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Introduction of Multi Layered Materials

With Straumann® CARES® Visual 10.2, we are introducing multilayered zirconia materials:

- zerion® ML
- zerion® UMTL

zerion UTML and zerion ML is available within the Order Creation (for Tooth and Implant Borne Restorations).
In CAD Station the Multi Layered Objects must be "PreNested" using the standard function out of the object context menu. The object can be moved in vertical direction and can be tilted as well.
Fast Waxing tooth borne Bridge

Order Creation Simple Coping with Waxing

1. Create a new Straumann Order
2. Prosthesis Family: Waxings
3. Choose the Material
4. Prosthesis subtype: Simple Coping with Waxing
Reselect all Simple Copings with Waxing and click the **Create Bridge** button and finalize the Order Creation.
Scan

- Select Fast Waxing Scan
- Do not select **Wax up**
- Place the model in the Scanner, close the door and click OK.

After the model scan, start the Waxing scan by placing the waxing on the model.
Important - For best results, clean the scans by doing the following:

- Right click on the waxing
- Select Remove scan faces
- With the **3D Clipping tools**, tightly encircle the area to delete
- Select “Clip and fill”
- Click Ok to exit the Cleaning tools
- If some smoothing is needed around the clipped area, right click again on the waxing and select **Add/Remove material**

Start the Multi-Die Scan, set the Margin Line afterwards and route the order.
CAD

Reduce Waxing allows the creation of a substructure prosthesis from a full contour that was scanned. To do the Reducing right click on the Waxing (blue), set the parameters and confirm with OK.
The prosthesis overlay is computed from the waxing. To edit the prosthesis, hide the waxing and right click on "Waxing overlay". It is possible to customize the restoration with several design tools, such as Add/Remove Material or add an Advanced Collar (e.g. for veneering or as dental band).

![Image of prosthesis overlay]

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![Image of prosthesis customization tools]

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![Image of customized prosthesis]

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After merging the model Attachment Items which are part of the attachment library can be added.
Fast Waxing Implant borne (SRBB)

Order Creation

1. Create a new Straumann Order
2. Prosthesis Family: Abutments
3. Material: Straumann CARES® for SRBB
4. Select the correct Implant Kit
5. Prosthesis Subtype: Custom Abutment With Waxing
6. Reselect all Custom Abutment With Waxing and click the Create Bridge button and finalize the Order Creation

Follow the steps described above for “Fast Waxing Tooth borne”
Fast Waxing for Variobase Bridge

Order Creation
1. Create a new Straumann Order
2. Prosthesis Family: Abutments
3. Choose **Stock Element** and set the correct Implant Kit
4. Create **Layer 1**
5. Prosthesis Family: Abutments
6. Select Material and Colour
7. Prosthesis Subtype: Custom Abutment With Waxing
8. Reselect all Custom Abutment With Waxing and click the Create Bridge button and finalize the Order Creation
Virtual Waxing Order Implant borne (SRBB)

Order Creation

1. Create a new Virtual Waxing Order
2. Material: Straumann CARES® for SRBB
3. Select the implant Kit
4. Prosthesis subtype: Custom Abutment with Waxing
Reselect all Abutments and click the *Virtual Waxing Definition* button.

Now Prosthesis Type can be selected for all tooth positions by clicking one after the other.
Click on the Tab Virtual Gingiva at “Re-compute Virtual Waxing”, the Gingiva can be enabled and disabled. Individual Gingiva Parameters can be set. Finalize the Order Creation afterwards.
Scan

- Select Emergence profile if needed
- No Wax up is needed for Virtual Waxing Order
- Place the holder in the Scanner, close the door and click OK
- Define the area on the preview, click to start the Scanbody Reconstruction. Here it is not necessary to define the Tooth Chain
Axis and Design Parameters

- Edit the Margin Line
- There is no need to set an insertion axis over the abutments because they will be merged into the virtual waxing. Click OK to exit this window.
CAD

You can modify the anatomies afterwards with shaping tools and also change the reference anatomy kit. You can then choose to generate the full contour so that only the shading will be hand-applied. Choose a down-sized overlay if you want to build the final anatomies with ceramic. Before merging, the virtual waxing components can be modified individually. Once merged, modification is handled in the CAD station in the same way as a scanned Waxing.

A virtual Waxing is computed with these customizable elements:

- The Abutments [1]
- The virtual Waxing (bridge) [2]
- Virtual prostheses (individual teeth) [3]

Remark: Extremely angulated implants or abutment in a bridge may not fit onto the model or in the patient.

Before creating a manual wax-up it is important to create the order and scan the scan bodies – to ensure that the bridge is possible

Note: If the angulation after scanning is too high consider using the SRA angular abutments from Straumann that can provide 17° and 30° correction for both NC and RC implants.
Edit Virtual Waxing

Occlusal table

By displaying the color handles, you can adjust the orientation of the occlusal table and the global shape of the teeth. Select the viewport check box to display multiple views simultaneously.

With **Re-compute Virtual Waxing** you can change the anatomy kit or the span of the bridge by adding or removing teeth from the blue lasso.
Virtual Prosthesis
Edit Anatomy

You can edit the virtual Prosthesis with the Option *Edit Anatomy*
Remark: On wall thickness for inter-tooth placed implants/abutments
Ensure that there is enough material about the implant screw channel see arrow first picture, in order to ensure the bridge has sufficient strength (recommended is 1.6mm thickness for metal and 2.0mm for ceramic).
Ensure also that the material about the screw channel is as high as possible (ideally to the neighboring tooth height) so that the bridge is strong enough.

Increase wall-thickness

Increase height of material about screw channel
Virtual Gingiva

The virtual gingiva is automatically computed for a virtual waxing on an implant case. It can be moved, transformed and sculpted, similar to the prosthesis.

By choosing **Delete**, only the virtual Prosthesis and the connectors are shown and can be edited. If you delete a virtual gingiva, a connector is automatically computed between non-touching teeth.
Create a virtual Gingiva

The Gingiva can be recomputed *manually* with *Base Line* or *Automatically*, which re-computes the virtual Gingiva to the initial proposal, based on the parameters.

This parameter sets the offset between the real and the virtual gingiva.
The **Base Line** is drawn on the model scan (or gingiva scan). It is the contour of the virtual gingiva.

With **Edit Gingiva Line** the papilla can be edited by moving the dots.

**Tip:** Hold down the space bar on the keyboard to isolate the tooth you are editing; it is then easier to grab the dot of the interdental papilla.
Remark: Please keep in mind that a deep gingiva can be challenging to clean. Concave structures shall be avoided to prevent infection, see red-arrow. Recessed implants or abutment interface can also be challenging to clean.

Hygiene aspects should always be considered ensure there is good patient cleaning access (green arrow) to implant assembly

If it is necessary to embed interfaces deeply in the bridge, e.g. SRA abutments, ensure that there is enough space for the underlying implants, especially if an angulated SRA is used.
Merge

Merging the virtual waxing turns it a blue color. The abutment, prosthesis and bridge layers are merged, and the new part is handled by the software in the same manner as a scanned waxing.

More editing options can then be applied:

- Reduce all areas of the waxing, i.e the teeth and gingiva
- Add a dental band on the reduction
- Add/Remove Material
- Unmerge to return to prostheses editing

Merged virtual Waxing with Abutments
Editing options of a merged virtual Waxing:

Merge with Adapt anatomy-the adaptation ensures that the waxing is smoothed up to the Implant/Abutment Interface.

Merge without Adapt anatomy-the anatomy is not affected. Only the minimum thickness between the Waxing and the Implant/Abutment Interface will be computed.
Merged virtual Waxing which was applied on a reduction parameter

Applying an advanced dental band on a reduced Waxing

Advanced Collar for Reduction

Reduction for e.g. Veneering
Virtual Waxing Order Tooth borne Bridge

Order Creation

1. Create a new Virtual Waxing Order
2. Choose Material
3. Prosthesis subtype: Simple Coping with Waxing
4. Select the respective dies
5. Reselect all dies and click the *Virtual Waxing Definition* button

> Follow the steps as described above for the Implant borne Indication “Custom abutment with Waxing” (*page 13-14*)