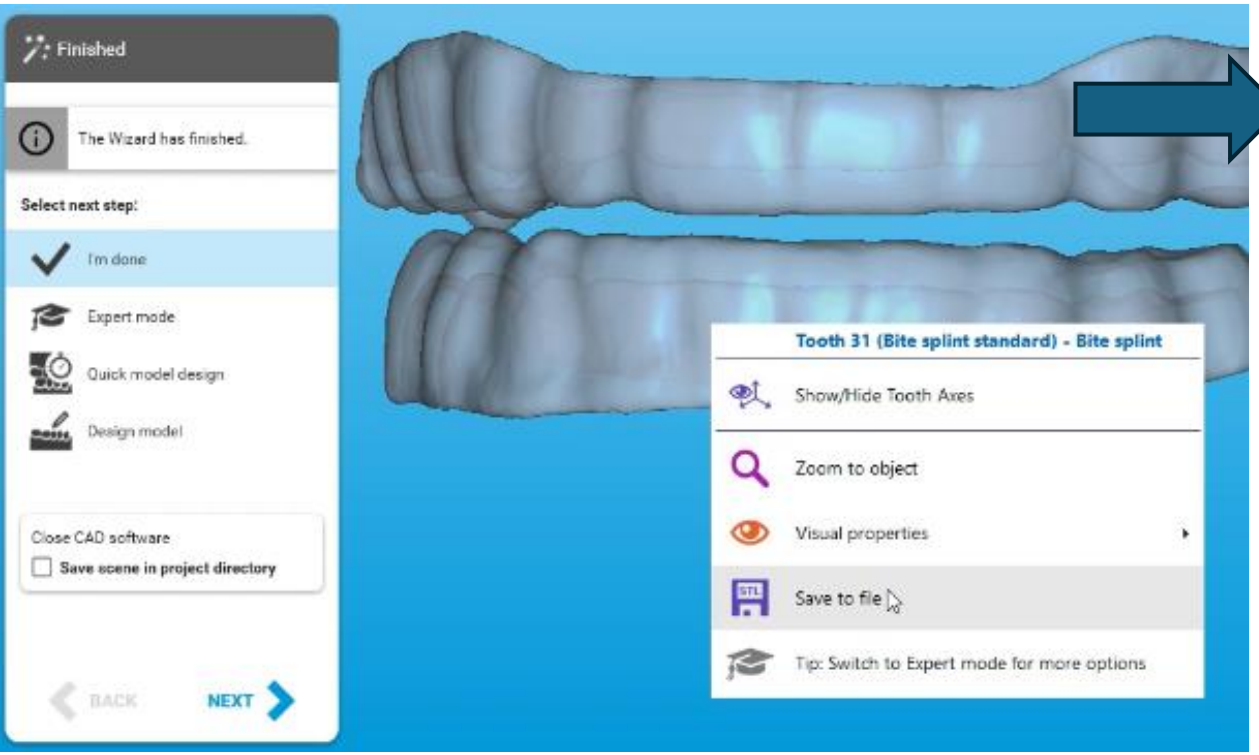
Step 7. Freeforming Bite Splint Top

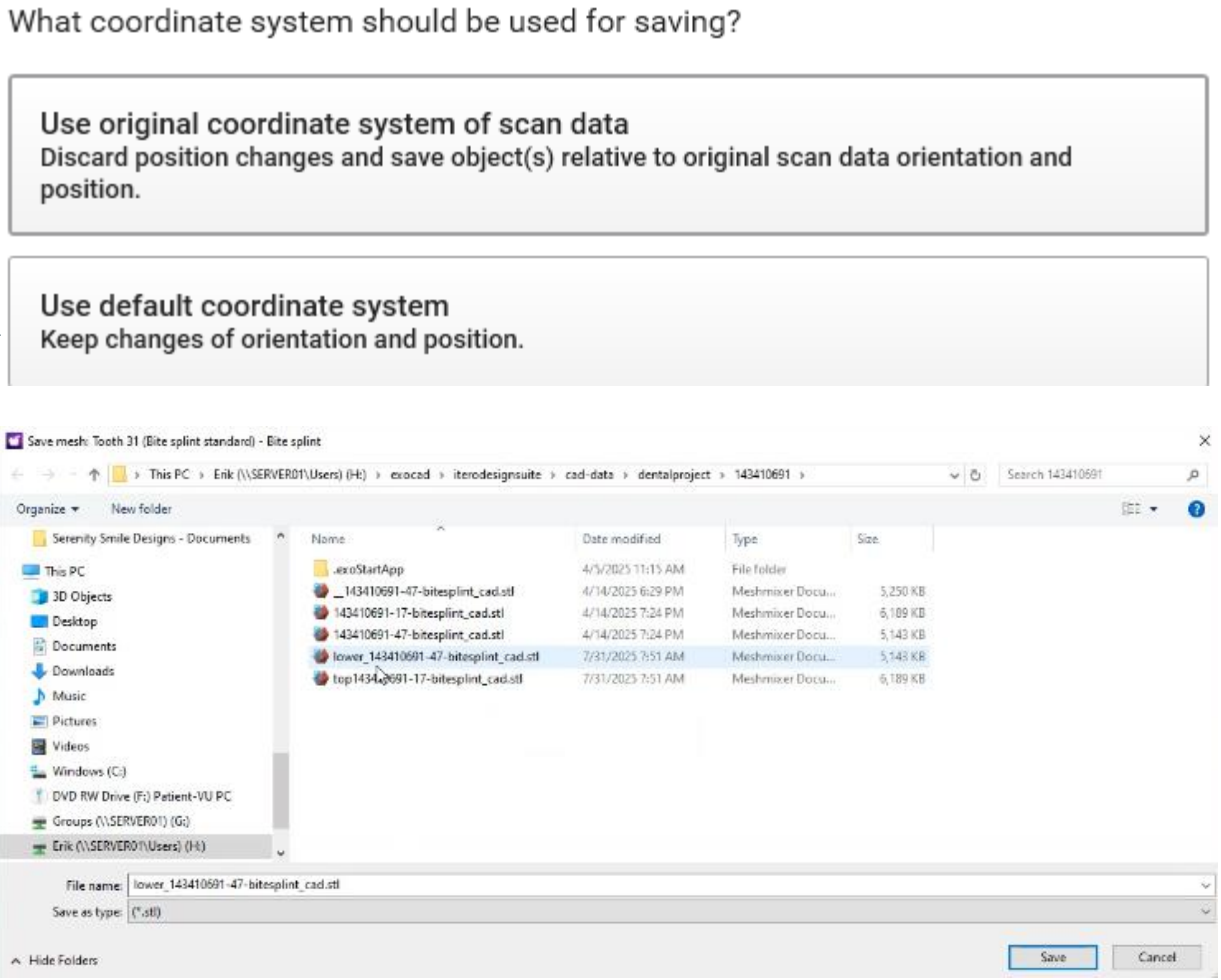


- Flatten the posterior cusp tips to reduce the likelihood of posterior contacts. This adjustment aids in preventing excessive opening of the vertical dimension of occlusion (VDO).
- Use the Cylinder tool with a large size and moderate strength to flatten.

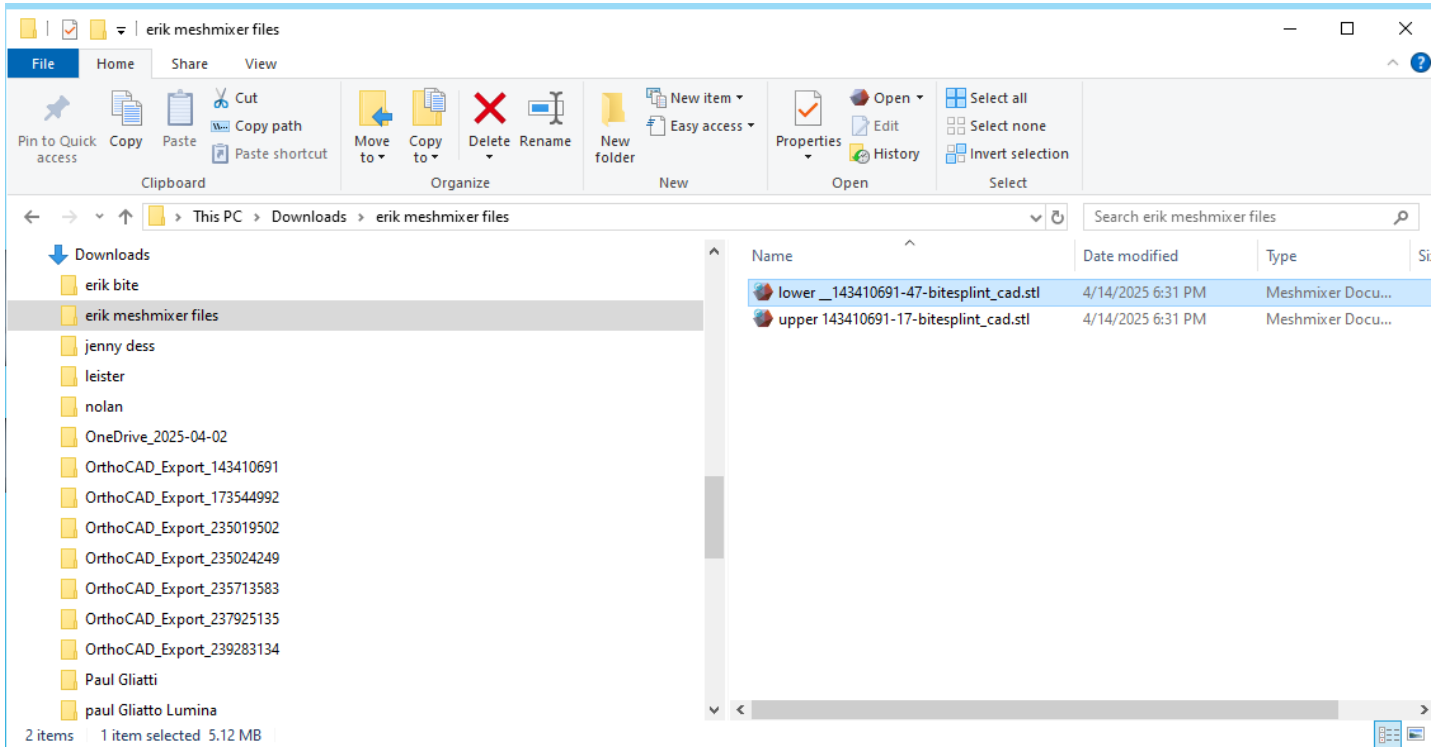
Step 8. Saving the Shells.

Right Click each shell >>Save to file>>Select Plain STL>>Use Default Coordinate System.

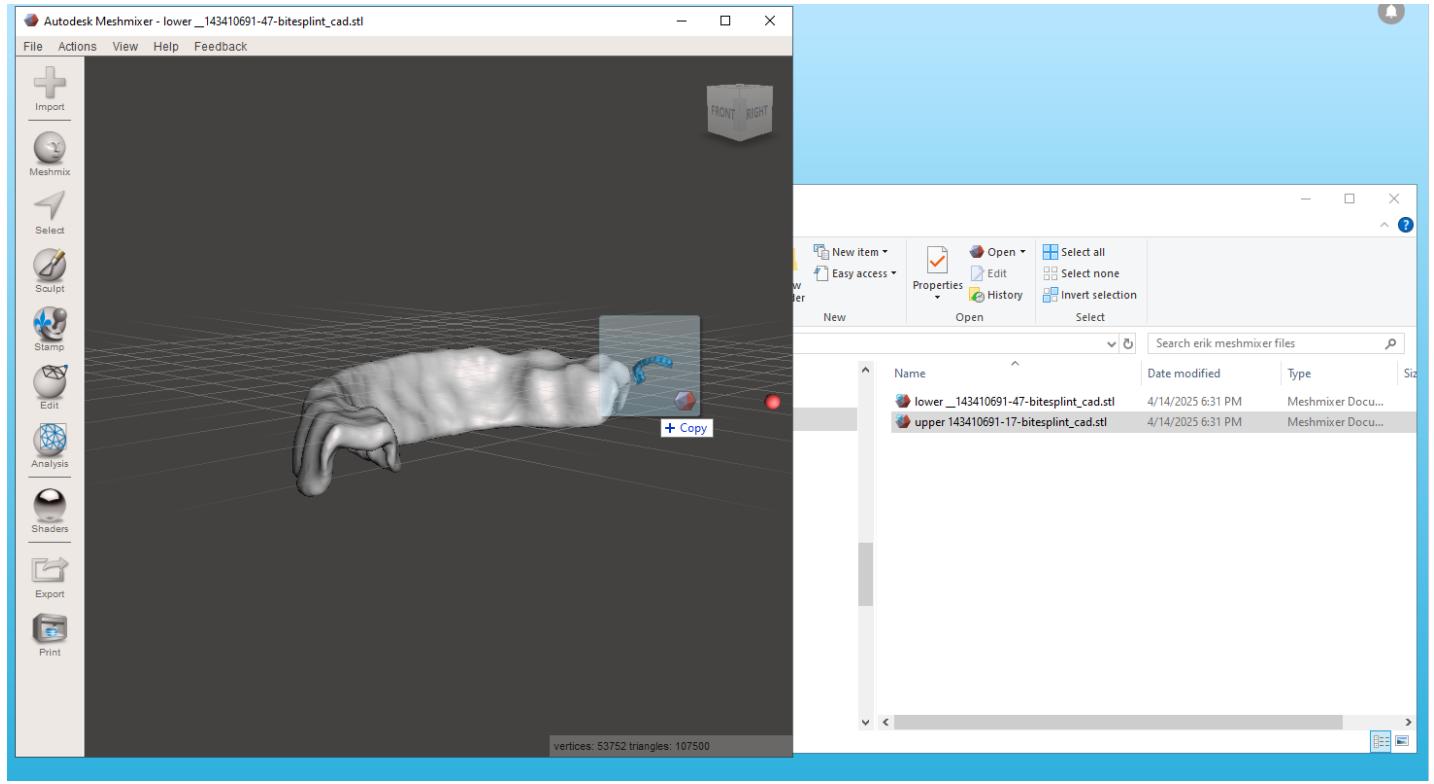




Step 9. Use Meshmixer to add the deprogramming element.



Meshmixer, a complimentary program developed by Autodesk, performs effectively on PCs but is less optimized for use on Mac devices since it was discontinued but can still be downloaded.


Autodesk Meshmixer - lower __143410691-47-bitesplint_cad.stl
File
Actions
View
Help
Feedback
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
FRONT
RIGHT
Copy
vertices: 53752 triangles: 107500
New item
Easy access
Properties
Open
Edit
History
Select all
Select none
Invert selection
New
Open
Select
Search erik meshmixer files
Name
Date modified
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4/14/2025 6:31 PM
Meshmixer Docu...
upper 143410691-17-bitesplint_cad.stl
4/14/2025 6:31 PM
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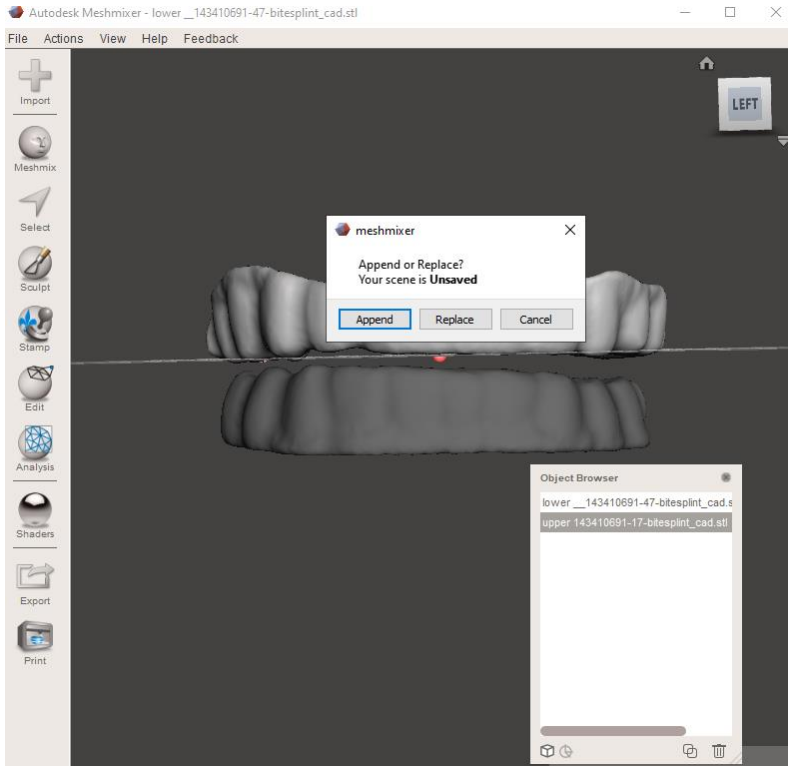
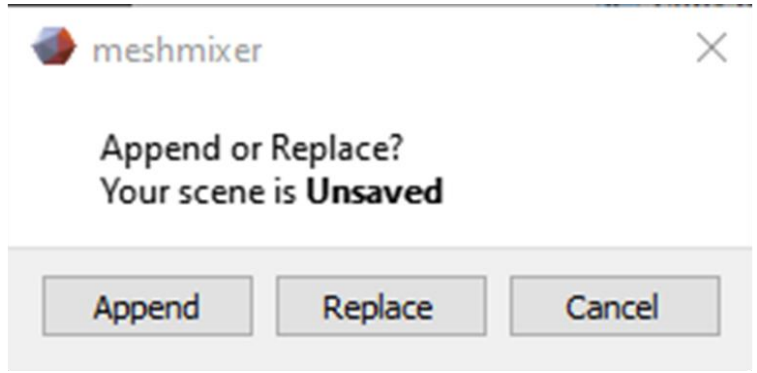
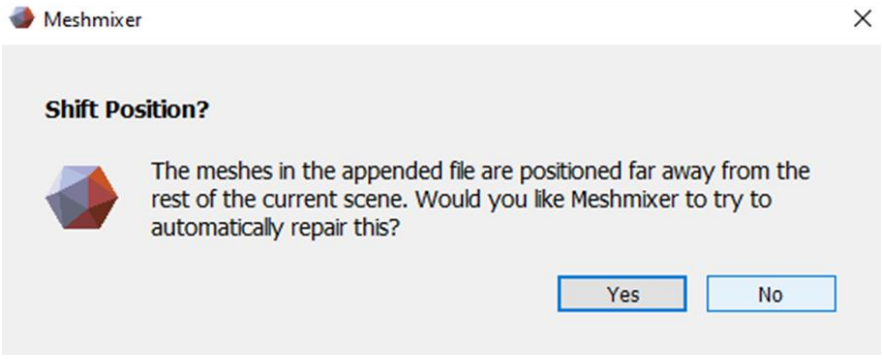
Append the arch and **do not repair**.

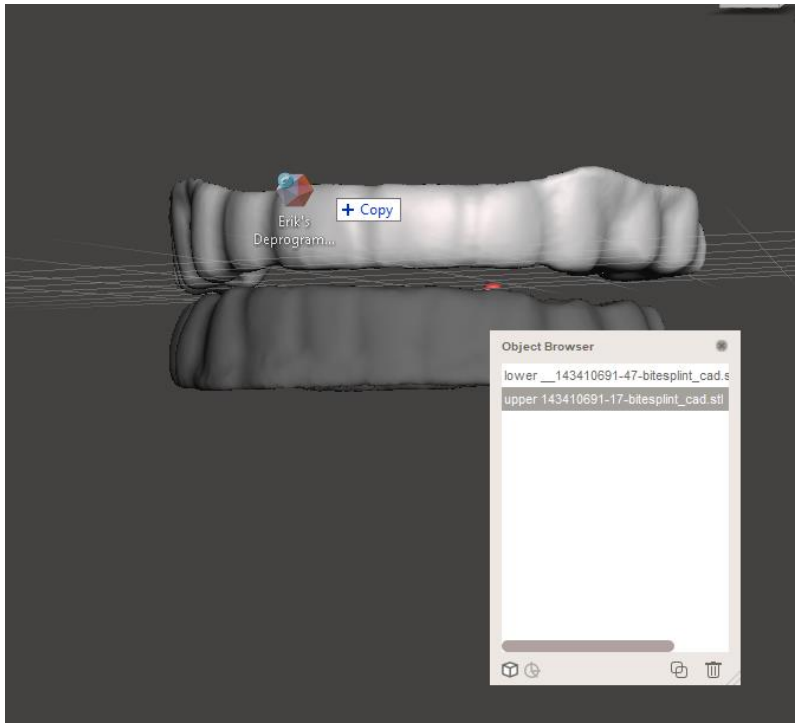


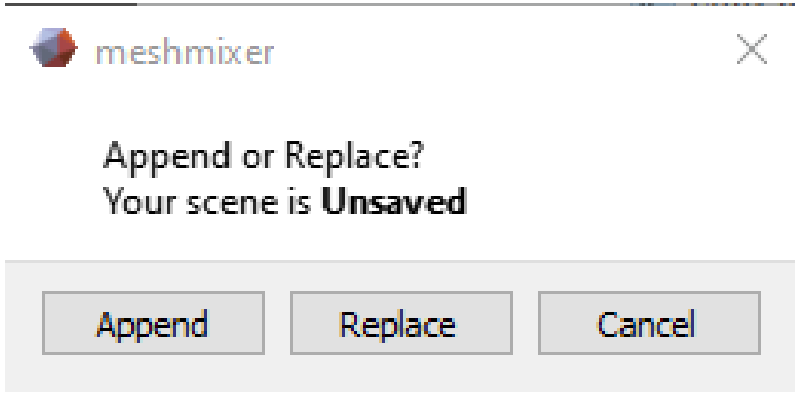


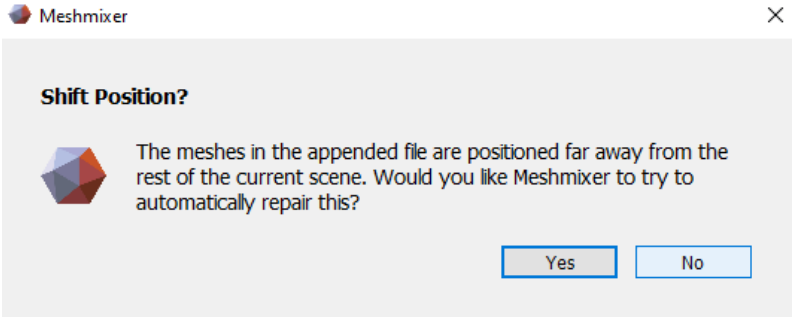


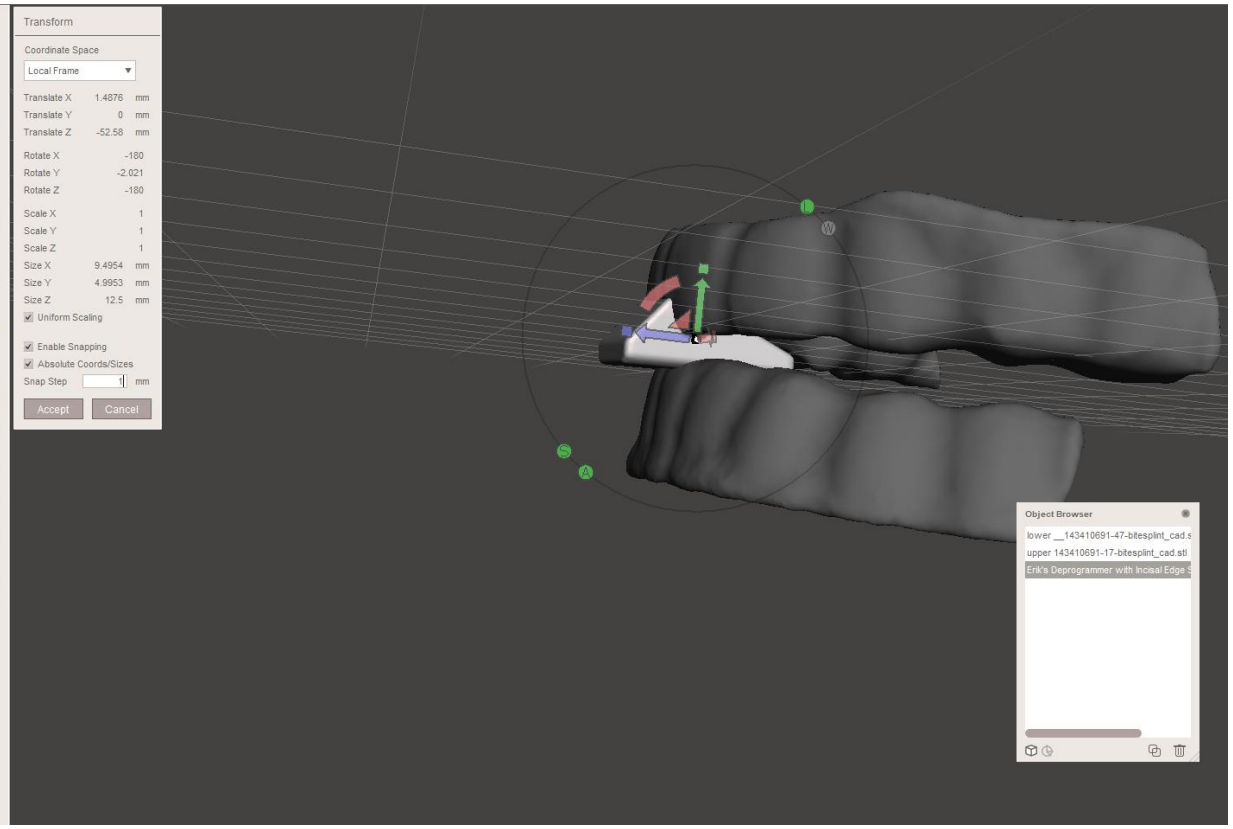
If you exported the files using the default orientation, they will import into Meshmixer maintaining the same orientation as the bite position you recorded.

Drag and drop the discluder Click Append>> **Do not repair position!**





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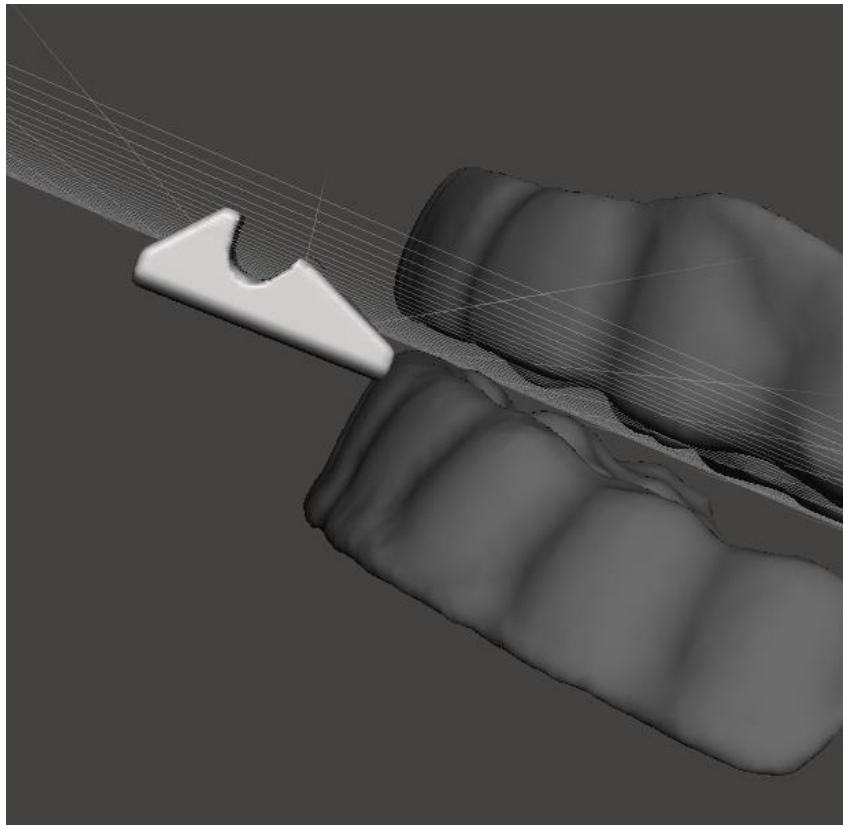
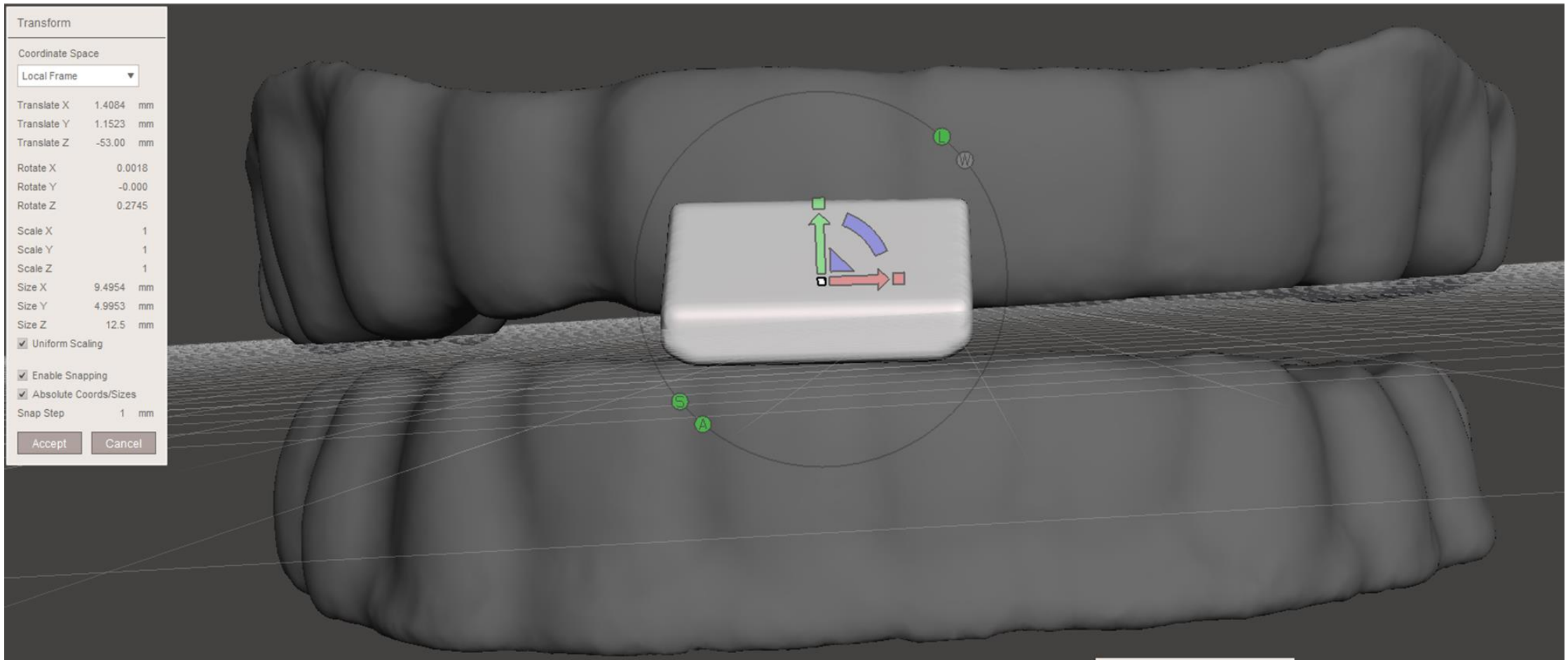
Coordinate Space
Local Frame
Translate X 1.4876 mm
Translate Y 0 mm
Translate Z -52.58 mm
Rotate X -180
Rotate Y -2.021
Rotate Z -180
Scale X 1
Scale Y 1
Scale Z 1
Size X 9.4954 mm
Size Y 4.9953 mm
Size Z 12.5 mm
Uniform Scaling
Enable Snapping
Absolute Coords/Sizes
Snap Step 1 mm
Accept
Cancel
Object Browser
lower __143410691-47-bitesplint_cad.s
upper 143410691-17-bitesplint_cad.stl
Erik's Deprogrammer with Incisal Edge S

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Rotate Y -0.000
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Scale Y 1
Scale Z 1
Size X 9.4954 mm
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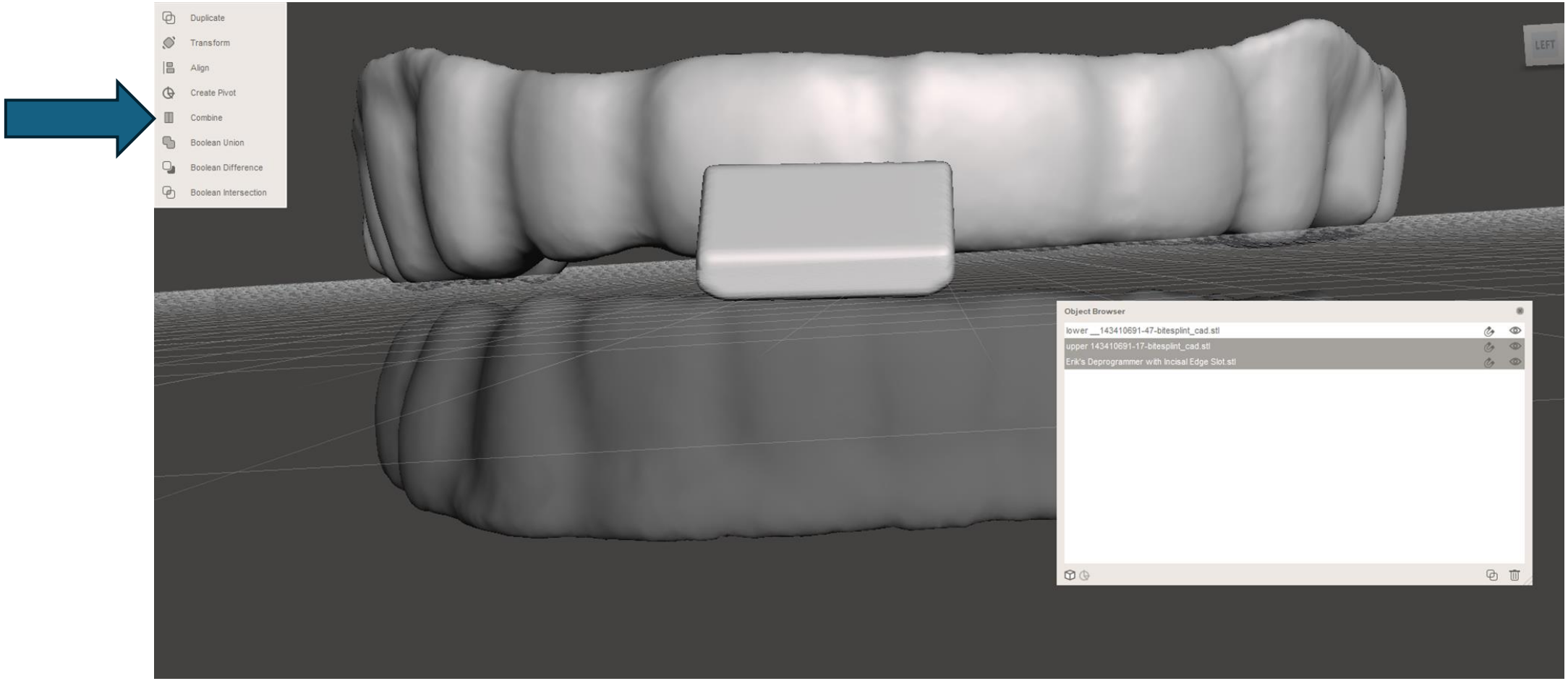
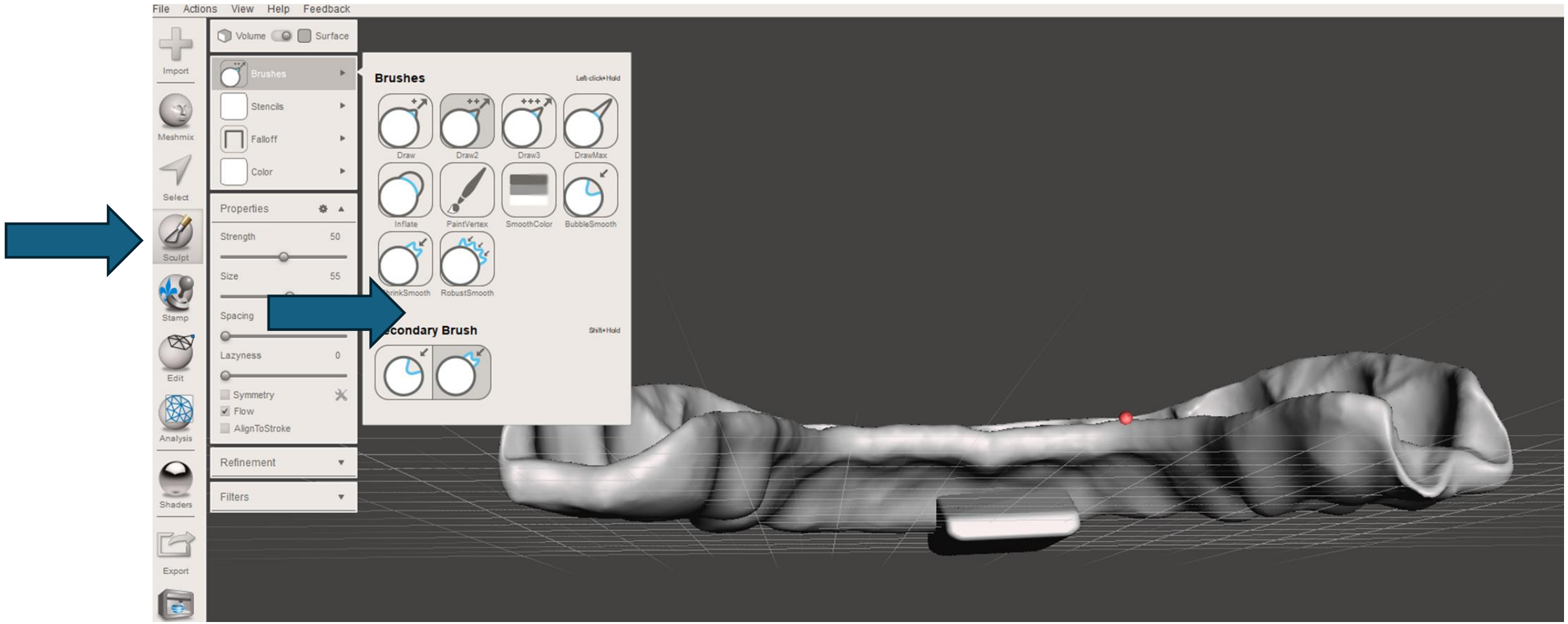


Selecting both the discluder and the splint shell simultaneously will trigger a popup that allows you to combine them.


File
Actions
View
Help
Feedback
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Volume
Surface
Brushes
Stencils
Falloff
Color
Properties
Strength
50
Size
55
Spacing
Lazyness
0
Symmetry
Flow
AlignToStroke
Refinement
Filters
Brushes
Left-click+Hold
Draw
Draw2
Draw3
DrawMax
Inflate
PaintVertex
SmoothColor
BubbleSmooth
RobustSmooth
Shift+Hold

In the View Objects browser, select both the shell and the deprogrammer by holding the Shift key. This action will trigger a prompt to merge the shells. After combining them, proceed to export the file.