Design

ME-UG-702A
Revision 3 (2026.07)
SW version 2.1.7

Table of contents

Medit Design

Workflow

Appendix

Symbols

No.	Symbol	Definition
1		Consult instructions for use on the website*
2		Consult instructions for use or consult electronic instruction for use
3		Caution
4		Warning
5		Prescription only (USA)
6		Date of manufacture
7		Manufacturer
8		Tips
9		Authorized representative in the European Community/European Union
10		Medical device
11		Serial number
12		This system complies with the regulatory requirements of Medical Device Regulation 2017/745 regarding medical device.
13		Authorized representative in Switzerland

14		Country of manufacture: Republic of Korea
15		Importer

**If a printed paper version of the user manual is required, it will be provided free of charge upon request to the manufacturer's contact information listed on the last page. The user manual in paper form will be supplied within a maximum of 7 days after receiving the user's request.*

Overview and General Information

Overview

Medit Design is a multifaceted app that can analyze, align, measure (including distance, area, length, and angle), and compare 3D data. It provides various tools such as “Boolean,” “Offset,” “Smooth Surface,” “Sculpting,” “Mirroring,” and many more to help you achieve your outcomes. Easy-to-follow explanations and guide messages accompany each step.

Product Name	CAD/CAM Software
Trade Name	Medit Design
Model Name	MA-ADS
UDI DI	(01)08800026700159
UDI PI	(10)2.1.7
Basic UDI-DI	88000267MA-ADS8Z

Intended Use

Medit Design is a software intended to help analyze 3D data, including scan data, perform additional tasks, and compare multiple datasets either individually or as a group. With an intuitive user interface and various tools, beginners and advanced users can quickly and efficiently perform measurements (including area, length, and angle), transformations, and data analysis tasks. The app can also function as a supplementary CAD design tool for creating prostheses.

The user assumes all responsibility and risk when working with Medit Design. Be advised that the results generated by the application may not be accurate or reliable and should only be used for communication purposes. Medit assumes no responsibility for any misunderstandings or miscommunications arising during or after the interpretation of the results. Medit is not liable for decisions or actions taken based on the information provided by the software, nor for any consequential, special, or similar damages.

The program must not be used for purposes other than those described in its intended use.

Indications for Use

Medit Design is to be used for completing various tasks such as transforming, analyzing, aligning, comparing, and measuring 3D data. With the tools available, it can also serve as a supplementary CAD program for prosthesis design work.

Contraindications

There are no specific contraindications.

Intended User Profile

The software is designed for use by dental professionals who have a basic understanding of dental procedures and terminology to operate it effectively and interpret its outputs. This includes but is not limited to dentists, dental hygienists, and dental technicians

Intended Patient Population

The intended patient population includes patients who require dental analysis, measurement, comparison, or prosthesis design support based on 3D dental data.

Patient Safety Advisory

If the user inaccurately designs the 3D data, the resulting treatment plan may lead to unnecessary procedures or unforeseen outcomes. Furthermore, the fabricated prosthetic may not properly fit the patient's mouth or could result in functional complications.

However, all decisions must be made by a skilled and experienced dental professional who reviews the software's data interpretation and the treatment decision-making process. In the context of prosthetic design, there are multiple opportunities at each stage of the treatment to correct errors before serious adverse effects arise. These stages should be closely monitored by a skilled medical professional using the software.

The final design is always reviewed and adjusted by a qualified clinician before being applied to the patient, thus lowering the actual clinical risk.

Security Risk Management and Error Handling

After the issue has been improved, if it is necessary to update the program, such as releasing a new installation file or applying some patch files, it is officially distributed through the head office sales/SE personnel, along with the application guide, to the person in charge of the corporation or the issue site.

Responses to security issues may be further announced on the website if necessary.

During the issue handling and recovery process, temporary operational restrictions may occur to ensure system stability and data integrity:

- Patient data may be temporarily inaccessible until the recovery process is completed.
- Clinical workflows may be interrupted; normal operations will resume once administrative actions have been completed. Patient data will not be automatically deleted during this process.
- A warning message will be displayed, and additional data entry will be restricted until the issue is resolved.
- User sessions may be automatically logged out to prevent unauthorized access.

Security Response Procedure

1. Reporting security issues
2. Share initial analysis results and progress
3. Issue delivery
4. Issue response plan / delivery
5. Issue response plan / share results

System Requirements

Windows

CPU	Intel Core i5 2.6 GHz or higher
RAM	16 GB or higher
Graphics Card	NVIDIA GeForce GT 1060(2 GB) or higher
OS	Windows 10 64-bit, Windows 11 64-bit

macOS

CPU	8-core or higher
RAM	16 GB or higher
Chip	M1/M2 or higher
OS	Sonoma 14 or later

Network Requirements

1. Network Type: wired LAN or Wi-Fi (WPA2 or higher)
2. Bandwidth: minimum 100 Mbps (1Gbps recommended)
3. Protocol: IPv4
4. Port: TCP 443
5. Latency: average below 50ms

Security Requirements

1. Authentication: Password must be 8-16 characters long, including a combination of at least three of the following: letters, numbers, and special characters. Passwords are accepted in English only.
2. Encryption: TLS 1.2 or higher, HTTPS transmission
3. Antivirus & Patches: keep the operating system and antivirus up to date

This software continuously monitors for security events such as unauthorized access, tampering attempts, and data integrity errors.

Unauthorized Access Prevention:

Only individuals who have been granted Admin account privileges in Medit Link can access patient information and internal servers. During the registration process, each user is assigned account permissions to manage and prevent unauthorized access.

Cybersecurity Information

Medit Design does not access any patient PII/PHI from Medit Link. In this system, the communication and API exchanges use scan data files identified only by the patient's Case ID rather than any PII/PHI.

Preparations and Handling Before/During Device Use

- Product installation procedure: managed via the Cloud
- Mandatory user validation when creating Medit Link Account:
  - Create a user account in Medit Link
  - Send a user validation email
  - User confirms the validation
  - User logs in
- Troubleshooting guide: https://support.medit.com/hc/en-us

Required Facilities, Training, and User Qualifications

- Local network administrators/operators must have IT expertise (network, server, OS security configuration).
- Cloud services are managed on AWS by Medit administrators (AWS certified).

Information to Verify Proper Installation and Safe Operation

- Medit Design Updates
  - Update through the App Box in Medit Link. (The latest Medit Design installer file will be downloaded and installed.)
  - Run Medit Design to check the installed version.
  - If security-related updates are required, install the updated Medit Design version in the same way.
- Cloud Services: Managed and monitored through AWS Trusted Advisor with regular updates to apply required security measures.
- Data and Settings Backup/Restore
  - Data is managed locally via Medit Link and backed up to the Cloud.
  - Backups/restores can be performed by downloading data as needed.
  - Original IOSC files are retained for up to 6 months only.
  - User logs are retained for 3 months and can be manually deleted.
  - Stored data can be deleted from the Case Box in Medit Link, and the responsibility for such deletion rests with the user who performs it.
  - Cases can be transferred using the Case Converting Tool in the Settings menu of Medit Link.
  - When a user account is deleted, all user data (e.g., personal information, usage logs such as log-in and feature usage) and database data are permanently removed and cannot be restored.
- Integrity and Verification of Software Security Patches
  - The executable file of Medit Design is automatically digitally signed during installation and verification, so users do not need to take any additional action.

IT Network Precautions

Guidelines

Execution of the health software on an IT-network could result in previously unidentified risks to patients, users, or third parties. The responsible organization is advised to identify, analyze, evaluate, and control these risks.

Hazard Situations

- Always ensure that your system is protected by the latest version of antivirus software and an active firewall.

- Connecting the network to any device other than Medit Design may result in potential virus infections or data tampering. Verify that the network is operating under appropriate administrative control before proceeding.
- Even if automatic backup is configured, no backup will be performed if the software is not running or if the designated backup location is unavailable.

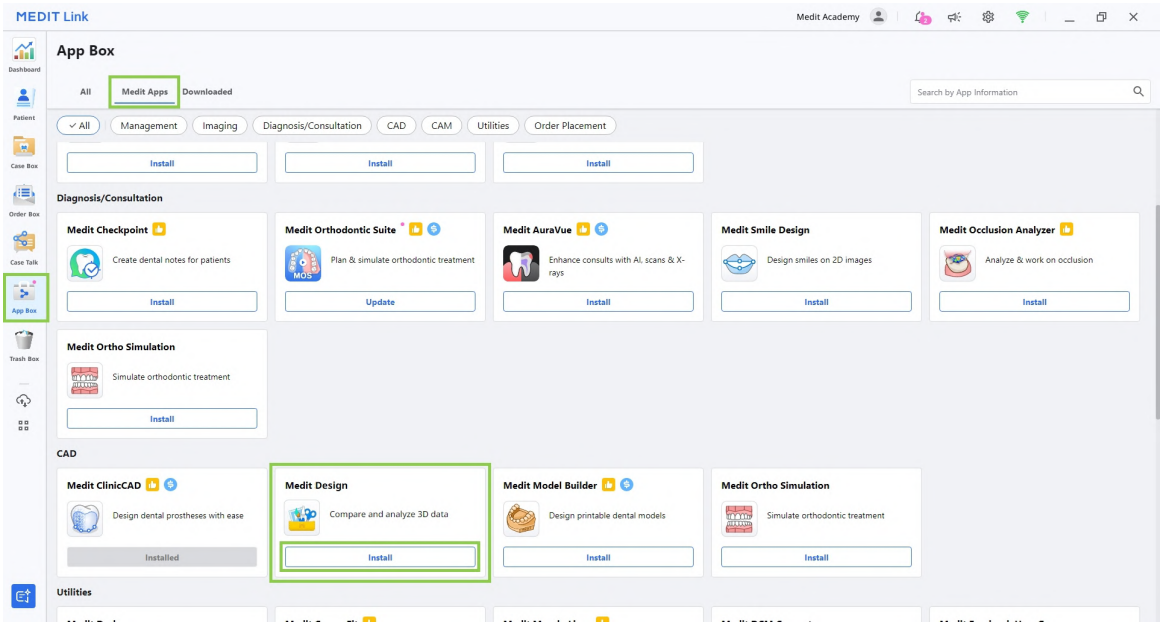
Subsequent changes to the IT network could introduce new risks and may require additional analysis. Such changes include:

1. Modifications to the IT network configuration.
2. Adding items (hardware, software platforms, or software applications) to the IT network.
3. Removing items from the IT network.
4. Updating software applications on the IT network.
5. Upgrading software platforms or software applications on the IT network

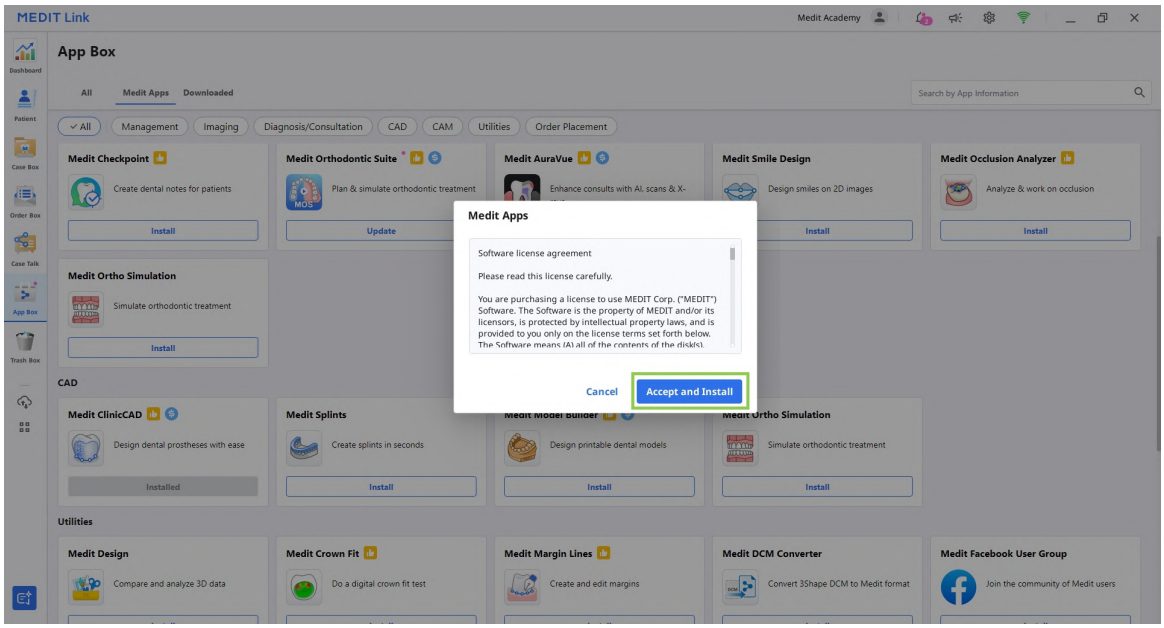
In the event of a cybersecurity incident, if the cybersecurity detection software identifies a threat, the user must report it to the manufacturer and to the competent authority of the Member State.

Installation Guide

1. Log in to your Medit Link account and go to the App Box in the left-hand menu.
2. In the Medit Apps tab, find the Medit Design app and click "Install."



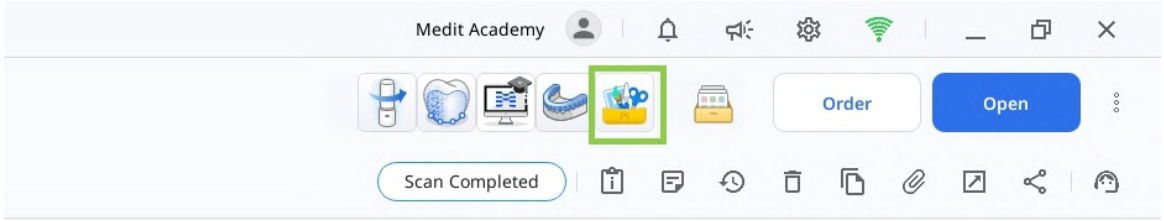
3. Read the Software License Agreement and confirm app installation by clicking "Accept and Install."



4. The app will be downloaded and installed automatically. It may take several minutes to finish the installation process.

> ⚠ **Caution**
>
> Do not turn off the PC or close Medit Link during the installation process.

5. Once the app is installed, you can run it from any case in Medit Link by clicking the app icon in the top right corner of the Case Detail window.



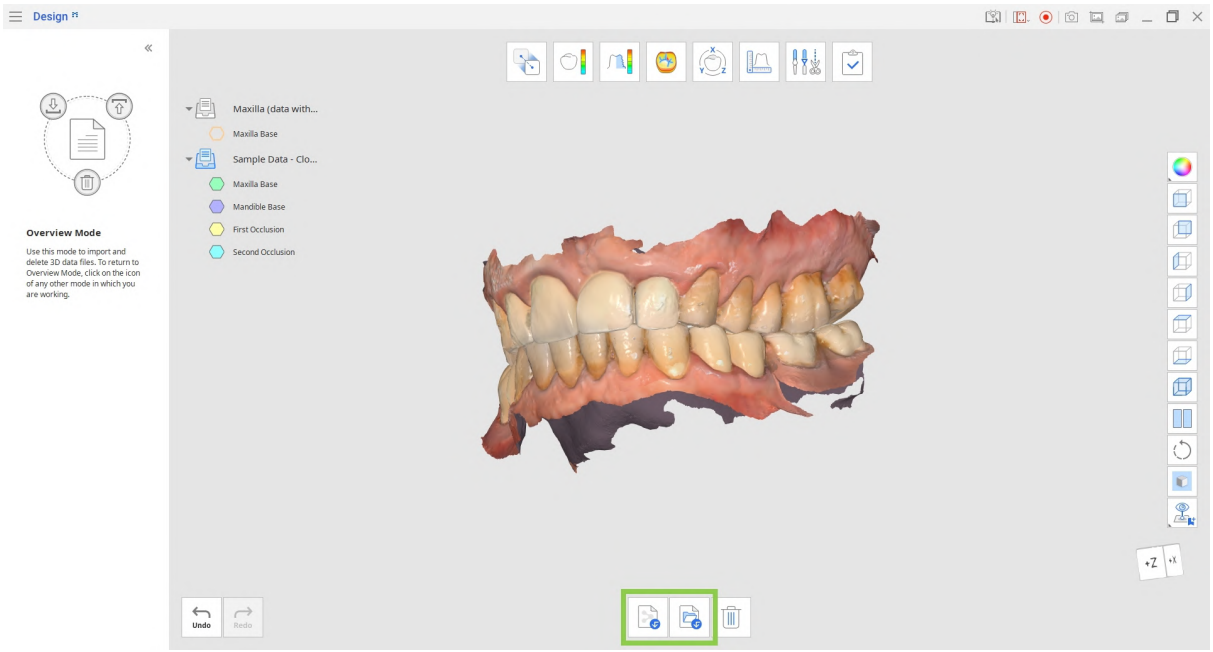
6. To uninstall the program, open App Box and locate the Medit Design app. Select the app card to open its details page, then click “Uninstall.”

Data Management

Preparing Data

There are three ways to prepare and import 3D data for use in Medit Design:

1. Scan data in Medit Scan for Clinics or Labs
   After the necessary scans are completed, the scan data is automatically saved to the patient's case in Medit Link. Once the app is opened, the data can be imported using "Import Medit Link Files."
2. Add 3D data to a Medit Link case
   To import 3D data that was not scanned in Medit Scan, the data must first be attached to a case in Medit Link. It can then be imported into Medit Design using "Import Medit Link Files."
3. Import local data
   3D data files (meditMesh, .obj, .ply, .stl) stored on the computer can be directly imported by clicking "Import Local Files" after the app is opened.



3D Data Control

Users can control the 3D data using a mouse alone or both mouse and keyboard.

3D data control using a mouse

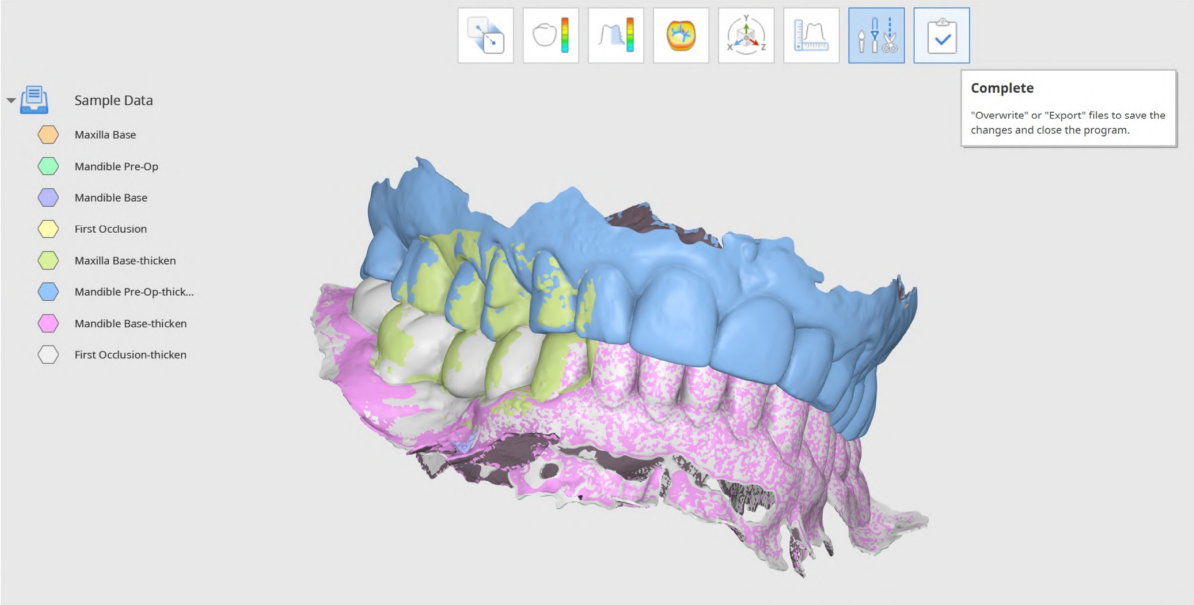
Zoom	Scroll the mouse wheel.	
Zoom Focus	Double-click on the data.	
Zoom Fit	Double-click on the background.	
Rotate	Right-click and drag.	
Pan	Hold both buttons (or wheel) and drag.	

3D data control using a mouse and keyboard

	Windows	macOS
Zoom		
Rotate		
Pan		

Saving Data

After changes have been made to the existing mesh, the project can be completed by clicking “Complete.”

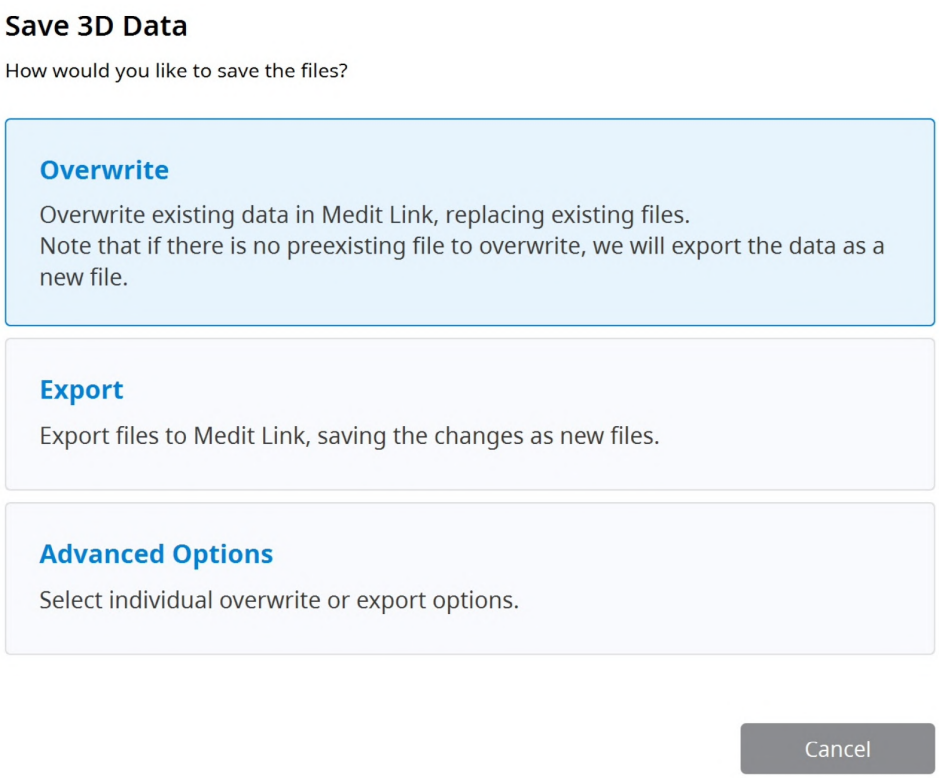


Tip

You could also export and overwrite separate files while working using the Data Tree. Right-click on the data to “Export to Medit Link” or “Overwrite File in Medit Link”.

The user is provided with several options for saving the completed files in the “Save 3D Data” window.

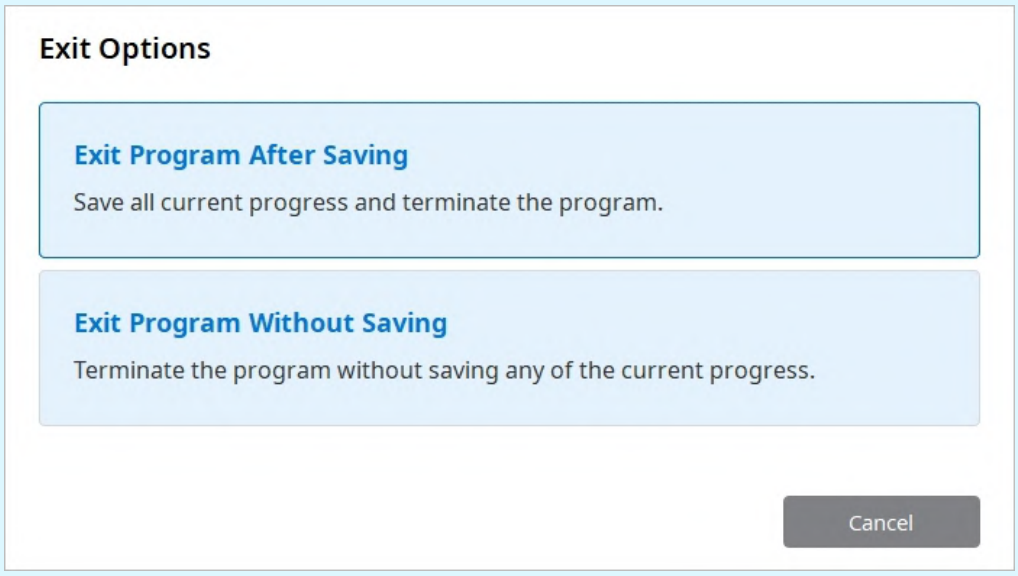
Here, a choice between overwriting and exporting completed files can be made by users, and the selected option will be applied to all files. Using “Advanced Options,” overwrite or export can also be assigned individually to each file.



Overwrite	If overwrite is selected, the existing data in Medit Link will be overwritten, and the existing files will be replaced. If overwrite is selected for a file that does not have a pre-existing version, the data will be exported as a new file instead.
Export	If export is selected, files will be exported to Medit Link, and the changes will be saved as new files.
Advanced Options	If “Advanced Options” is selected, another window will be displayed, and overwrite and export options will be provided for each file.

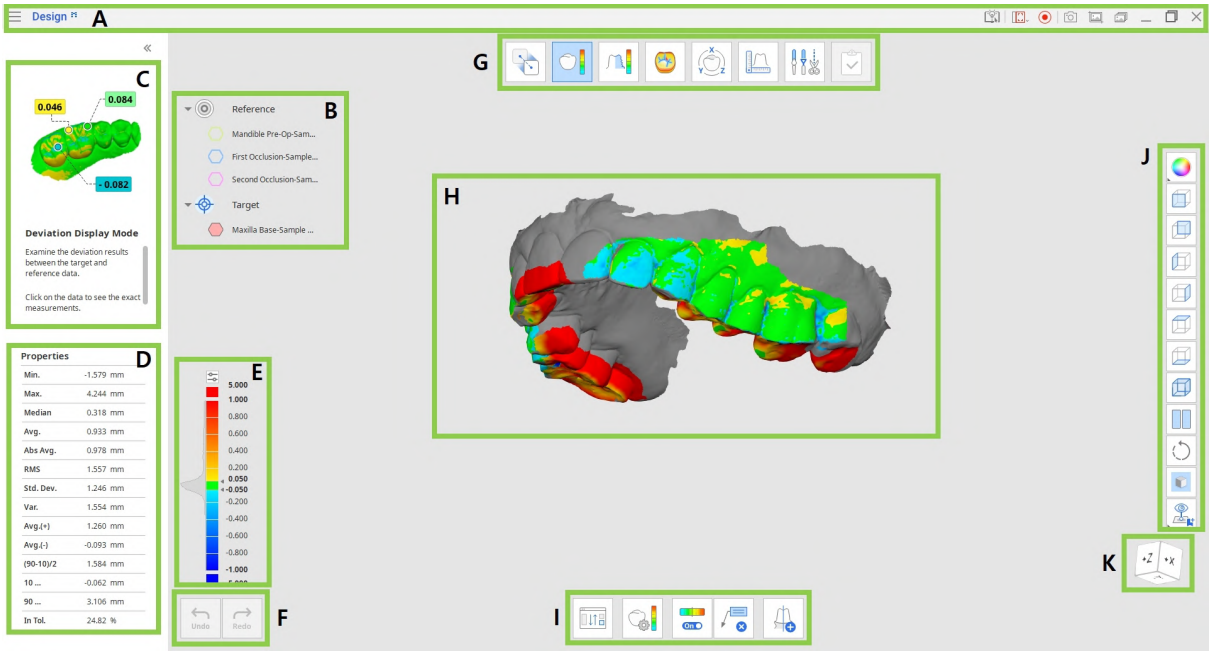
Note

Users can save their work progress for an unfinished project even if they terminate the program before reaching the final workflow step.



User Interface

User Interface at a Glance



A	Title Bar
B	Data Tree
C	Guide Message Panel
D	Data Properties (available in certain Modes)
E	Color Bar (available in certain Modes)
F	Action Control Buttons
G	Workflow
H	3D Data
I	Toolbox
J	Side Toolbox
K	View Cube

Title Bar

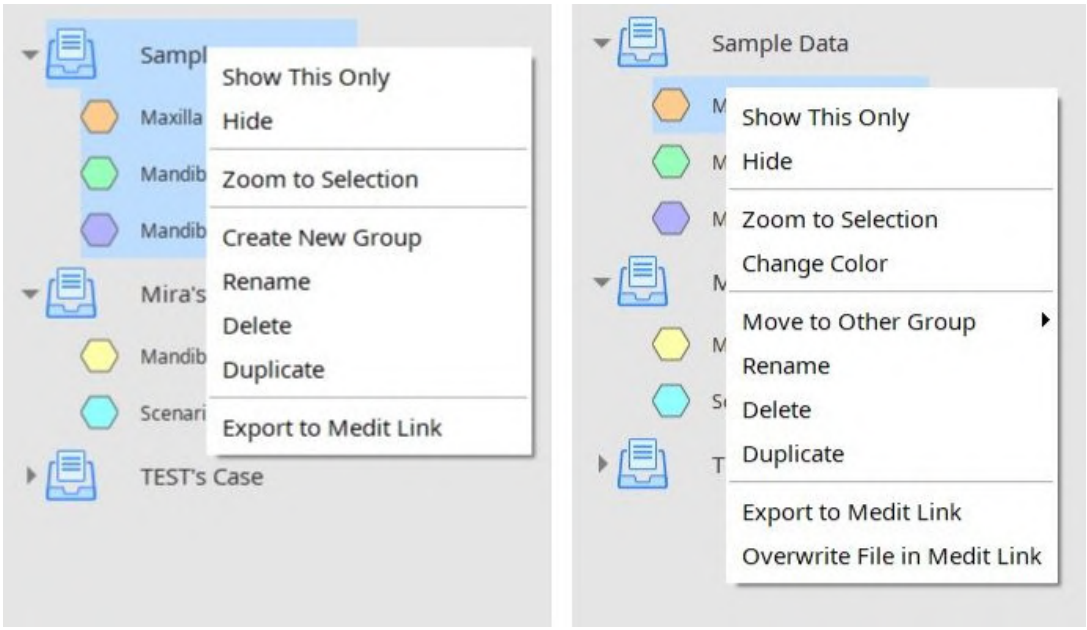
The Title Bar is the ribbon at the top of the application window that contains basic controls on the right and the program menu on the left.

	Menu	Manage the opened project, access available assistance resources, and check app details.
	Help Center	Go to the Medit Help Center page dedicated to this app.
	Select Video Record Area	Specify which area shall be captured for video recording.
	Start Video Recording	Start and stop the video recording of the screen.
	Screenshot	Take a screenshot. Capture the app with or without the title bar using automatic selection, or click and drag to capture only the desired area.
	Screenshot Settings	Configure settings for taking screenshots. Set a transparent or white background and choose to hide all icons.
	Screenshot Manager	View, export, or delete the screenshots. Upon completion, all captured images will be saved to the case automatically.
	Minimize	Minimize the application window.
	Restore	Maximize or restore the application window.
	Exit	Close the application.

Data Tree

The Data Tree is located on the left side of the screen and shows a list of the project data organized into groups. Users can control each data visibility by clicking its icon in the tree or changing its transparency by moving its slider. The structure may vary slightly depending on the objectives of a specific step or tool.

Right-click on the data group or specific data to see the context menu for each.



Note

Note that all context menu commands are provided only when in Overview Mode.

Action Control Buttons

There are two buttons that control the overall work process. They are located in bottom left corner of the application window.

Undo	Undo the previous action.
Redo	Redo the previous action.

Side Toolbar

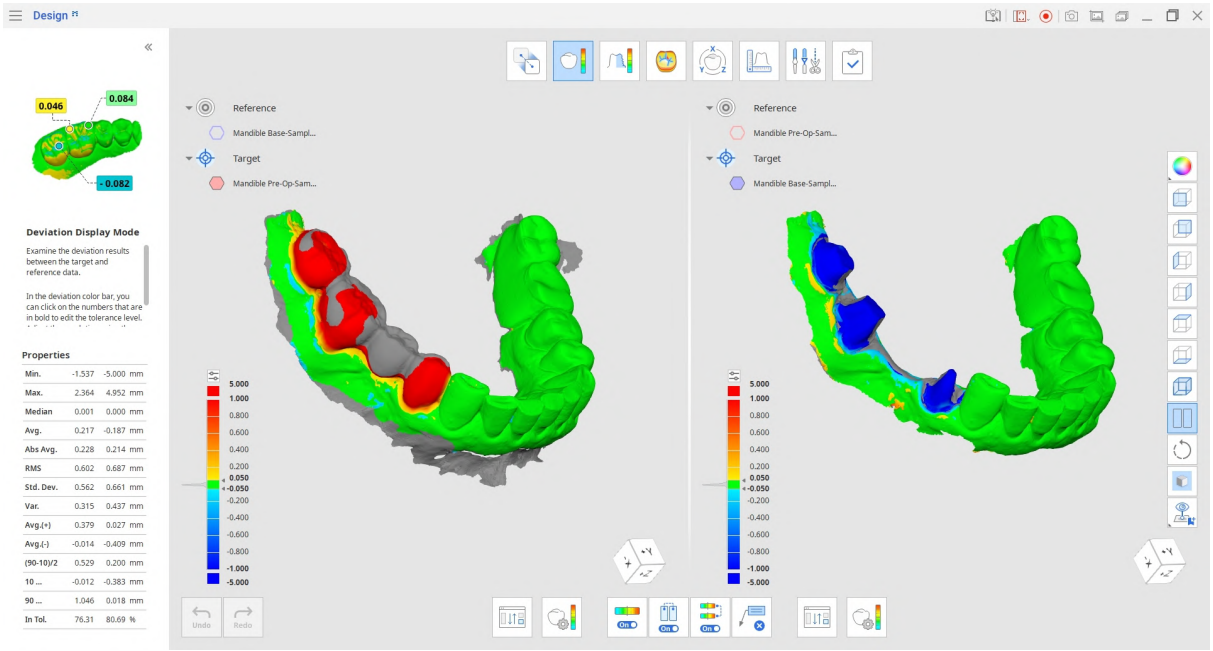
The Side Toolbar is located on the right side of the screen; it offers a number of tools for data visualization and control.

	Change Data Display Mode	Change between different data display options. (Textured/Textured with Edges/Monochrome/Monochrome with Edges/Wire-Frame)
	+Z Axis View	See the front view.
	-Z Axis View	See the back view.
	-X Axis View	See the left view.
	+X Axis View	See the right view.
	+Y Axis View	See the top view.
	-Y Axis View	See the bottom view.
	Isometric View	See the isometric view.
	Split View	Work on two sets of data simultaneously.
	Rotate	Rotate data by click-and-drag.

	Grid Settings	Show or hide the grid (overlay on/off). Click multiple times to control overlay options.
	Custom View	See the custom set view. Save multiple custom views to quickly rotate data to your preferred direction.

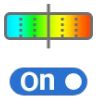
Split View

Users can enable Split View from the Side Toolbar to view and work on two data sets side by side. This feature is available in Overview and Deviation Display Modes only.



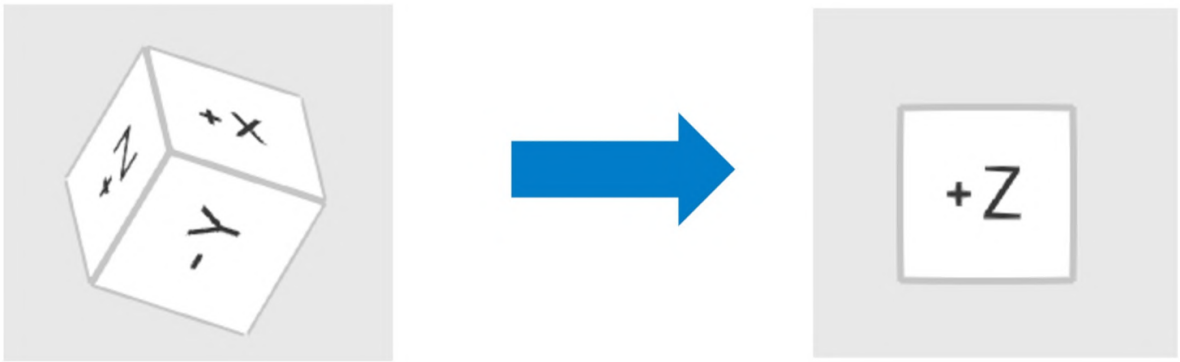
- Click the “Reassign Target and Reference Data” button to select the data set you want to compare with the current one in Split View.
- Choose whether you want data manipulations to be synchronized across both sides of the screen.
- If you synchronize the color bar (this option appears in Deviation Mode), changes made to one data set will be applied to both sides.

Toolbox: Split View

	Reassign Target and Reference Data	Reselect target and reference data for the assignment.
	Color Map On/Off	Turn on or off the color map.
	Sync View	Turn on or off to sync the split view parts.
	Sync Color Bar	Turn on or off to sync the color bar on the split view parts.
	Delete Measurement Results	Delete deviation measurement results by clicking on each of them on 3D data.

View Cube

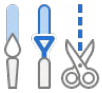
The View Cube shows the 3D view orientation; it rotates simultaneously with the 3D data to help understand data positioning within a three-dimensional space. You can click on the visible faces of the cube to rotate data and see it from a specific viewpoint.



Workflow

Modes

The complete workflow consists of eight modes, each representing a specific task. These modes are not tied to a fixed sequence. Users can work with 3D data without any prior alignment.

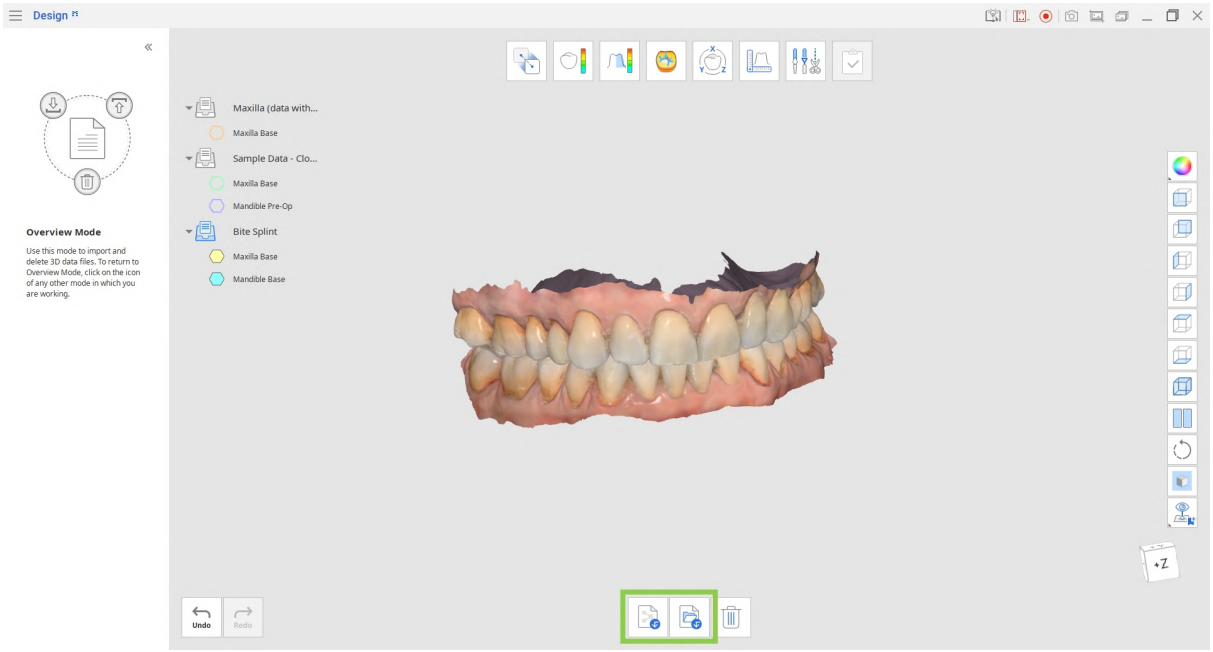
	Overview Mode	Import, examine, and delete data.
	Alignment Mode	Align target and reference data.
	Deviation Display Mode	See the deviation result on the 3D data.
	Roughness Measurement Mode	See the surface roughness of the data through a color map.
	Curvature Display Mode	See the curvature of data through a color map.
	Transformation Mode	Transform 3D scan data by rotating, translating, scaling, or using a transformation matrix.
	Measurement Mode	Measure the distance, angle, length, and area on the 3D data or its section lines.
	Edit Mode	Edit and trim data using the wide array of functions provided.
	Complete	Overwrite or export the files to save the changes, then close the program.

Tips

- Click on the icon of any mode you are working in to exit it and return to Overview Mode.
- If you want to keep the measurement results ready for communication in Medit Link, take a screenshot using the “Screenshot” tool located on the Main Toolbar.

Overview Mode

In this step, users can manage the current project data by importing required meshes from Medit Link or local storage and deleting unneeded files.



Toolbox

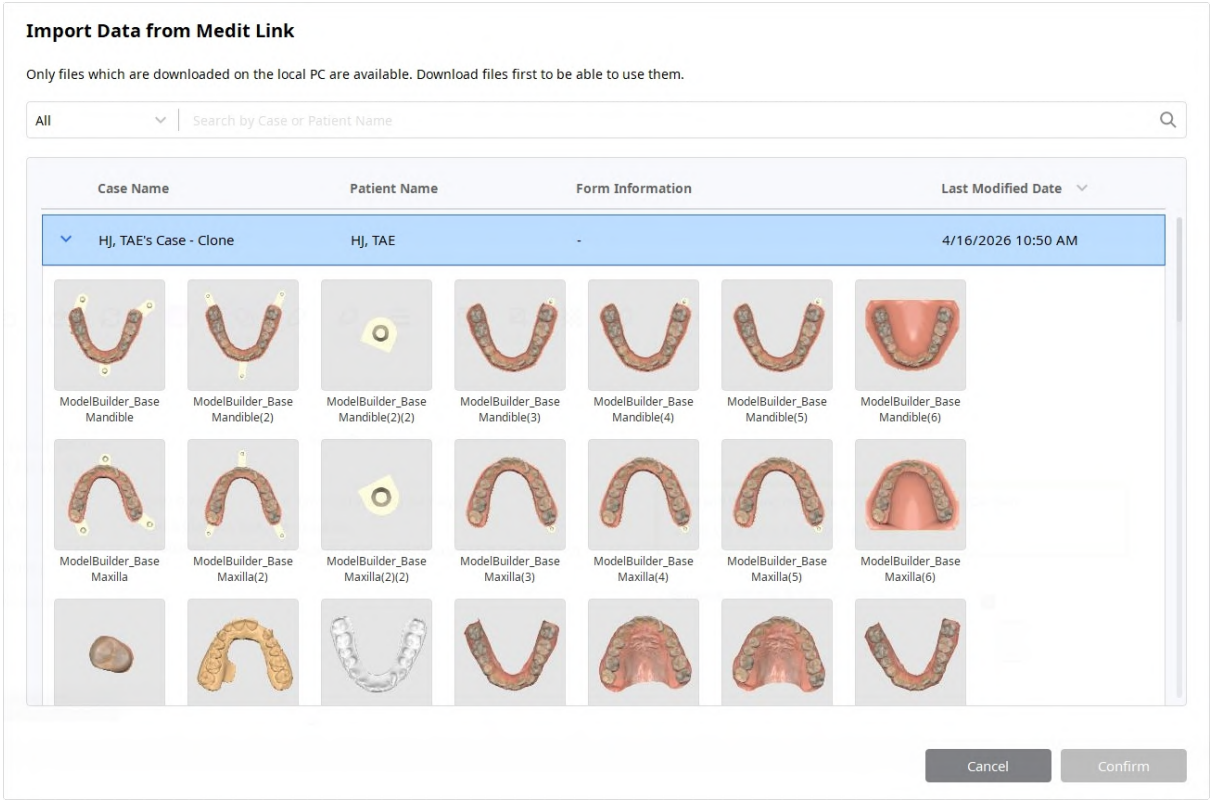
	Import Medit Link Files	Import files from Medit Link.
	Import Local Files	Import local 3D files from your computer in .obj, .ply, .stl, or .meditMesh formats.
	Delete Data	Select data to delete.

How to import data from Medit Link

1. Click “Import Medit Link Files."
2. Choose the 3D data files from your existing Medit Link cases. You can choose the files that belong to different cases and compare them together or as separate sets.

Tips

- You can choose multiple files to use in Medit Design.
- You can import additional files at any time while working with data by returning to the Overview Mode and clicking the “Import Medit Link Files” icon.



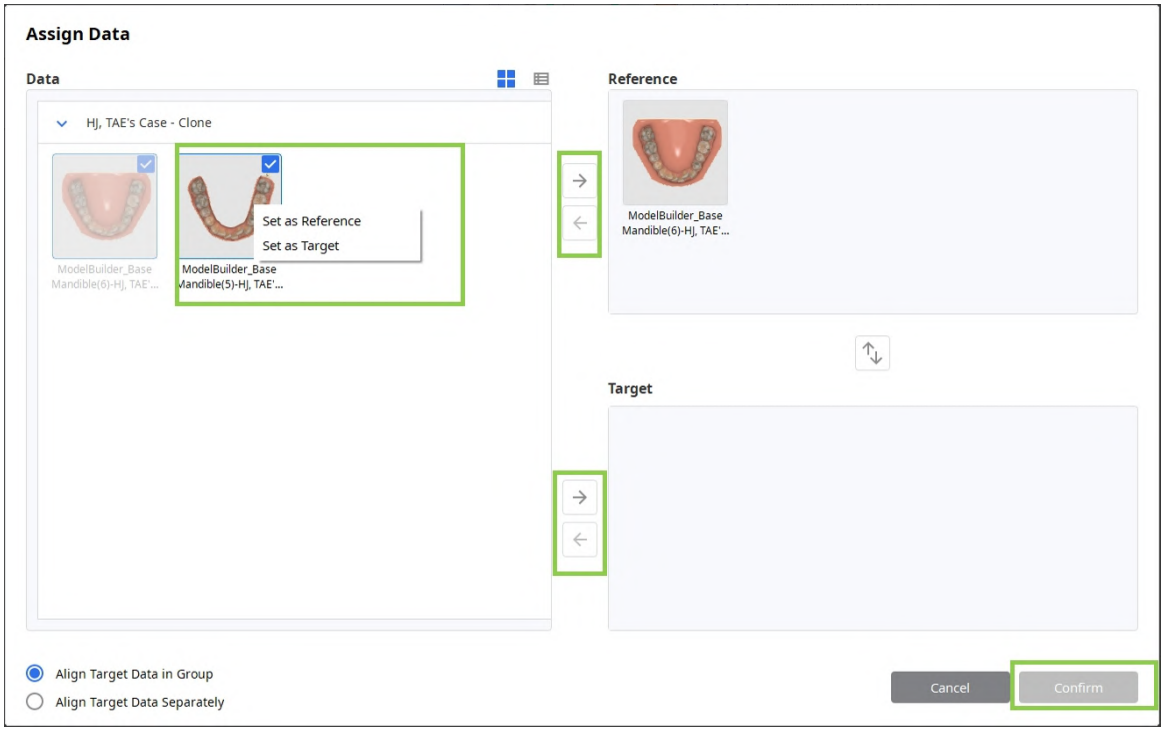
How to import data from local files

1. Click “Import Local Files.”
2. Select the files you want to import in the file explorer. Only the following file formats are supported: .obj, .ply, .stl, or .meditMesh.
3. You can also import local files by dragging and dropping them into the window.

Alignment Mode

In this step, users can align the target and reference data in Alignment Mode.

1. Start by assigning imported data as the target and reference data in the initial Assign Data window or by using the “Reassign Target and Reference Data“ tool at the bottom.
   Select 3D data that you want to set as the reference and click the “Assign as Reference” arrow or drag-and-drop it. Alternatively, right-click on the data to choose a data assignment option.



2. Repeat the same to assign the target data.

- If you want to align the target data separately to the reference, choose “Align Target Data Separately.” If you select “Align Target Data in Group,” the target data will be aligned as a group.
- Select "Align Target Data Separately" if you want to align the target data separately from the reference data. Select "Align Target Data in Group" to align the target data as a group.

Aligning data one by one

3. Click “Confirm“ when ready.

Toolbox: Main

	Reassign Data	Reassign target and reference data.
	Automatic Alignment	Align data automatically without any user-defined points.
	Manual Alignment	Align data manually using user-defined points.
	Align Selected Areas	Select the corresponding areas in the target and reference data to align them together.
	Detach Data	Detach the aligned data and bring it to the original position.

Toolbox: Align Selected Areas

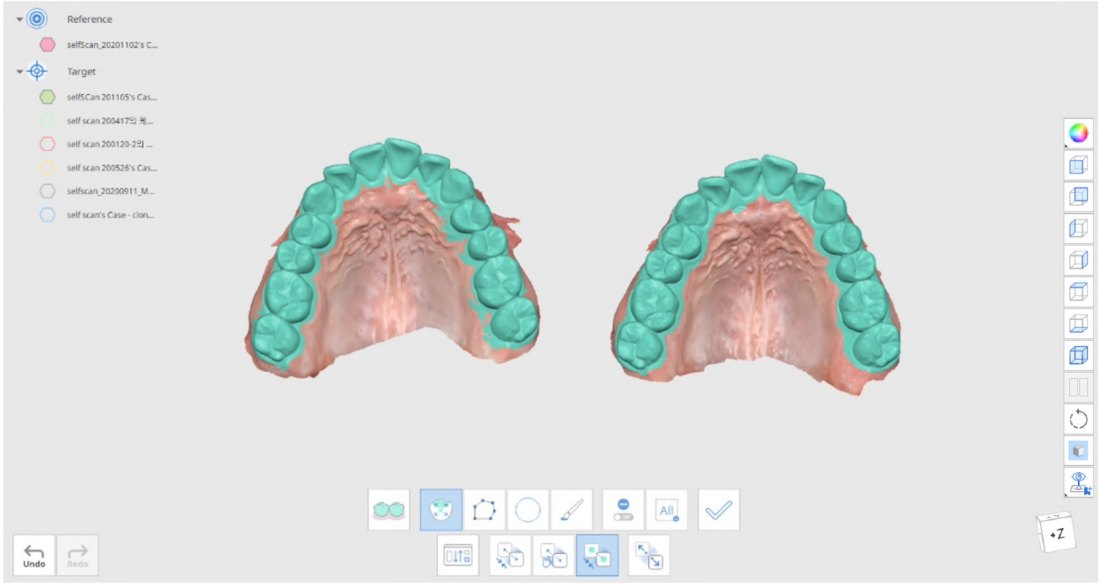
	Smart Teeth Selection	Automatically select all teeth of the arch, leaving out the gingiva parts.
	Smart Single Tooth Selection	Automatically select the area of a single tooth, leaving out the gingiva parts.
	Polyline Selection	Select all entities within a polyline shape drawn on the screen.
	Circle Selection	Select all entities within the circular area.
	Brush Selection	Select all entities on a freehand-drawn path on the screen. Only the front surface is selected. The brush comes in three sizes.
	Deselection Mode	When enabled, selection tools function as deselection tools.
	Clear All Selection	Clear all selected areas.
	Apply	Click to apply the alignment.

Toolbox: Manual Alignment

	Delete Alignment Points	Remove the points selected for alignment.

4. There are three data alignment options: Automatic Alignment, Manual Alignment, or Align Selected Areas.
   d. Click “Manual Alignment” to align the data manually and set the matching points up to three on both target and reference data. The points can be by clicking “Delete Alignment Points.”

e. The “Align with Selected Area” tool allows you to select the specific part of the data you would like to align. Use the selection tools to mark the area on both target and reference data.
f. If you would like to select one or several teeth easily, try using the “Smart Single Tooth Selection” tool.
g. If the data you are working on was acquired via scanning in Medit Scan for Clinics, “Smart Teeth Selection” is a tool that allows to select all arch teeth, leaving out the soft tissue data.



5. Click on “Apply” to finish the selection and align the selected data with the chosen area.
6. Swap target and reference data by using the “Reassign Target and Reference Data” button at the bottom of the window. You can come back to this option while working in any mode.

Deviation Display Mode

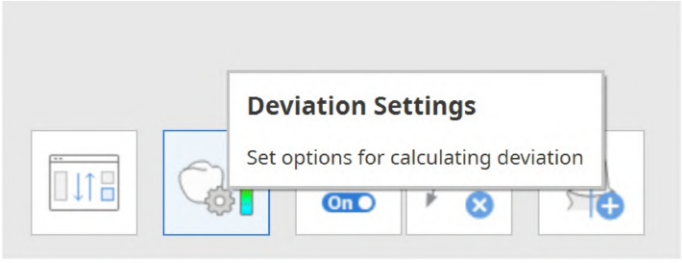
Deviation Display Mode displays the deviation results between the aligned target and reference data using the Color Map.

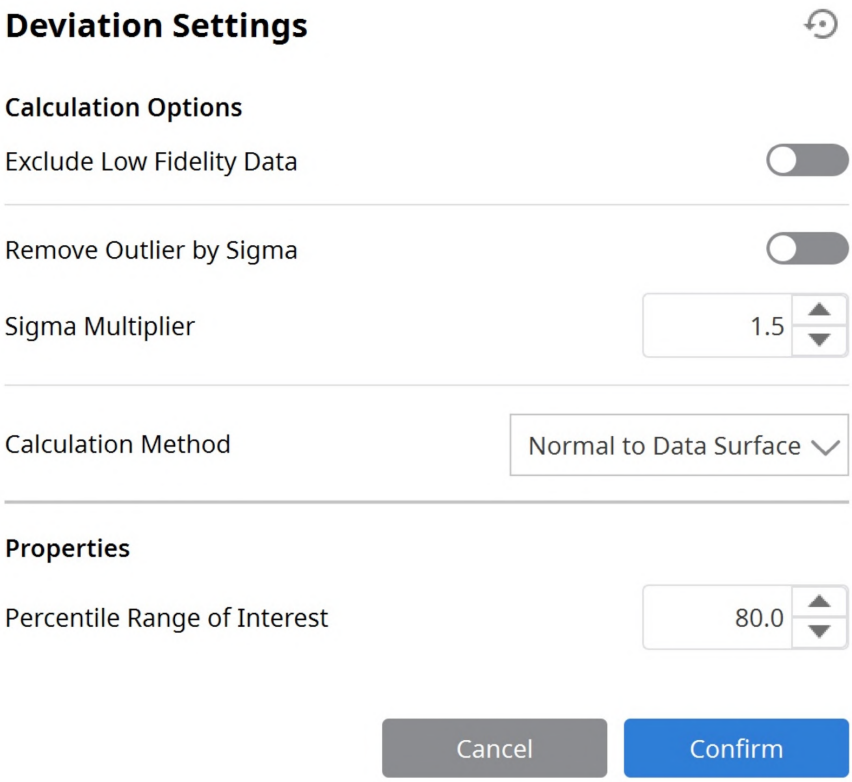
Toolbox

	Reassign Target and Reference Data	Change the target and reference data assignment.
	Deviation Settings	Set options for calculating deviation.
	Color Map On/Off	Turn on or off the color map.
	Delete Measurement Results	Delete deviation measurement results by clicking on each of them.
	Create Sections	Create section lines.

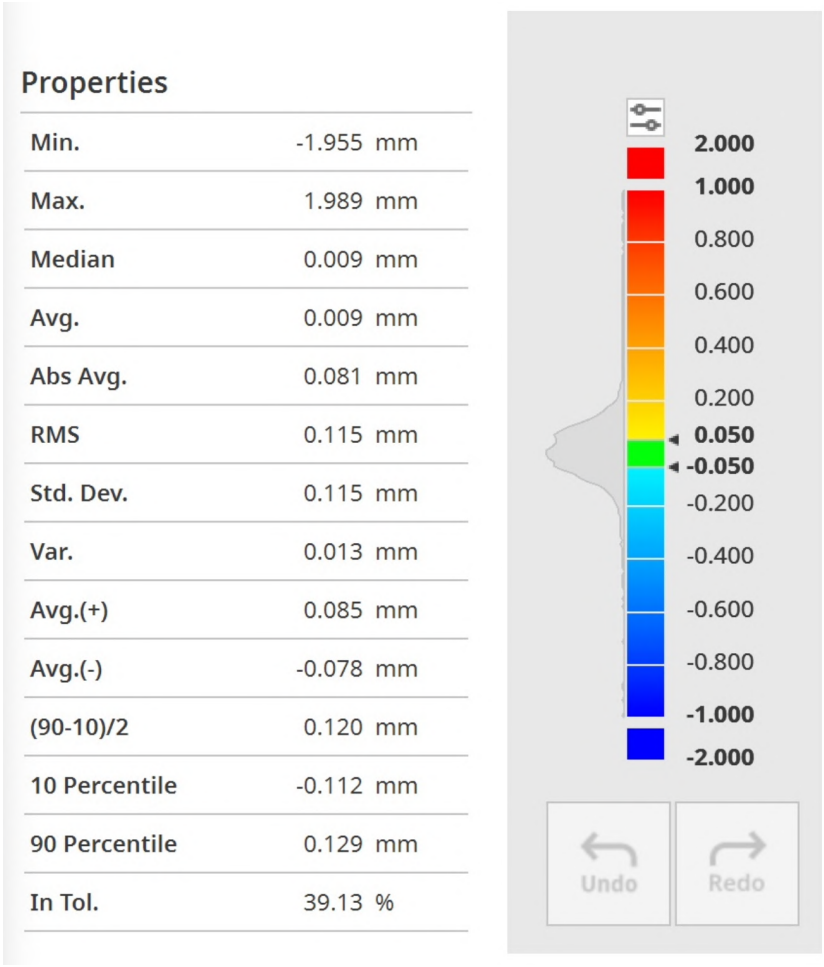
Deviation Settings

Click “Deviation Settings” to customize your settings.

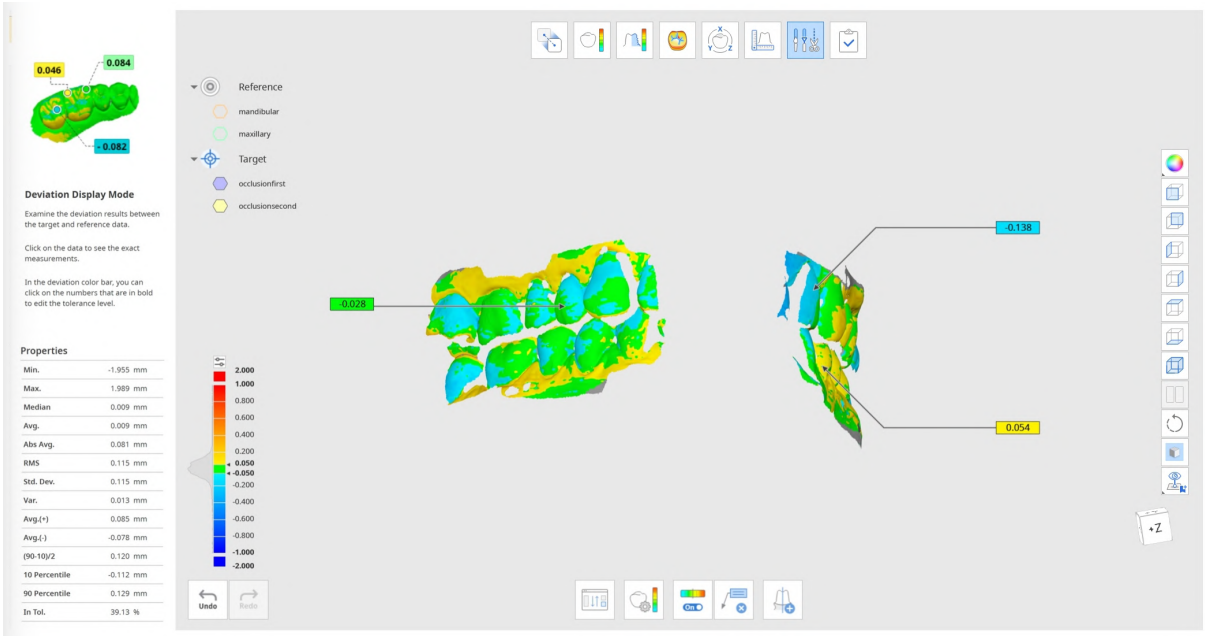



Deviation Settings
Calculation Options
Exclude Low Fidelity Data
Remove Outlier by Sigma
Sigma Multiplier
1.5
Calculation Method
Normal to Data Surface
Properties
Percentile Range of Interest
80.0
Cancel
Confirm

Option	Description
Exclude Low Fidelity Data	Exclude the low-fidelity boundary data when calculating data deviation.
Remove Outlier by Sigma	Input the Sigma value and use it to exclude the outliers when calculating. - In the case of 1 sigma, only data that comes within 1 sigma (standard deviation) are used for calculation based on the positive and negative deviations. - In the case of n-time sigma, only data that comes within n-time sigma (standard deviation) are used for calculation based on the positive and negative deviations.
Calculation Method	You can choose between the normal vector and the nearest position when calculating data deviation.
Percentile Range of Interest	Set the percentile range displayed in the Properties on the left side of the program window. If you enter “80,” it will show the 10th percentile and 90th percentile. - You can customize the maximum value of deviation and the acceptable tolerance by clicking on the numbers in bold. - Adjust the resolution bar located above the color bar. The color range gets further divided when the resolution is higher.

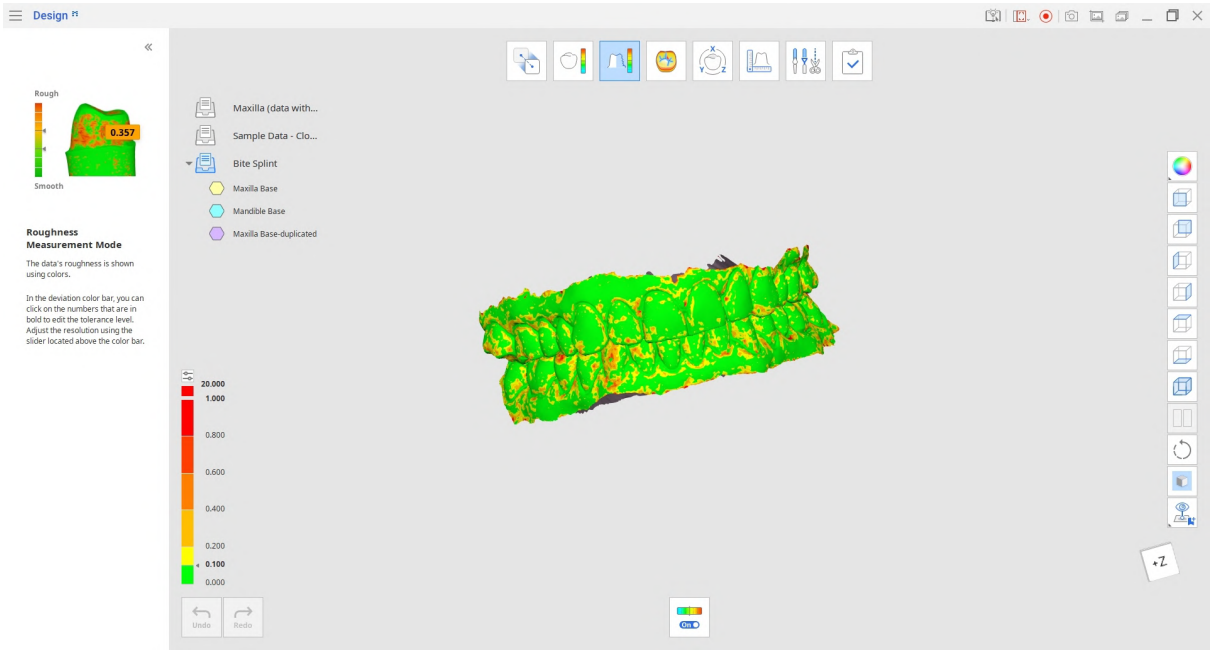


Click on the data to receive the exact measurements.



Roughness Measurement Mode

Roughness Measurement Mode displays the surface roughness of 3D data using the Color Map.



The map shows the roughness of target data and is colored according to the roughness value of a specific surface.

You can customize the maximum roughness value and the acceptable tolerance by clicking on the numbers in bold on the index.

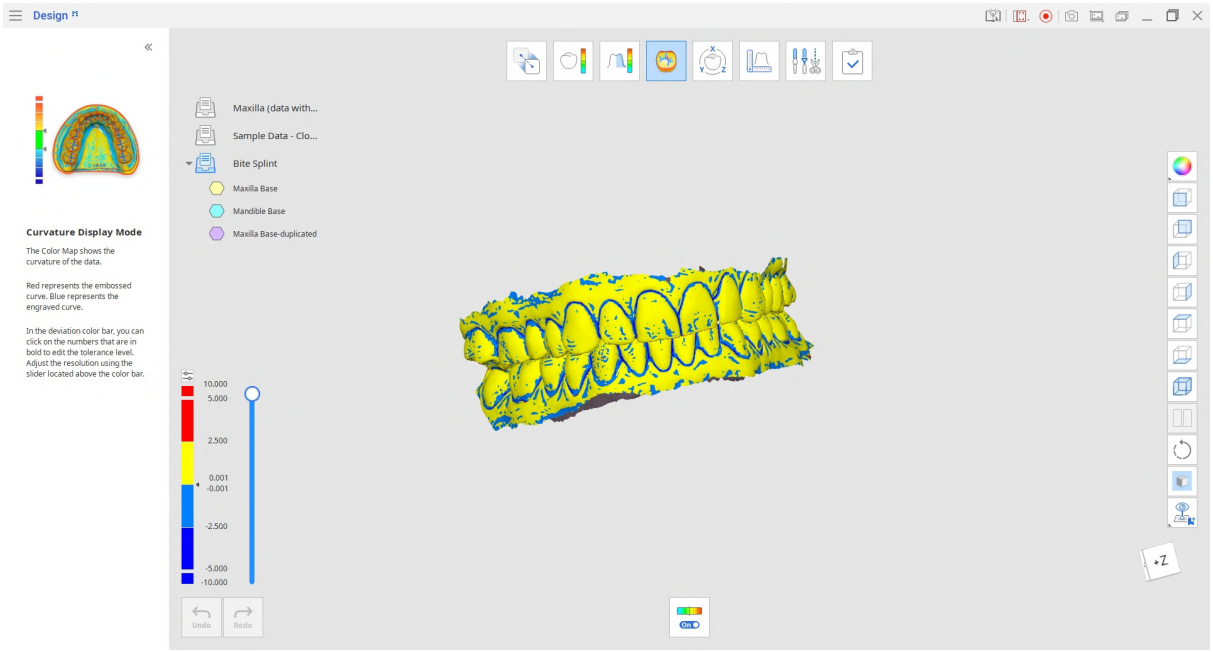
Use the “Color Map On/Off” tool to check the original texture and color of the 3D data

Toolbox

	Color Map On/Off	Turn on or off the color map.

Curvature Display Mode

Curvature Display Mode helps you analyze the data's curvature using colors. Red represents the embossed curve and the blue represents the engraved curve.



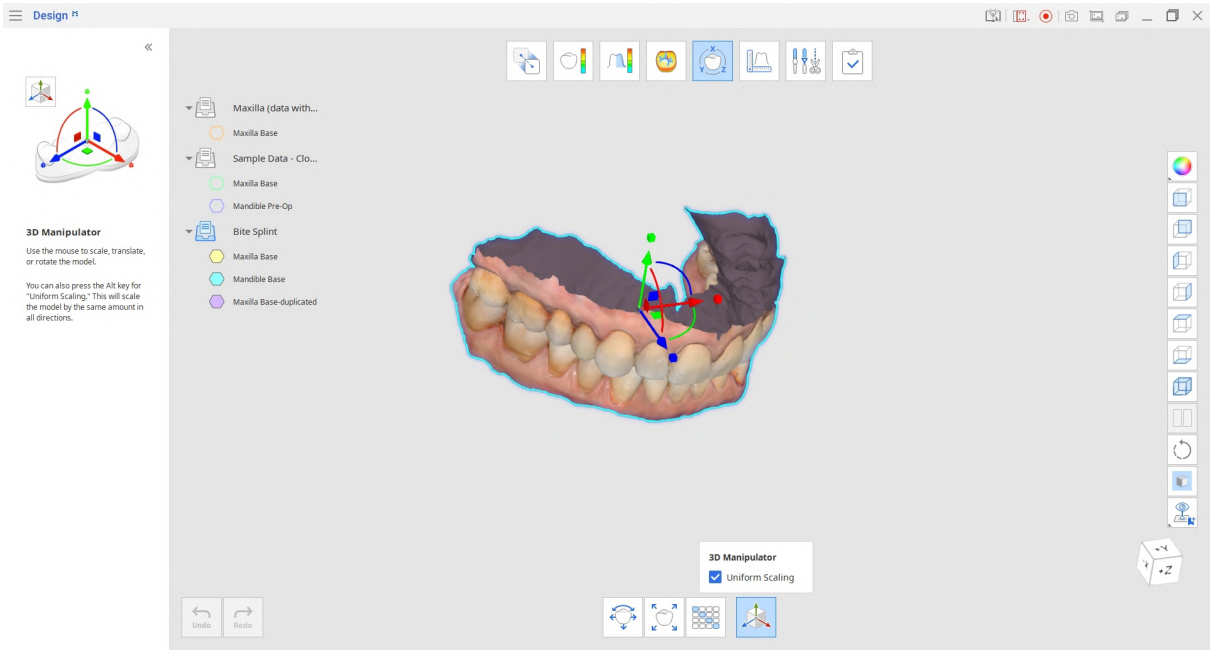
Control the slider located on Color Bar's right side to adjust the resolution or click on the numbers that are in bold to edit the tolerance level.

Toolbox

	Color Map On/Off	Turn on or off the color map.

Transformation Mode

Transformation Mode provides various transformation tools so you can rotate, translate, and scale your 3D data with ease.



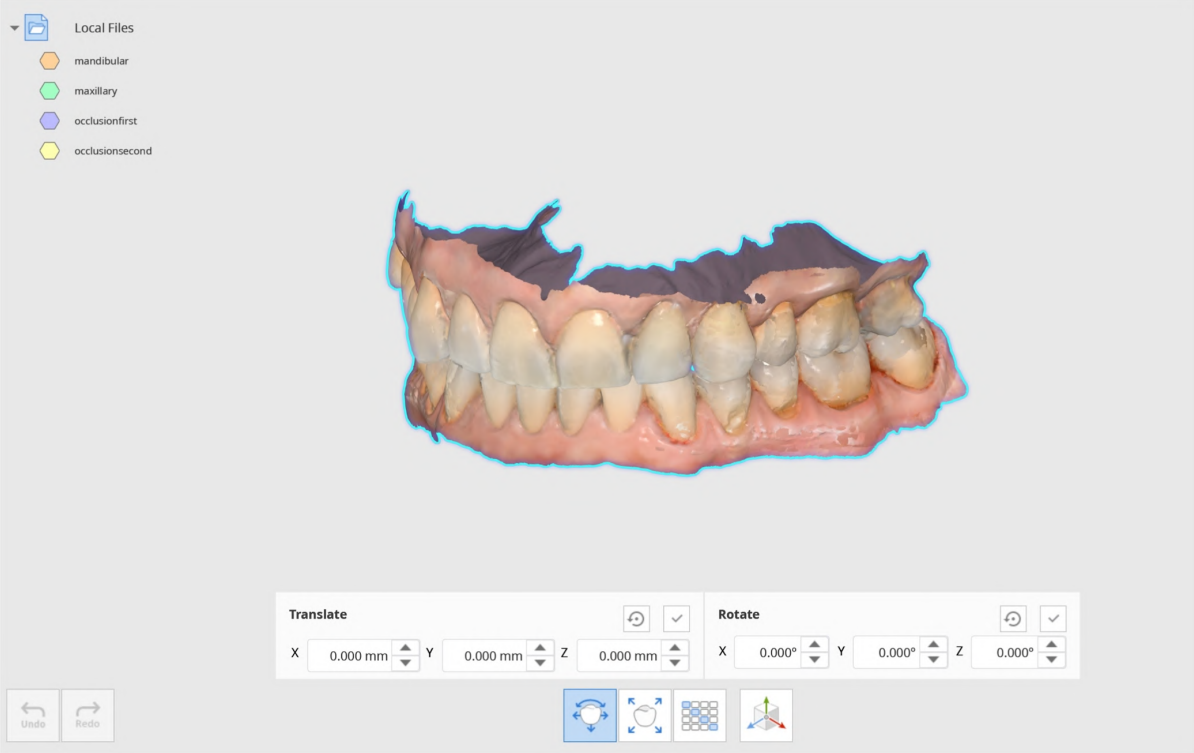
Toolbox

	Translate and Rotate	Set values for the X, Y, and Z axes to translate and rotate data.
	Scale	Set values for the X, Y, and Z axes to scale data.
	Transformation Matrix	Manually set values for each element of the matrix.
	3D Manipulator	Scale, translate, or rotate the model.

Translate and Rotate

1. Translate or rotate data by entering the distance or angle value for the axes. Use the up and down keys on the keyboard or mouse wheel to change the values as well.

2. Click “Apply” to apply the changes to all modes in the program.



Tip

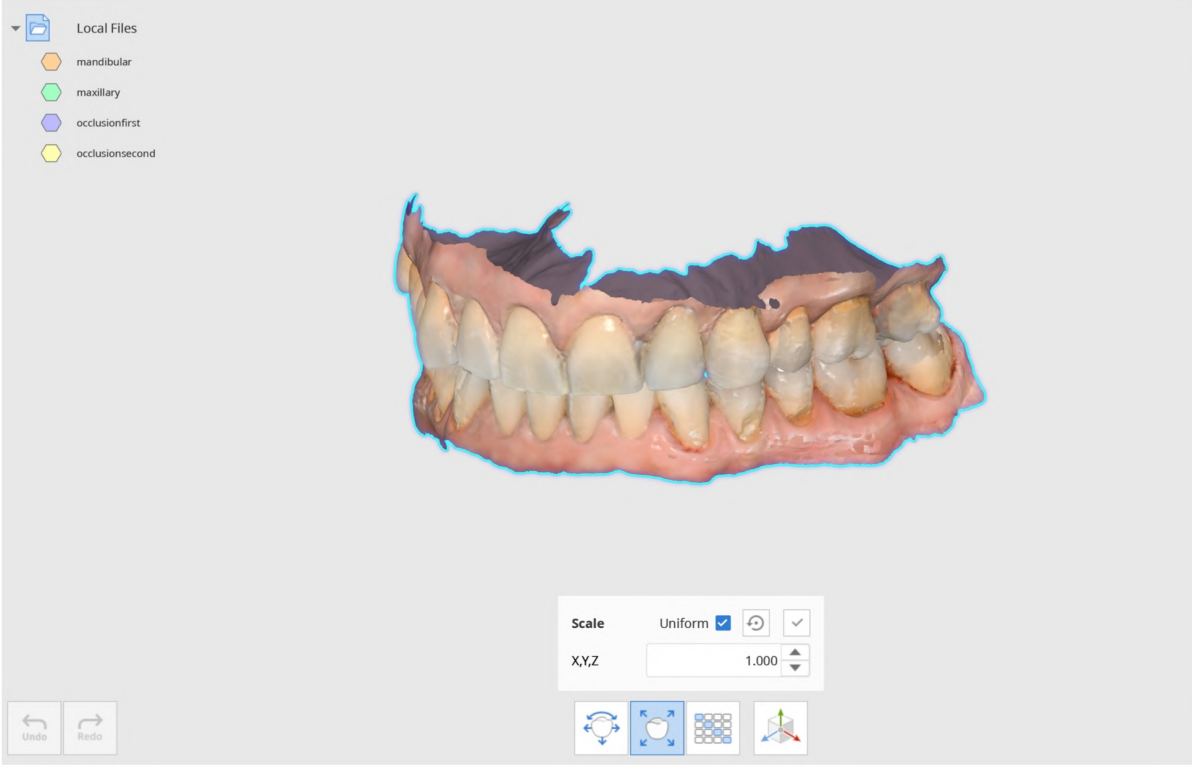
You can leverage this function to change the axes' orientation of data.
For example, if the occlusal surface is located on the +Y axis, as in 3Shape CAD files, you change it to +Z axis to match the exocad orientation.
Export the data by clicking the right mouse button on the Data Tree to export the data you are working on.

Scale

1. Scale data by entering values for the axes.

2. Check the “Uniform” box to use the same value to scale data across all axes simultaneously.

3. Click “Apply” to apply the changes to all modes in the program.



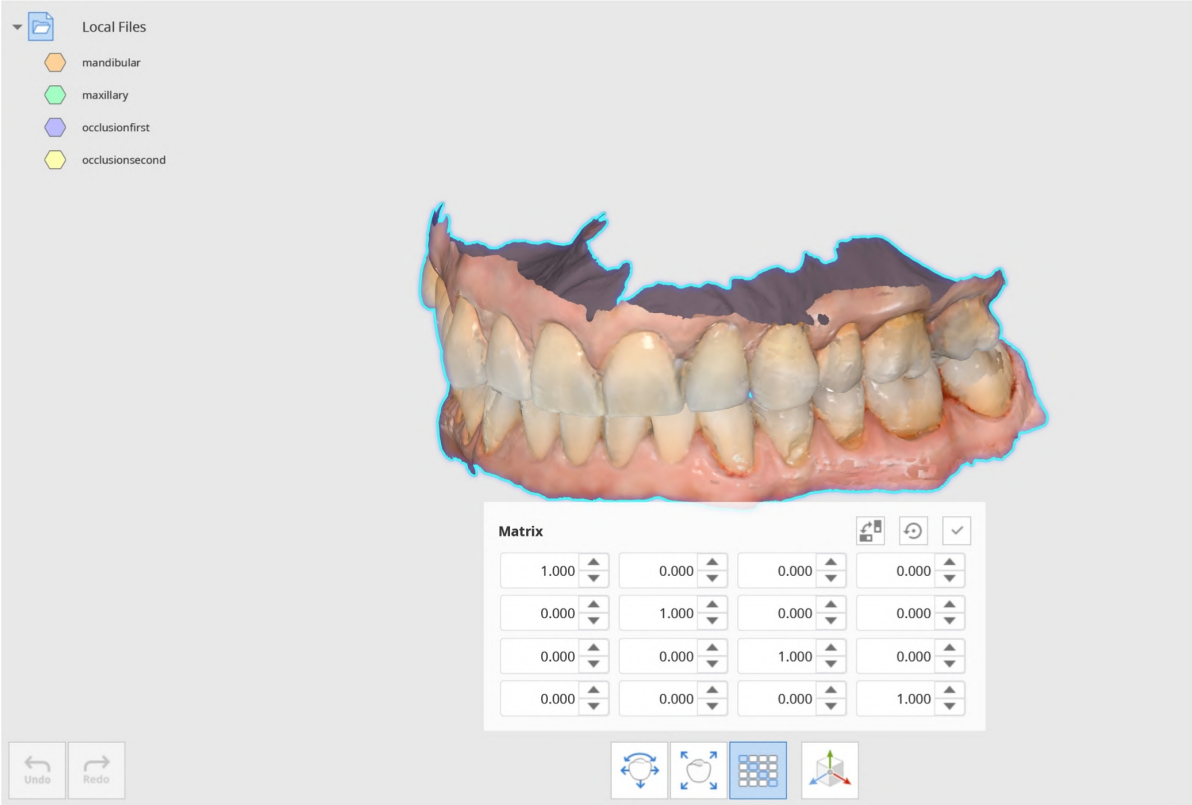
Tip

Scale the enlarged crown/bridge data before sintering down to 1:1 proportion and compare it with the original data to see if the shrinkage is constant.

Transformation Matrix

The transformation matrix transforms the data by setting the value for each element.

Click “Apply” to apply the changes to the data across all modes in the program.



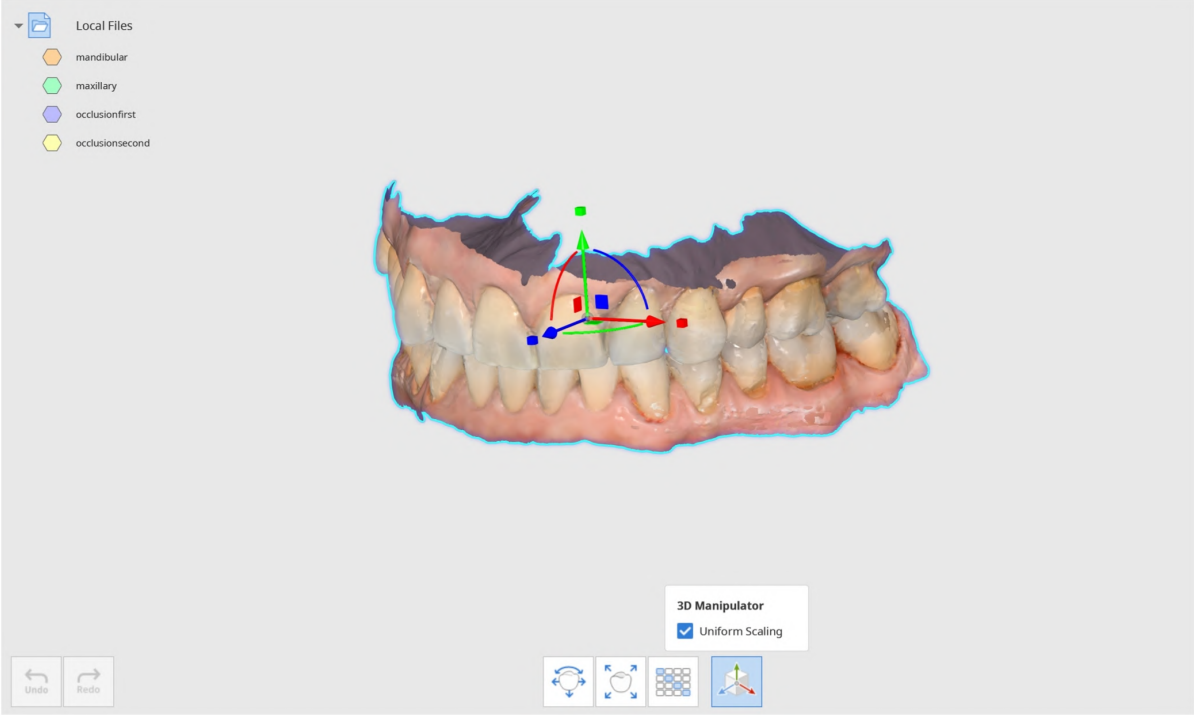
Tip

Used when you want to check if CAD implant library and scan data were aligned correctly.
Enter the value for the matrix to move to the alignment position and inspect the data.

3D Manipulator

Use the manipulator in 3D Manipulator to scale, translate, or rotate the model.

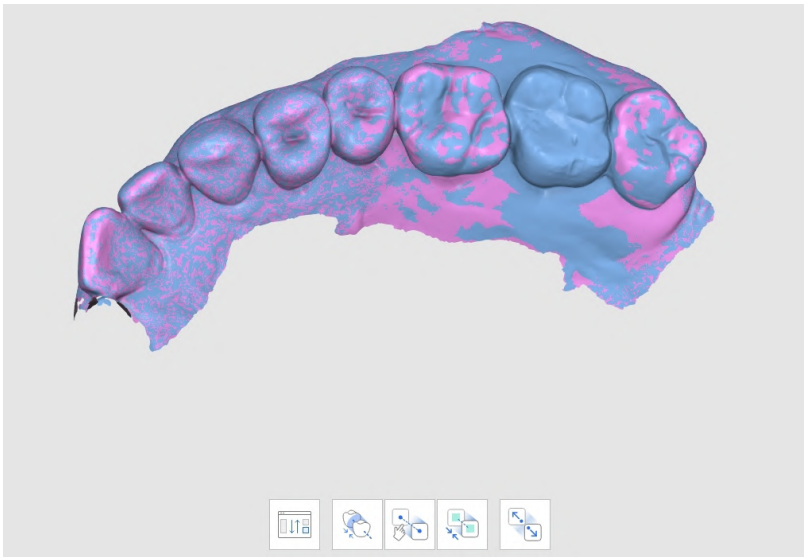
Check “Uniform Scaling” to use the model by the same values in all directions.


Local Files
mandibular
maxillary
occlusionfirst
occlusionsecond
3D Manipulator
Uniform Scaling
Undo
Redo

Measurement Mode

Measure distance, angle, length, and area of the 3D data.

You can measure the data in its aligned or detached state. Data can be detached in the Alignment Mode by using the “Detach Data” feature.

Aligned Data	Detached Data
	

Toolbox: Main

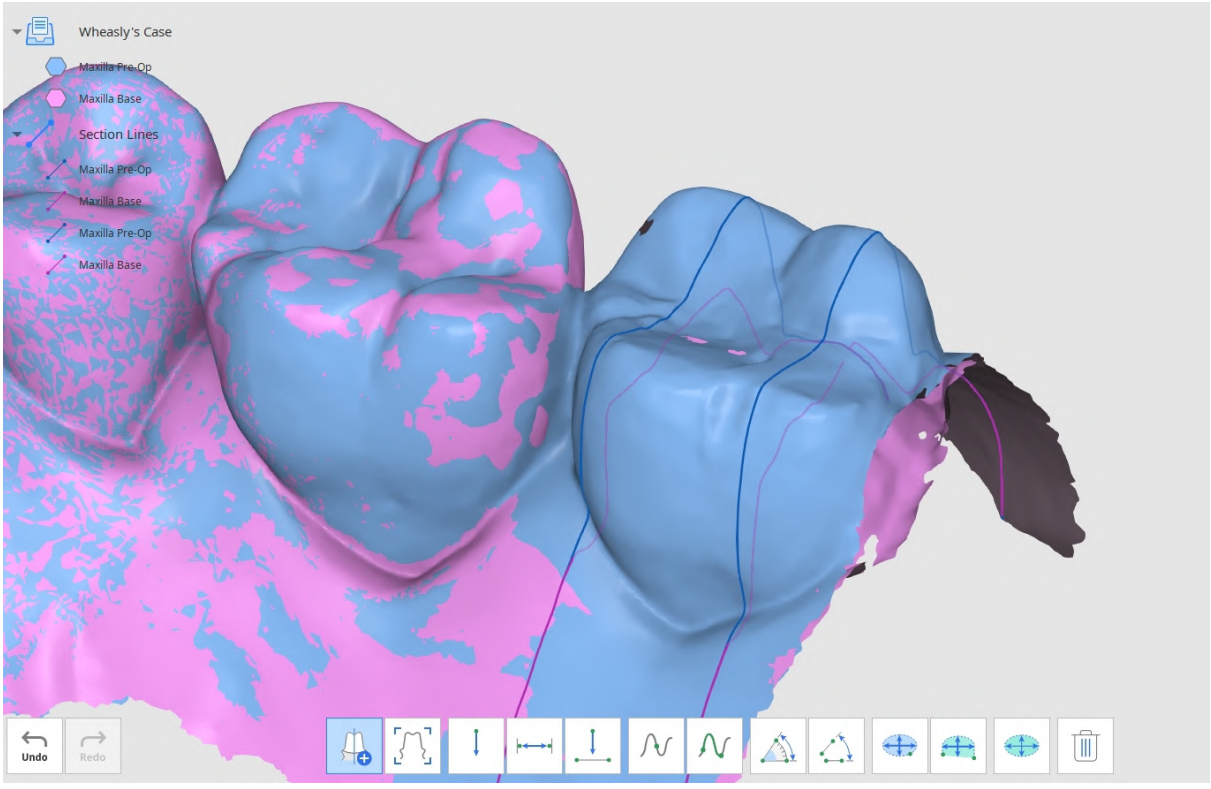
	Create Sections	Create section lines.
	View Perpendicularly to Section Line	Orient the view perpendicularly to the section line.
	Measure Distance by One Point	Measure the shortest distance to the adjacent 3D data or line.
	Measure Distance by Two Points	Measure the distance between two points.
	Measure Distance by Three Points	Measure the distance between a point and a line defined by another two points.
	Measure Length by One Point	Measure the length of the section line by one point.
	Measure Length by Two Points	Measure the length of the section line by two points.
	Measure Angle by Three Points	Measure the angle between the lines made with three points.
	Measure Angle by Four Points	Measure the angle between the lines made with four points.
	Calculate Area by One Point	Calculate the area of the section line by one point.
	Calculate Area by Two Points	Calculate the area of the section line by two points.
	Calculate Area by Selection	Calculate the selected area.
	Delete Measurement Results	Delete measurement results and sections by clicking on each of them.

Toolbox: Calculate Area by Selection

	Brush	
On	Deselection Mode	
	Apply	

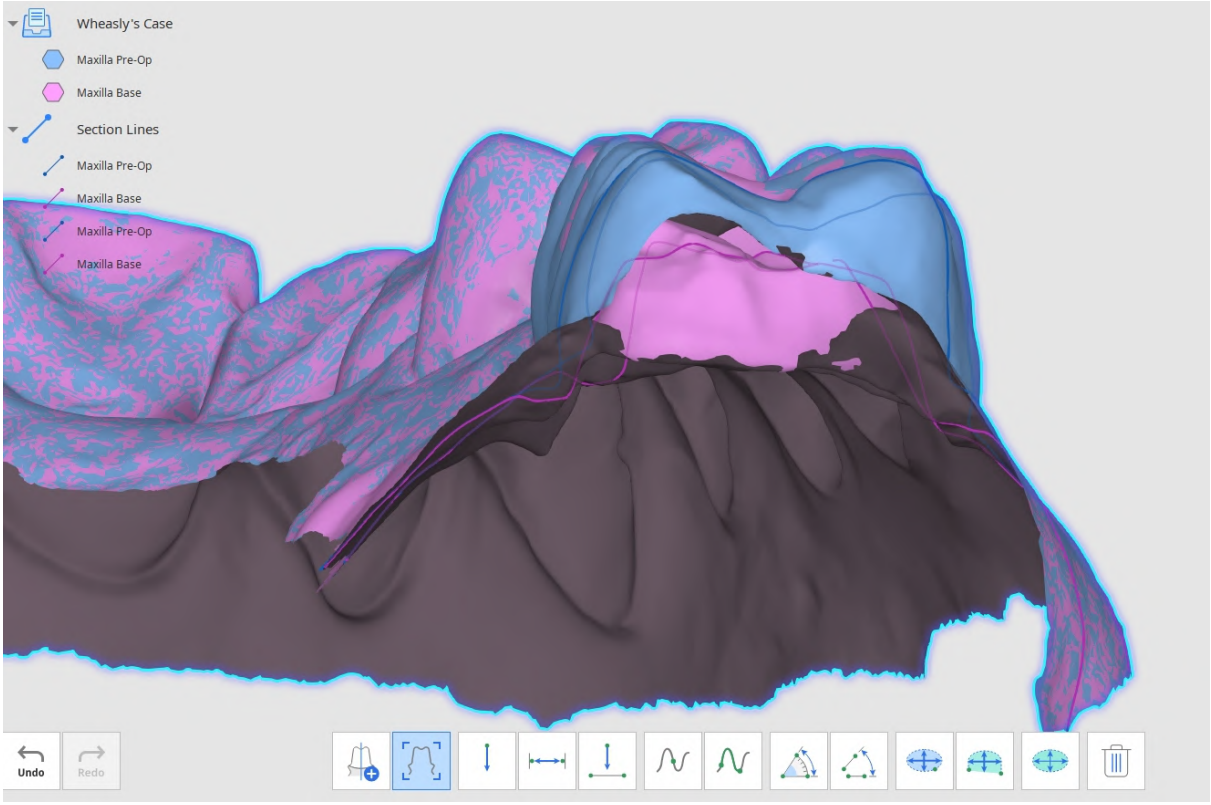
How to use Measurement Mode

1. Click “Create Sections” to draw a line at the desired area to create a section. You can add multiple lines. The section’s visibility can be controlled in the Data Tree.

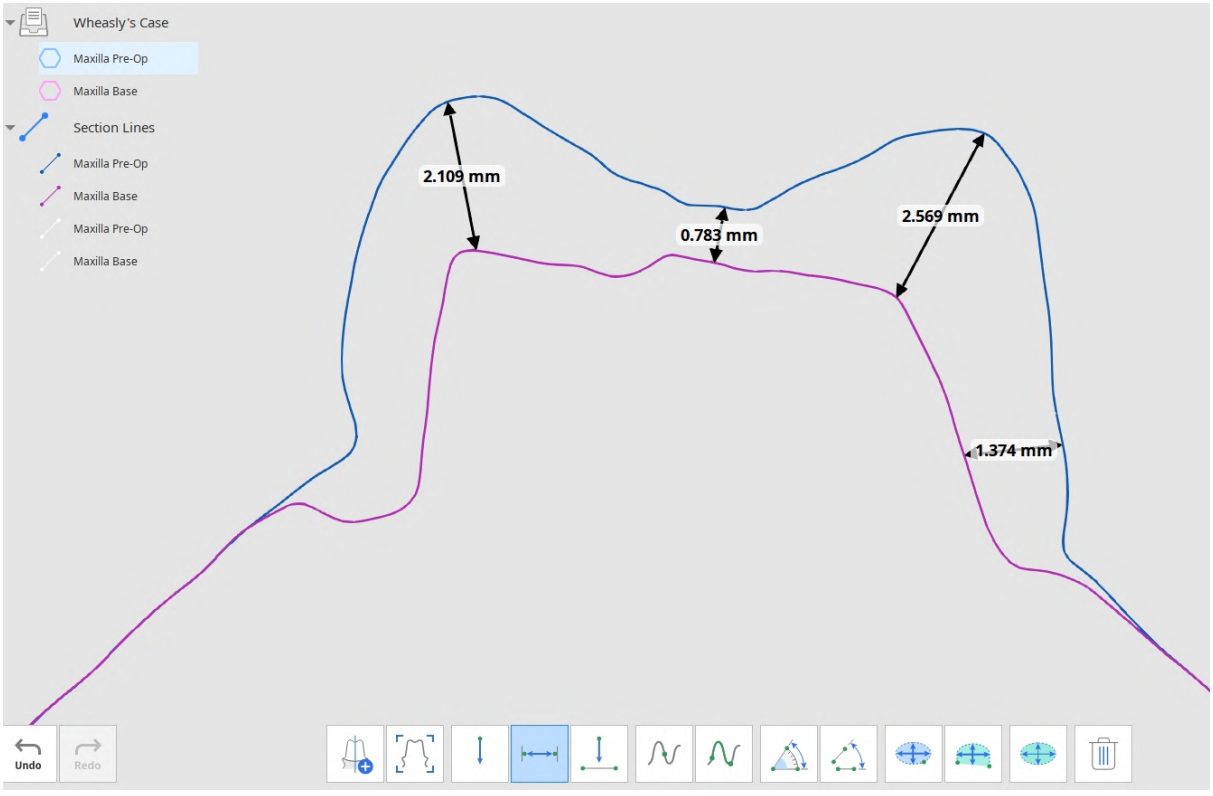


2. Use the tools at the bottom of the window to measure the distance, angle, length, and area of the data.

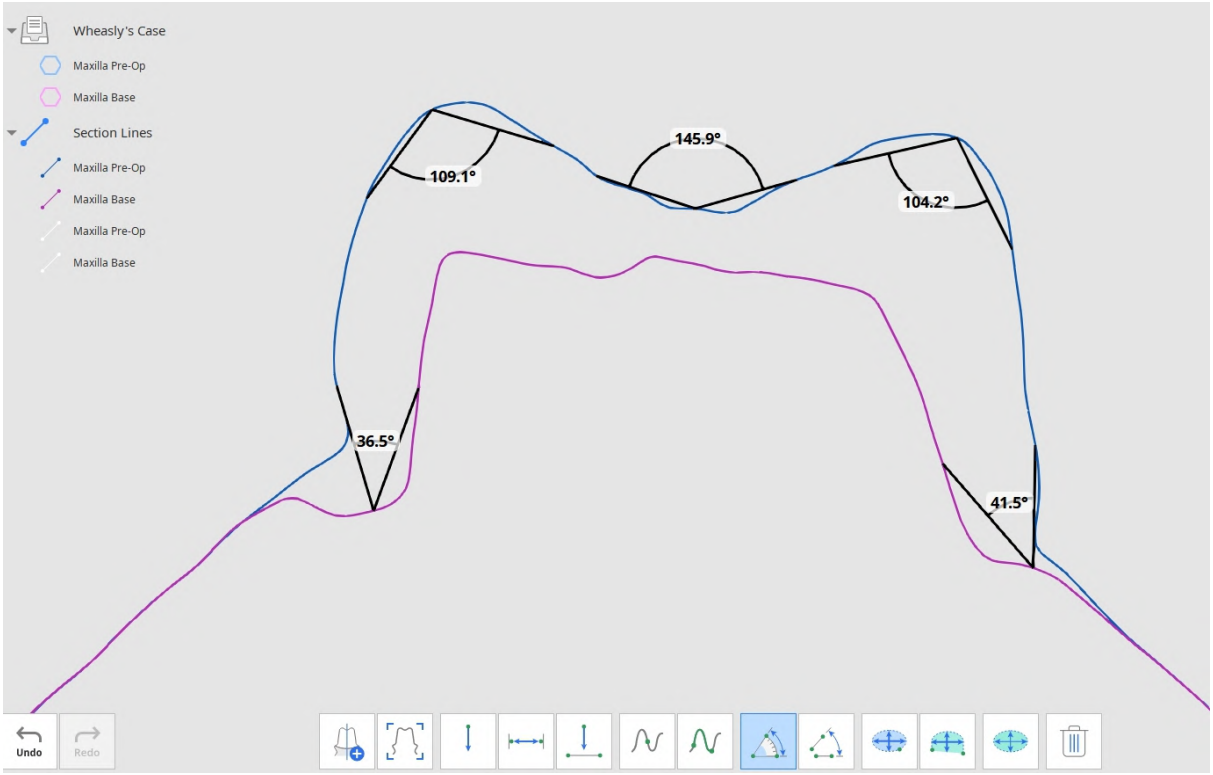
3. “View Perpendicularly to Section Line" to change the view. Click on any of the section lines to change the data view perpendicularly to them.



4. Measure Distance: You can measure the distance by using one, two, or three points.

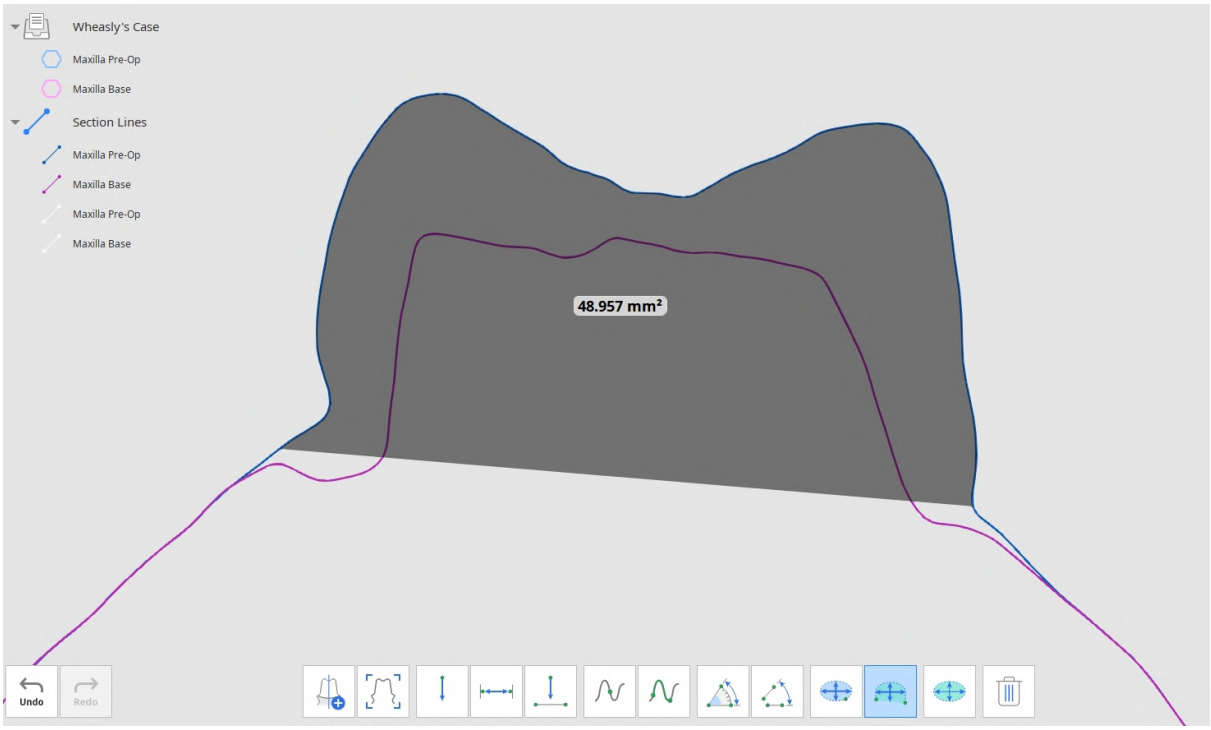


5. Measure Angle: You can measure the angle by using three or four points.



6. Measure Length: You can measure the length by using one or two points.

7. Measure Section Area: You can measure the section area by using one or two points.



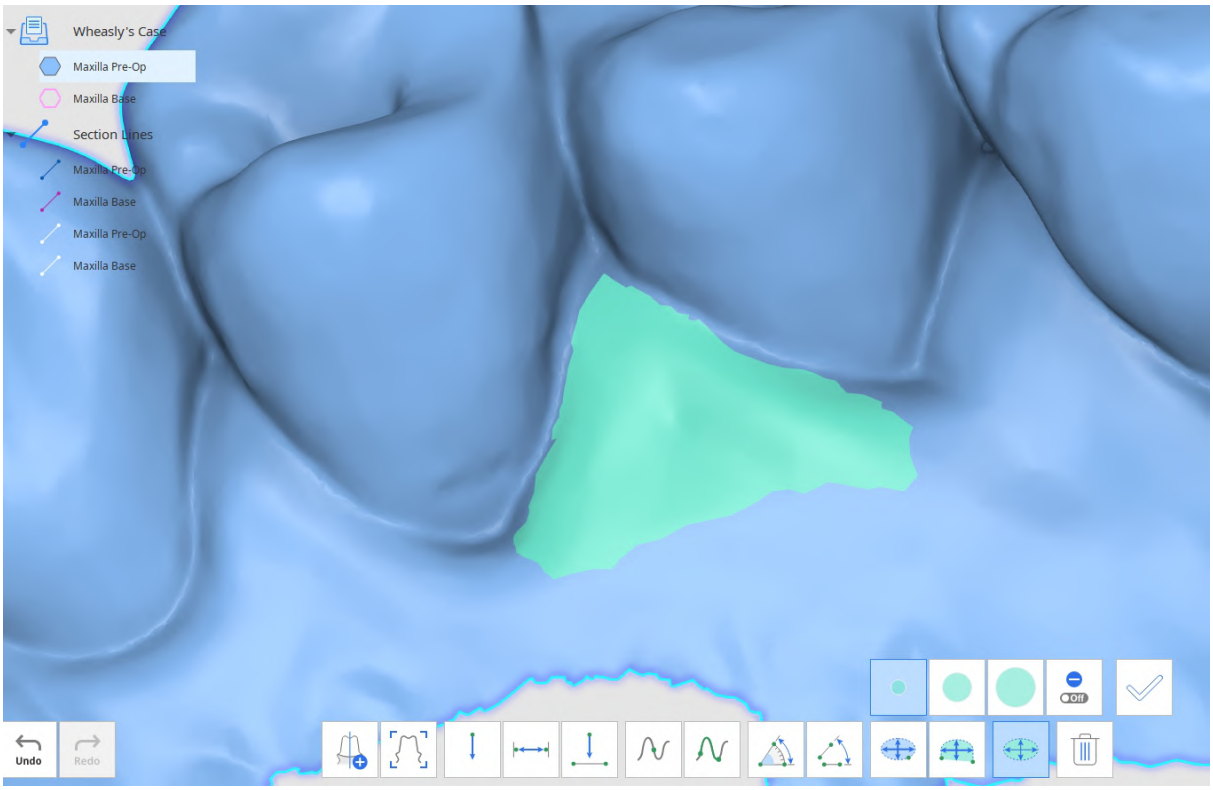
Note

The Measure Distance and Measure Length tools can also be used without creating sections.

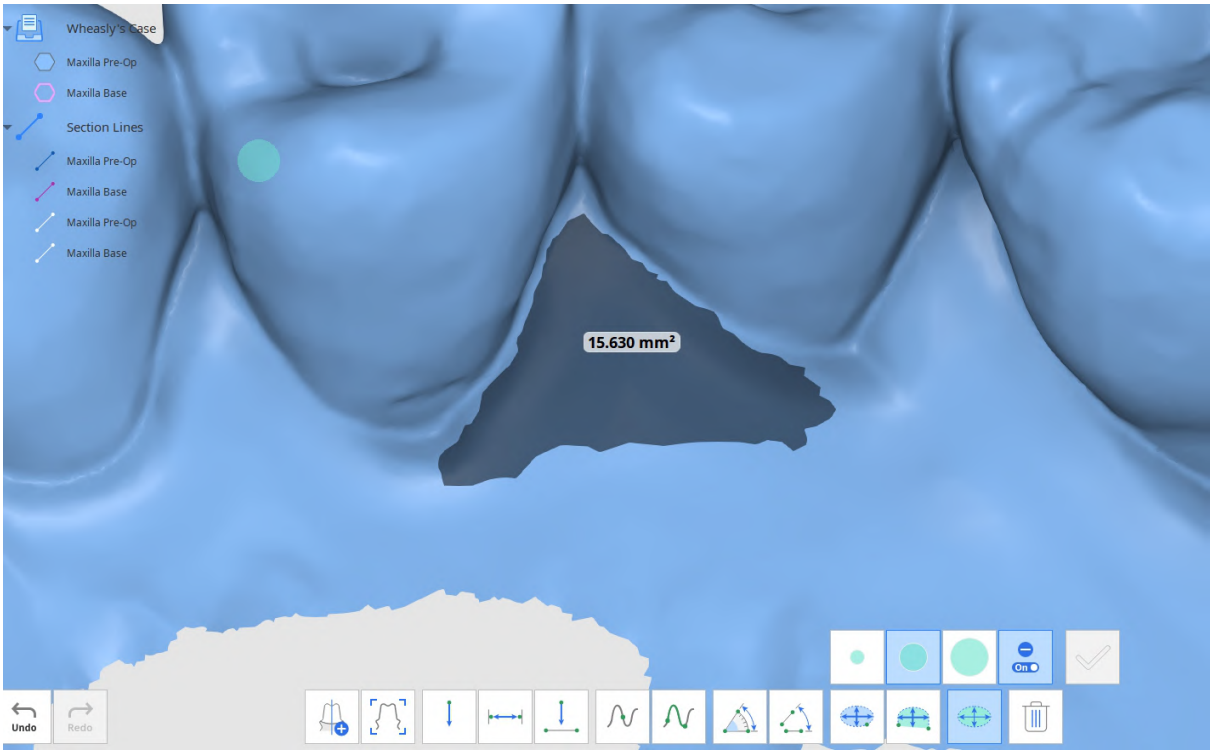
How to measure area

The measure area tools (Calculate Area by One Point/Calculate Area by Two Points/Calculate Area by Selection) allow you to measure the area by selecting the desired portion of the data.

1. Select the area of the 3D data to calculate.



2. Click “Apply” to measure the selected area.



Note

To remove measurements, click “Delete Measurement Results” and select any result on the data. You can also click and drag the mouse across all the measurement results to delete them.

Edit Mode

Edit Mode provides various tools to view and edit data.

The selected 3D data can be edited using different tools located at the bottom of the window.

Control the data to be displayed and its transparency using the Data Tree on the left.

Right-click on the data to export it as an attachment to Medit Link.

Toolbox: Main

	Reverse Data	Reverse data surface inside out.
	Trimming Tool	Use the various selection tools to select and remove unnecessary data.
	Bridge	Connect parts of the mesh data by creating a mesh bridge.
	Fill Holes	Fill empty spaces in the 3D mesh data.
	Sculpting	Make changes to data by sculpting it; add, remove, smooth or morph it.
	Offset	Set the offset distance from the existing data to create a new mesh.
	Thicken	Increase the thickness and direction of the selected mesh.
	Boolean	Perform the following boolean operations: Union, Cut, and Intersection.
	Duplicate	Create a new mesh by duplicating the selected area.
	Blockout Undercut	Fill and remove the unwanted undercuts. Adjust the undercut’s angle and set the insertion direction.
	Smooth Surface	Use the selection tools to select the surface you want to smooth. Adjust the level of smoothness.
	Mirroring	Create a symmetrical copy of the data.
	Combine	Combine two meshes into one without transforming the originals.

	Mesh Resolution	Change the mesh resolution by controlling the number of triangles that constitute the mesh.

Toolbox: Selection Tools

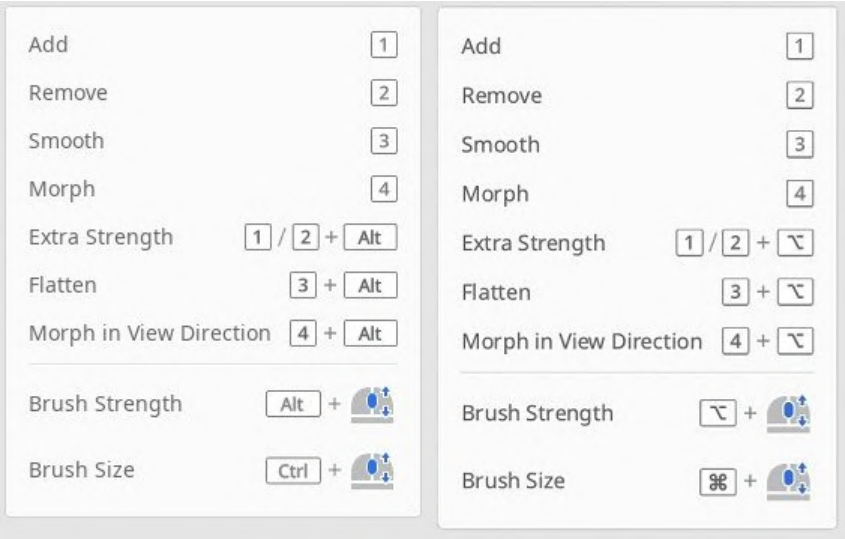
	Smart Teeth Selection	Automatically select all teeth of the arch, leaving out gingiva parts.
	Smart Single Tooth Selection	Automatically select the area of a single tooth, leaving out gingiva parts. Click, press, and drag the mouse on the tooth.
	Flood Fill Selection	Select the connected area based on mouse movement.
	Polyline Selection	Select all entities within a polyline shape drawn on the screen.
	Brush Selection	Select all entities on a freehand drawn path on the screen. Only the front face will be selected. The brush comes in 3 different sizes.
	Autofill Selected Area	When on, automatically selects all areas within a hand-drawn shapes.
	Shrink Selected Area	Reduce the selected area each time you click the button.
	Expand Selected Area	Expand the selected area each time you click the button.
	Invert Selected Area	Invert the selection.
	Deselection Mode	When on, this function allows to deselect data using the existing tools.
	Clear All Selection	Clear all selections.
	Delete Selected Area	Delete the selected area.

Toolbox: Sculpting Tools

	Add	Use the mouse to add on parts of the data.
	Remove	Use the mouse to remove parts of the data.
	Smooth	Use the mouse to smooth parts of the data.
	Morph	Use the mouse to morph parts of the data.
	Strength	Adjust the strength for each of the tools. Hotkey: Alt/Opt + Mouse Wheel
	Brush Size	Adjust the brush size for each of the tools. Hotkey: Ctrl/Cmd + Mouse Wheel

Note

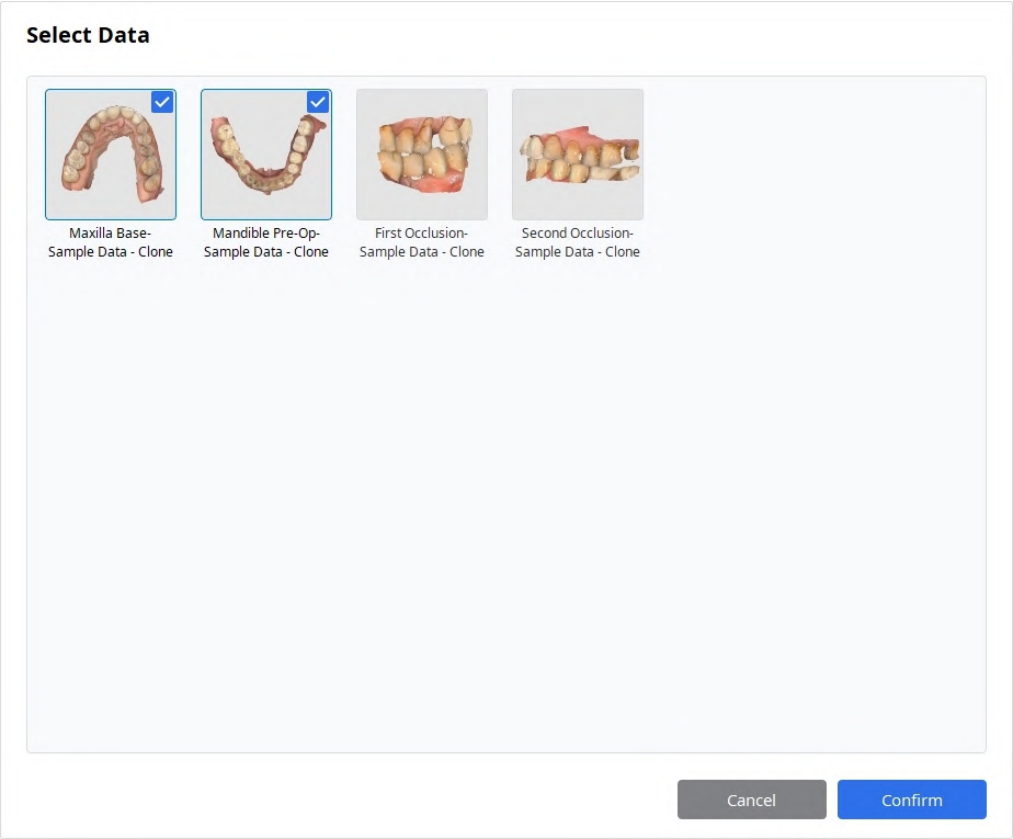
Press “Tab“ to switch to the right side tool. Press “Shift + Tab“ to switch to the left side tool.



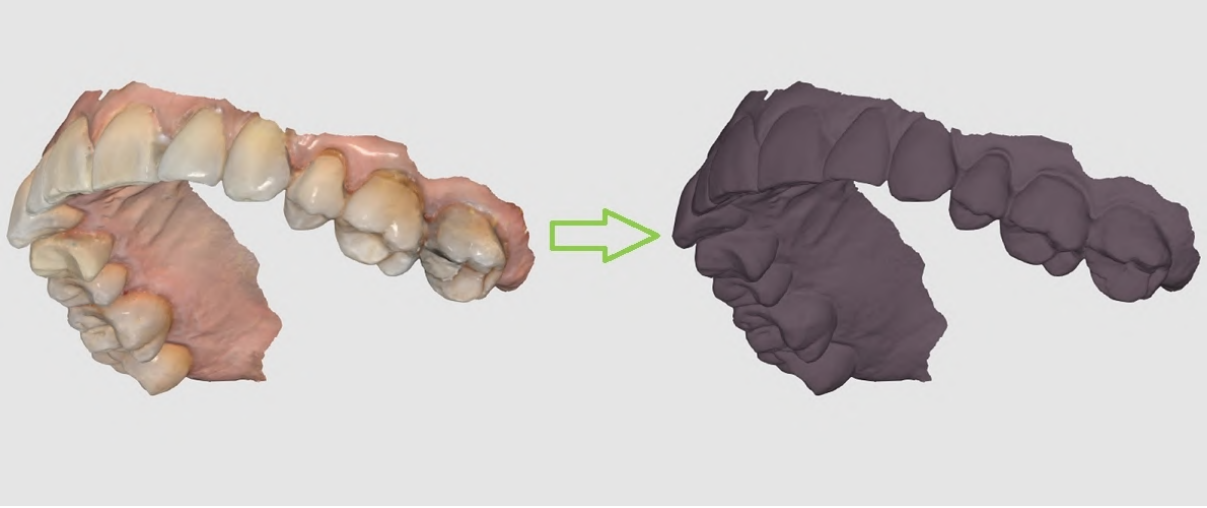
How to reverse data

You can reverse data inside-out using the “Reverse Data” feature.

Click on the “Reverse Data” icon at the bottom of the screen, and in the new dialog window, select your target data. You can choose more than one data for reversing.



Once selected, click “Confirm” to see the result.

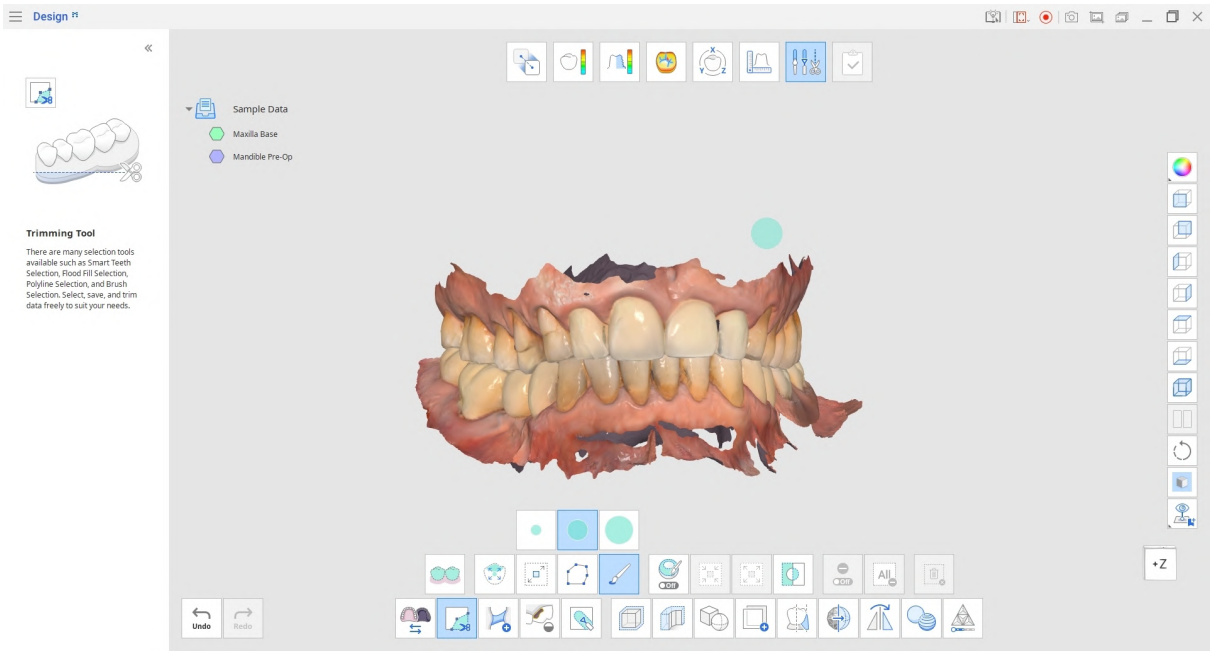


How to use Trimming Tools

You can use various tools to select the area you would like to trim.

There are many selection tools available (from left to right): Smart Teeth Selection, Smart Single Tooth Selection, Flood Fill Selection, Polyline Selection, and Brush Selection.

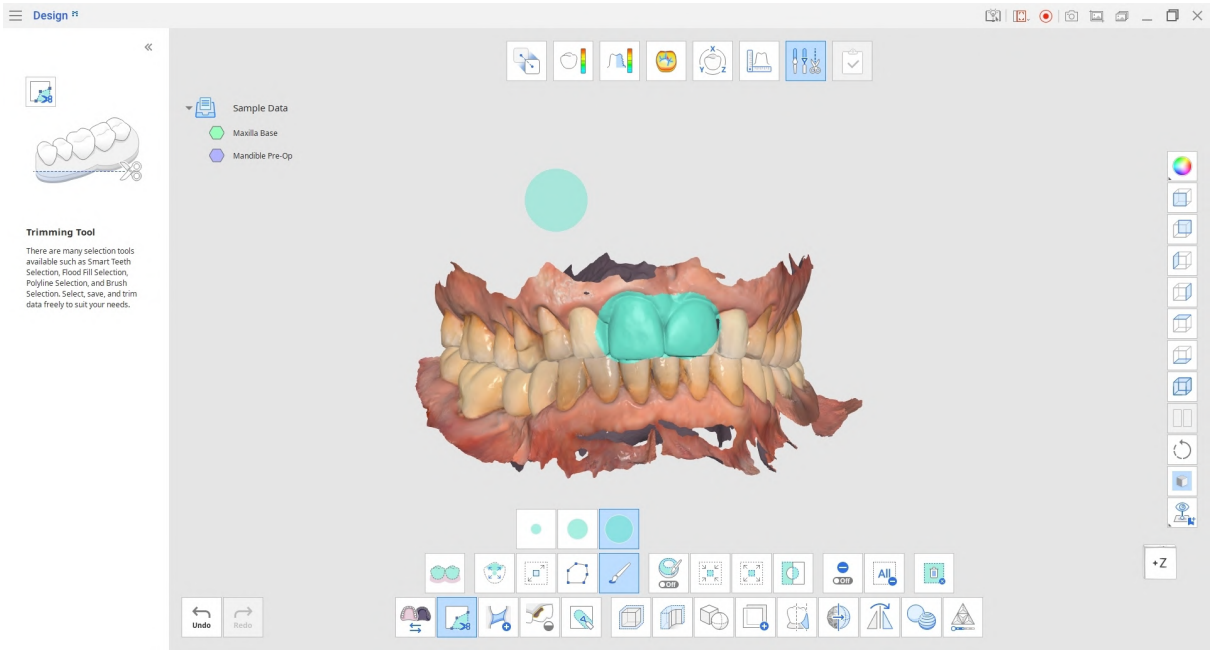
Smart Teeth Selection	Automatically selects all teeth in the arch, leaving out the gingiva. This selection tool is useful when you want to quickly select all teeth.
Smart Single Tooth Selection	Makes selecting individual teeth easier. Click and drag over the area you want to select and it will only select the tooth area, leaving out the gingiva.
Flood Fill Selection	Like the name suggests, fills and selects the area that is clicked and dragged over. Move the mouse to expand the selection.
Polyline Selection	Selects areas within the polyline shape drawn on the screen. Left click to draw the polyline shape and right click to close the shape and finish the selection.
Brush Selection	Offers three different brush sizes so you can freely select the data.

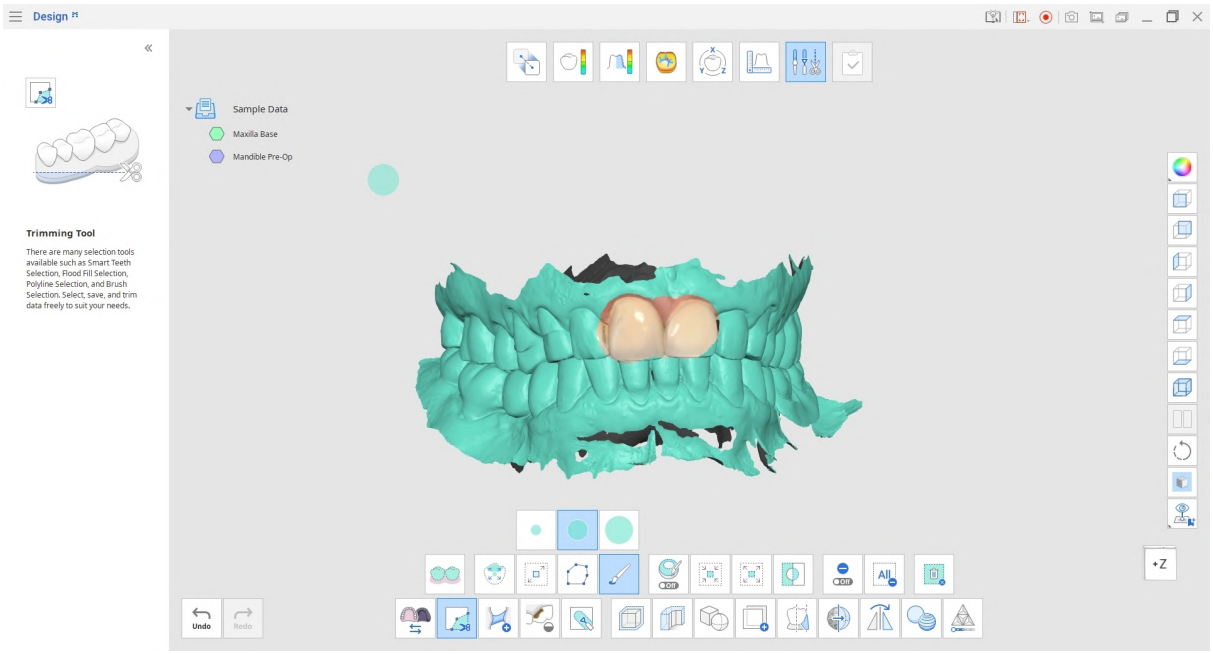


Note

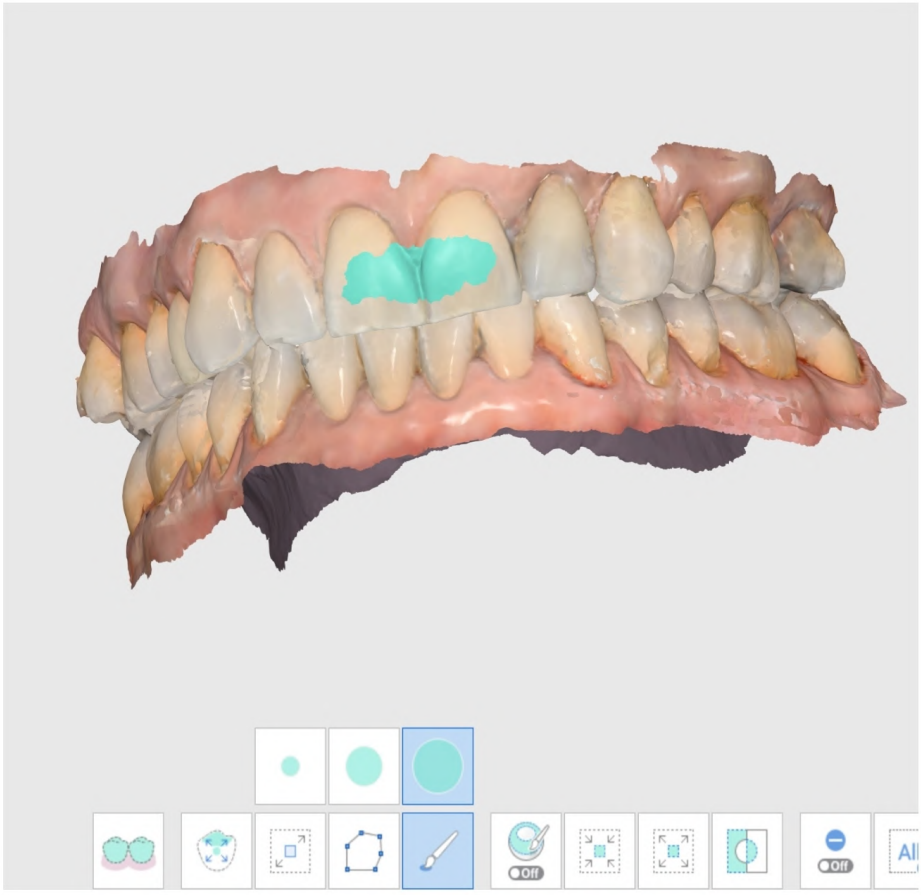
”Polyline Selection” selects all areas within the polyline shape drawn on the screen, while “Brush” selects only the front- facing data.

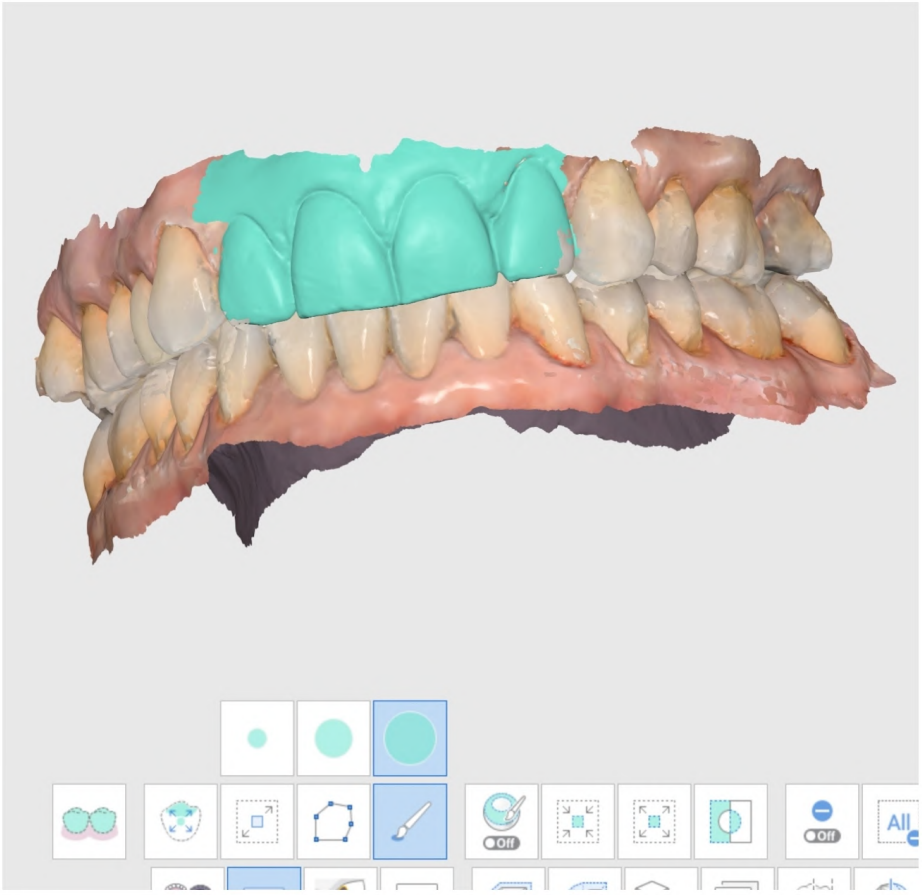
Revert the selection by clicking “Invert Selected Area.”





Reduce or expand the selected areas using the “Shrink Selected Area” or “Expand Selected Area” tools.



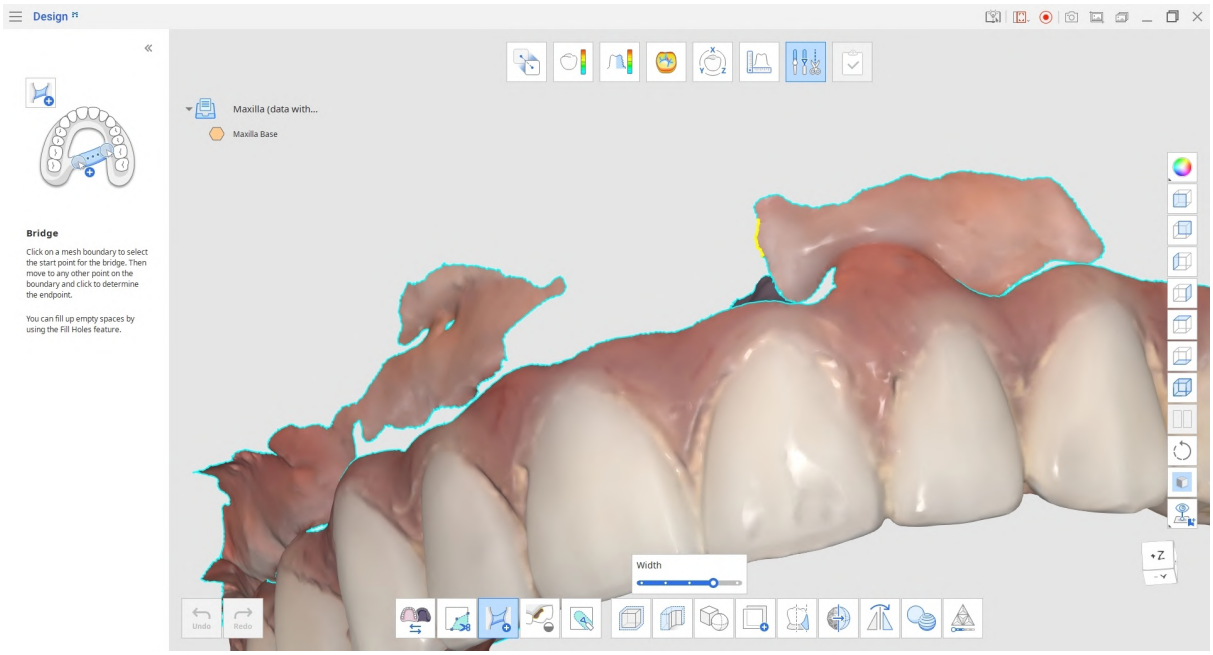


Click "Delete Selected Area" to delete the entire selected area.

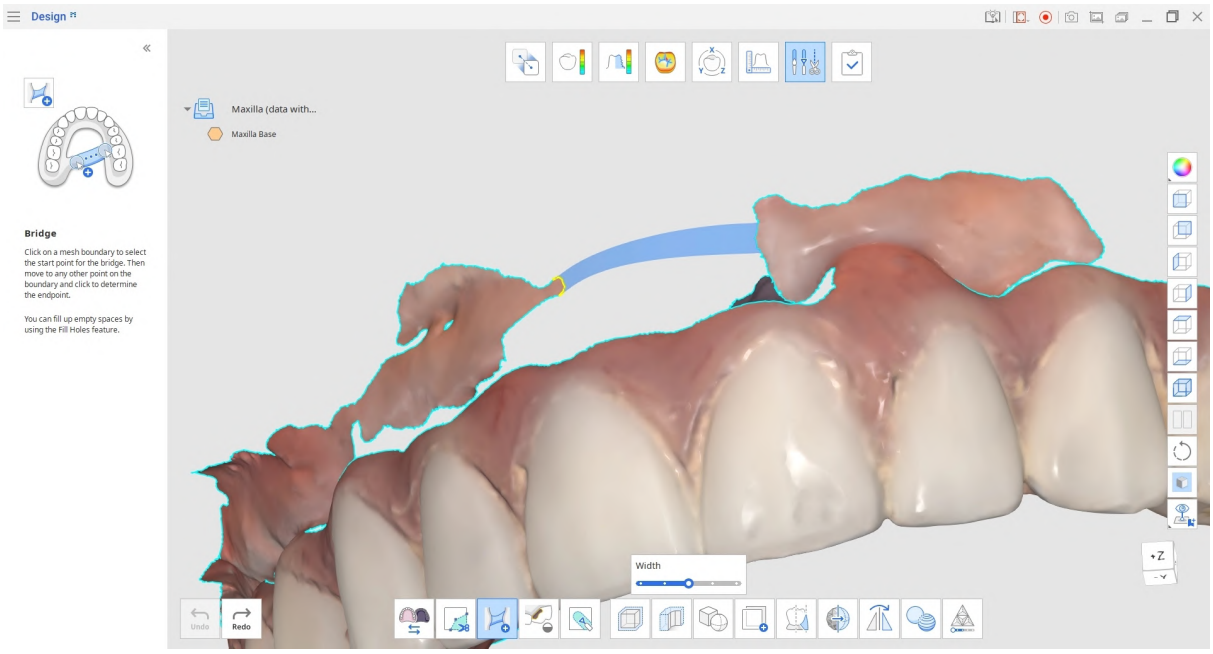
How to create mesh bridge

"Bridge" creates a stripe of new mesh that restores the connection between the separated parts of the data.

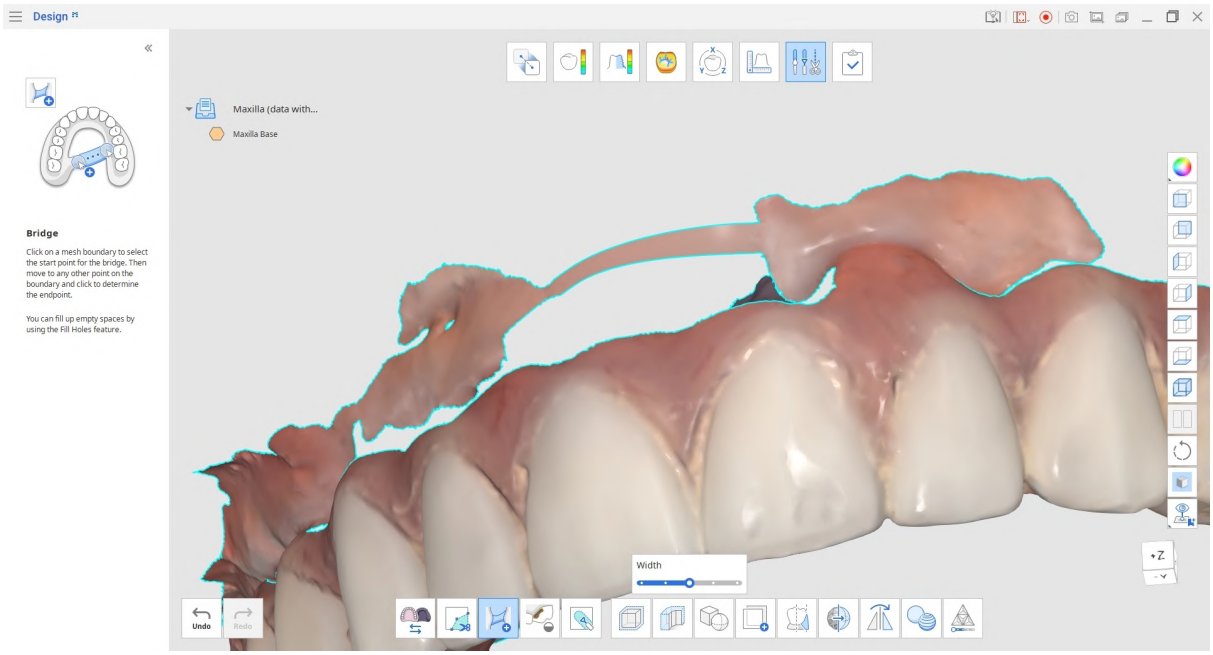
Select the “Bridge” tool at the bottom of the screen and zoom in on the separated data element. Adjust the “Width” slider to determine how broad the created mesh stripe will be.



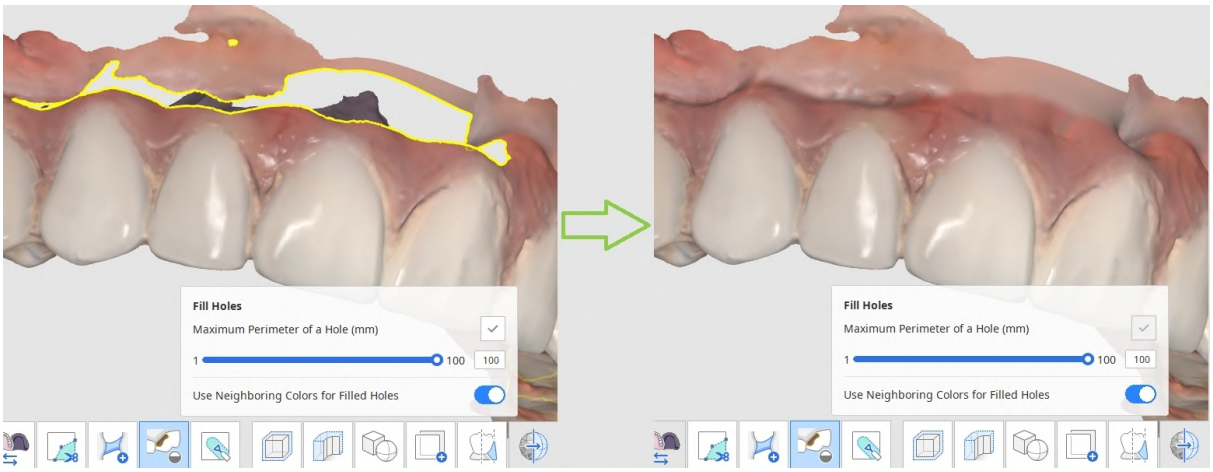
Hover the mouse over the boundary of the mesh to find the start point for the bridge; it will be displayed in yellow. Click on the boundary to select the start point, and then move the mouse to where you want the bridge to end.



Click again to create the mesh bridge.



Once you have an enclosed boundary, you can use the "Fill Holes" feature to fill gaps.



How to fill holes in data

You can use "Fill Holes" to fill in the data holes left from scanning or any sparse areas.

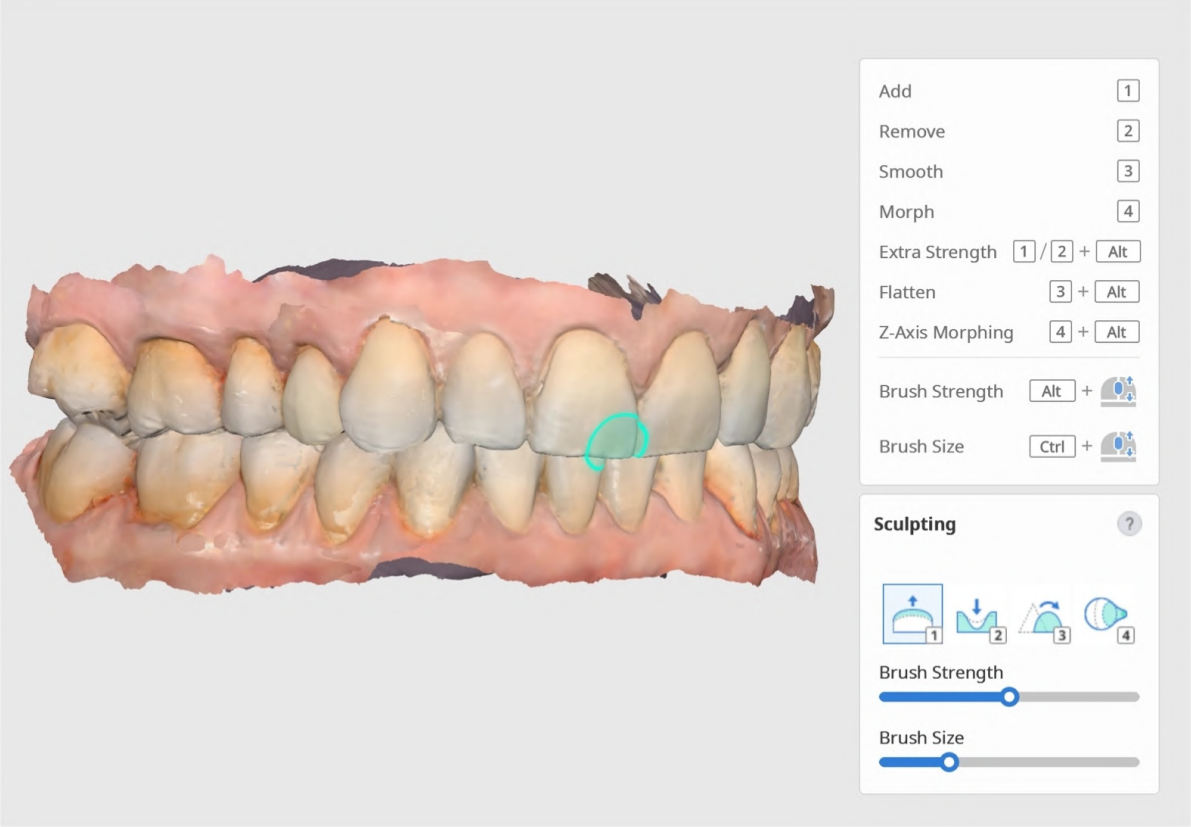
Maximum Perimeter of a Hole (mm): Set the maximum size of holes (mm) to fill. Note that any holes exceeding the size you set will not be filled.

Use Neighboring Colors for Filled Holes: When the “Use Neighboring Colors for Filled Holes” is turned on, the program will use the colors around the holes for filling. Otherwise, the filled areas will be grey.

Click “Apply” to apply the changes and see the result.

How to sculpt data

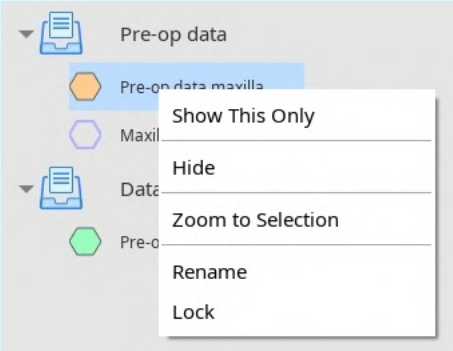
Sculpt data using tools such as "Add," "Remove," "Smooth," and "Morph.”



There are shortcut keys available so you can easily switch back and forth the tools. Control the brush strength and brush size using the sliders.

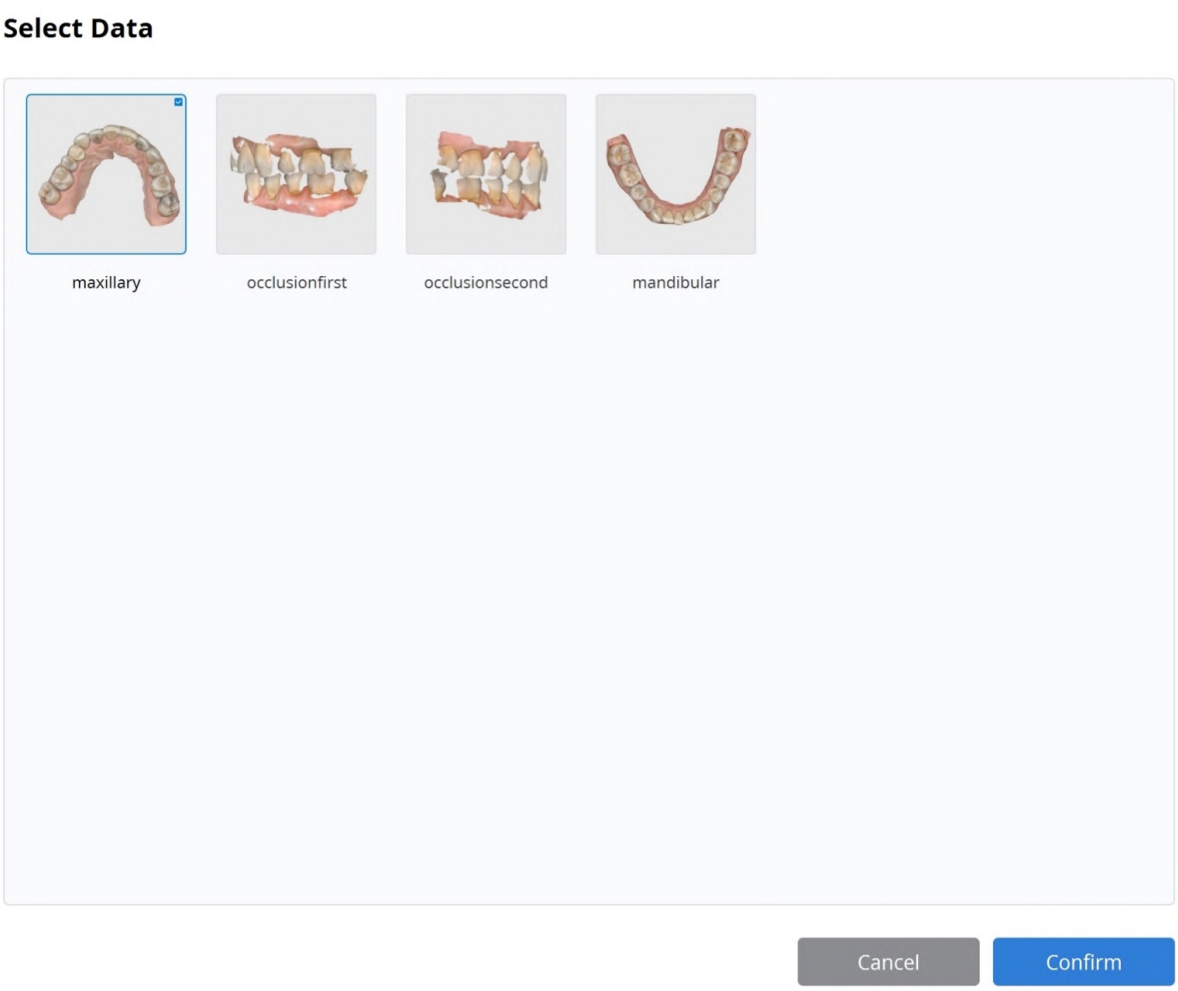
Tip

When working with multiple data, you can lock desired data to preserve it from changes during sculpting (without hiding or moving it). Right-click the data or data group in the Data Tree and select the “Lock (Unlock)” command in the context menu. When locked, a lock icon will be displayed near data name.



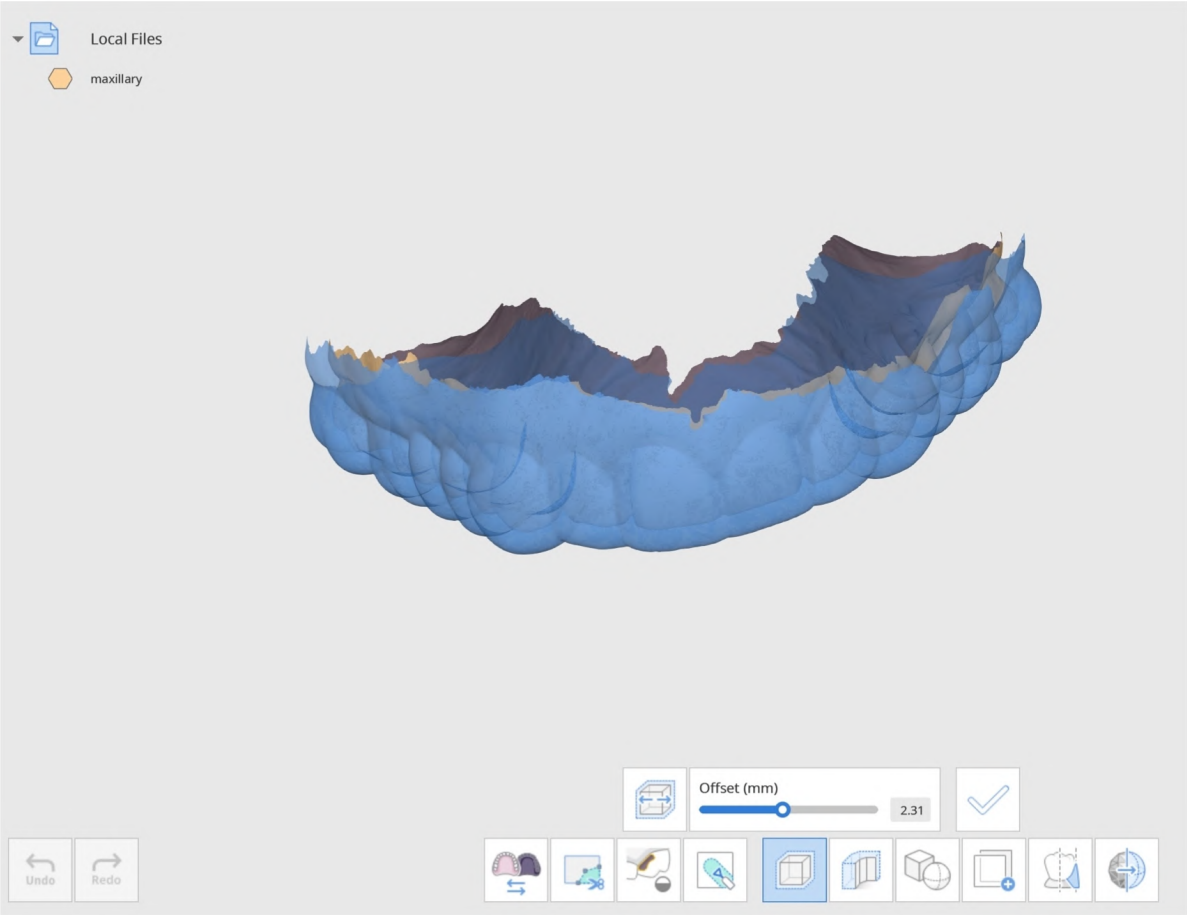
How to set offset

Click on the “Offset” icon to open the dialogue window.

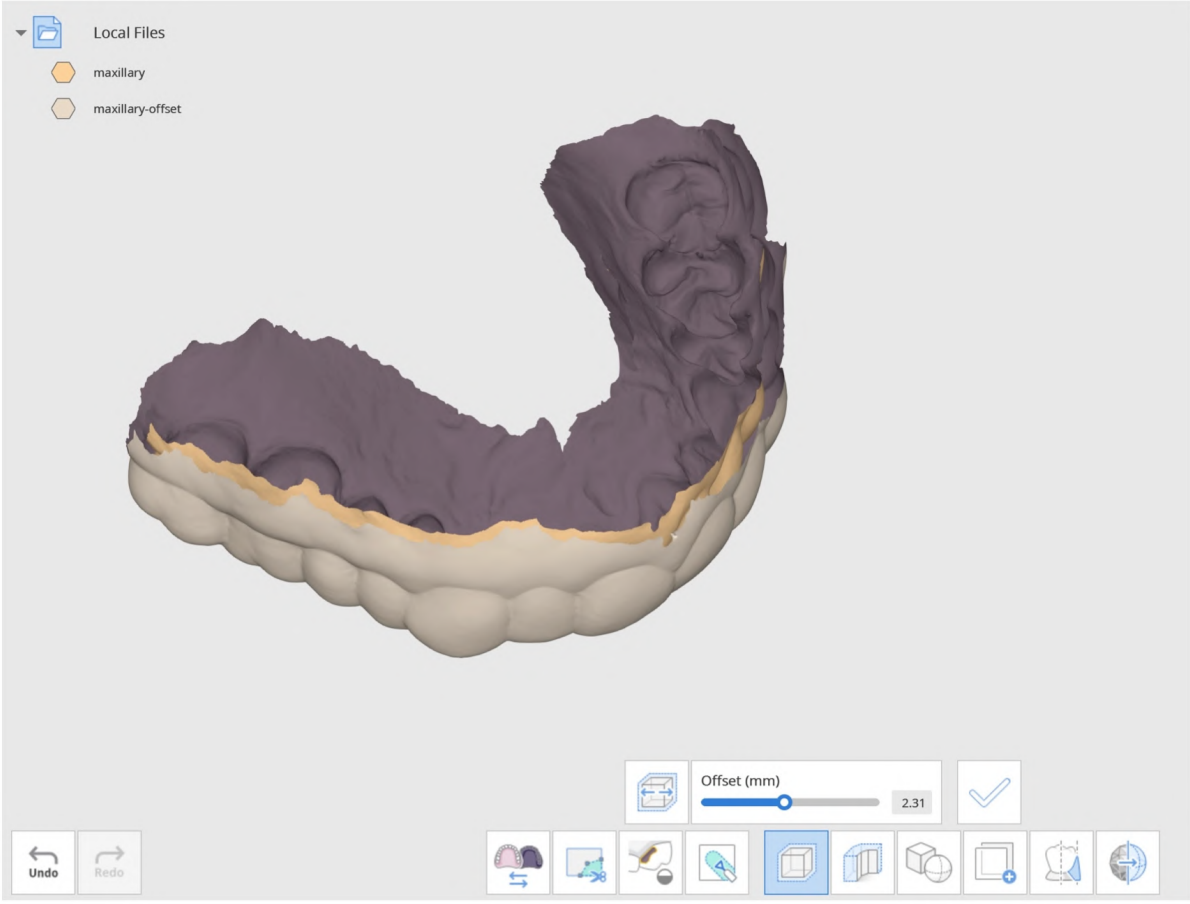


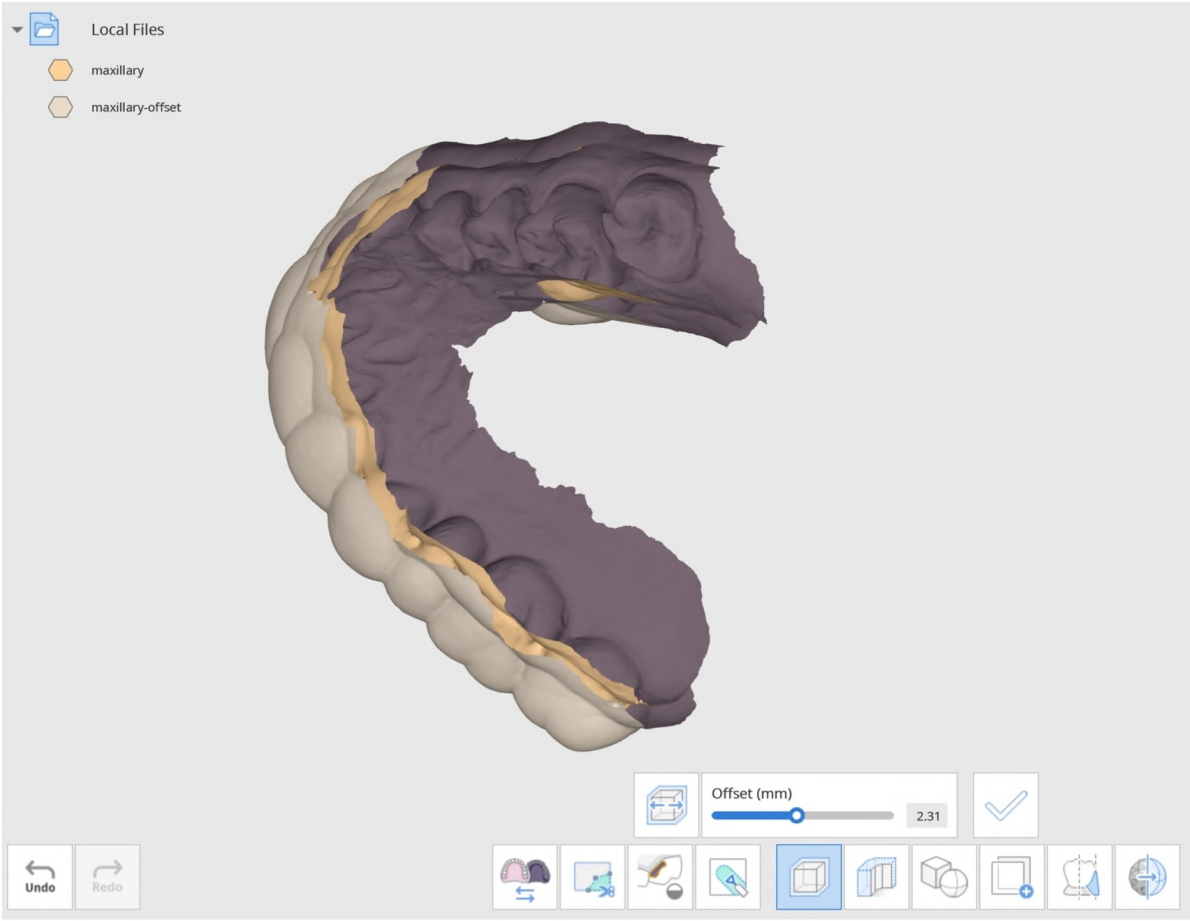
Set the offset distance from the existing data using the slider. You can also input a specific number (mm).

You can also change the offset direction to either inside or outside by clicking on "Inside/Outside" located next to the slider.



Click "Apply" to apply the changes made. This will create a new offset mesh.


Local Files
maxillary
maxillary-offset
Offset (mm)
2.31
Undo
Redo


Local Files
maxillary
maxillary-offset
Offset (mm)
2.31
Undo
Redo

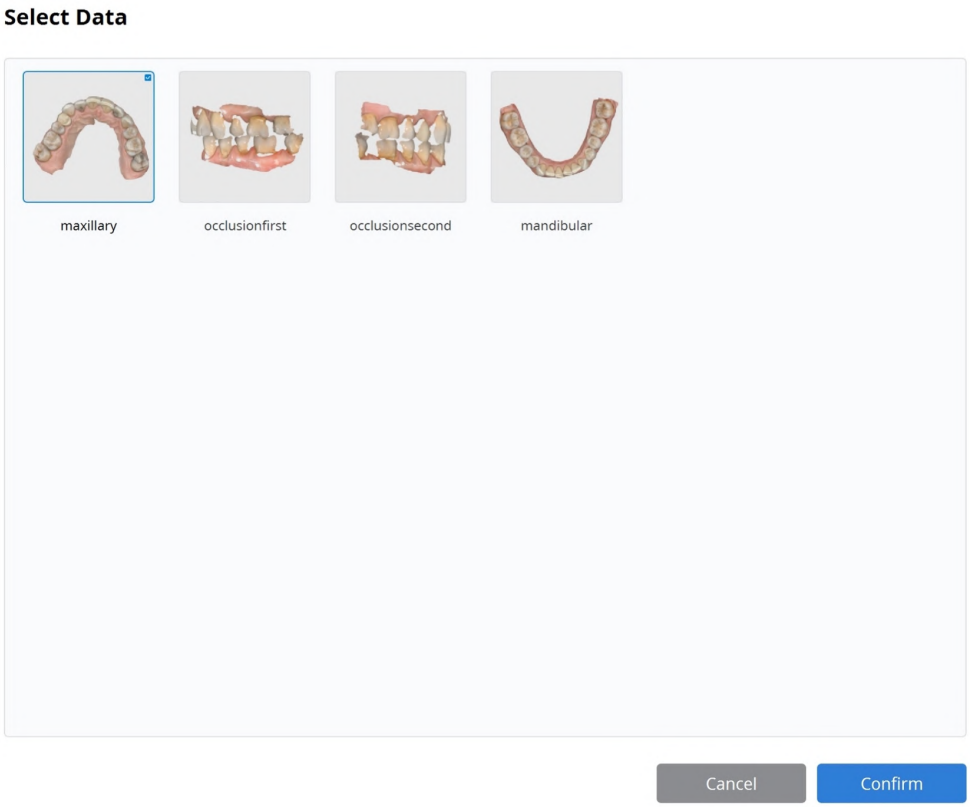
New offset mesh created.

> **Tip**
>
> Change “Data Display Mode” on the right side to “Monochrome” to easily spot the changes made.

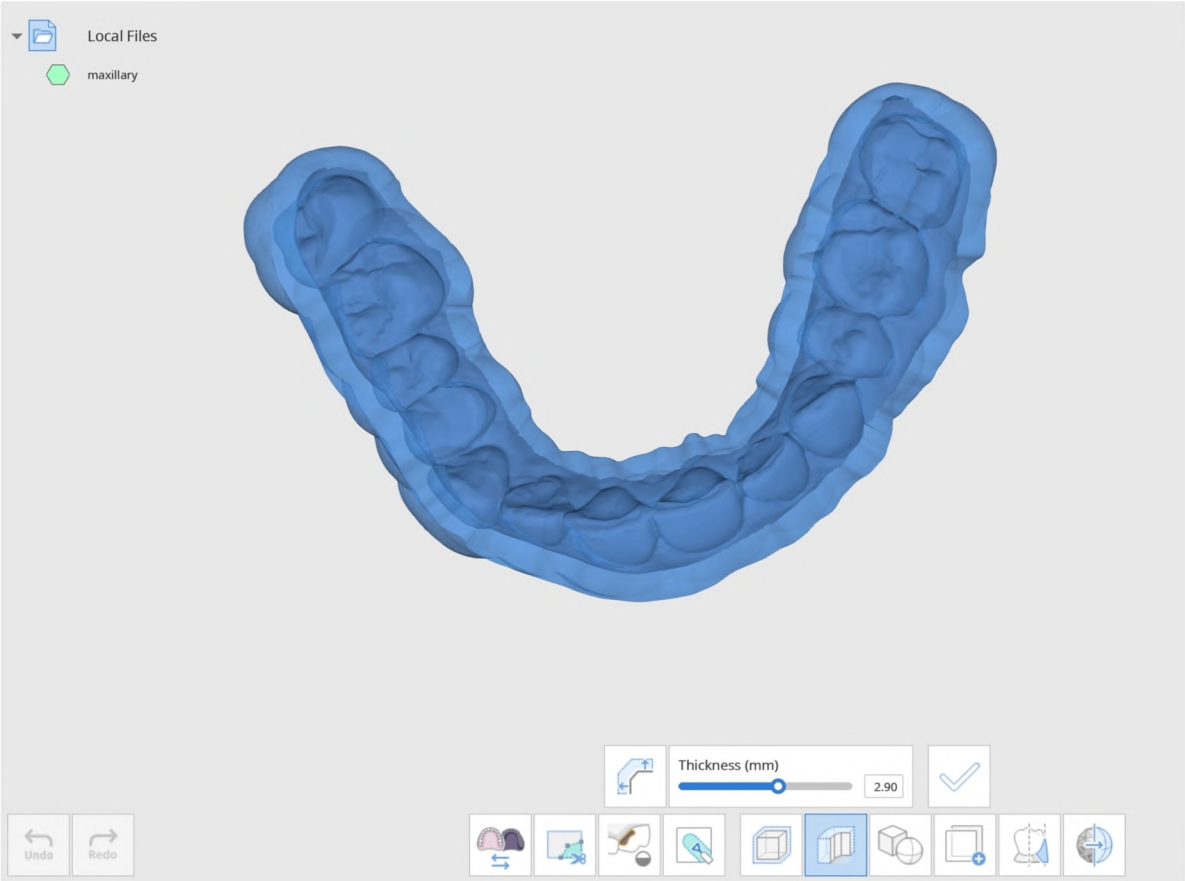
How to make data thicker

Click on the “Thicken” icon to select the data. You can click to select individual data or drag to quickly select multiple data at once in the dialogue window.

> **Note**
>
> Trim the data with “Trimming Tools” before thickening for neater edges.



Click “Confirm” to finish your data selection.

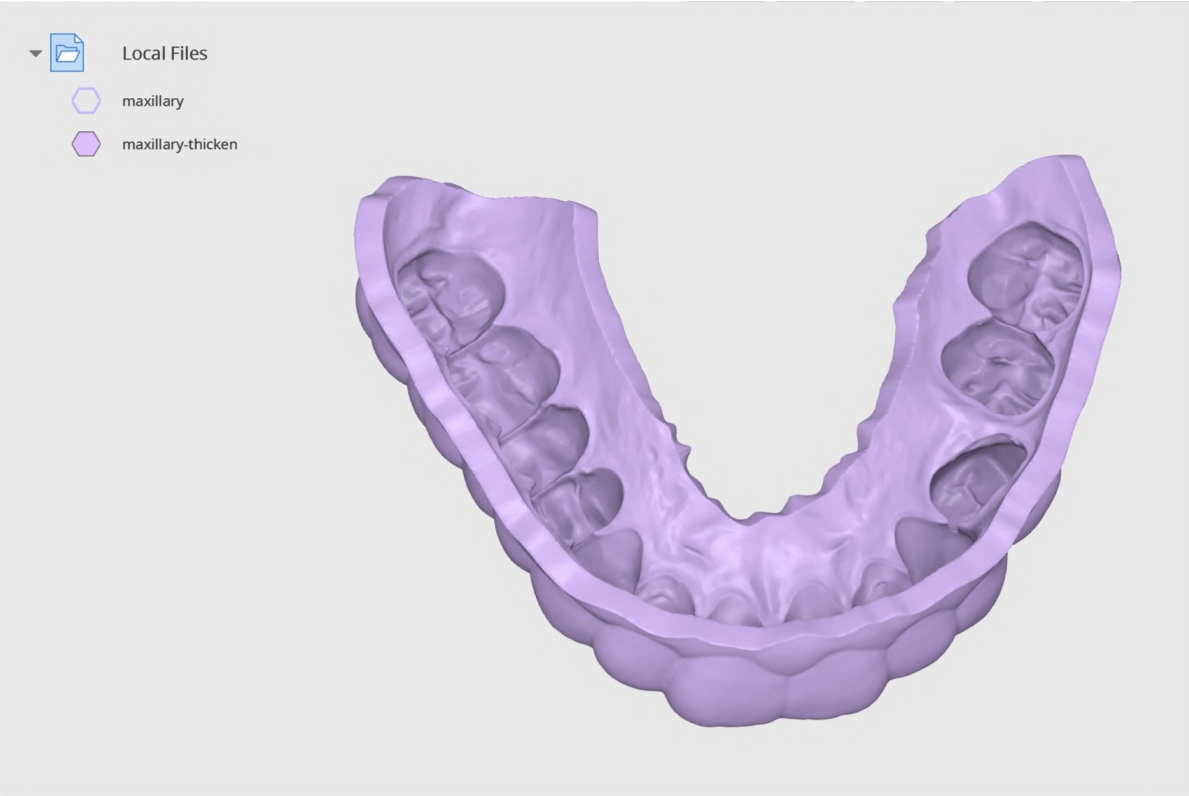


You can control the thickness (mm) of the mesh using the slider below. The thickness can range from 0.00 to 5.00 mm.

You can also change the thickness direction by clicking on the "Change Thickness Direction" next to the thickness slider.

Clicking on the icon will change the thickness direction of the mesh to either outside, inside, or both sides; each click will change the direction.

When you are finished and satisfied with the mesh's thickness, click "Apply" to apply the changes made.



Note

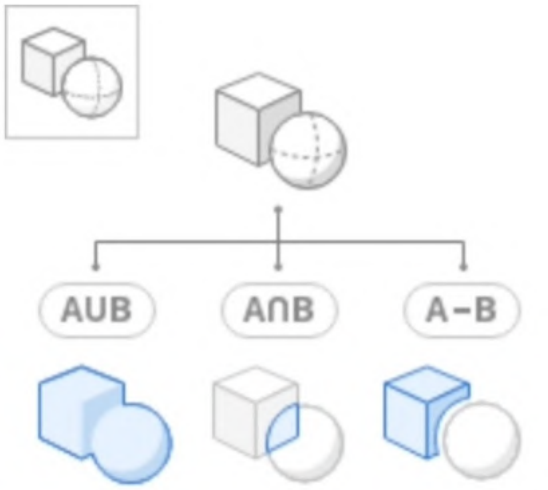
Change “Data Display Mode” on the right side to “Monochrome” to see easily spot the changes made.

How to perform boolean operations

There are 3 boolean operations provided: Union, Cut and Intersection.

Before performing boolean operations, you can move and rotate the data using your mouse.

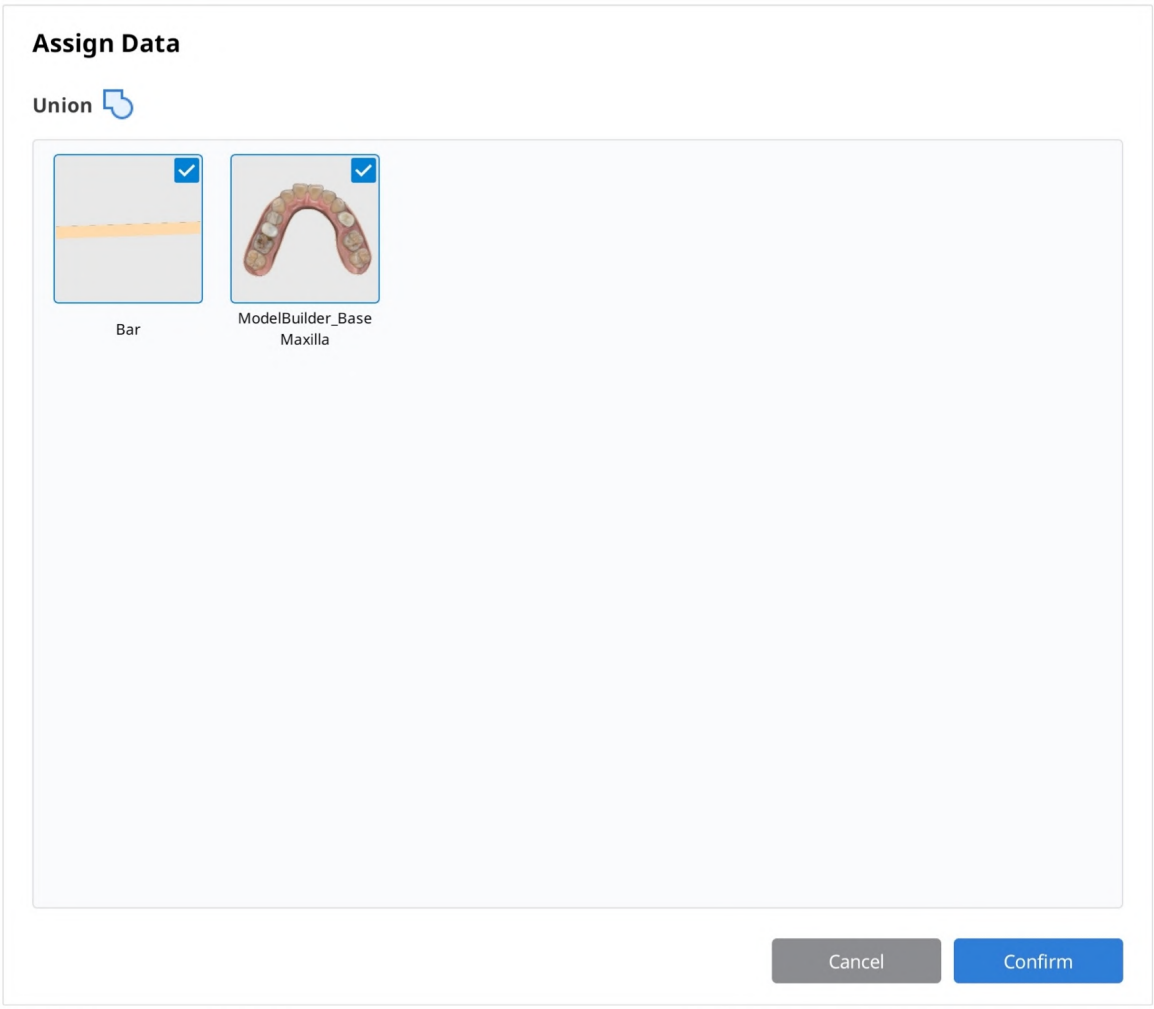
- Click and hold the mouse wheel to move the data around.
- Right-click to rotate the data.



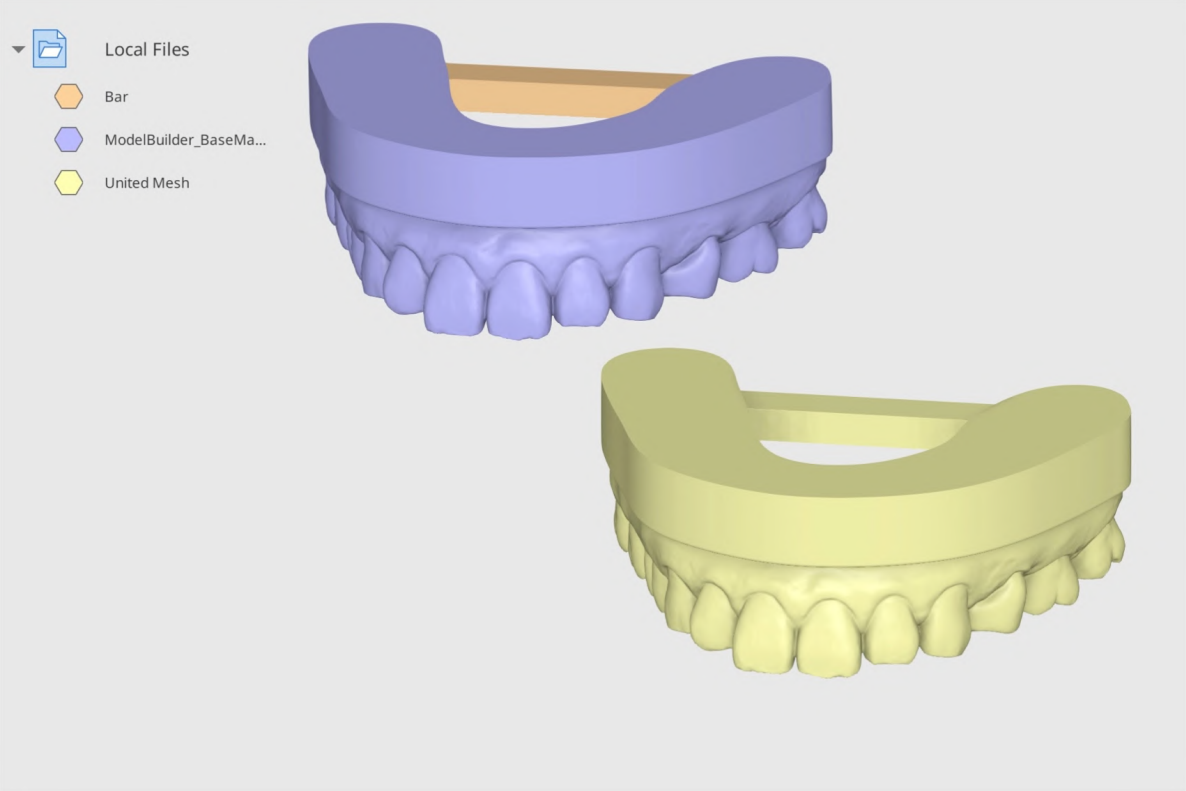
Union

Combine two or more meshes into one.

Click on the “Union” icon to open the dialogue window. The “Assign Data” dialogue window will pop up. Select two or more data to combine together.

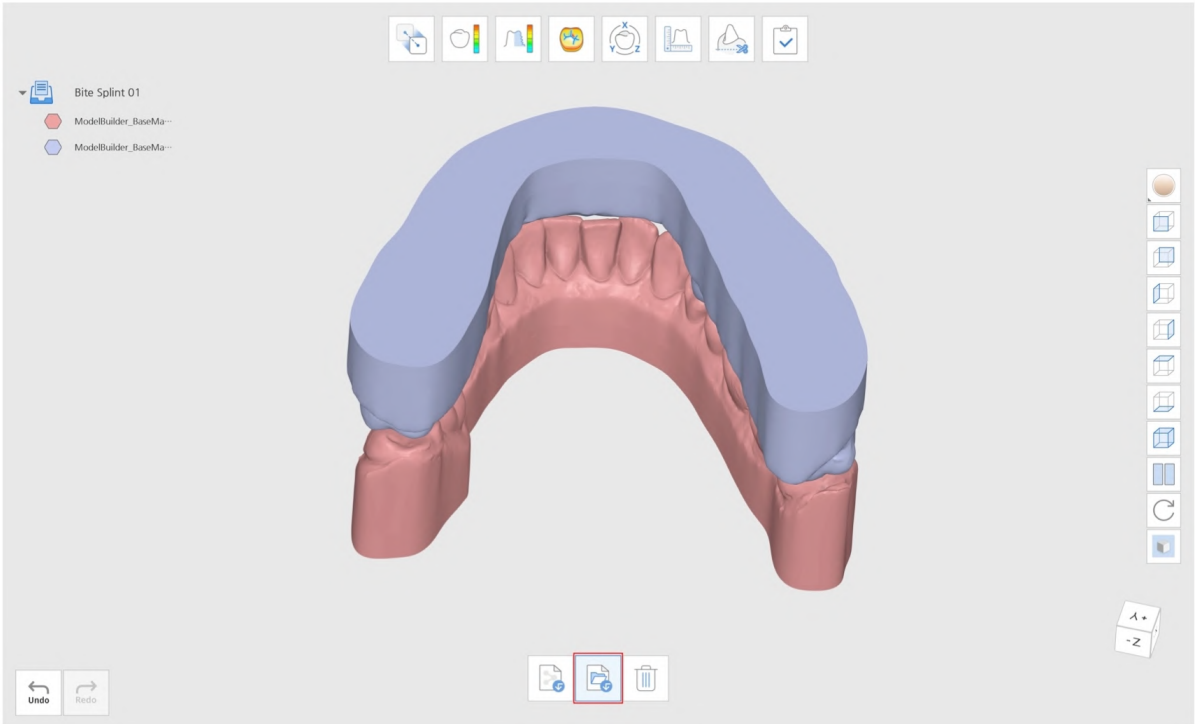


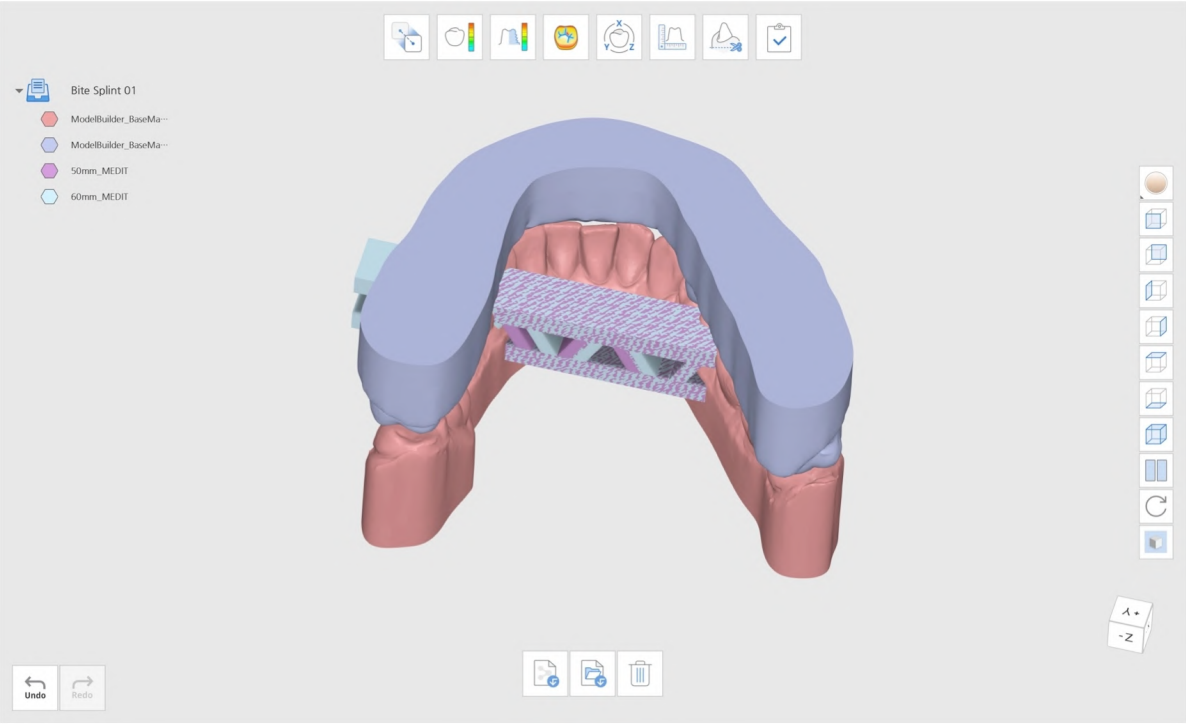
Select target data and click "Confirm" to combine the data. Once the data is successfully combined, you will see a new mesh file, "United Mesh" created in the Data Tree. Use the Data Tree to easily view and hide data.



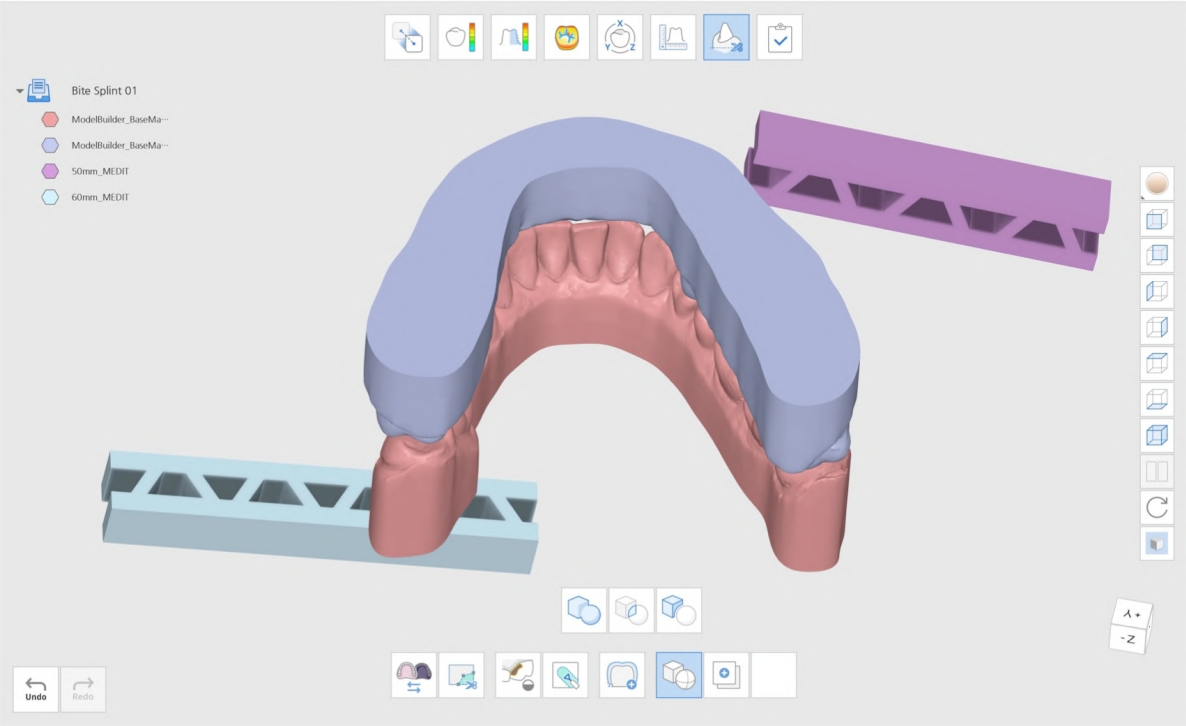
Union Example

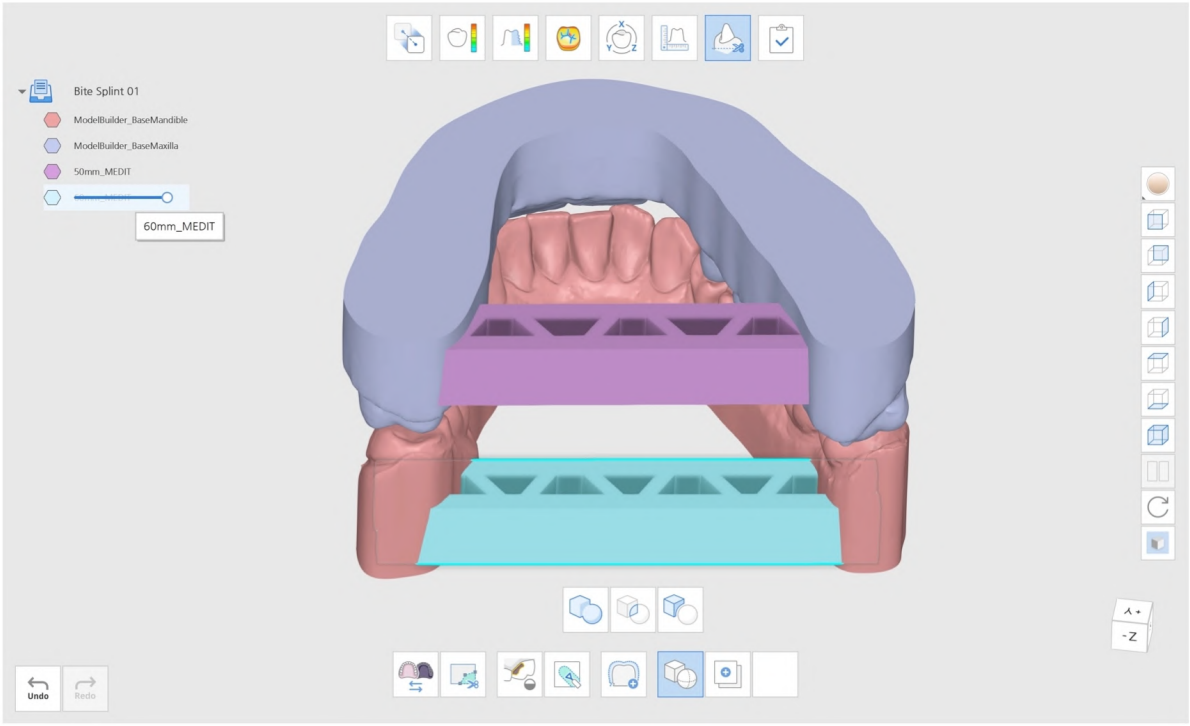
You can use the "Union" feature to attach support bars to the model. The model below was designed using Medit Model Builder. Import this data from Medit Link, then open in Medit Design. Import the support bar from your PC by clicking "Import Local Files."



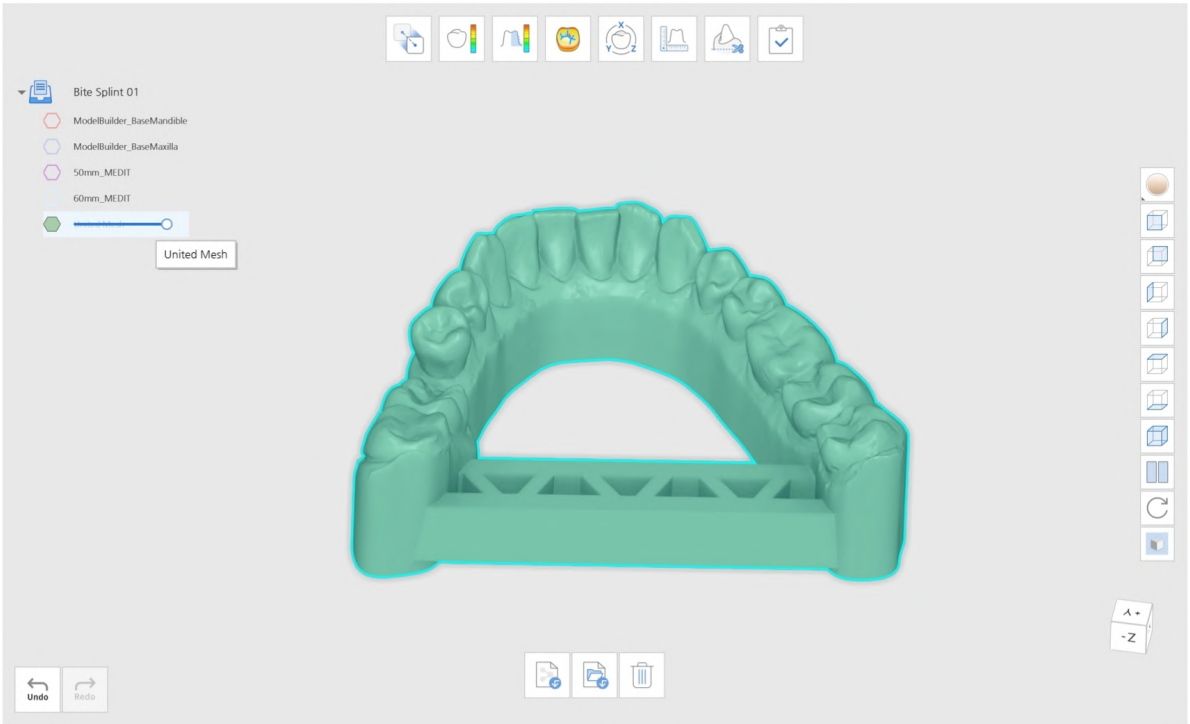


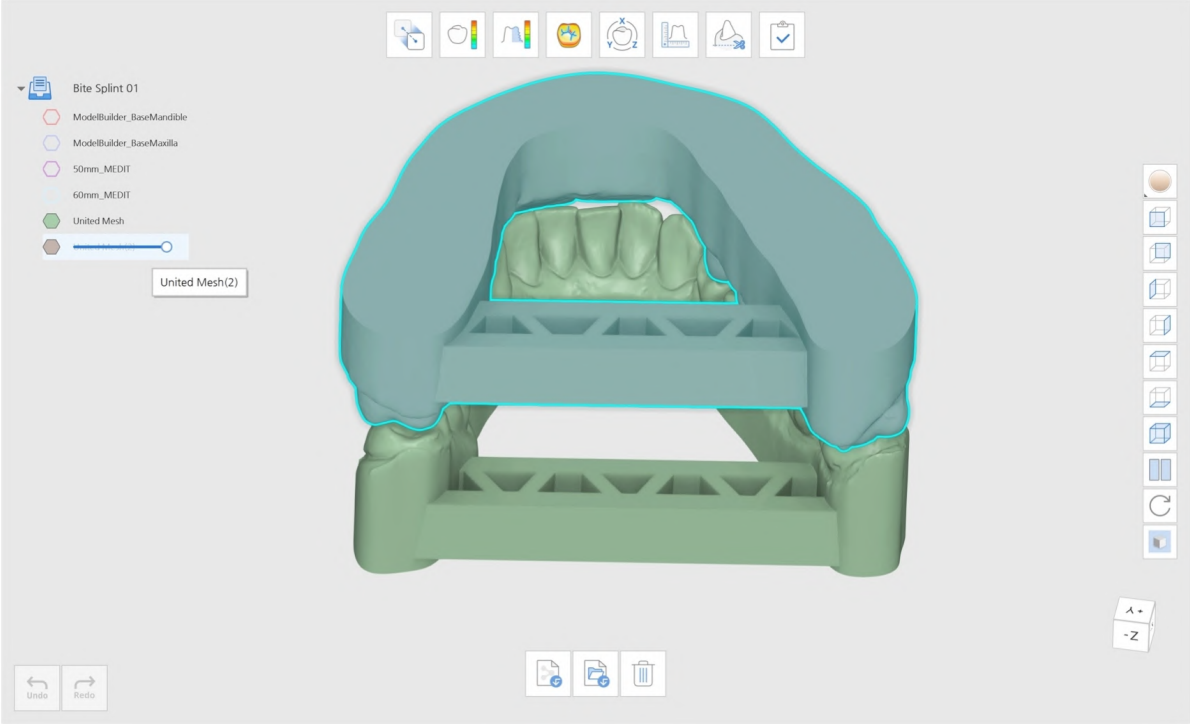
Go to Edit Mode and click "Boolean." Arrange the support bars accordingly.



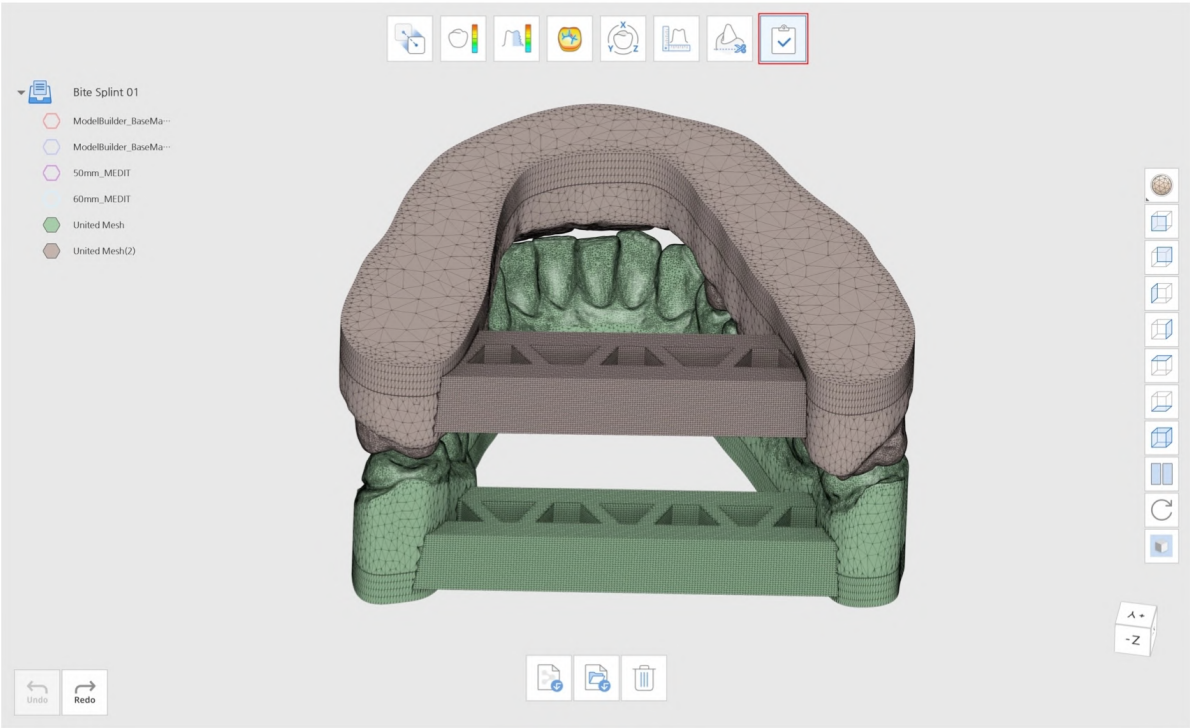


Then, click "Union" to combine the models together. Combine the maxilla data with the support data to create a new, united mesh model. Repeat the same for the mandible.

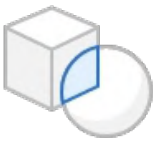




Click "Complete" to finish and select how you'd like to save your data.

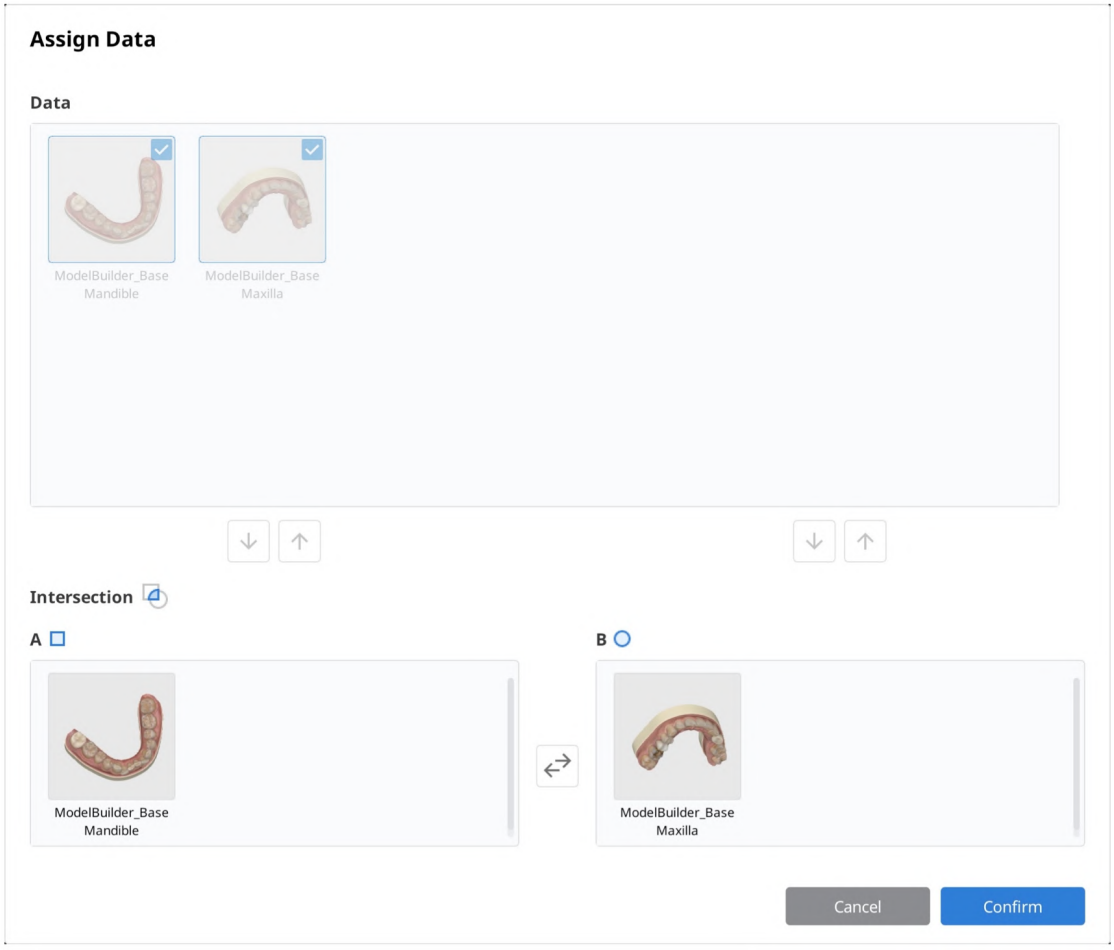


Intersection

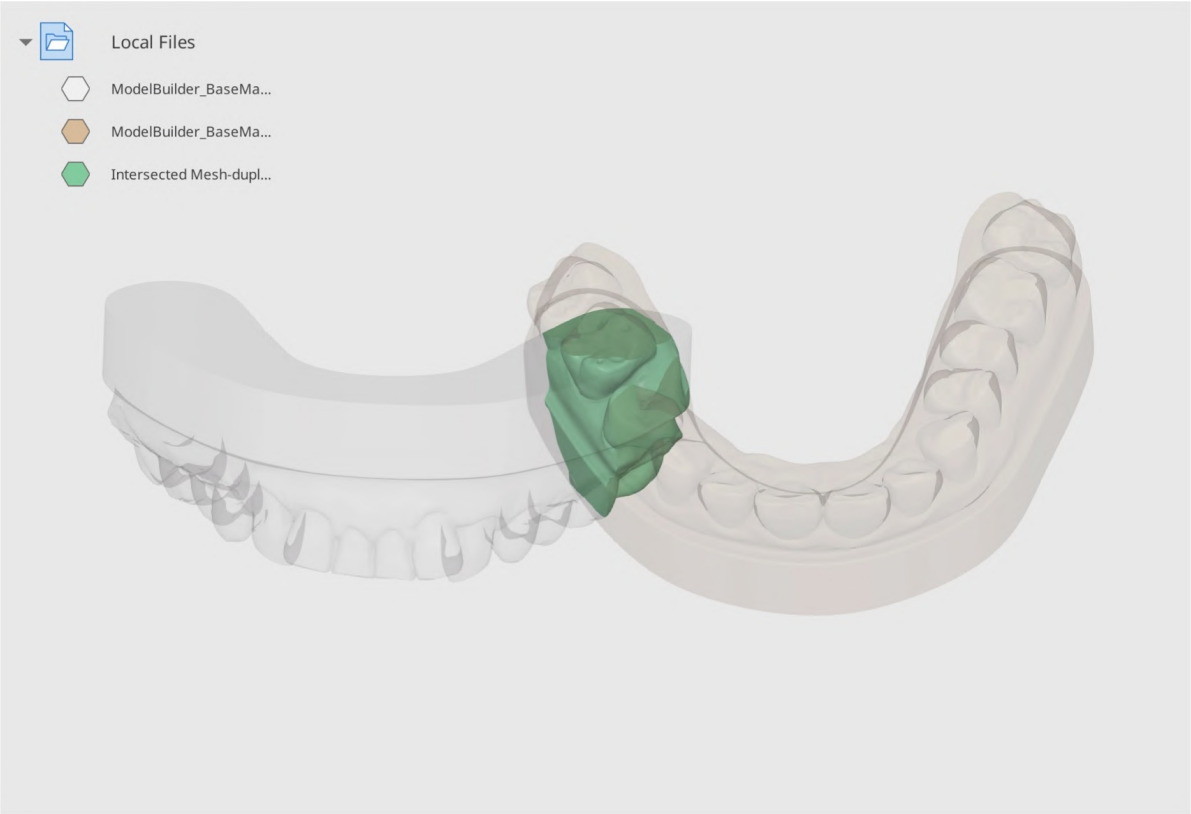


Extract the intersecting mesh data.

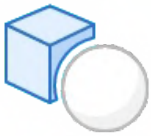
Click on the “Intersection” icon to open the dialogue window. The "Assign Data" dialogue window will pop up. Assign the data to A and B using the arrows. You can also drag and drop the data to A and B.
If you have assigned them incorrectly, you can simply swap the data by clicking "Swap A and B.”



Click "Confirm" and wait for the creation of a new data file. You can see that the intersecting mesh data has been extracted.



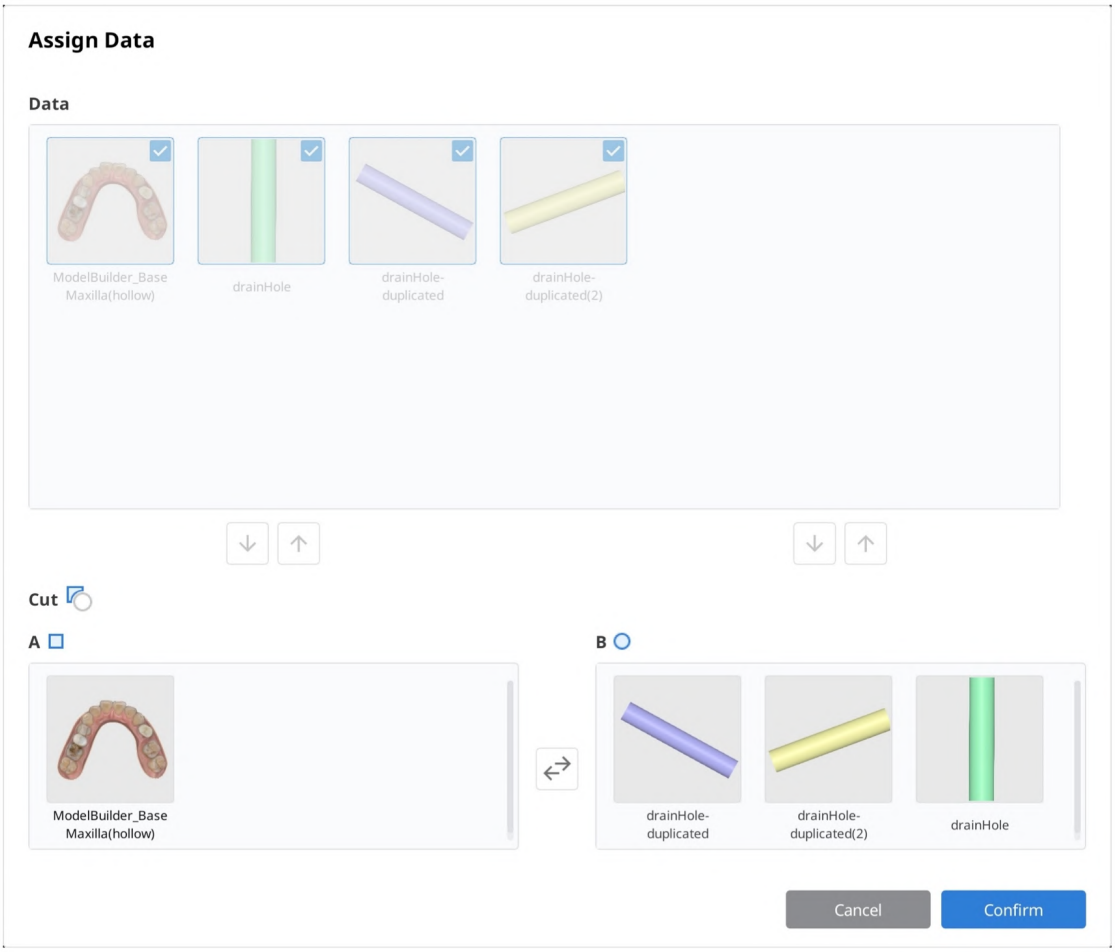
Cut



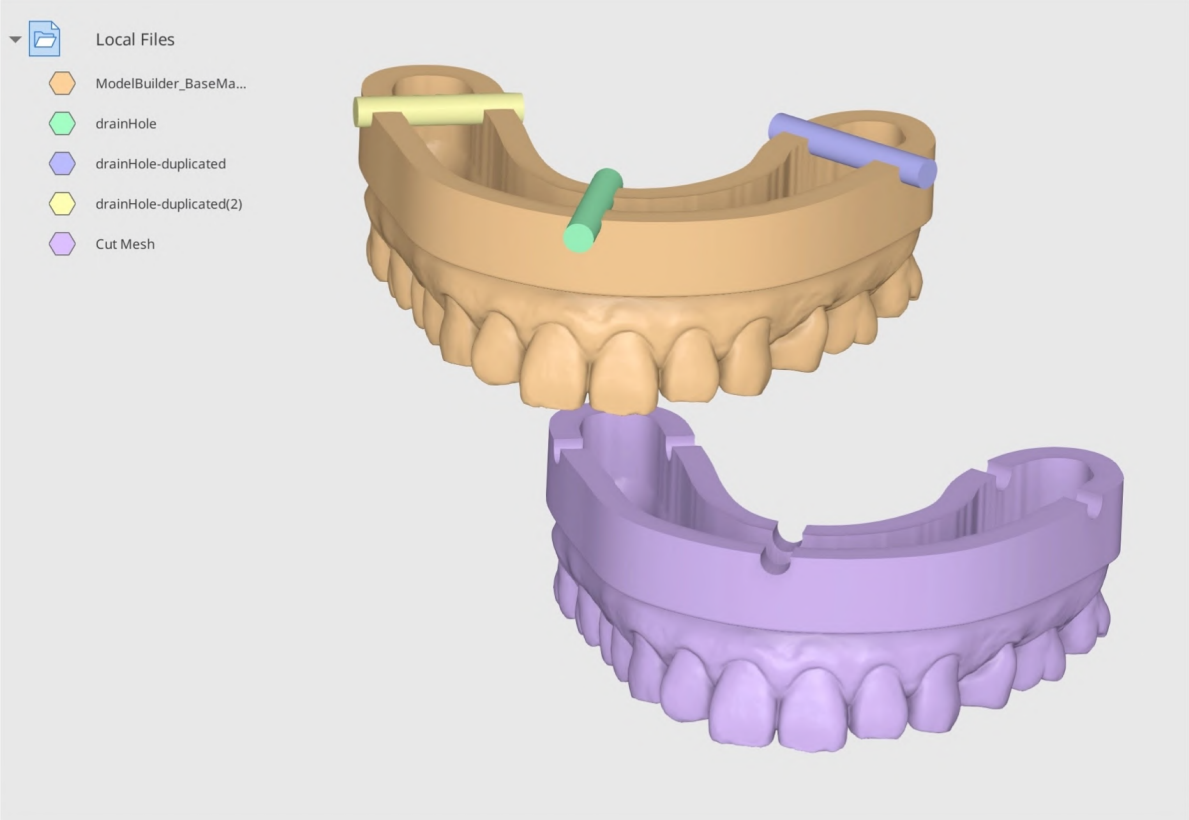
Remove mesh from A that overlaps with B.

Click on the “Cut” icon to open the dialogue window. The "Assign Data" dialogue window will pop up. Assign the data to A and B using the arrows. You can also drag and drop the data to A and B.

If you have assigned them incorrectly, you can simply swap the data by clicking "Swap A and B.”



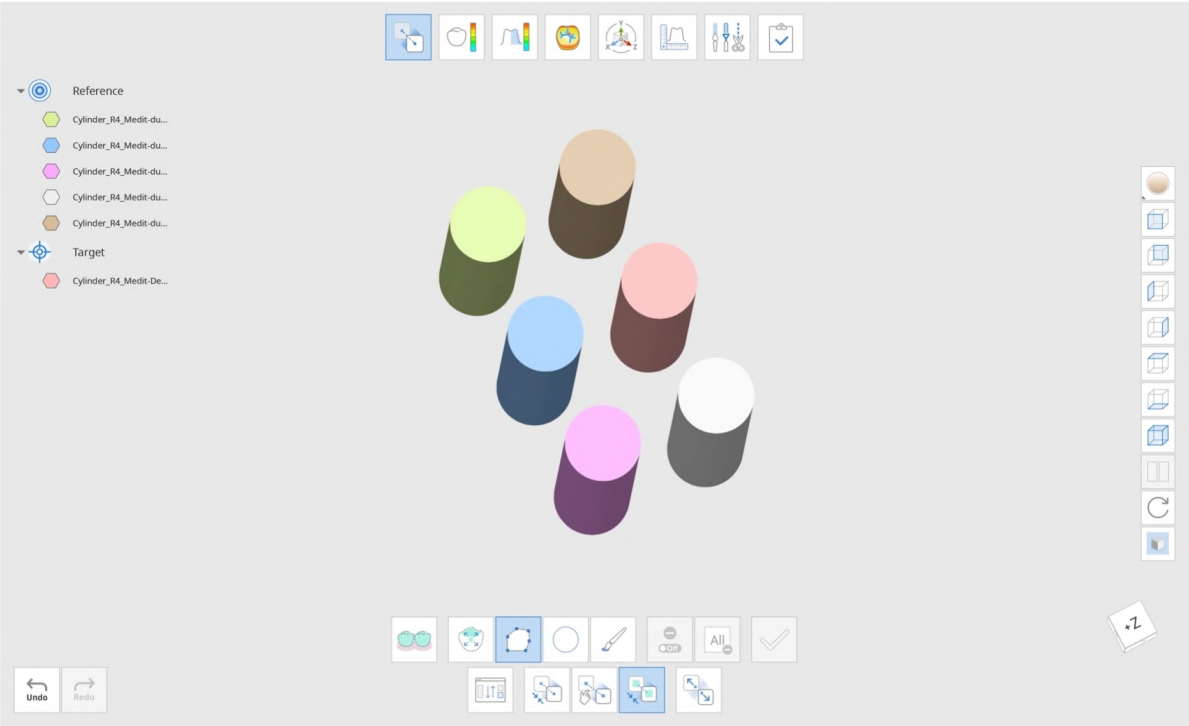
Click "Confirm" and wait for the creation of a new data file. You can see the mesh from A that overlaps with B has been removed, removing the occlusion data.



Cut Example

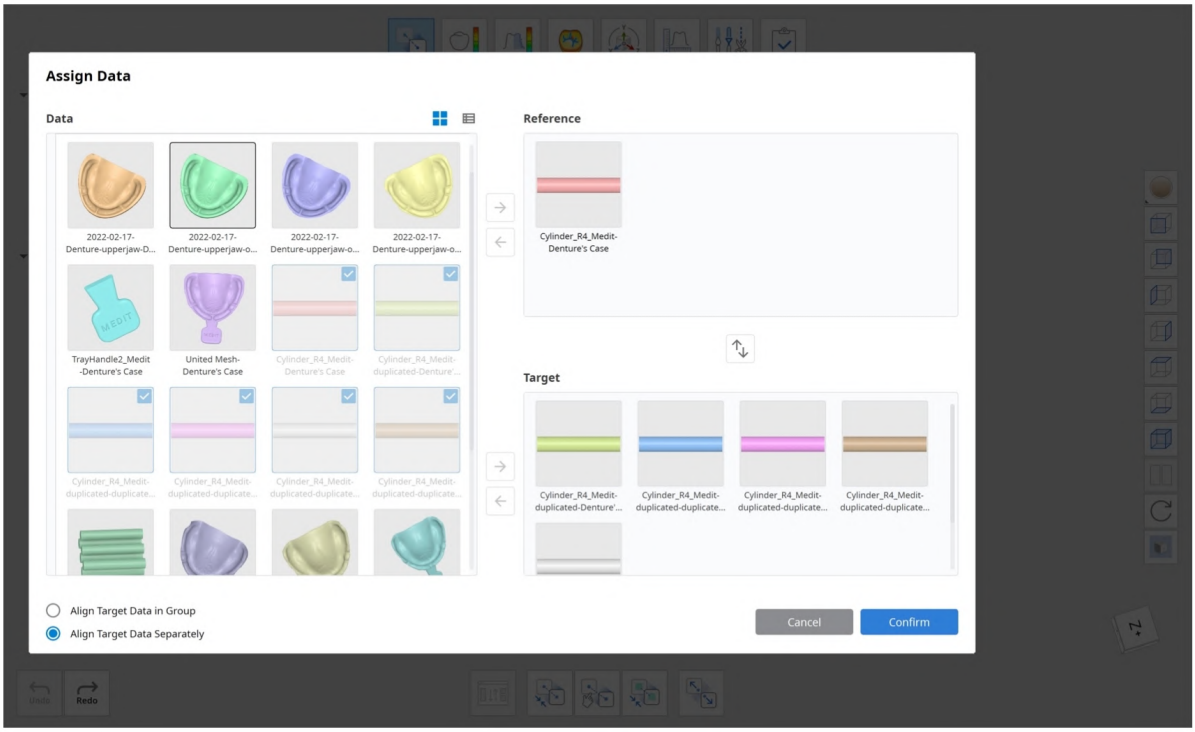
You can use the "Cut" feature to create holes in a custom tray. The model below was designed using Medit Model Builder. Import this data from Medit Link, then open in Medit Design. Import the support bar from your PC by clicking "Import Local Files."

Import cylinder files and duplicate them to suit your needs.

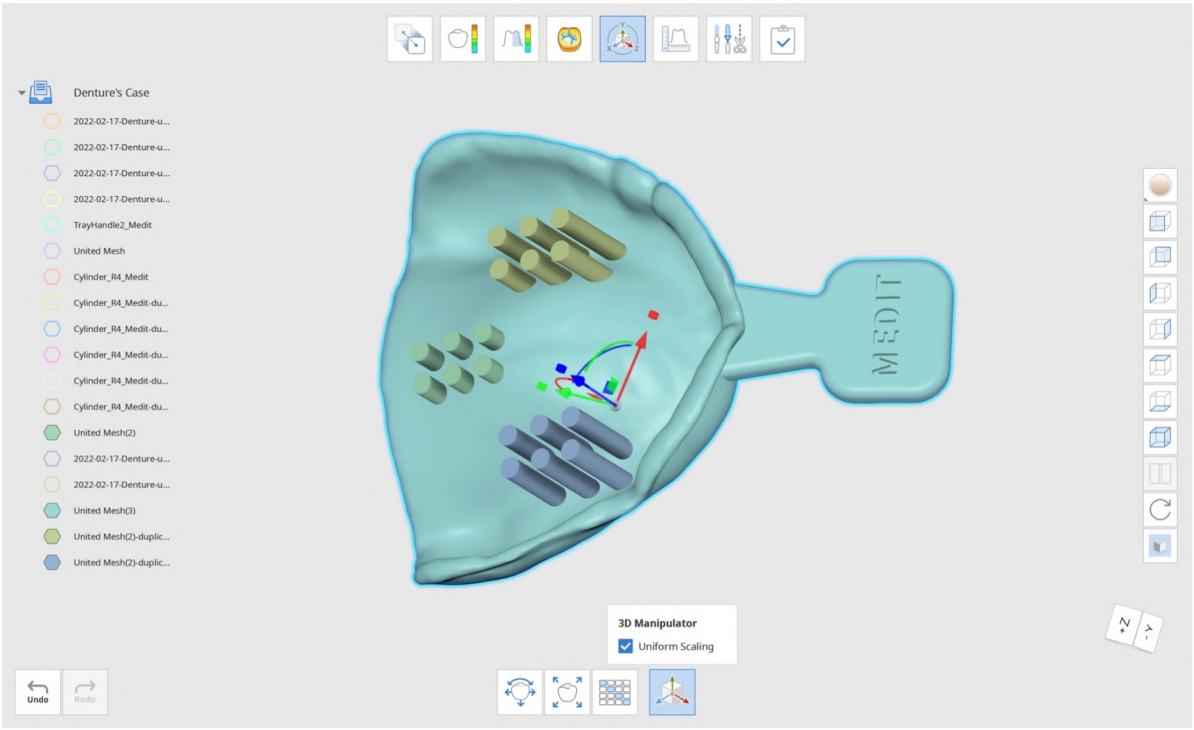


Note

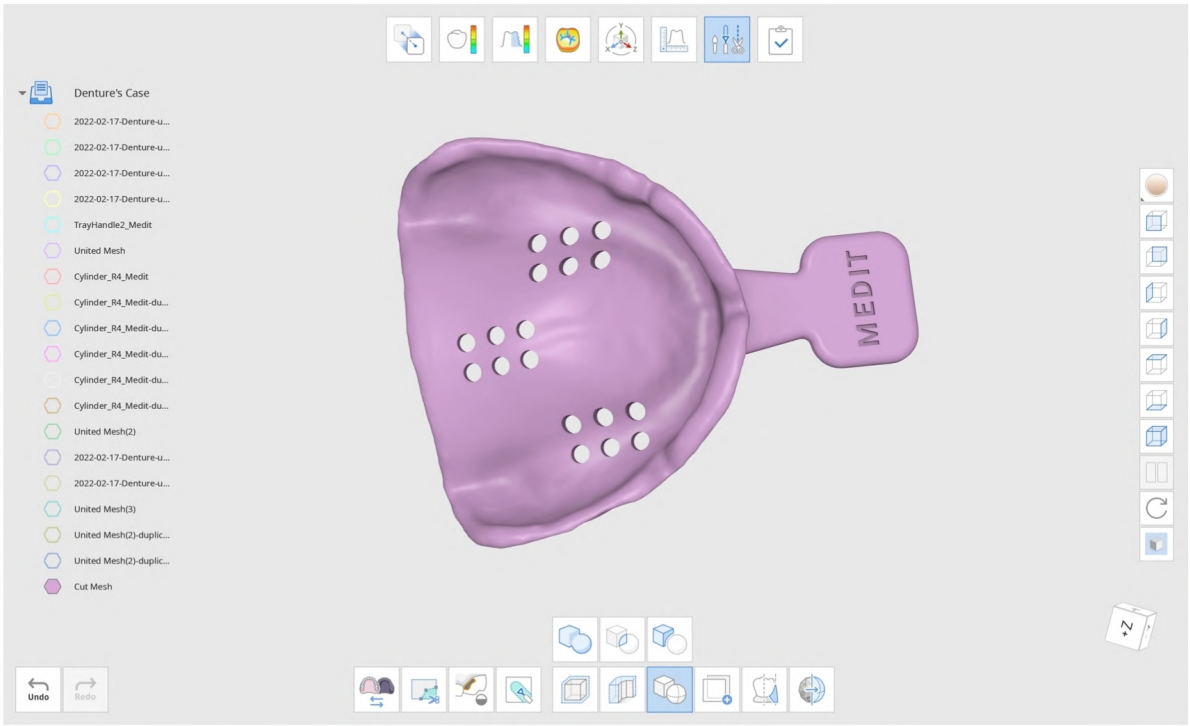
You can use the "Detach" function in "Align" to place them evenly. In "Align," place one of the cylinder data in the reference and the rest in the target. Then, select the "Align Target Data Separately" option. When you click the "Detach" button afterward, the target data will be aligned evenly.

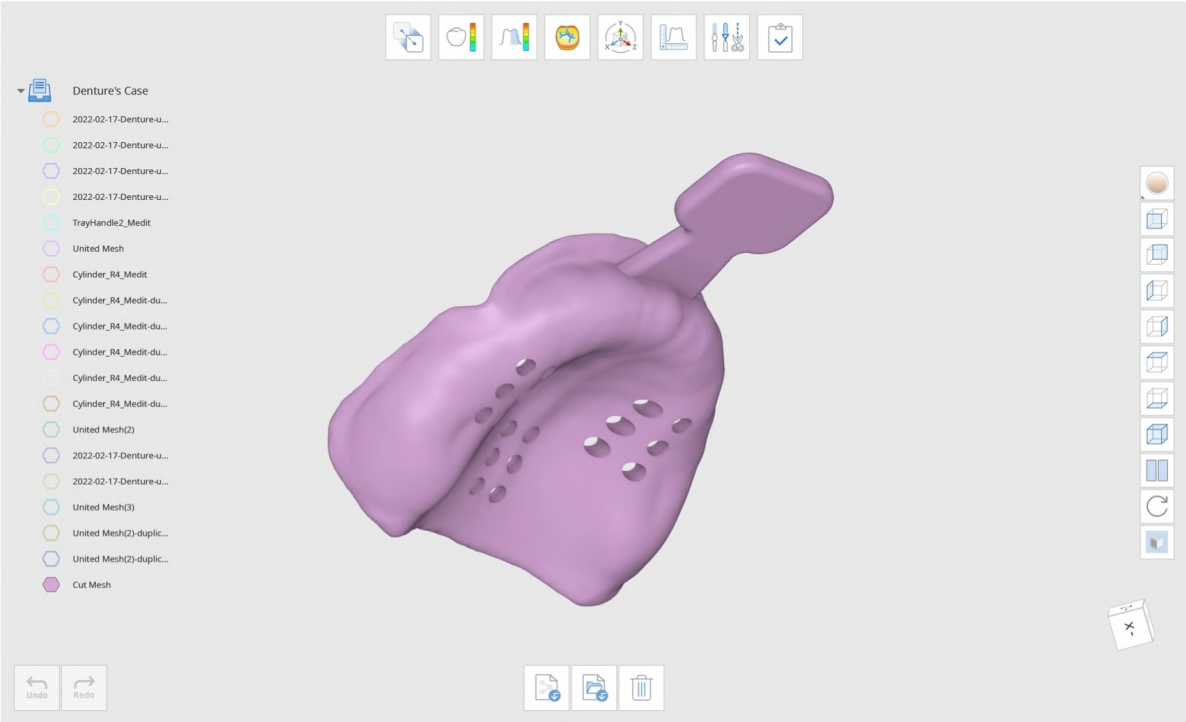


Combine the six cylinders to one set using "Union." Duplicate the sets three times to create three sets of six cylinders. Place the cylinder sets are as follows and use the "Cut" function to create holes. Assign the cylinder sets to B so they can be removed from A (A-B).



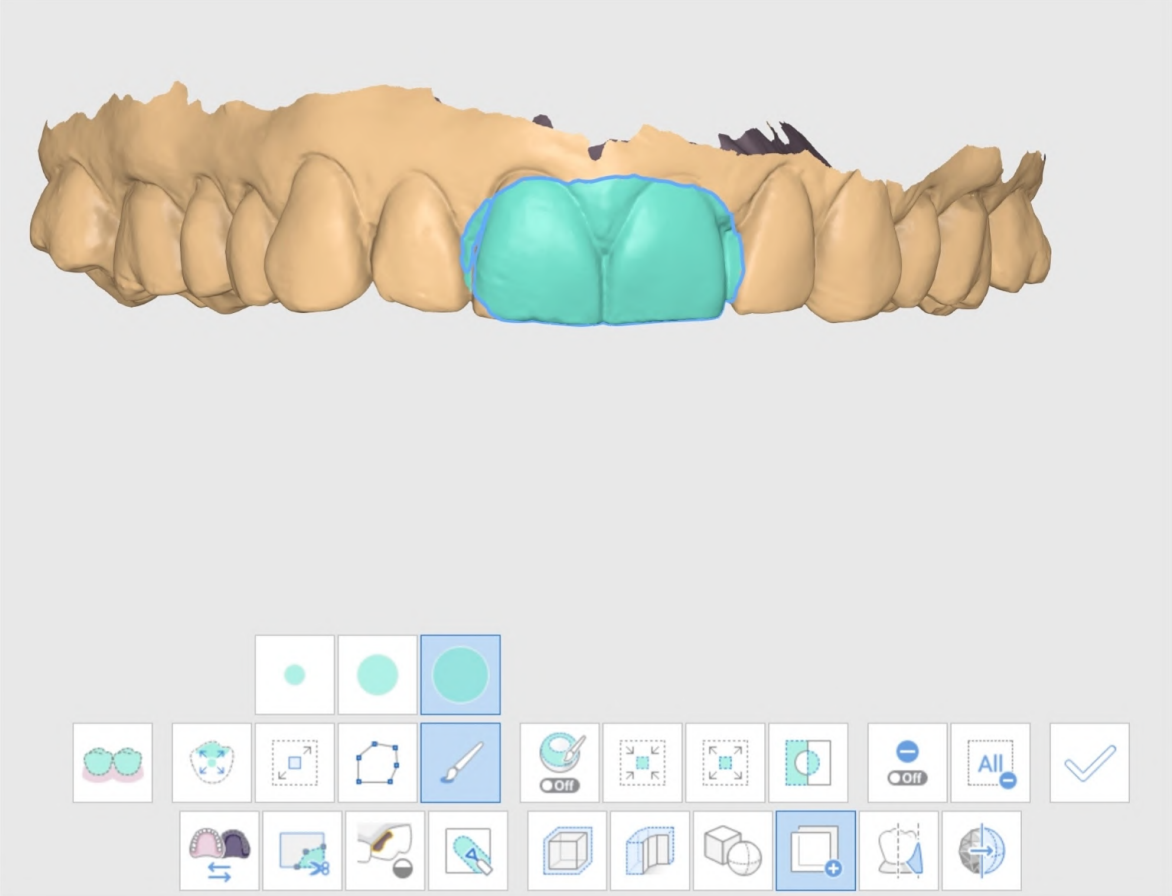
Click "Confirm" to see the final result.



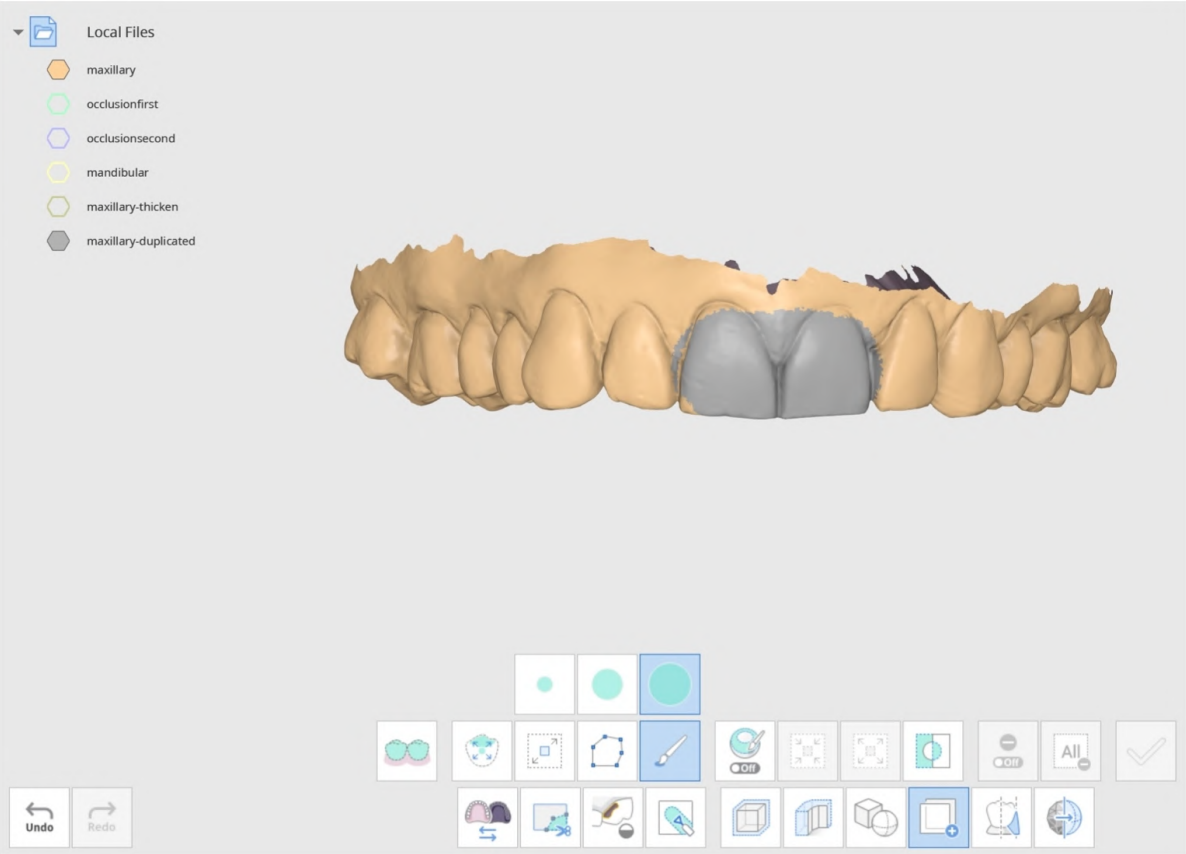


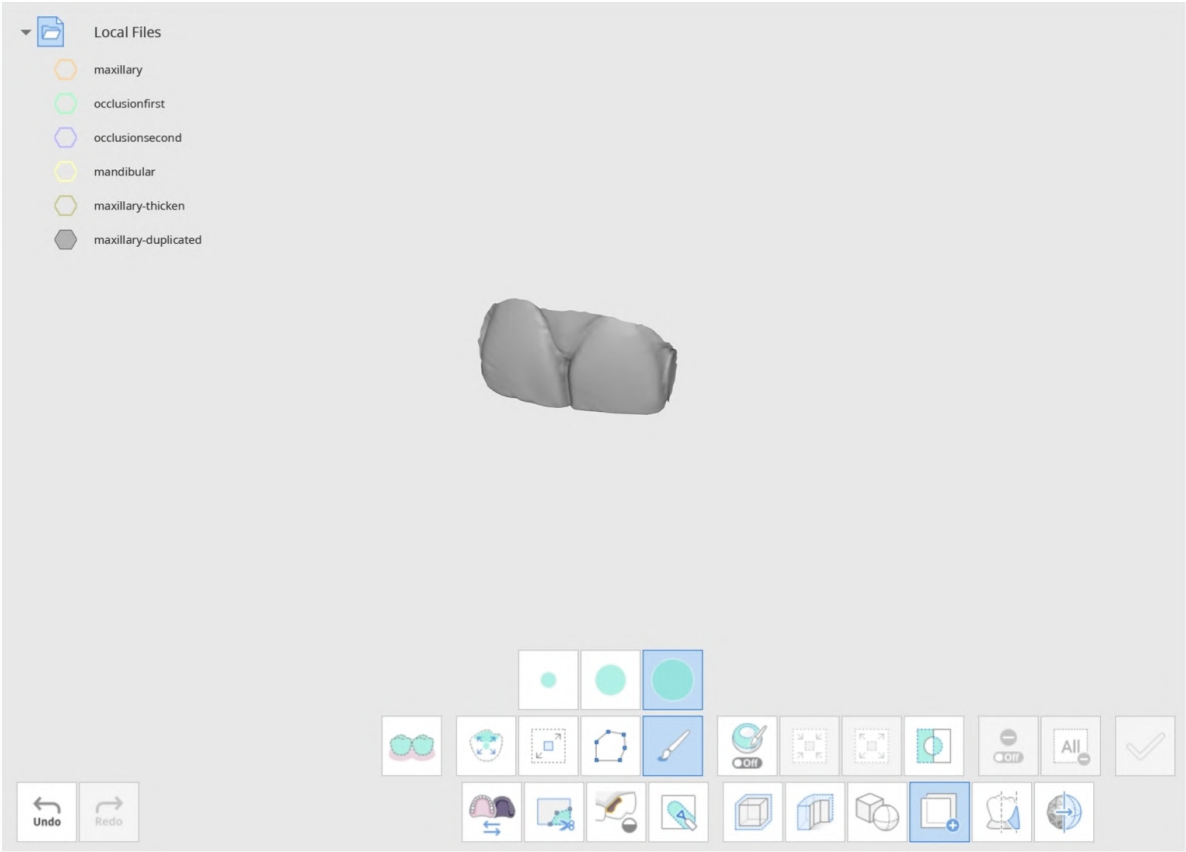
How to duplicate data

Use the selection tools provided to select the area you want to duplicate.



Click “Apply”, the duplicated meshes will be created. Go to the Data Tree and unselect the other data to examine only the duplicated mesh data.





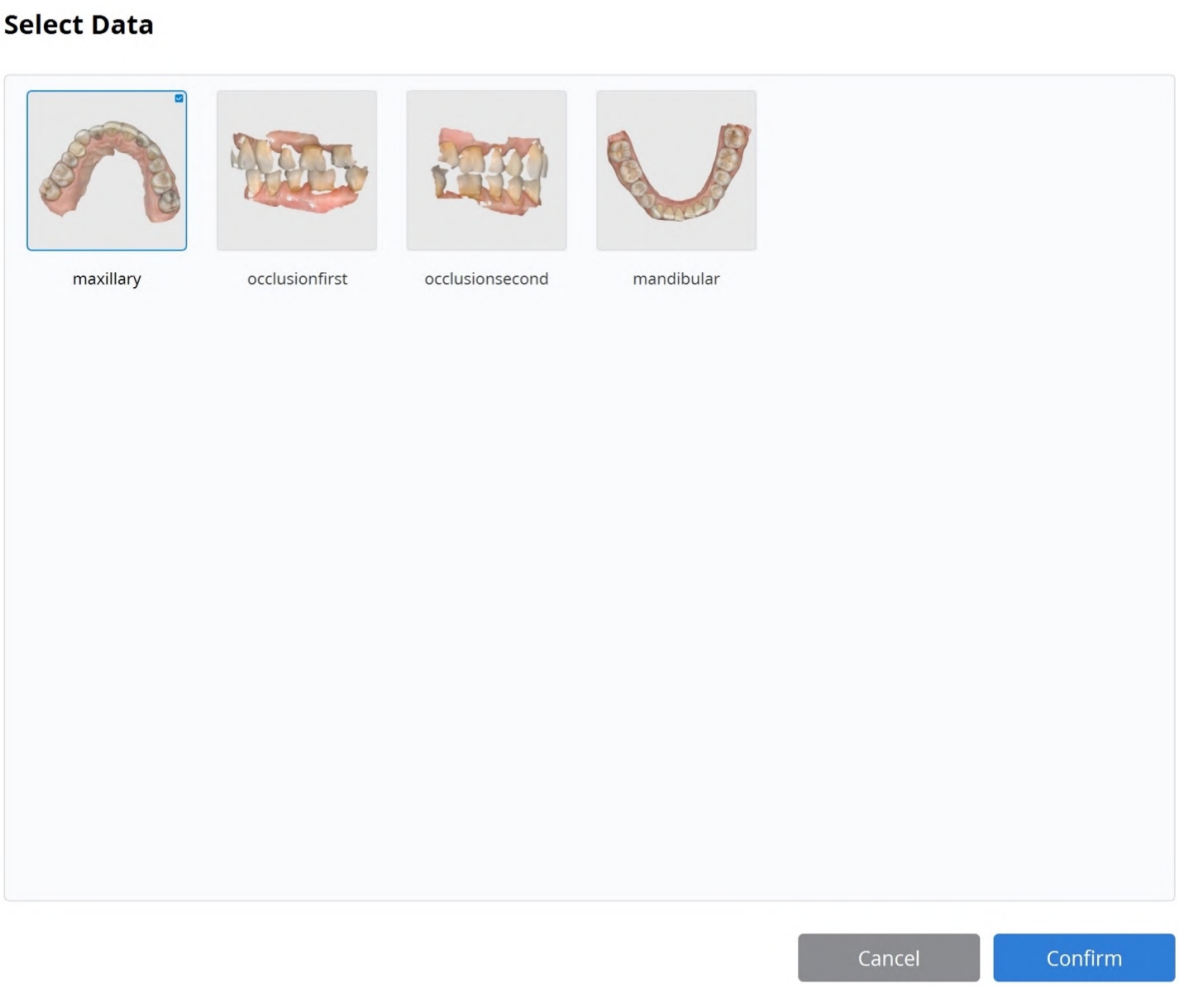
You can see that the area duplicated is a new data file titles “maxillary-duplicated” in the Data Tree.

Note

Change “Data Display Mode” on the right side to “Monochrome” to see easily spot the changes made.

How to use Blockout Undercut

Click on the “Blockout Undercut” icon to open the dialogue window. Select the data you want to fill the undercut for and click “Confirm”.

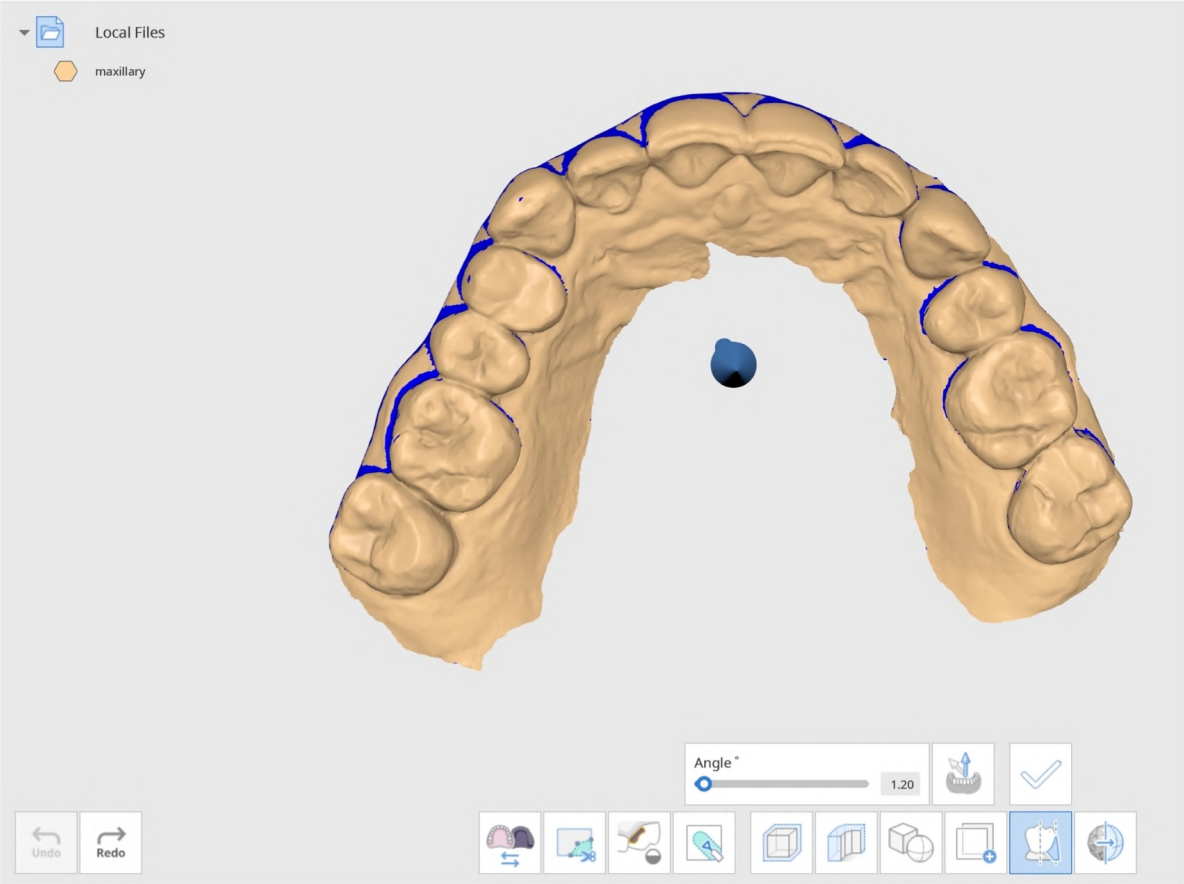


We highly recommend adjusting the data to a palatal view so you can see all the teeth. Once you've adjusted the position, you can use "Set Arrow to Your Viewpoint" so the blue arrow directly faces you.

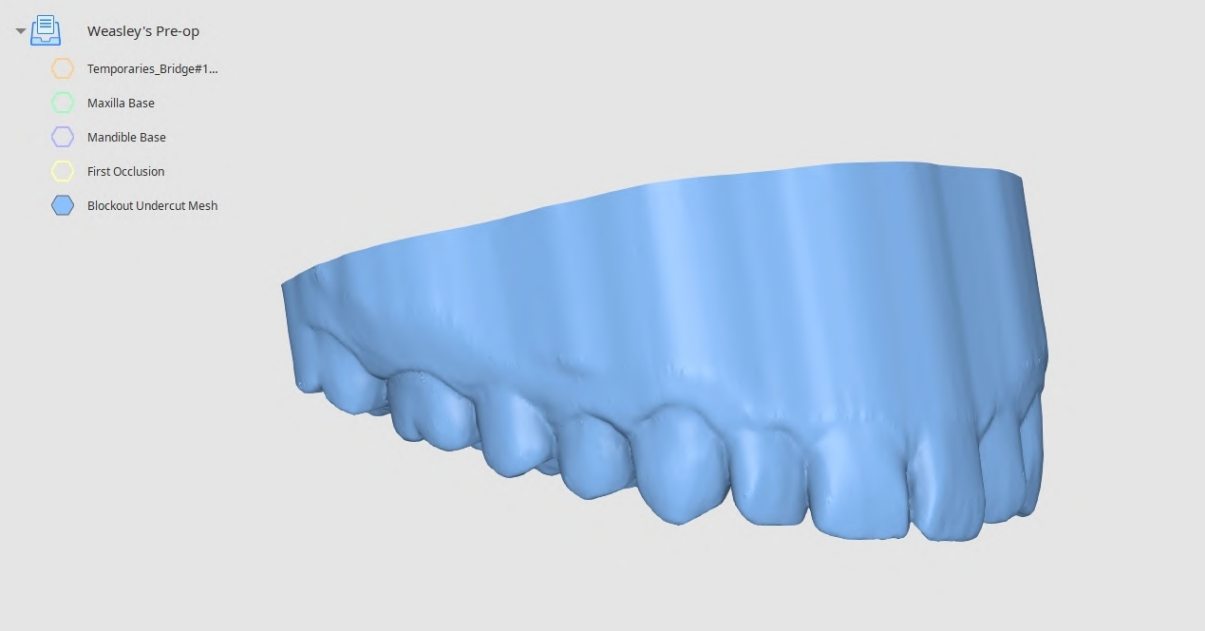
Adjust and move the arrow so all undercuts can be filled as evenly as possible.

Note

For a successful blockout undercut, adjust the arrow to make sure all teeth are properly covered by the blue.

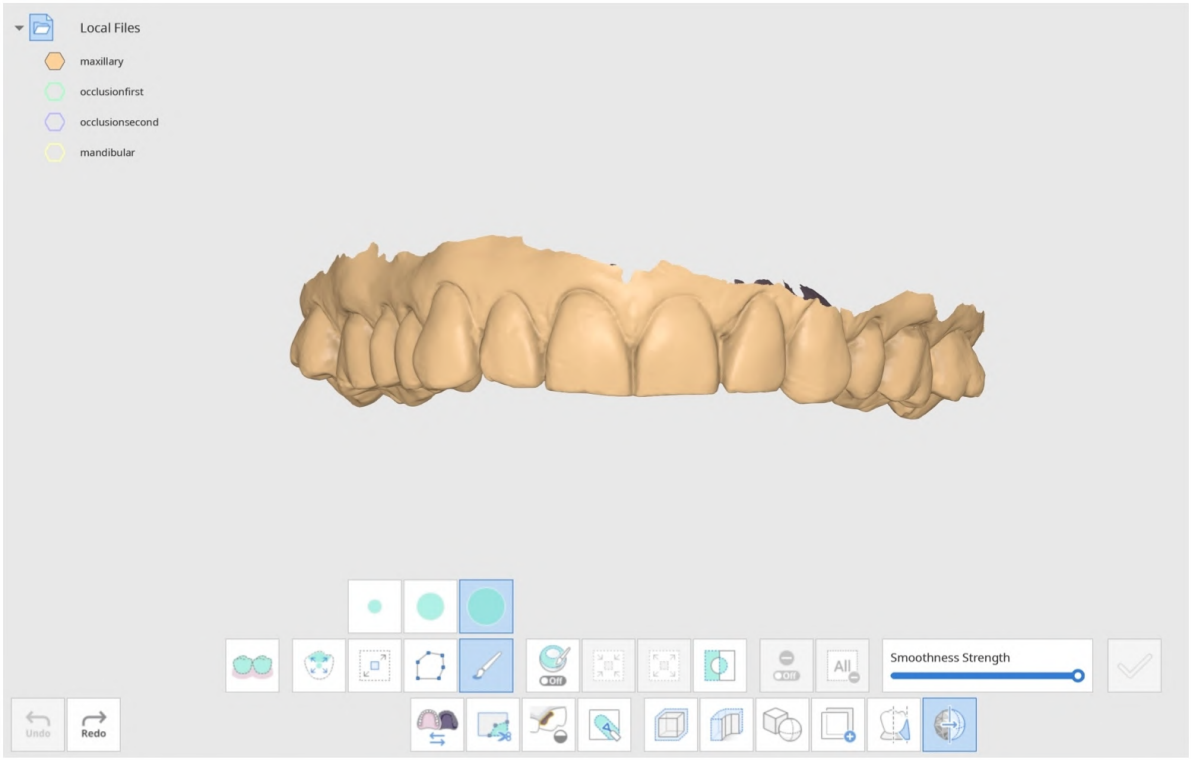


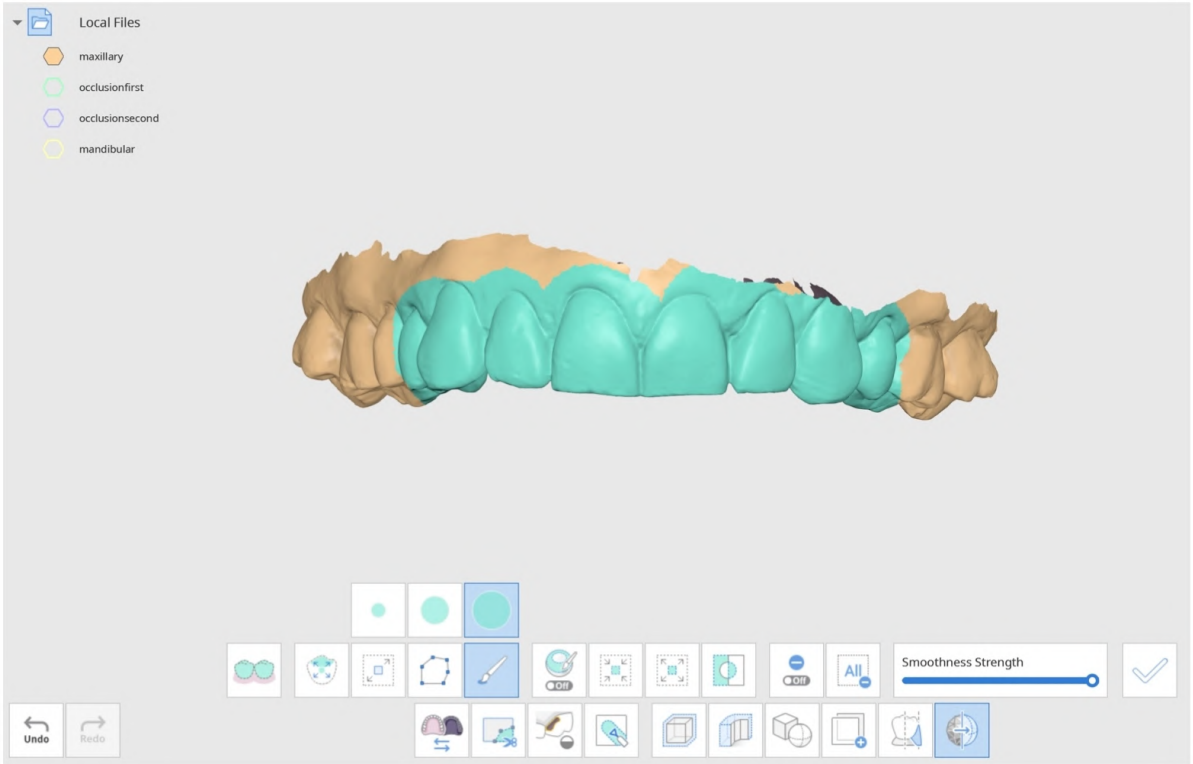
Set the angle using the slider or enter a specific number manually. Click “Apply” to apply the changes made.



How to smoothen out surface

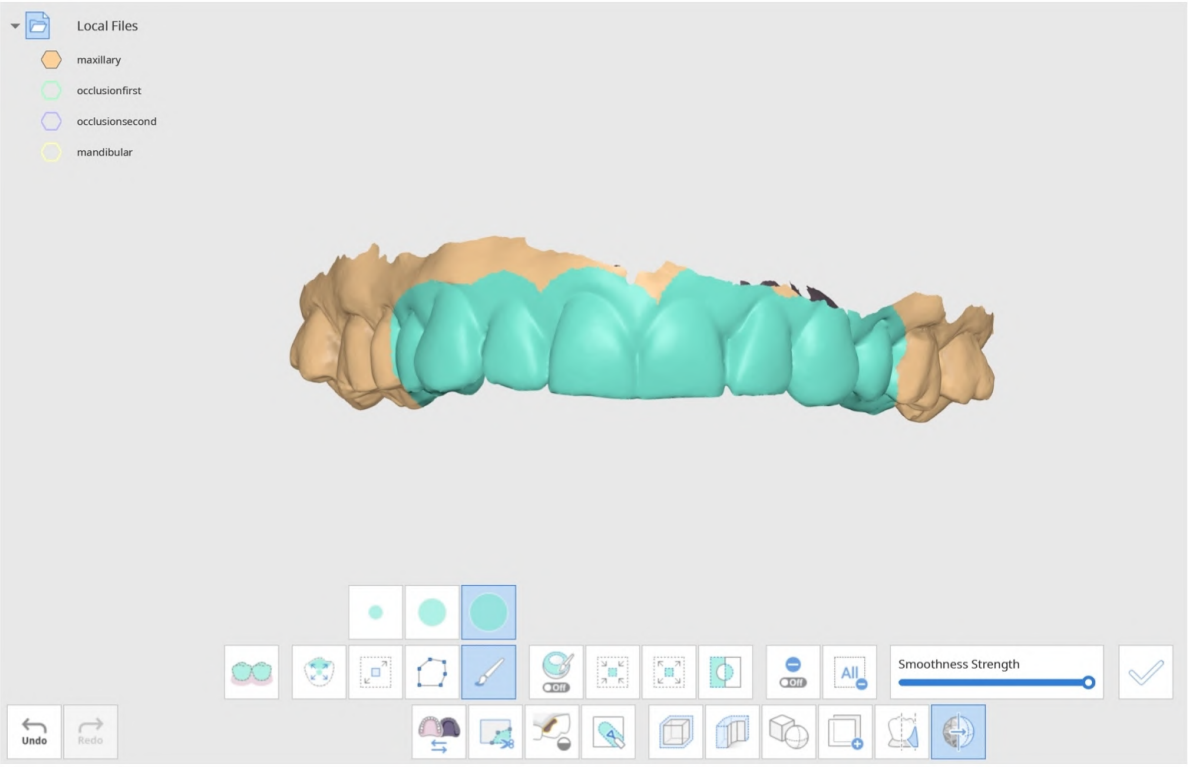
Use the selection tools to select the surface you want to smooth.





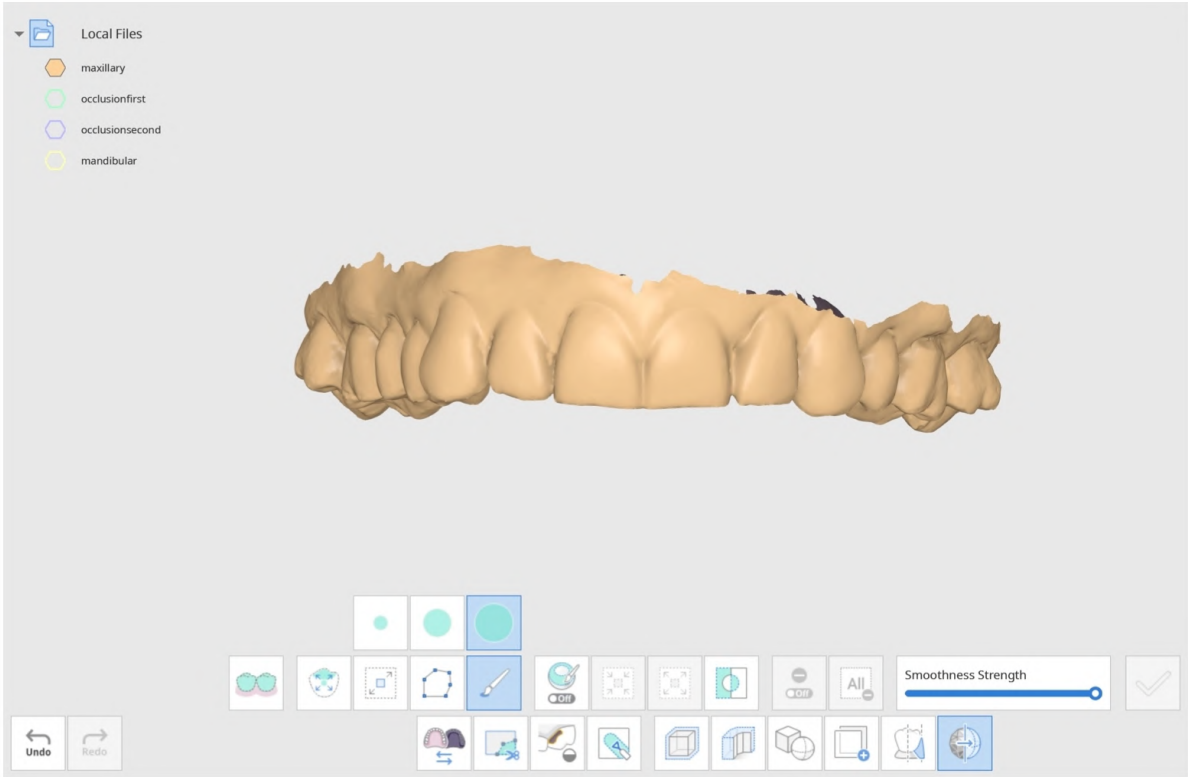
After you've selected the area, adjust the smoothness strength using the slider below.

Once you are ready to see your results, click "Apply."



Note

You can click on “Apply” as many times as you want to reach the smoothness level you desire.



You can see that the selected area is now smoother. Click "Clear All Selection" to get rid of the blue selection marks.

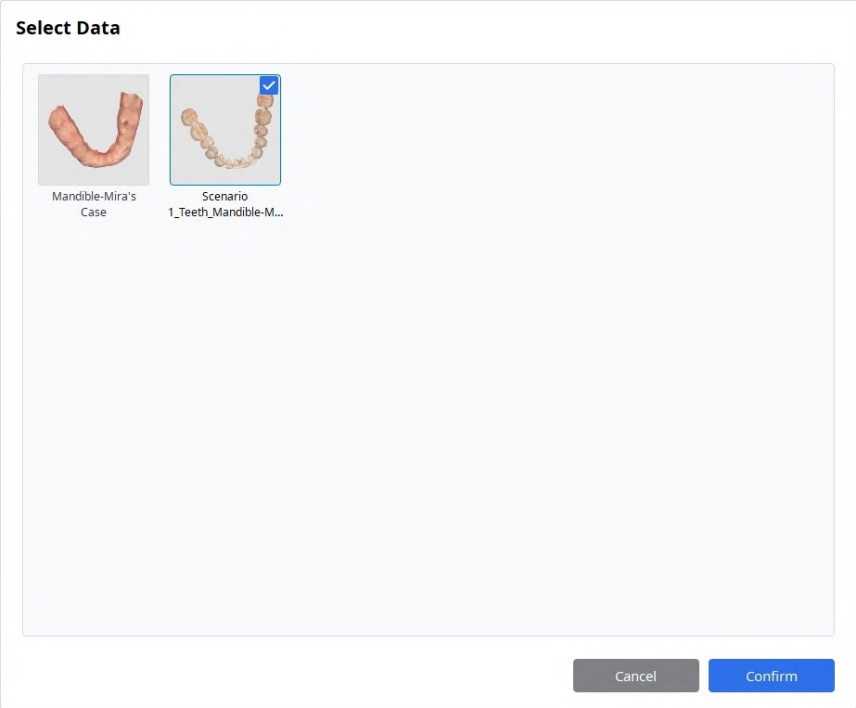
Tip

Change “Data Display Mode” on the right side to “Monochrome” to easily spot the changes made.

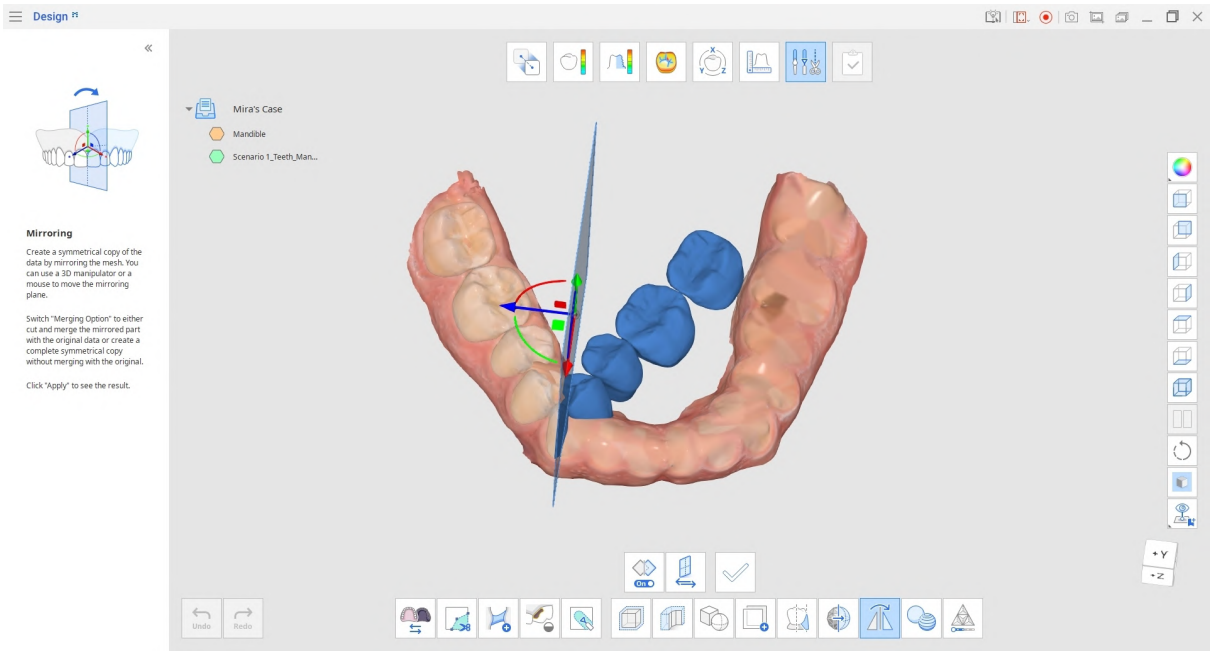
How to mirror data

This feature creates a symmetrical copy of your data by mirroring the mesh across the plane.

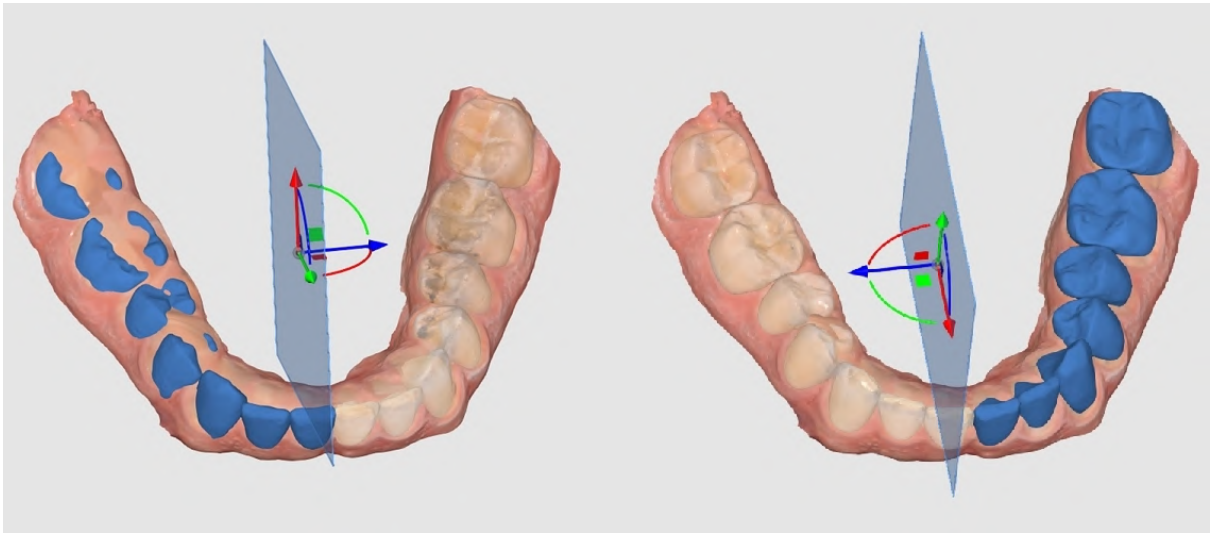
Click on the “Mirroring” icon and select your target data in the “Select Data” window. You can choose more than one data.



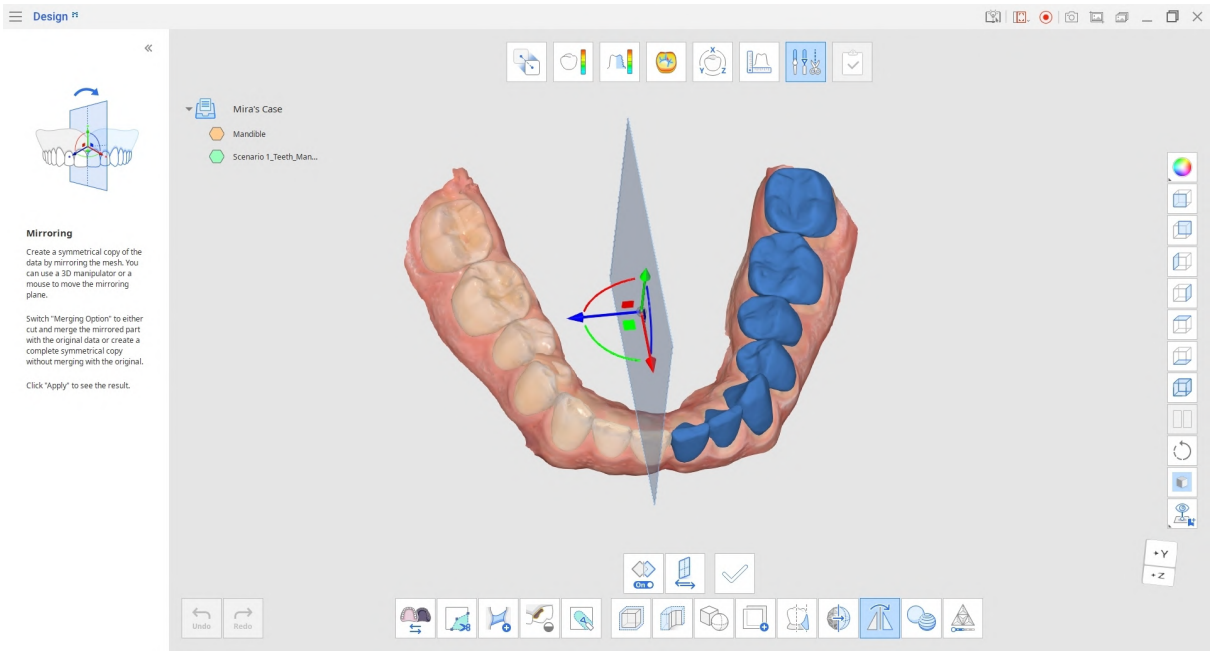
Selected data will appear on the screen together with the mirroring plane. The mirrored part of the data is displayed in blue.



Click “Change Direction” to change the mirroring direction from right to left.

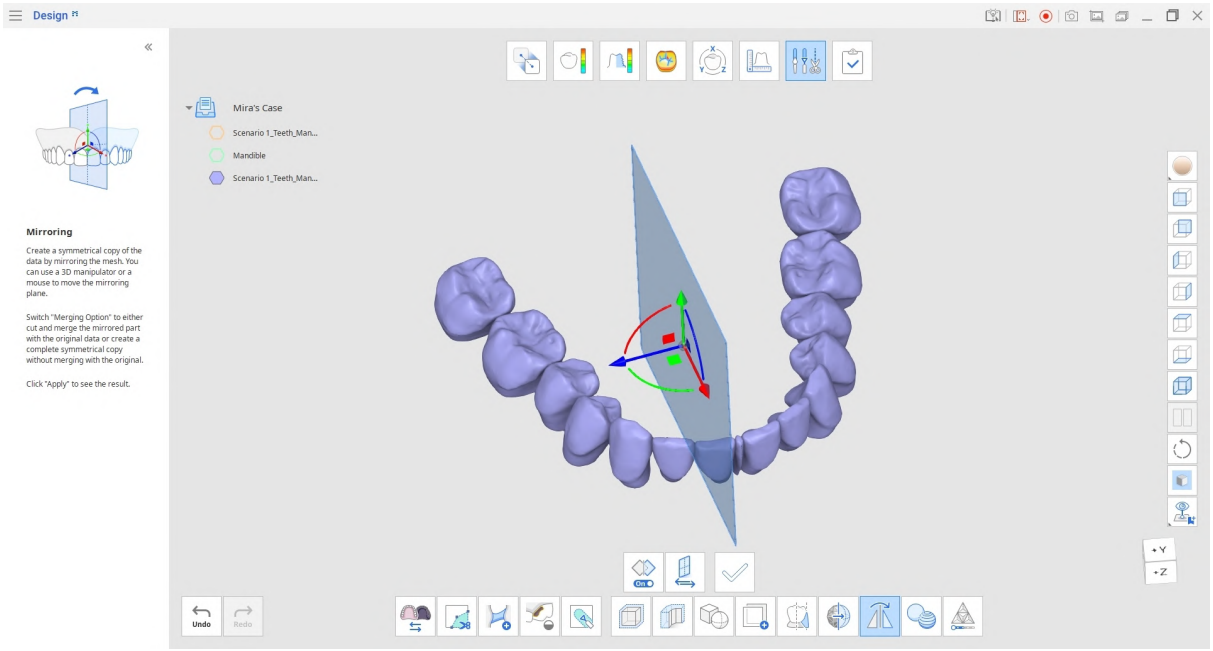


Use the 3D Manipulator or your mouse to move the mirroring plane and control what data part is mirrored and how it is positioned on the reference data (if the latter is used).



After adjusting the mirroring plane, click “Apply.” The original data will be cut and merged with the mirrored part to create a new mesh in the Data Tree. The new data will have ‘mirrored’ added to its original name.

Go to Data Tree and hide the other mesh to examine only the new mirrored data.

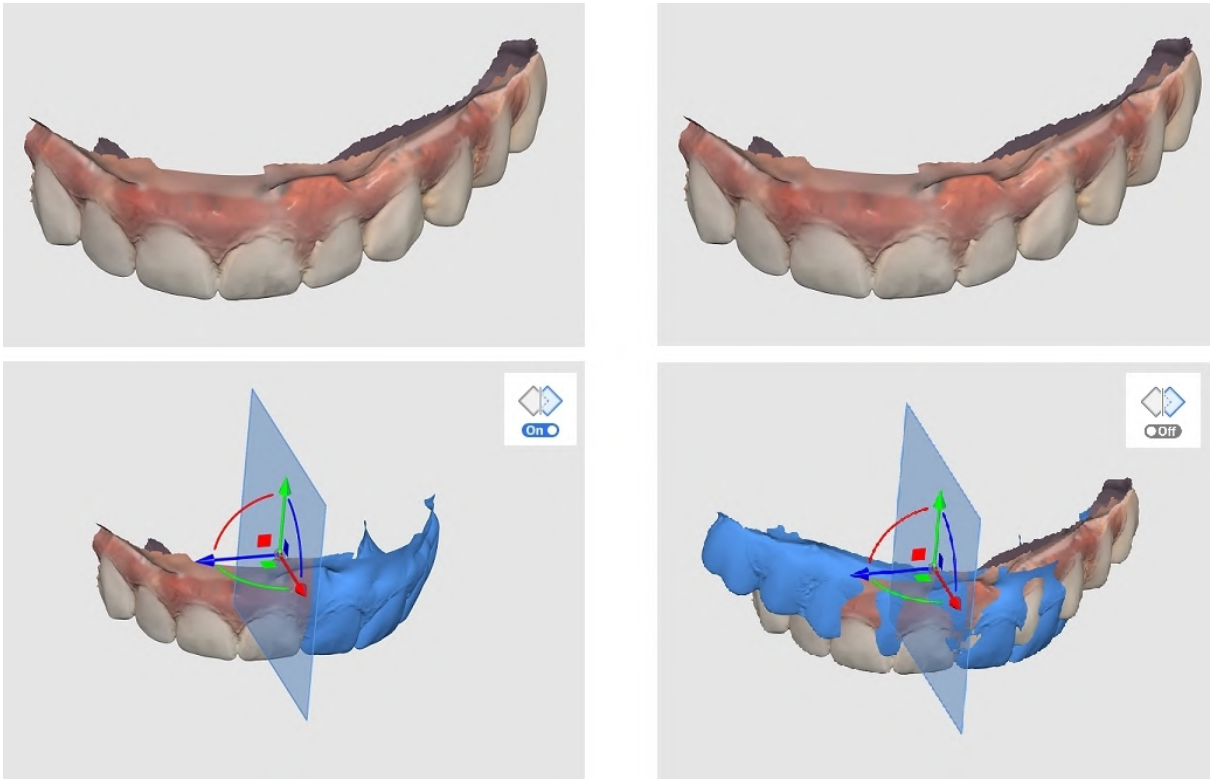


By default, the merging option is activated when you enter mirroring. If you don’t want to merge mirrored data with the original, click on the “Merging Option” icon once to turn it off.

With the "Merging Option" off, there will be no cutting or merging. Instead, a full symmetrical copy will be created as the new mesh.

To see the difference between the "Merging Option" on and off, compare the blue mirrored parts with the source data in the picture below.

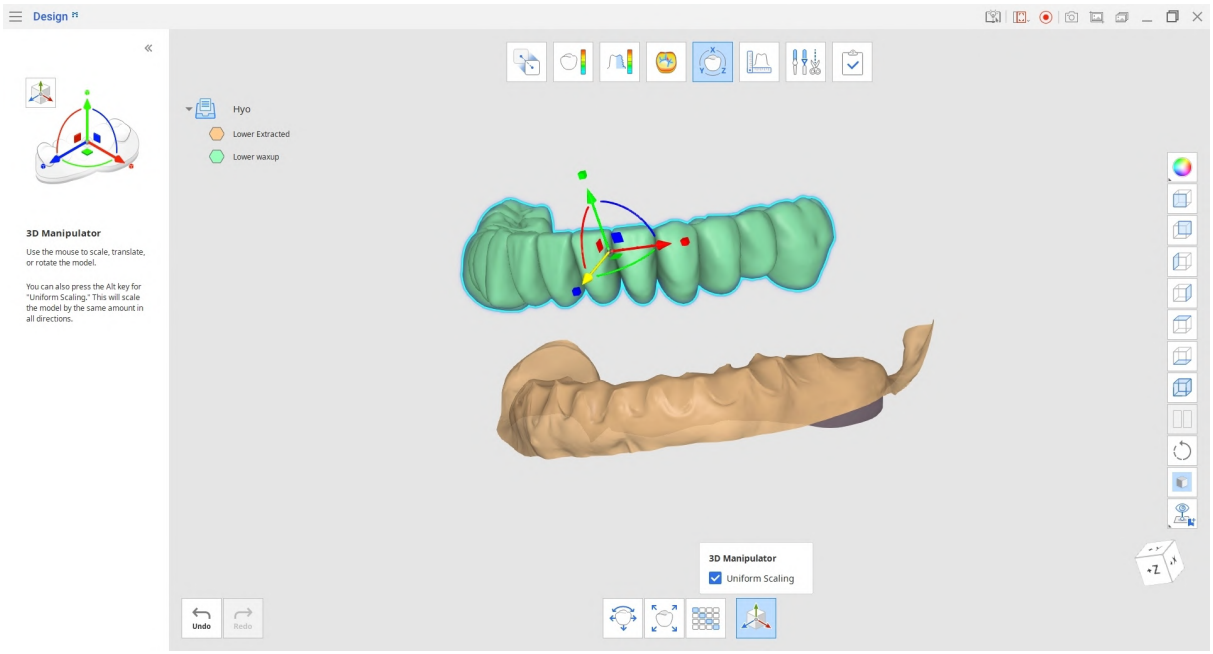
Mirroring example with the “Merging Option” on and off before changes are applied:



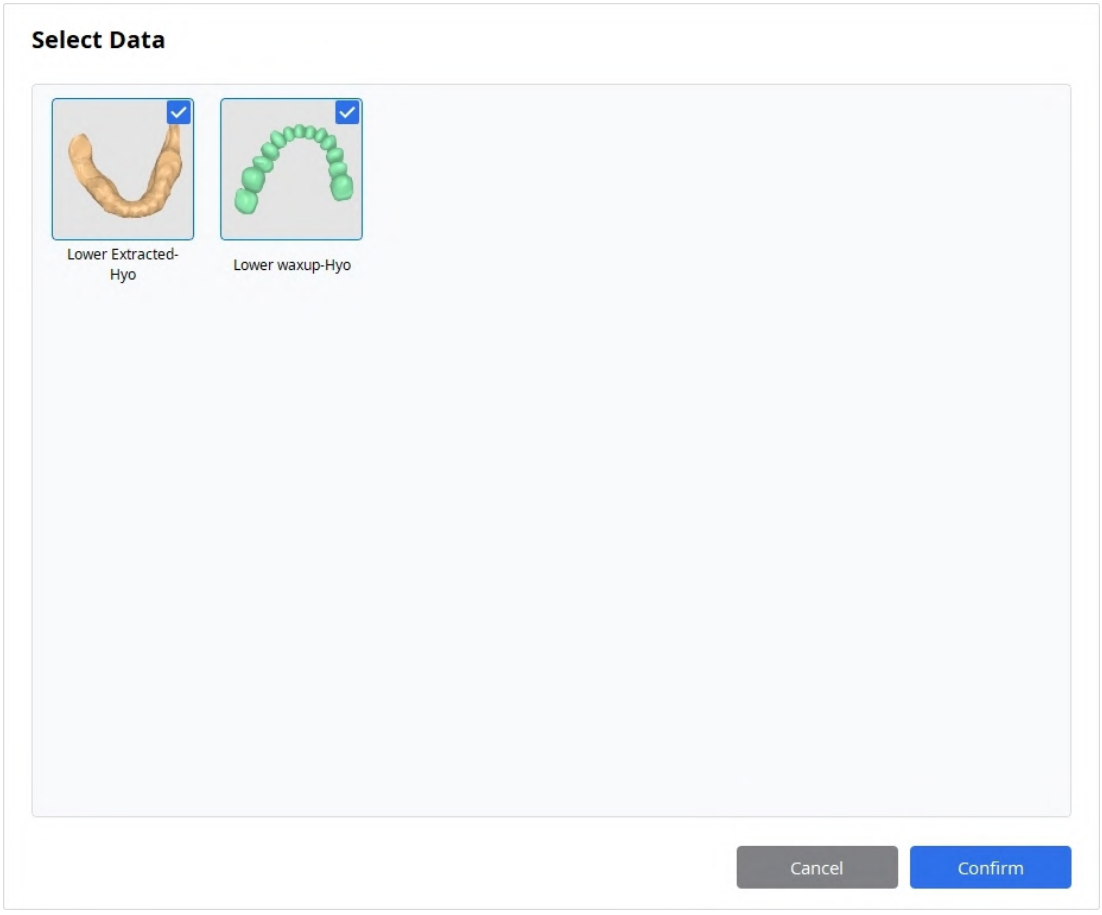
How to combine data

Use the “Combine” feature to join two meshes into one without making any structural changes to the original data.

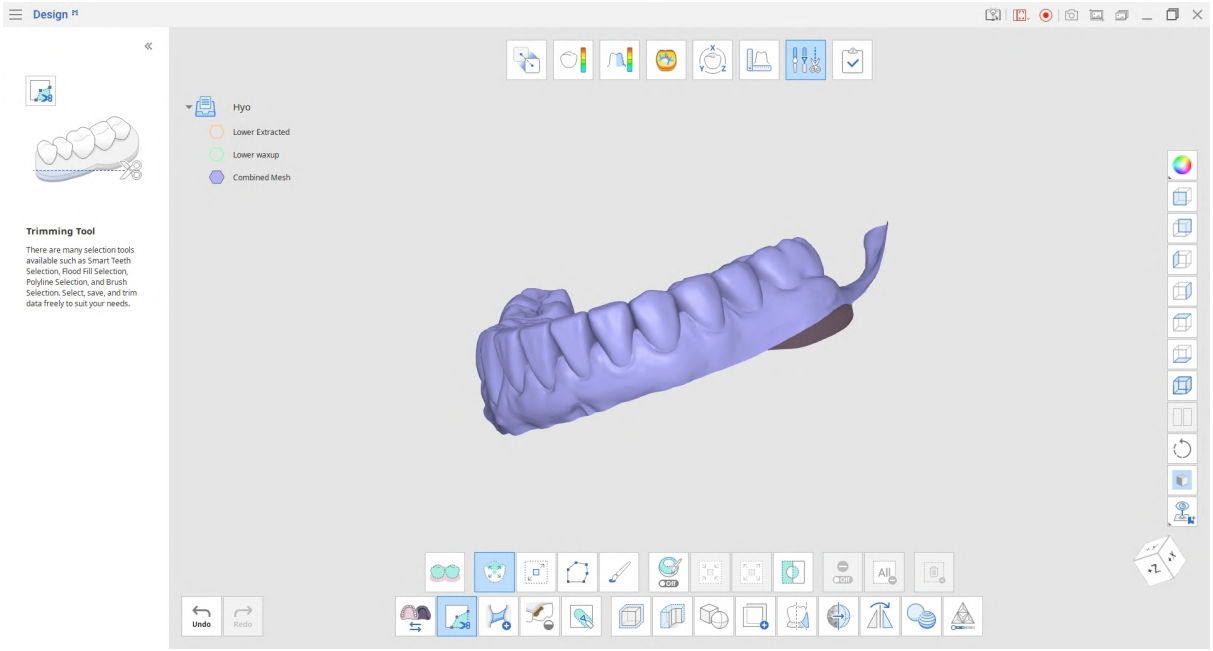
Go to Transformation Mode and position your data using the 3D Manipulator. Move and rotate data to place it in the desired position before combining.



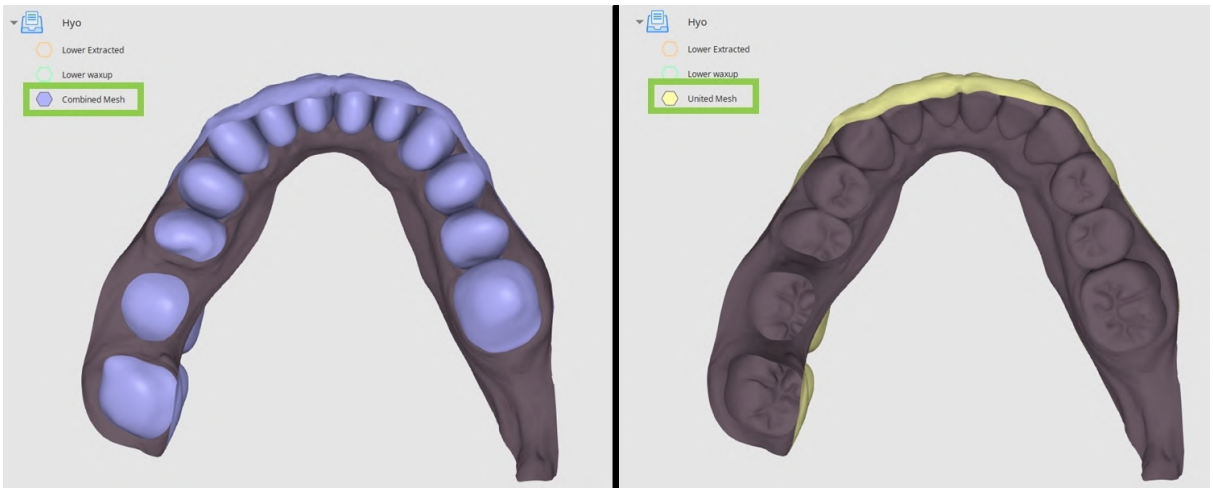
When done, return to Edit Mode and click on the “Combine” icon. In the opened dialog window, select what data will be combined and click “Confirm.”



The data is combined automatically, considering its current positioning, and a new mesh is created in the Data Tree. Hide the original data in the tree to examine only the combined mesh.

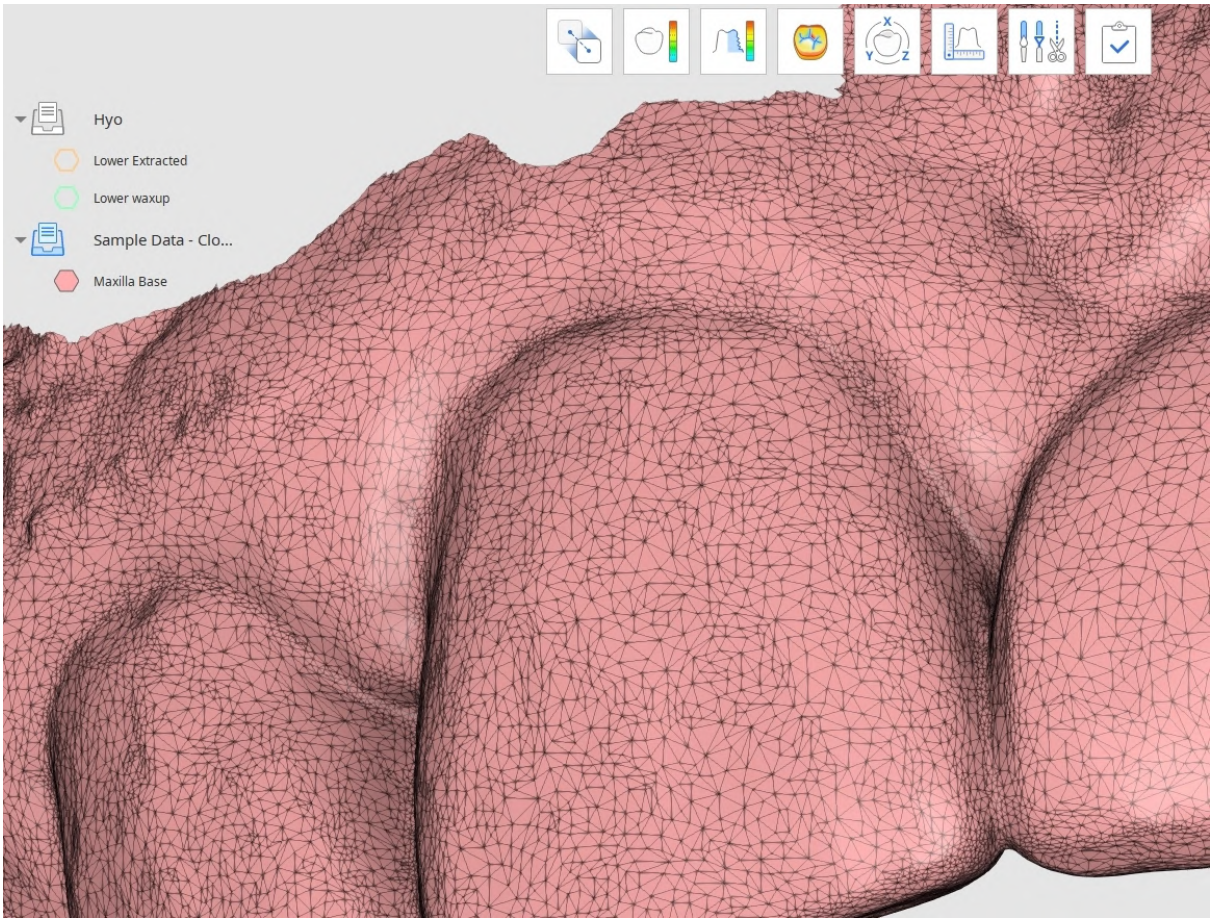


Compared to the union option of the “Boolean” feature, combining doesn’t remove the intersecting parts of the mesh. "Combine" preserves the shape and form of the original mesh, allowing further separation of the combined files without losing mesh.

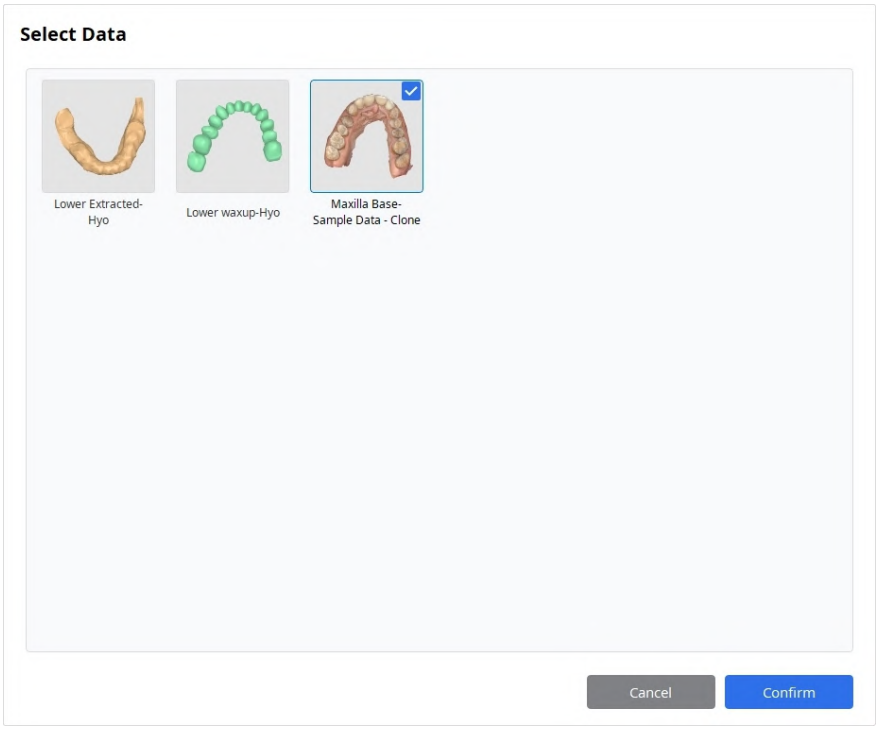


How to use Mesh Resolution

Each of your meshes consists of triangles. In the Edit Mode, using the “Mesh Resolution” feature, you can control the number of these triangles.



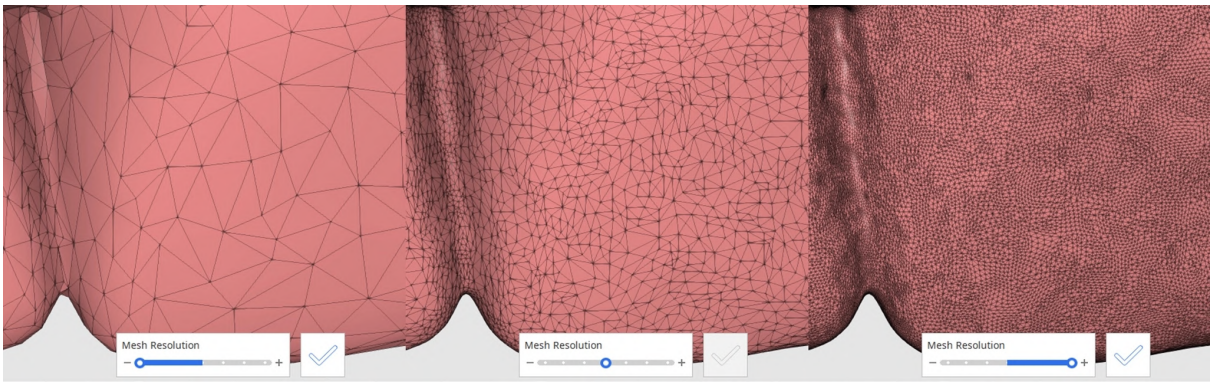
Click on the “Mesh Resolution” icon at the bottom of the screen, and select your target data in the pop-up window.



Tip

It is recommended to change “Data Display Mode” on the right side to “Textured with Edges,” “Monochrome with Edges” or “Wire-Frame” to easily spot the changes made.

Use the “Mesh Resolution” slider to control the number of triangles that constitute the mesh. You can increase the resolution to have more sharp details in your data or lower it to have a lighter file for further rendering and converting. Click “Apply” to save changes and see the result.



Notice of Adverse Event Report

The user and/or patient should report any serious incidents that have occurred in relation to the device to the manufacturer and the competent authority of the Member State in which the user and/or patient is established.

Report to manufacturer at:

Telephone: +82-02-2193-9600

Website: www.medit.com

email: support@medit.com

Report to local authority at:

FDA MAUDE http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfMAUDE/search.CFM https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfRES/res.cfm
MHRA (Medicines & Healthcare products Regulatory Agency): Medical device alert https://www.gov.uk/drug-device-alerts
BfArM : Medical device alert https://www.bfarm.de/SiteGlobals/Forms/Suche/EN/kundeninfo_Filtersuche_Formular_en.html
MFDS (Ministry of Food and Drug Safety) : Medical device alert http://www.mfds.go.kr/brd/m_548/list.do https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfRES/res.cfm
European_EUDAMED https://ec.europa.eu/tools/eudamed/#/screen/search-device
Australia https://apps.tga.gov.au/prod/mdir/mdirsummary.aspx?sid=new
Canada https://www.canada.ca/en/health-canada/services/drugs-health-products/medeffect-canada/adverse-reaction-reporting.html
Brazil https://notivisa.anvisa.gov.br/frmLogin.asp
Japan https://www.estrigw.pmda.go.jp/Iryo/Login/Index?ReturnUrl=%2fIryo

Japan https://www.estrigw.pmda.go.jp/Iryo/Login/Index?ReturnUrl=%2fIryo
Taiwan https://qms.fda.gov.tw/tcbw/main/ap/index.jsp
Switzerland https://www.swissmedic.ch/swissmedic/en/home/medical-devices/reporting-incidents---fscas/users---operators.html

Error and Warning Messages

Title	Message
Information	Auto Alignment has failed. Try using Manual Alignment.
Information	Alignment with Selected Area has failed. Try adjusting the selected area, or performing Manual Alignment first.
Information	Manual Alignment has failed. Try setting alignment points on the corresponding surfaces that match the most.
Information	This file cannot be imported. Update Medit Link to the latest version first.
Information	Failed to open the file.
Information	Automatic Alignment has failed. Try using the 'Align With Selected Area' tool by selecting the corresponding margin areas.
Information	Failed to import %1.
Information	This action will delete section lines, measurements, and measurement results. Would you like to continue?
Information	This action is only available for the scan data that has been acquired by Medit Scan for Clinics with the 'Use GPU' option on. Selection for the following data will not be performed: %1,%1.
Information	The texture information of below mesh will be removed when its holes are filled.
Information	The texture information of below mesh will be removed when it is sculpted.
Information	A higher version of Medit Link is needed to read the file. Please update Medit Link.
Information	The selected files cannot be imported. The files are either broken or are not supported by this version of Medit Link. Please update Medit Link.

Information	Cannot calculate the distance. Make sure that all necessary data is visible.
Information	There is no margin data. Try using manual alignment.
N/A	A Medit Design project file with the same name already exists. Do you want to replace it?

eIFU download link:

https://support.medit.com/hc/en-us/articles/53571022051737-Medit-Apps-PDF

Medit webpage:

https://www.medit.com

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