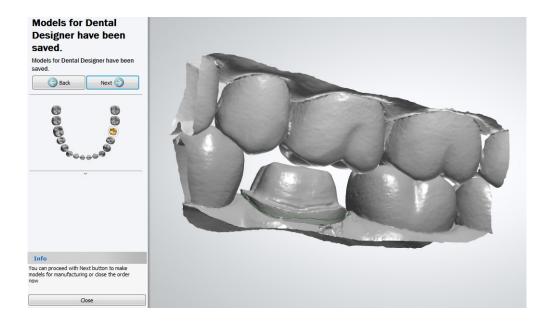




Instructions

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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Dental Model, Crown and/or Coping Instructions

Page 1

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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Load a 3Shape DME file Instructions Page 2 Copy the file to your HTM140 Peach 3Shape 2013.02.14.dme (3 MB) desktop. In Control Panel: **Tools** System Settings Frame elements Basic elements Left-Click: Basic element Materials Colors Margin line Attachments ○ Copings ○ Frame Pontics ○ Waxups Import/Export DentalManager Primary telescopes ☐ General ☐ Manufacturing Inbox Manufacturing Inbox ERP and processing to Order import Working days 3rd party applications Abutments Anatomy elements Top cap libraries Crown Pontics Crown Pontics Inlays Onlays/Veneers Anatomy and Pontic libraries Post and core Site Settings Post and core systems Post and cores Sites Sites Operators Countries Manufactu Temporaries Bridge elements Temporary Crowns Temporary Pontics Temporaries on prepared model License Management (D Manageme Digital model Removables Digital model design The Articulator interfaces In the 3Shape Control (2) Panel. Tools → Import/Export Left-Click: Import materials Export materials Import Materials

1 Import materials

Point your computer

desktop.

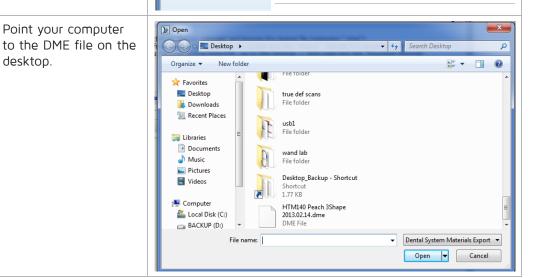
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Import materials

Export materials

To import new materials, click on "Import materials" and browse the desired file Then select the materials from the list that appeared on a screen and click "Improved can also download the materials directly from FTP - go to Site Settings -> :





Left-Click: Import Tools Import and update materials Foot and update materials Foot Available materials Foot Available materials Foot Means select materials Foot Means select materials Foot Means select materials Foot Means select materials Food Means select materials Foot materials

Design a Model and Coping Instructions Files to be loaded. Date modified * Favorites Desktop Downloads B3XGM 019963_S0_unprocessed.zip 2/15/2013 8:08 AM WinRAR ZIP archive B3XGM 019963_S0_unprocessed_56-scan... 10/26/2012 1:39 PM STL 3D Model File 2,284 KB Recent Places ▶ B3XGM 019963_S0_unprocessed_mandibl... 10/26/2012 1:39 PM STL 3D Model File ▶ B3XGM 019963_S0_unprocessed_maxilla.stl 10/26/2012 1:40 PM STL 3D Model File 14.477 KB Libraries B3XGM 019990 S0 unprocessed.zip 2/15/2013 8:09 AM WinRAR ZIP archive 30.681 KB Documents Music Pictures Create a new file. Left-Click: Octors BUDG Sabous New (Crir-N) Town (Crir-N) Last two days Last two days Last two seeds Jack Systams Conseed (Ita New file icon 32112_2... 3/22/2013 9:23:59 AM

Left-Click: Digital Impression (1)

Left-Click: Correct tooth (2)

Left-Click:

Frame/coping (3)

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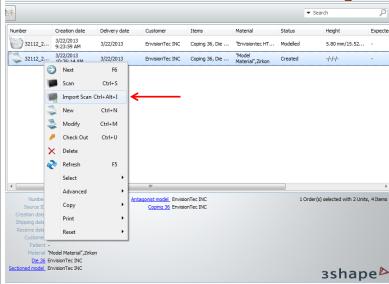
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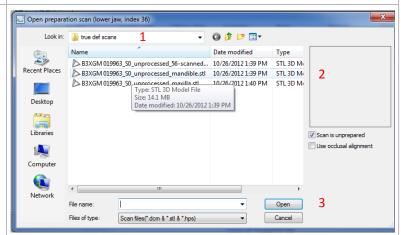
Left-Click: Import Scan



Navigate: Folder containing the job files (1)

Left-Click: Your preparation scan (2)

Left-Click: Open (3)

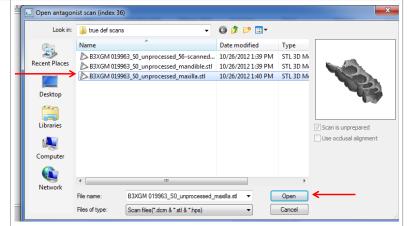




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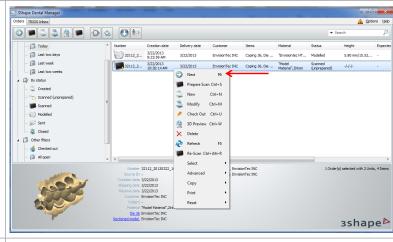
Left-Click: Your antagonist scan

Left-Click: Open



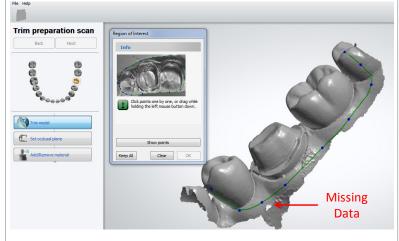
Right-click: Your file

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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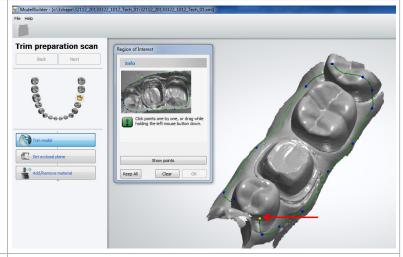
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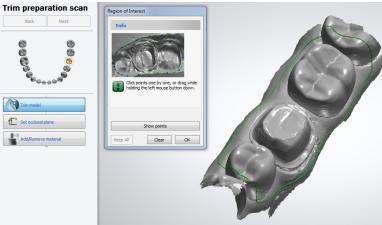


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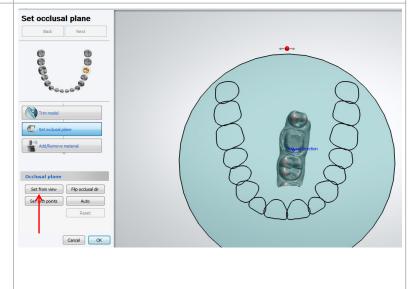
Draw points and Left-Click terminal point to connect data selected.



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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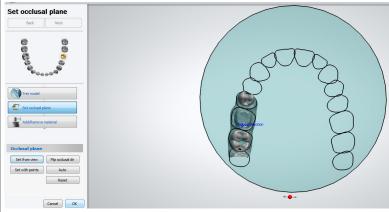


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After aligning outline of arch form to model orientation.

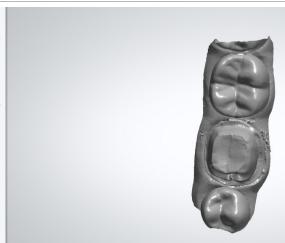
Left-Click: Set from view

Left-Click: OK



Left-Click: Next



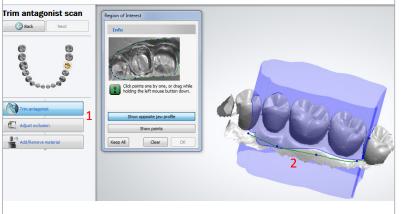


Left-Click: Show opposite jaw profile (1)

Begin outlining the area of the opposing model you want to keep (2)

Left-Click: OK





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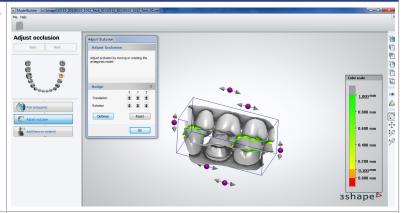


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Align the models for optimal occlusion.

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

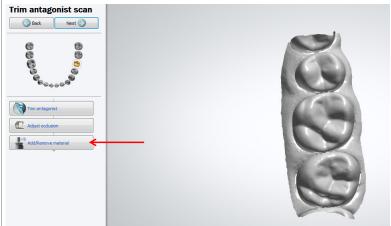
Left-Click: Optimize to let the software do it for you.)



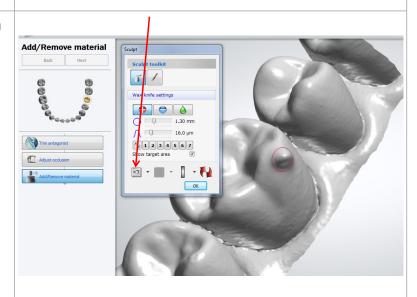
At this step you will most likely,

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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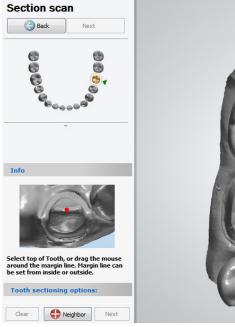
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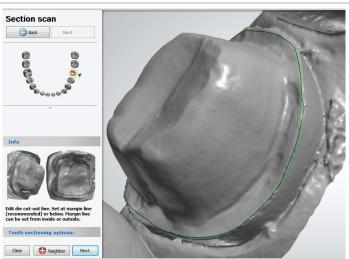
Design a Model and Coping Instructions

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



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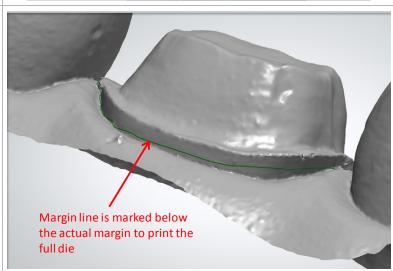
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(OPTIONAL)

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.







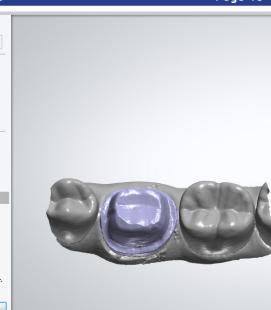
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If you want a removable neighbor tooth Left-Click Neighbor and follow instruction.

Otherwise

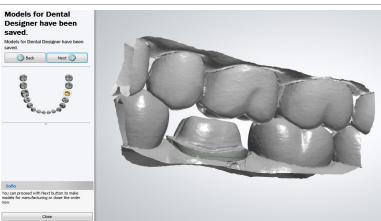
Left-Click: Ok

Section scan (Back Clear Ok



Models have been designed.

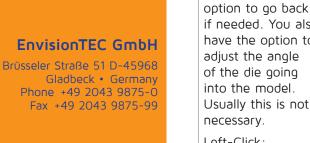
Left-Click: Next



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.

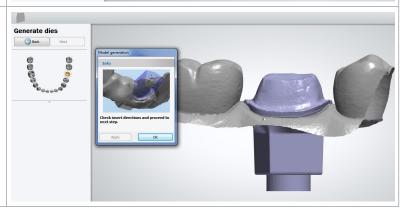
OK

Left-Click:



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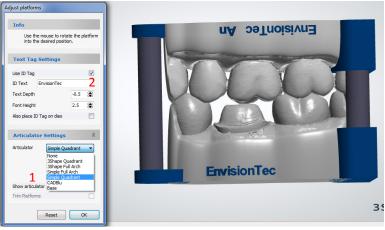


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A variety of articulator styles are available. (1)

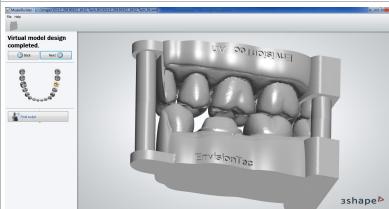
Custom labeling is also available. (2)

(HINT) You can click and drag both the label and the articulator



Your model design is complete.

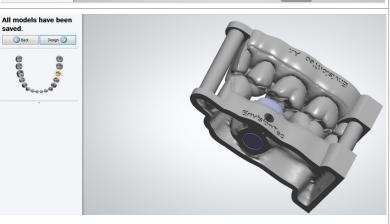
Left-Click: Next



Your models will be automatically hollowed and saved.

To automatically proceed to designing the coping.

Left-Click: Design



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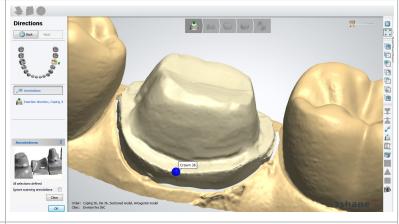
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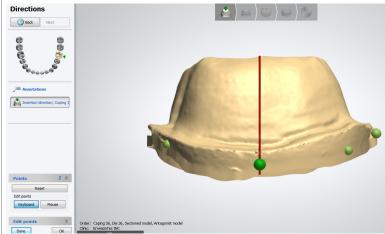


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Locate the center of the buccal margin of the die and left click to orientate the software to the scan data. Proper placement will for example allow automatic lingual band placement equidistant to the interproximal of the neighboring teeth.



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.



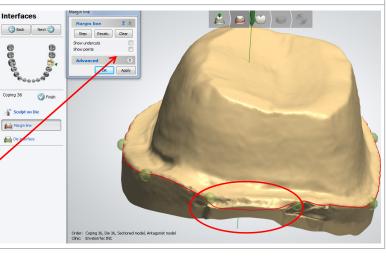
The software will try to mark the margin but some adjustment may be needed as shown below.

Sculpt

Margi

Left-Click:





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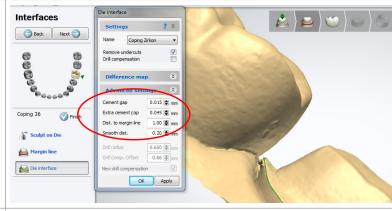


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Design a Model and Coping Instructions

For printed copings and crowns use the cement gap and extra cement gap settings shown

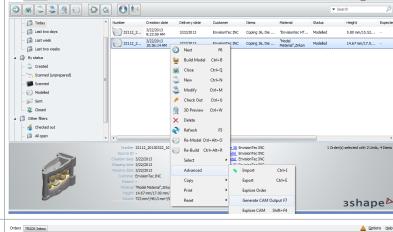
gap settings shown below. You will only need drill compensation if the preparation has very sharp angles.



After design session is complete,

Right-Click: Your order

Left-Click: Generate Cam Output from the Advanced tab



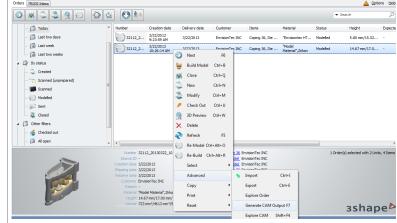
To retrieve your files,

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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Design a Model and Coping Instructions Page 14 You can create ▼ 👣 Search 32112 a copy of the Dopen ▼ Burn New folder ₩ - □ 0 manufacturing 32112_20130304_1224_Tech_01 Date modified Туре 32112 20130306 1610 Tech 01 32112_20130322_1012_Tech_01_0.pts 3/22/2013 2:40 PM PTS File directory folder on 32112_20130306_1637_Tech_01 > 32112_20130322_1012_Tech_01_0.stl 3/22/2013 2:40 PM STL 3D Model File 4.57 32112_20130307_1537_Tech_01 △ 32112_20130322_1012_Tech_01_Antag.stl 3/22/2013 2:40 PM STL 3D Model File 7,89 your desk top for 32112_20130307_1552_Tech_01 32112_20130322_1012_Tech_01_Model_Lo... 3/22/2013 2:40 PM STL 3D Model File easier access to 32112 20130322 0921 Tech 01 32112_20130322_1012_Tech_01_Tooth_36.... 3/22/2013 2:40 PM STL 3D Model File 5,01 32112_20130322_1012_Tech_01 your data files. D.W.K Lab. 1899-2879 Lec ManufacturingDir 32112_20130128_0911_Tech_01 32112_20130218_1022_Tech_01 32112 20130307 1537 Tech 01 32112_20130322_0921_Tech_01 32112_20130322_1012_Tech_01 Visualization output lntel MSOCache PerfLogs 32112_20130322_1012_Tech_01_Tooth_36.... Date modified: 3/22/2013 2:40 PM STL 3D Model File Size: 4.89 MB Date created: 3/22/2013 2:10 PM

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