**Straumann® CARES® Visual 9**

Software Update – What’s New

Software Version 9.0
Release Date October 15th 2014

**New Feature Highlights**

- New Graphical User Interface
- New Bar Types
- Different Custom Abutment Types
- Anti-Rotation grooves
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1. New Graphical User Interface
The notable change for the Straumann CARES user is the fresher and cleaner outline of the client user panel. With the introduction of this leaner and harmonized appearance the CARES user will experience improved guidance within the new structure. The following is a short description of the new graphic user interface of Straumann® CARES® 9.

1.1 New Icons and Toolbars

The Horizontal toolbar is grouped (order creation, CAD applications and settings) as it was in the previous CARES® Visual 8 version.

The Icon names are displayed when the mouse curser is placed over them (mouse over buttons).

New to the Toolbar are:

- Additional software modules (i.e. Partial Module)
- User Preferences
- Removal of the CAD Calculation tab

The CARES user can choose from different Order types right over the Order Creation tab.

The Order Creation dialog consists of the same functionalities as previous CARES® Visual versions.

The Route Order button has moved to the bottom left corner.
1.2 New Menus

All Menus can be opened by clicking on the Icon, or simply by using the right mouse button.

The Order list can be sorted or filtered by using the filter toolbar:

The Orders names can be displayed differently by adding information with the display button:

The Calculation is now managed in the CAD Station. The current calculation status is displayed in a progress bar under the Order.
1.3 Display Tools

*Display Effects* can be changed by removing the options from the display tool. When deselected the display is the same as in previous CARES® Visual versions. If the current view is not giving you the best lighting conditions, flat shading can be chosen when editing the margin line,
1.4 Order Management

The overall functionality of the menu has not changed. The icon names are displayed as mouse-over buttons.

A known order, dentist or patient name can be typed into the search field to find it quickly.

The Details of each Order are shown at the bottom of the screen. Here you can see and add comments or look at screenshots taken during scan or design.

If you press the switch view button it will show you the Model or the Overlay, depending on the selection (whole order or an item).
1.5 User Preferences

*User Preferences* are now part of the main horizontal toolbar and can be accessed by pressing the User Preferences Icon.

Your Lab information is no longer stored in the Master-Data. It is now located, along with all connections, under User Preferences.
2. New Features and Products in Straumann® CARES® Visual

2.1 New Bar Profiles for Acrylic wrap around

Four new bar profiles are added to Fixed Prosthetics and grouped in two new families.

These bar profiles allow the CARES user to create retention bars for total/partial acrylic wrap around technique. They are free-formable (with the required minimum allowable dimension) and are independent of any inter-implant segment restrictions. This means the geometry can be independently designed throughout the jaw, creating the best possible anatomical retention for the different areas of prosthesis restoration (Anterior/Posterior).
a. Basic Fixed Bar profiles for complete acrylic wrap around

All new bar profiles can be altered efficiently with fixed cross section points or 3D via profile splines (purple). Descriptions of these points according to the bar profile are as follows.

**Cross Profile**: Two control points allow the CARES user to change the size of the geometry. The wider horizontal shelf geometry is static in size and position (always centered vertically).
Lambda Profile: Four control points allow the CARES user to change the size, position and shape of the geometry.

Trapezoid Profile: Four control points at each corner allow you to change the size, position and orientation of the geometry.
b. Advanced fixed bars for partial Acrylic warp around

**Staircase Retention:** Six control points allow the CARES user to modify the geometry for best results. Two control points for the Staircase Retention Rail, one for the Acrylic Finishing Line, one for the Basal Form and two for the Oral Metal Backing.

Many design varieties for different needs or regions are possible.
c. Software Workflow

For both Basic and Advanced Fixed Bar solutions it is recommended to scan the Denture Wax-Up.

The workflow and functionality within Order Creation and Scanning for fixed bars is the same as removable Prosthetics.

Once the order is opened in the CAD Station, the CARES user can open Bar Designer. Here one of the new Bar Profiles can be chosen according to the indication.
Place the Bar without planarity restrictions in an anatomically correct position. Use the Wax-up with transparency for orientation and reference positioning.

In the Segment Mode the Bar Profile can be edited. Use the control points in the 2D Designer or drag the purple splines to modify the cross section locally or globally (depending on the deformation size slider setting). The section view of the 2D Designer can be moved throughout the bar.
The Pillar mode alters height and the parameters of the pillars. If the Pillar body is interfering with the denture, an additional chamfer can be made.

For Advanced Fixed Bars a *Cut Out tool* can be used to create tooth retentions.

The Advanced Fixed Bar is also adaptable to the gingiva (with or without offset) to create a tight basal contact area. Negative values can be selected to create pressure on the soft tissue.

Note: A gingival mask should be used in areas of the model with negative offset to allow fitting checking.
d. Feature and Notification Explanation

2D Designer

The 2D Designer can be used to make modifications to bar geometry. The Designer also shows the gingiva and the waxing profile (when scanned) of that current section.

The current minimum section area value and the current designed section are displayed.

The part of the profile that is not colored (cut-out or screw hole) will no longer be part of the cross section after validation.

The section view of the 2D Designer can be moved using the gripper throughout the entire bar.
Show Measures

When activating the “Show Measures” button in the 2D Designer, the bar segment lengths and the measured minimum distances between the bar and the gingiva and/or wax-up (when available) will be displayed in the 2D view.
Undercuts

Due to maximum design flexibility, it is possible to create undercuts at the bar’s surface. These Undercuts can be shown when activating the “Show Undercuts” button.

The CARES user can then alter their design to reduce the volume of undercuts in order to avoid potential later manual processing steps.
Deformation Size

Using the “Deformation size” slider you can change the area of influence when altering the geometry. This affects the 2D Designer and the splines in the 3D Design.

Pulling the slider to the left makes the design changes local to the part in your section view or where you move the cross section point.

The more the slider is pulled to the right the larger the area of deformation is.

Pulling the slider completely to the right makes the design changes global to the whole bar.

Reset, Undo/Redo

The Undo/Redo buttons can be used in any design mode. The reset button only resets the design steps in the current mode.
Cut Out

The Cut out tool can be found in the Attachment Mode. The cut outs can only be placed on the Advanced Fixed Bars by clicking on the bar surface. The cut out parameters can be changed and defined.
Protected Bar Area

The colored part of the Advanced Fixed Bar is protected. This part can't be adapted to the gingiva. If this part is below the gingiva it will lead to an interference notification. The protected area is marked green when the cross section area contains sufficient dimensions. It will turn red when this area is insufficient with a corresponding notification.
Protected cross section area

When the Minimum section area value is not sufficient, a notification will appear and that area will be colored in the 3D Design.

The Protected Area will turn red (for Advanced Fixed Bars only)

The CARES user will remain in the Bar Designer to adapt the design to fulfill all design recommendations.
Insufficient pillar contact

This notification will appear if the contact area between pillar and bar is insufficient. The CARES user will remain in the Bar Designer to adapt the design to fulfill all design recommendations.

Breaking Point

WARNING: Pillars can be lower than the bars top surface, which makes it possible to create an insufficient design. As the screw channel reduces the cross-section of load bearing material, it may cause the bar profile to be insufficient by creating a high stress point.

If this is the case the CARES user will be notified to adapt the design.
Gingiva Interference

Bars not supporting gingiva adaption can interfere with the gingiva. This will make it impossible to fit the milled bar onto the model or in the mouth.

The CARES user will be notified if a part of the bar is interfering with the gingiva. The area impinging on the gingiva will be marked red.
2.2 Gingiva Former

A new Prosthesis Subtype called “Custom Gingiva Former” can be found in the Abutments Family.

The gingiva former can be made on all CARES® X-Stream™ Variobase™ connections using Polycon ae®.

**Tip:** After you have designed your custom emergence profile, you can change the Prosthesis and Material to a CARES® X-Stream™ Abutment without losing the design of the emergence profile.
2.3 New Implant Type (Pure Ceramic Implant Monotype*)

A new Implant Type is available in the CARES® Visual Implant Library as shown:
Ø4.1mm RD, AH 4mm
Ø4.1mm RD, AH 5.5mm
Ø3.3mm ND, AH 4mm
Ø3.3mm ND, AH 5.5mm

The allowed prosthesis subtypes and material combination are shown in this table:
(Product and material availability might be country specific)

<table>
<thead>
<tr>
<th></th>
<th>zerion® HT</th>
<th>zerion® LT</th>
<th>polycon ae</th>
<th>IPS e.max CAD LT</th>
<th>IPS e.max CAD HT</th>
<th>IPS e.max CAD MO</th>
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<tbody>
<tr>
<td>Custom Abutment (coping)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Red. Crown on Implant</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Full Crown on Implant</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
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Software Workflow
- The Pure Ceramic Implant Monotype doesn’t have a Scan body to scan inter-orally or from a stone Model. The Implant or Analog is scanned and the software will reconstruct the implant using the 3-Point matching method.
- CIM Analogs should be treated with scan spray to achieve the best matching results

*not yet available in CA/USA
3. New Software Workflow Improvements

3.1 Initial Proposal Calculation

A patented new calculation method has been developed to ensure the best possible initial proposal. This method takes the given anatomical information (remaining teeth and antagonist) from the model.

To use the “Tooth Chain” Technology and to achieve the best results we recommend the following steps:

**Tip:** Use all Information available (Antagonist and full jaw scans).

After Scanning the first Jaw the new Model Assignment Designer will open. The checkbox must be active to use the “Tooth Chain Technology”.

Define the tooth chain information using the button “Define tooth chain”.

The given information is set for each tooth separately. The CARES user can choose from:

- Tooth (remaining teeth)
- Preparation (die)
- Inlay
- Veneer
- Gingiva (for implants or pontics)
The assigned dies and the assigned “Tooth Chain” teeth must be set correctly.

The result of the initial proposal with “Tooth Chain Technology”
3.2 Customized Abutment Types and Initial Proposal

The CARES user can now choose from two different Customized Abutment Shapes. This can be done in the Parameter Settings or in the Overlay Multi-Designer.
The Mechanical shape is the original shape from previous CARES® Visual versions. This shape has large parallel friction areas.

The Anatomical shape is an improved shape to ensure the best possible initial proposal. The abutment is reduced to fit the anatomy and is used for all CARES® X-Stream® combinations.
3.3 Customized Abutment Anti- Rotation groove

The CARES user can create an Anti- Rotation groove on a Custom Abutment. This can be made by selecting “add rotation stop” in the abutment local menu.

The size and position of the groove can be changed using the Position slider and the parameter settings.

Note: When creating a CARES® X-Stream® restoration, complete this step at the very end of your design. The groove will be automatically computed to the inside of the crown.

3.4 Connector Editing

Improvements were made to the connector editing calculation. These improvements make it easier to create smooth and homogeneous connectors without causing spikes or folded areas.
3.5 Tooth-borne minimal material thickness display

When using the *Overlay Multi-Designer* the minimal material thickness is shown red. This allows the CARES user to see which parts of the crown are not respecting the minimal thickness and will be corrected after validating the design.
3.6 Clip Planes

The Clip Planes have been improved to cut the selected surface.

Software Workflow

Select a surface by clicking on it (it will be highlighted) and then select a clip plane. The selected surface will be clipped.

Tip: To clip an abutment in the Abutment axis, click on the Abutment and select Mesial Clip. To clip an abutment in the implant axis, click on the Implant and select Mesial Clip.

3.7 Occlusal Adaption

The Occlusal Adaption has been improved to create the best anatomical adaption. The CARES user can choose from two different types of adaption:

- Abrasive
- Smooth
3.8 Material and Prosthesis change flexibility

A new tab in the *Recompute Dialog* was added to allow the change of *Subtypes* in a *Prosthesis Family*. The design of the anatomy will remain the same after the change has been made.

The anatomy design also remains after changing the material over the *Edit Order* dialog.

**Note:** The design changes done to the overlay *will be lost* since the overlay is recomputed after changing the subtype or the material.
4. Online Help Guide

CARES® Visual 9 contains an online Help Guide to give the CARES user immediate access to relevant information, whenever it is needed.

This Button is located throughout the CAD Client and will lead directly to the corresponding topic in the online Help Guide.
5. Synergy™ Connection to coDiagnostiX™

CARES® Visual 9 is able to connect to coDiagnostiX™ and use the Synergy™ technology. Synergy™ allows synchronization between the Diagnostic Crown design proposal from the CARES Dental Technician and the coDiagnostiX Implant Plan of the Dentist.

5.1 Connection

The connection to Synergy™ is created by logging in with the registered account under User Preferences.
5.2 Software Workflow in CARES® Visual

To create a planning project for the Diagnostic Crowns you will need to create coDiagnostiX™ Abutments, that can be found in the “other” Prosthesis family.

<table>
<thead>
<tr>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single - DWOS Ceramic</td>
</tr>
<tr>
<td>• 47: coDiagnostiX™ Abutment, D/W Kit</td>
</tr>
<tr>
<td>Single - DWOS Ceramic</td>
</tr>
<tr>
<td>• 37: coDiagnostiX™ Abutment, D/W Kit</td>
</tr>
</tbody>
</table>

After scanning or importing a model, the order can be opened in CAD Station. Within CAD Station the vertical toolbar for Synergy™ will open. The top icon allows the connection to the partner coDiagnostiX™ system that is used for this Order.
After establishing the connection the corresponding Implant Kit needs to be chosen. The yellow implant is the implant chosen by the coDiagnostiX™ partner and the gray implant is the chosen Kit from the *Implant Kit Library*.

Now the Diagnostic Crown can be designed and the proposal will be automatically sent to the coDiagnostiX™ partner software.
After the coDiagnostiX™ partner has set the implants the diagnostic crowns can be switched to any prosthesis from the *Abutment Family*. This Abutment can then be sent to production.
6. New Dental Desktop

New Tiles and Names – try them out!
7. Bug Fixes

- Starting and ending gripper for Telescopic Crowns now at ends of crown, before was sometimes at the same point
- SR-Bridge connector failure coloring is now always visible, before was sometimes only visible when being edited
- Scan body reconstruction works with Gingiva import, sometimes in old versions it failed in Scan Import when Gingiva was also imported

8. Tips and Tricks

- The lists shown in Order Management, Inbox and Production Management show 5 Items per page. To avoid switching pages change the filter to show more items per page.
- SR-Bar - By holding down the Shift Key and then moving a control point in the 2D Designer, the changes will be done globally to the whole bar.
- SR-Bar - When the Bar Designer is open, the CARES user can change the Deformation size by clicking and scrolling with the mouse wheel.
- SR-Bar - Before the Design is validated, check the Design with the 2D Designer. Go through the whole bar slowly and check if all recommendations are fulfilled and if the position of the bar is as you like it.