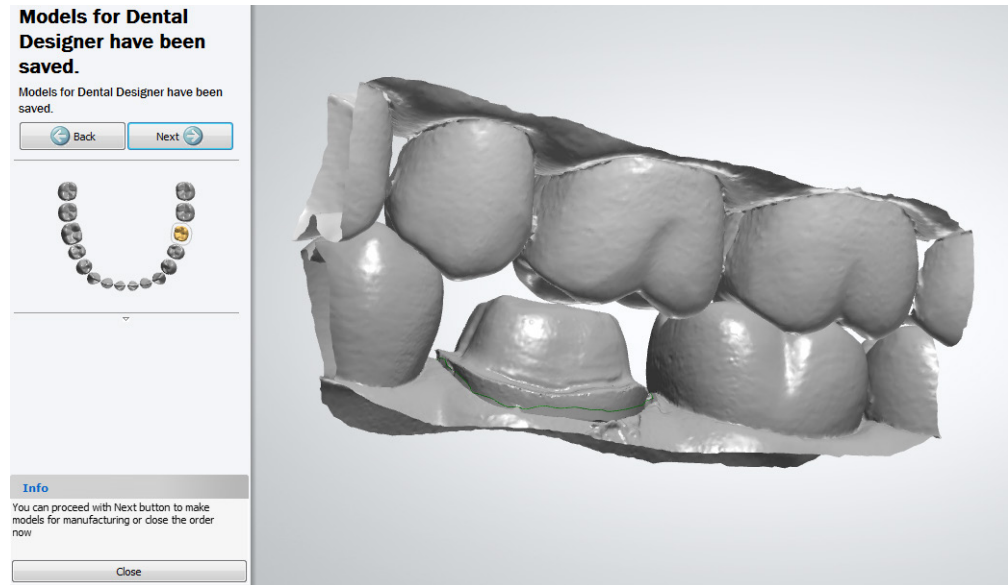




Instructions

Design a Dental Model, Crown and Coping

This paper aims to give a step by step guide to design a dental model, crown and coping using 3Shape Dental Manager.



Questions or comments:
casting@envisiontec.com

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The information and suggestions presented are to be viewed as aids. The intention is to be educational and is not a substitute for sound professional judgment. They are offered as samples for your reference only and are not intended to represent the only approach to any particular issue.

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The type of machines commonly used for Dental industry production are 3Dent®, Perfactory®4 DDP or PixCera these tend to give the best accuracy and surface finish.

3Dent®



Perfactory®4 DDP



PixCera



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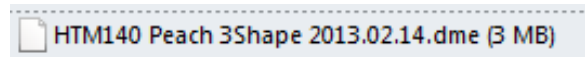
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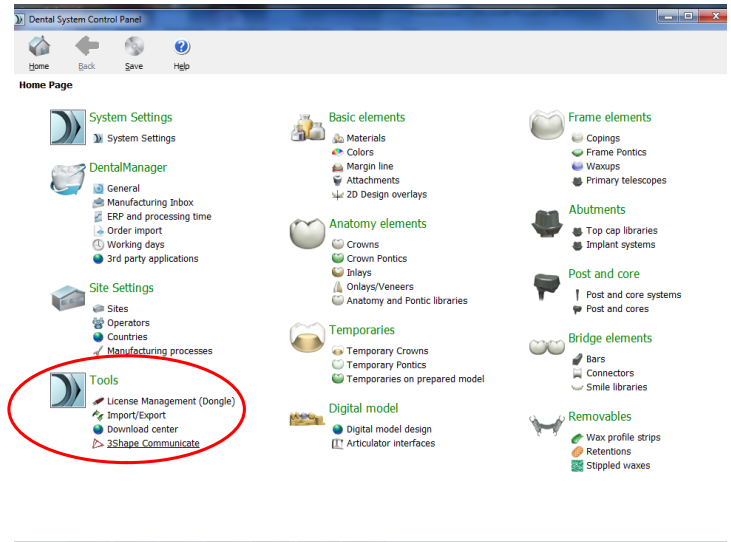
Load a 3Shape DME file Instructions

Copy the file to your desktop.



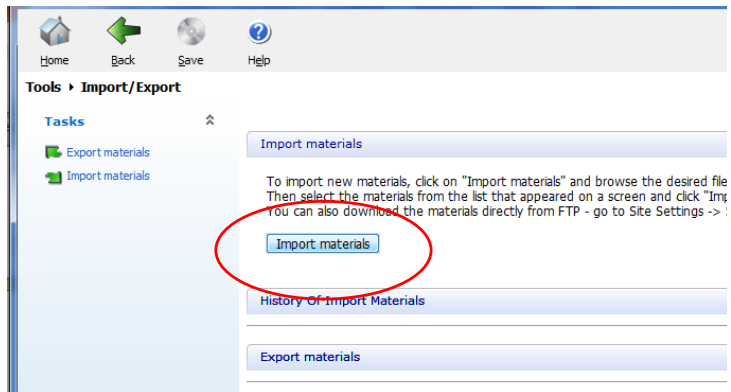
In Control Panel:
Tools

Left-Click:
Import/Export

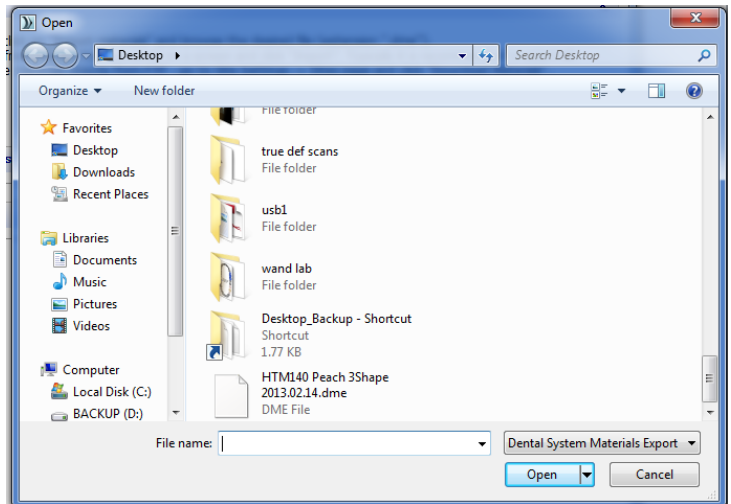


In the 3Shape Control Panel.

Left-Click:
Import Materials



Point your computer
to the DME file on the
desktop.



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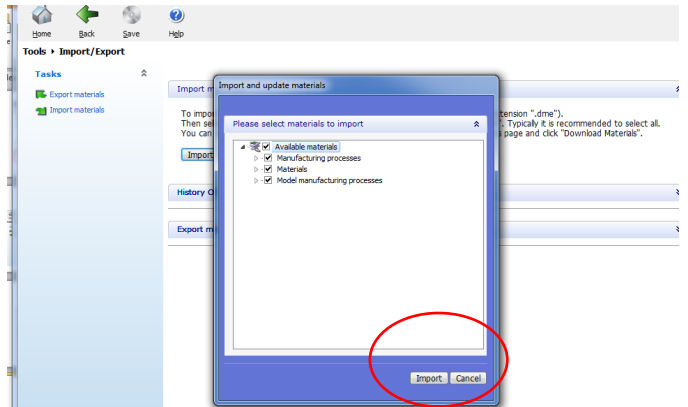
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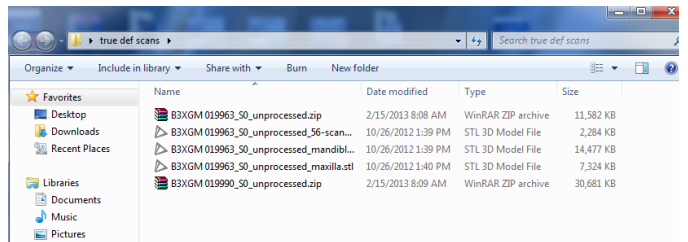
Load a 3Shape DME file Instructions

Left-Click:
Import

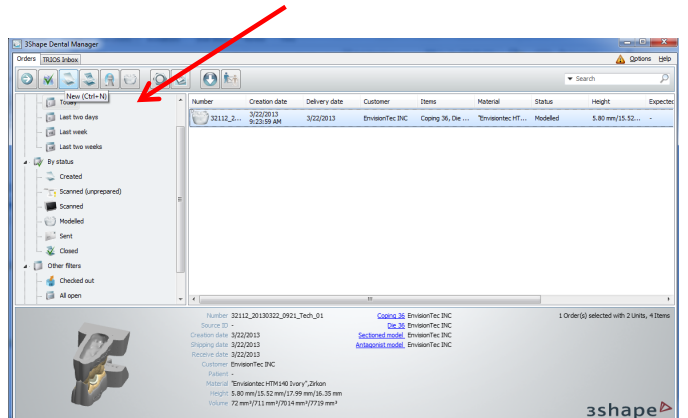


Design a Model and Coping Instructions

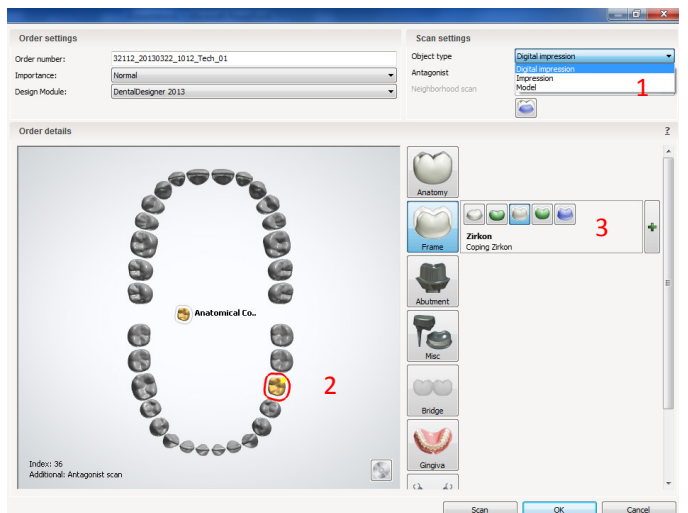
Files to be loaded.



Create a new file.
Left-Click:
New file icon



Left-Click:
Digital Impression (1)
Left-Click:
Correct tooth (2)
Left-Click:
Frame/coping (3)



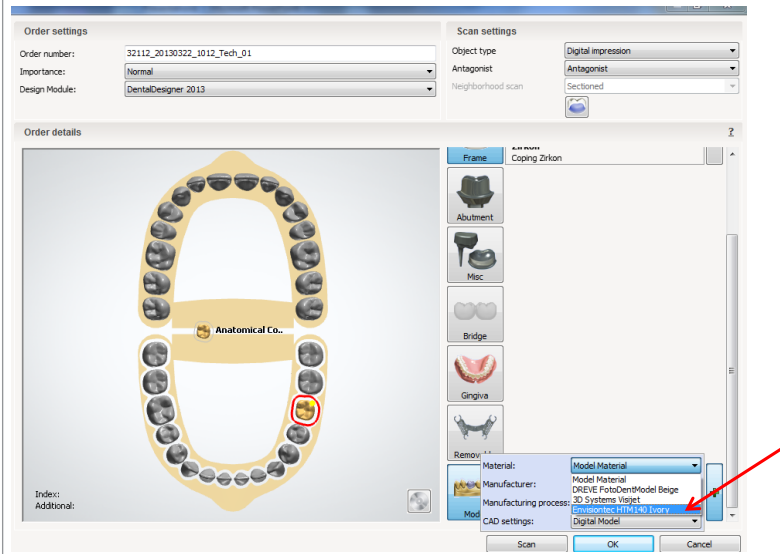
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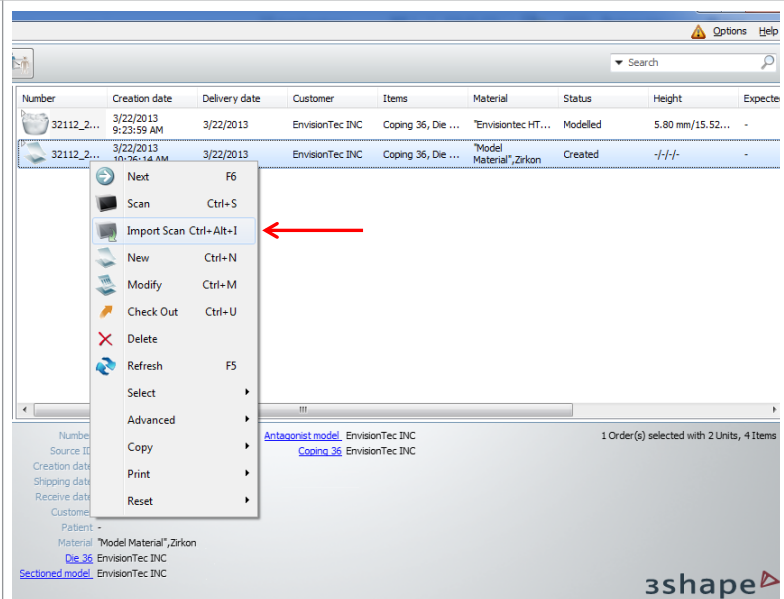
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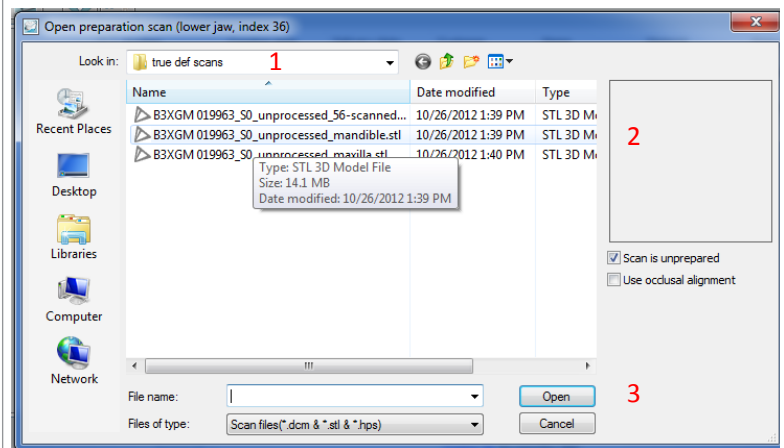
Left-Click:
Model
Left-Click:
Material type
Left-Click:
OK



Left-Click:
Your job
Left-Click:
Import Scan



Navigate:
Folder containing
the job files (1)
Left-Click:
Your preparation
scan (2)
Left-Click:
Open (3)



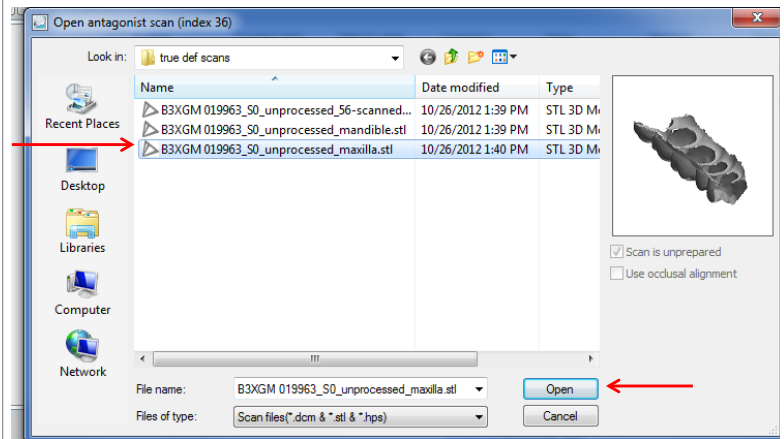
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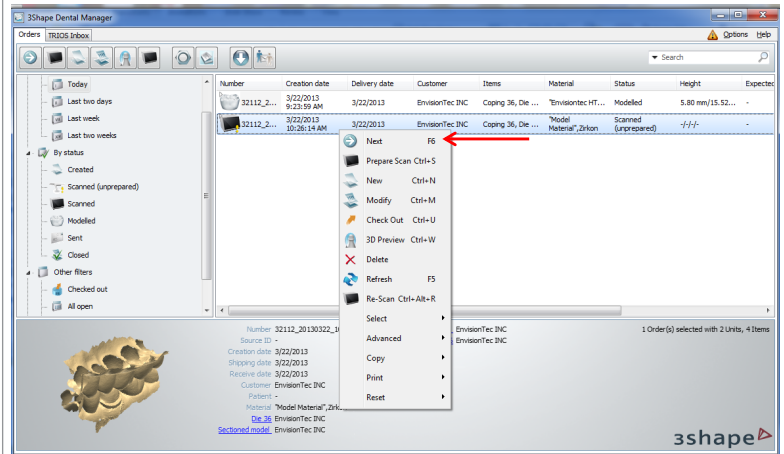
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Left-Click:
Your antagonist scan
scan
Left-Click:
Open

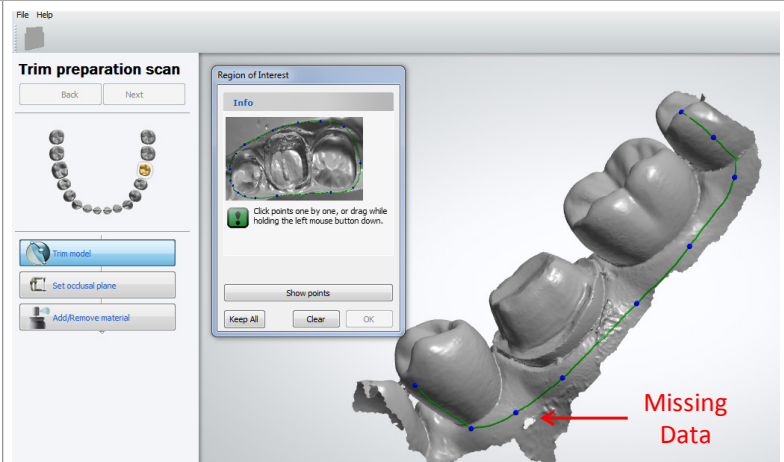


Right-click:
Your file
Left-Click:
Next



Left-Click:
Add points to draw
the outline of the
area you want to
keep.

*(Be sure to avoid
keeping areas
where data is
missing as this may
crash the software
later in the design
process.)*

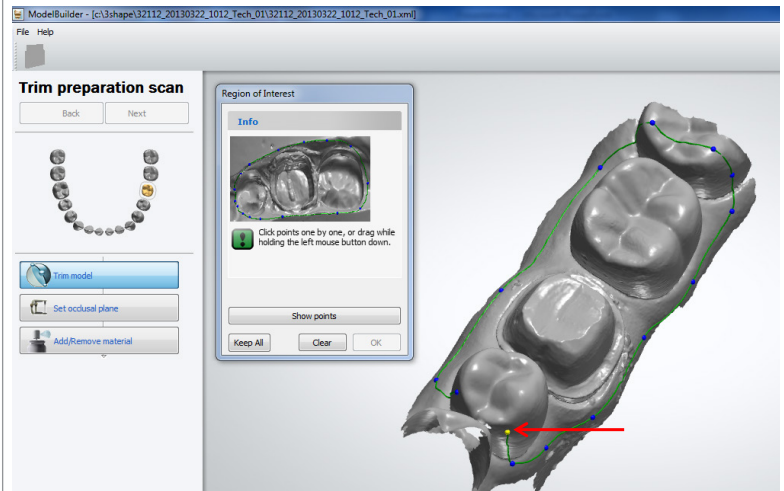


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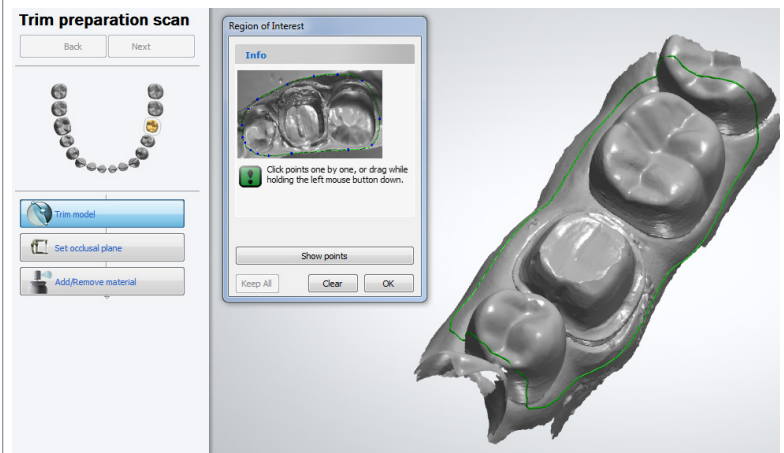
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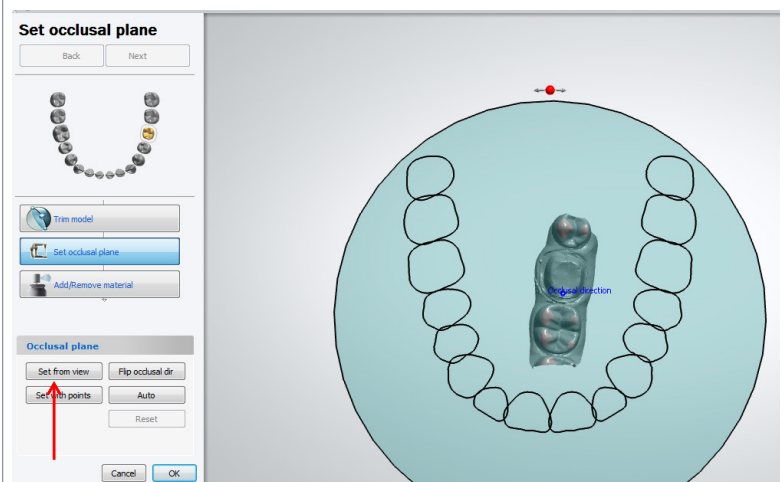
Draw points and Left-Click terminal point to connect data selected.



Trim is completed.
Left-Click:
OK



Using the red handle align the arch outline to match the model
Left-Click:
Set from view



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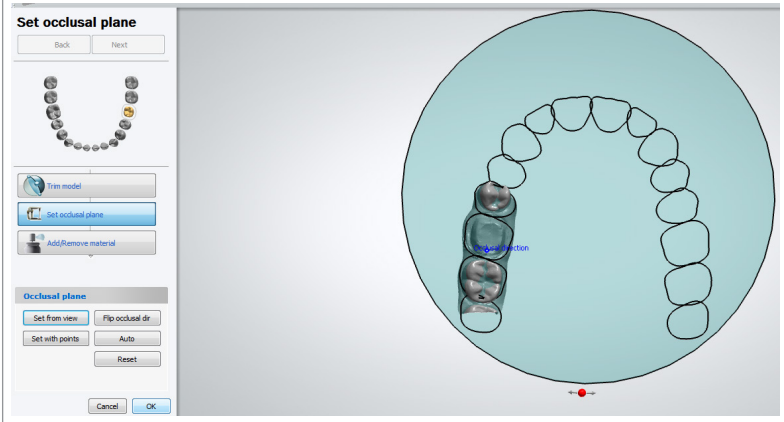
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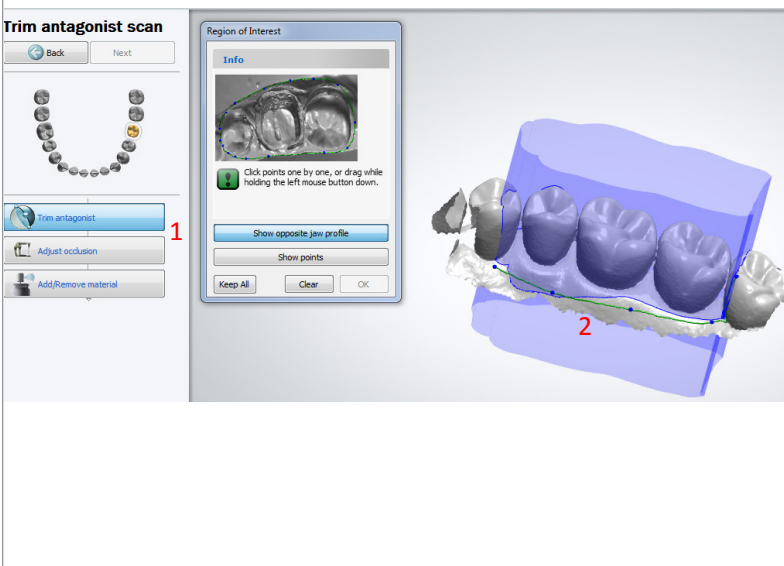
After aligning outline of arch form to model orientation.
 Left-Click:
 Set from view
 Left-Click:
 OK



Left-Click:
 Next



Left-Click:
 Show opposite jaw profile (1)
 Begin outlining the area of the opposing model you want to keep (2)
 Left-Click:
 OK



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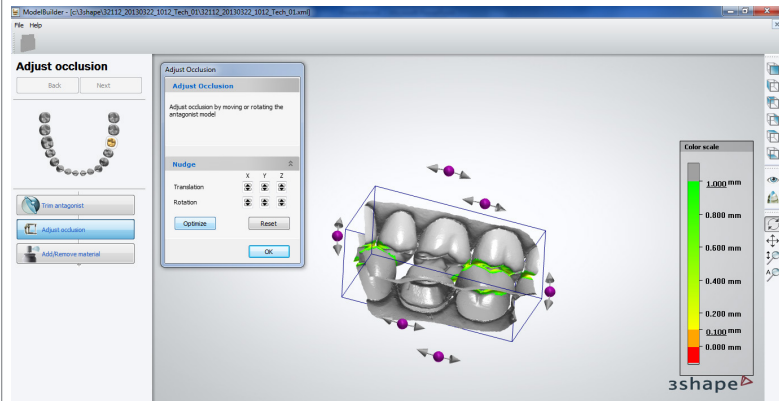
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Align the models for optimal occlusion.

(You want green or yellow on the color map. If you see red then the teeth are too compressed.)

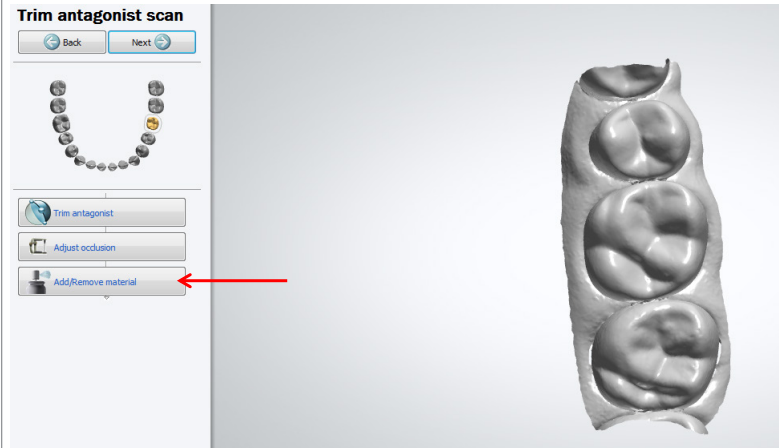
Left-Click: Optimize to let the software do it for you.)



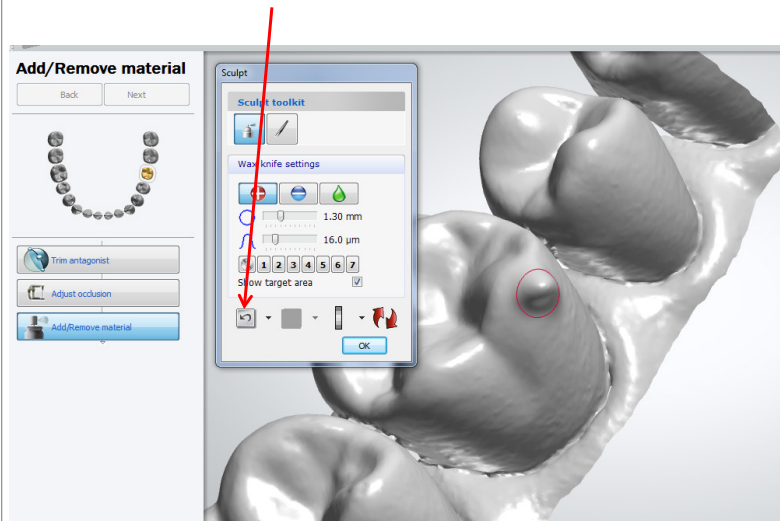
At this step you will most likely,

Left-Click: Next

(The software allows you to add or remove material if desired.)



Using the sculpting tool you can add/remove or smooth material as shown. There is also a handy "Undo" button.



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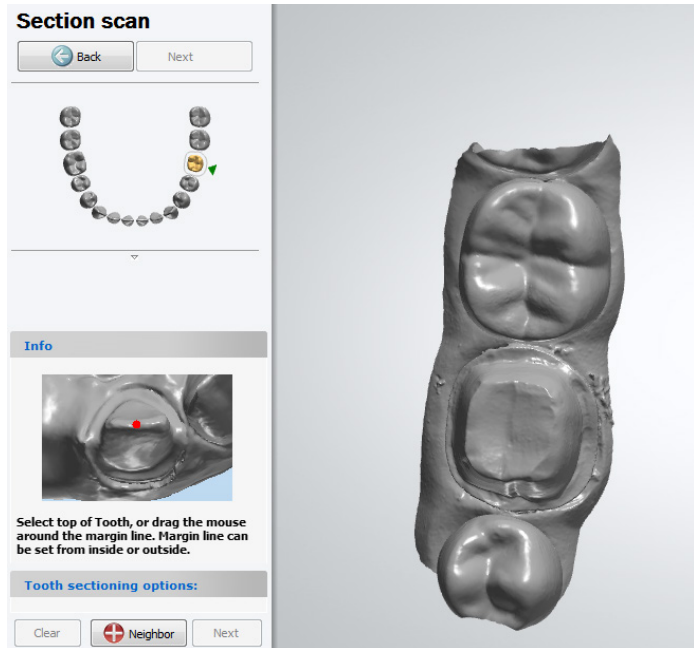
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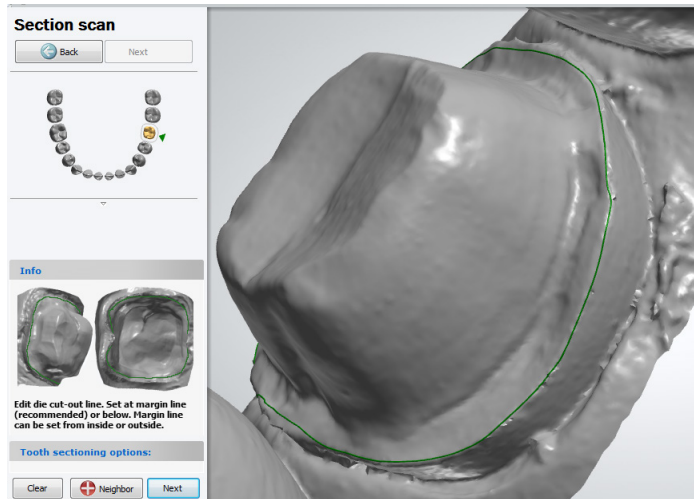
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Left-Click:
Center of the top of the tooth

The margin marking will begin. The software will try to detect the margin but some adjustments will be needed.

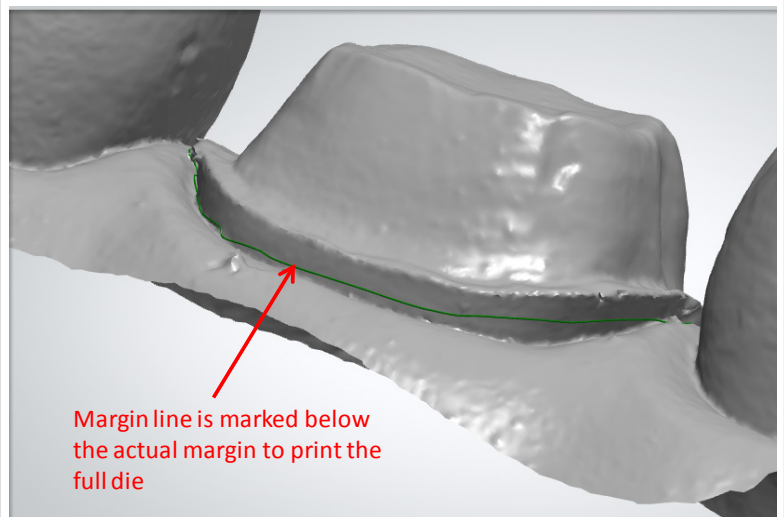


Left-Click and hold:
Draw the desired margin line



(OPTIONAL)

If you want to print the full tooth below the margin line then mark the margin below the actual line. This will make the full tooth. You will need to adjust the margin line later when you design the coping.



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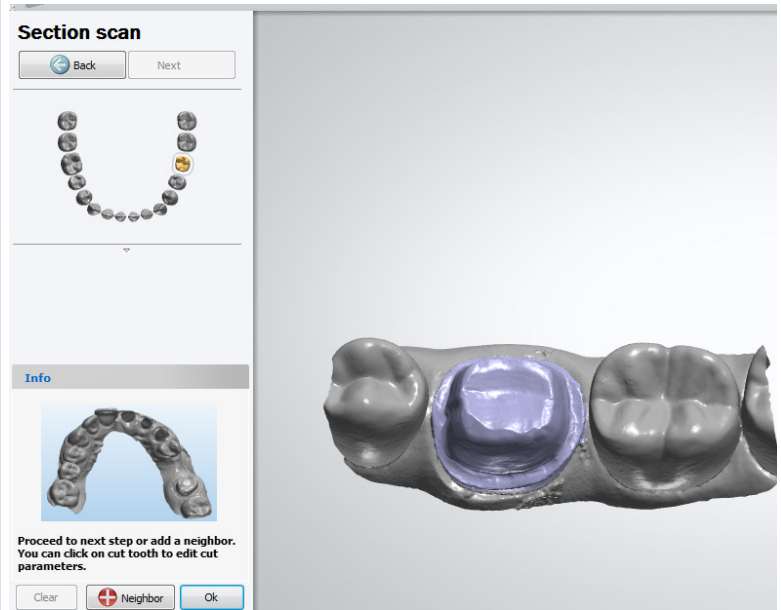
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If you want a removable neighbor tooth Left-Click Neighbor and follow instruction.
Otherwise
Left-Click:
Ok

Section scan

Back Next



Info

Proceed to next step or add a neighbor. You can click on cut tooth to edit cut parameters.

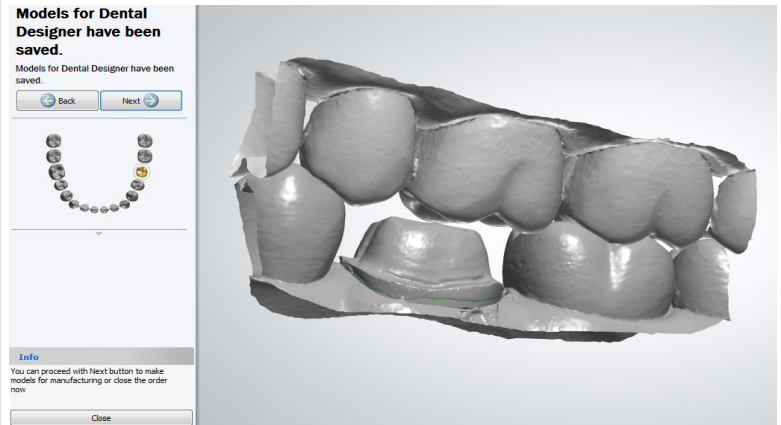
Clear Neighbor Ok

Models have been designed.
Left-Click:
Next

Models for Dental Designer have been saved.

Models for Dental Designer have been saved.

Back Next



Info

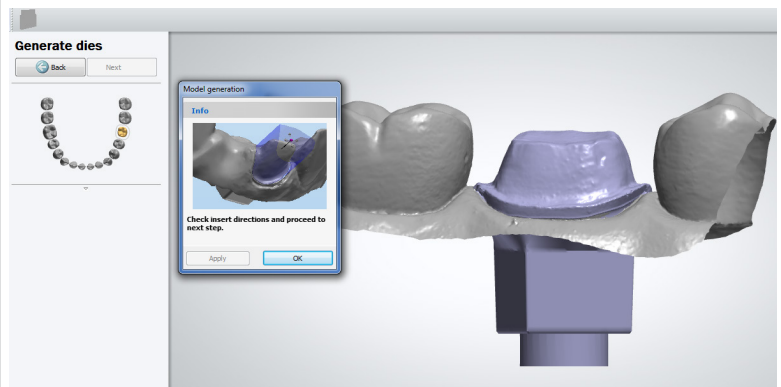
You can proceed with Next button to make models for manufacturing or close the order now.

Close

You have the option to go back if needed. You also have the option to adjust the angle of the die going into the model. Usually this is not necessary.
Left-Click:
OK

Generate dies

Back Next



Model generation

Info

Check insert directions and proceed to next step.

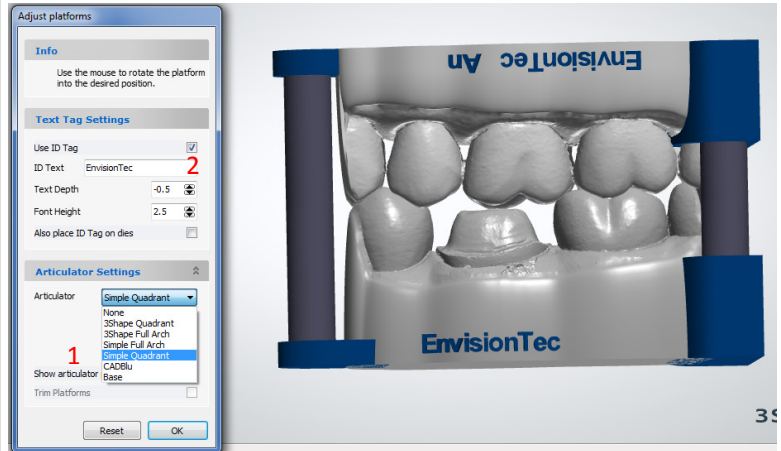
Apply OK

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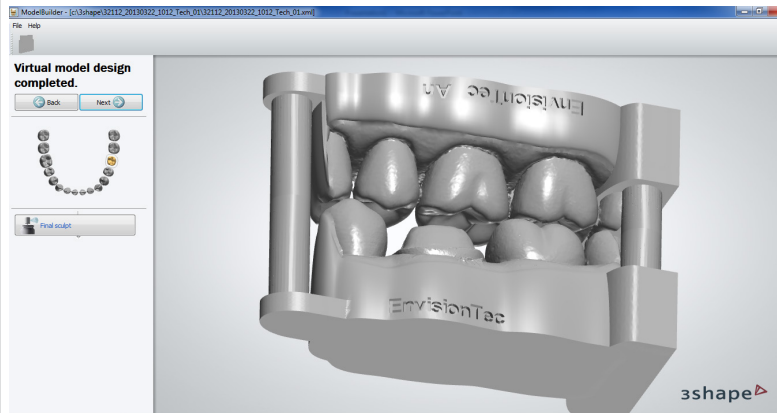
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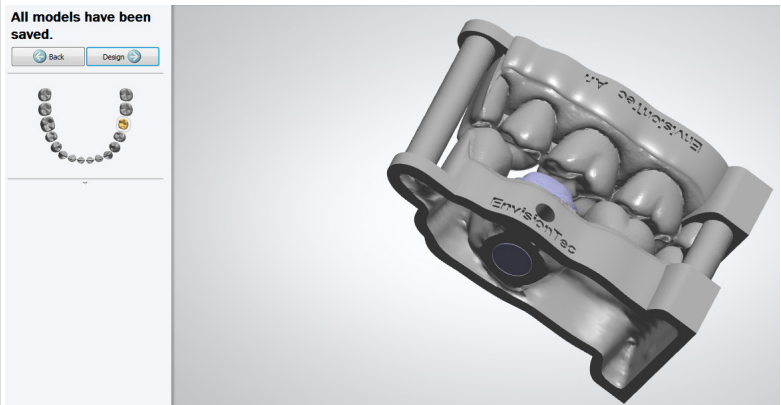
A variety of articulator styles are available. (1)
 Custom labeling is also available. (2)
(HINT) You can click and drag both the label and the articulator



Your model design is complete.
 Left-Click:
 Next



Your models will be automatically hollowed and saved.
 To automatically proceed to designing the coping.
 Left-Click:
 Design



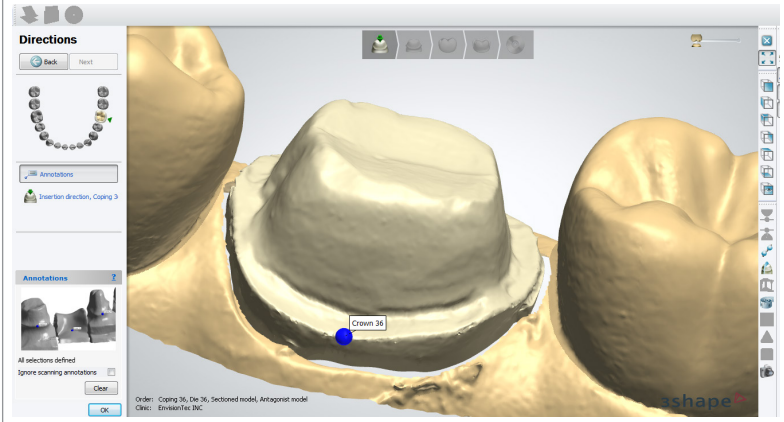
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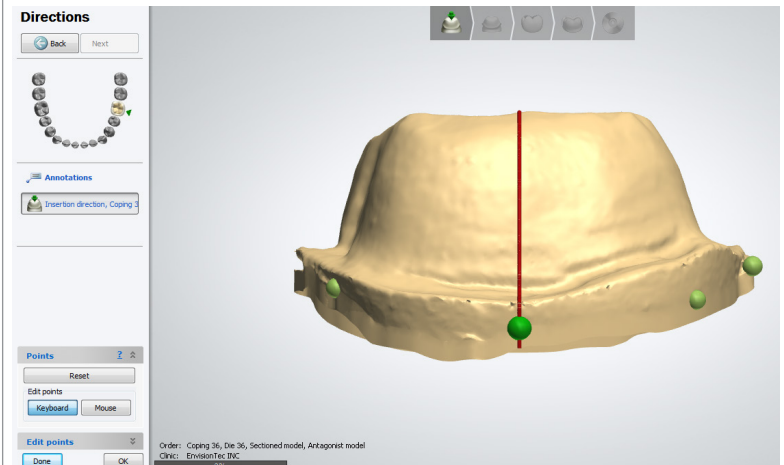
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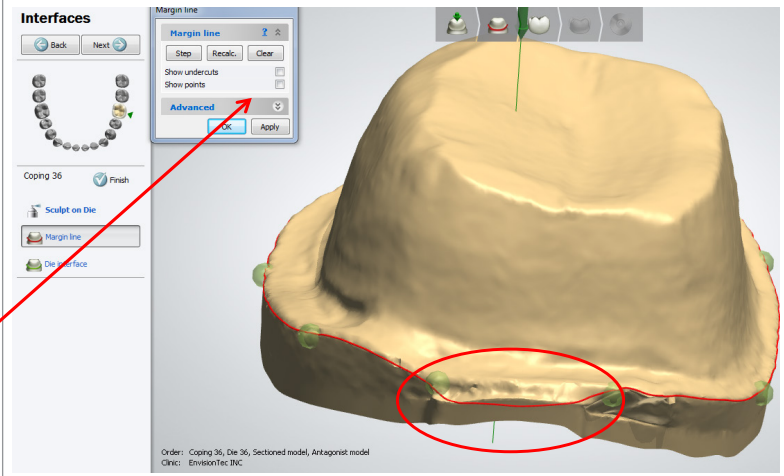
Locate the center of the buccal margin of the die and left click to orientate the software to the scan data. Proper placement will for example allow automatic lingual band placement equidistant to the interproximal of the neighboring teeth.



As we originally declared the margin lower than the actual margin, we will now need to adjust the margin line using up arrows and moving to the next green handle by using right or left keyboard arrows.



The software will try to mark the margin but some adjustment may be needed as shown below.



Left-Click:
OK
(HINT) for micro adjustments click SHOW POINTS

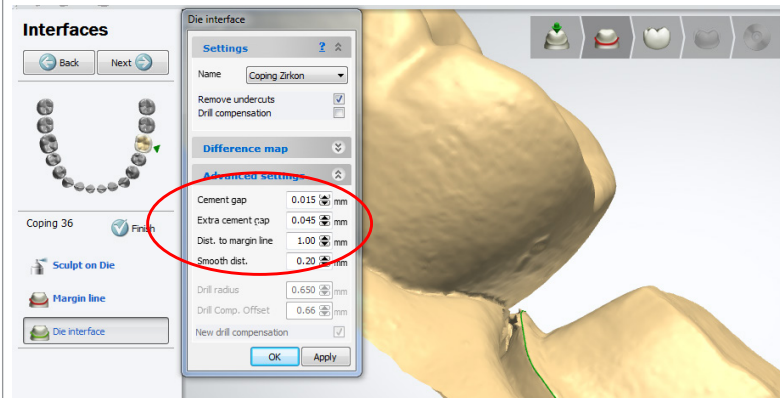
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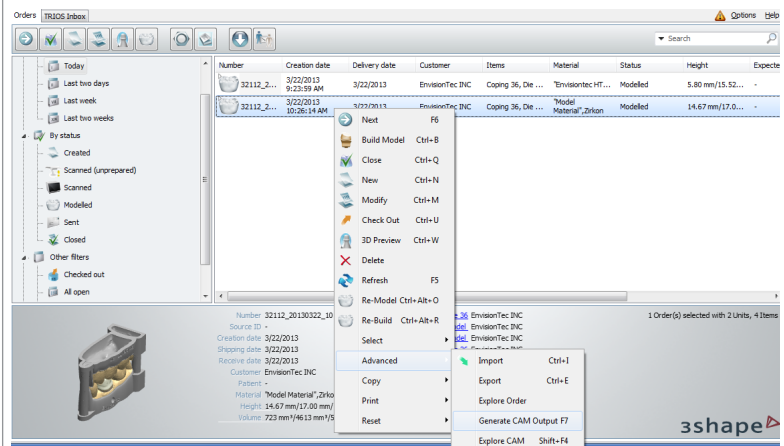
For printed copings and crowns use the cement gap and extra cement gap settings shown below. You will only need drill compensation if the preparation has very sharp angles.



After design session is complete,

Right-Click:
Your order

Left-Click:
Generate Cam
Output from the
Advanced tab

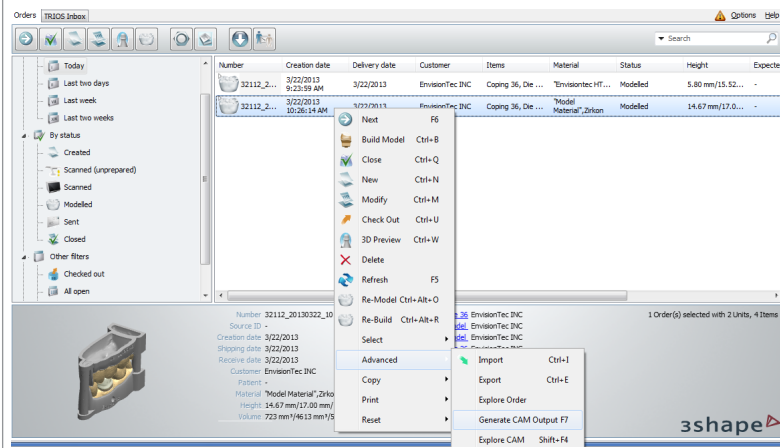


To retrieve your files,

Right-Click:
Your the job file

Left-Click:
Explorer from the
Advanced tab

Your files will be in
the folder for that
job.



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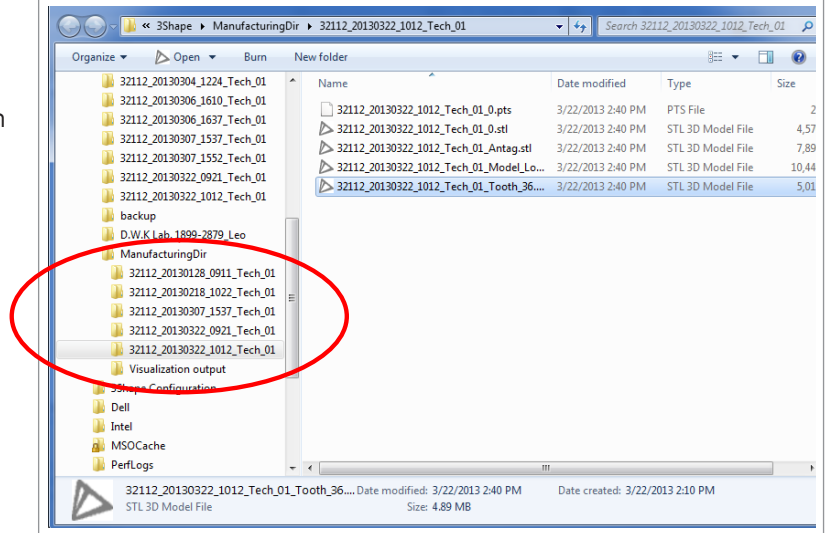
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You can create a copy of the manufacturing directory folder on your desk top for easier access to your data files.



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