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PROMADENT
Quality Dentalware

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2 EDIT

EDIT is part of the BiSS Dental Software Suite. EDIT takes the conversion and processing of dental scan data to a new level. The AI-supported software not only enables the automatic conversion of files between the common .OBJ, .STL and .PLY formats, but also specifically improves mesh quality with a special repair scan. Thanks to the automated workflow via folder monitoring (filewatching) and extensive transformation functions such as rotation, scaling and centering, the entire process can be designed efficiently. Individual setting options and the integration of your own logics - for example for the automated alignment of rails - offer maximum flexibility for customized workflows.

EDIT can optionally be upgraded to a ***network multi-user license***.

Have fun with EDIT! :)

Data conversion made possible

FAST· EASY-TO-USE · INTUITIVE

3 Installation

3.1 System Requirements

The system requirements listed below must be fulfilled:

- ✓ Windows 64 Bit
- ✓ At least 500 MB free file system memory, recommended 2 GB
- ✓ Processor with at least 2 cores at 2 GHz, recommended 4 cores at 2,5 GHz
- ✓ Free working memory at least 8 GB, recommended 16 GB working memory
- ✓ Free USB-2.0 connection
- ✓ Minimum display resolution 1200 x 900 Pixel
- ✓ Graphic card: e.g., HD Graphics 3000 DX10.1 (we recommend not to use AMD/ATI RADEON graphics cards)

3.2 Installation Notes

The installation of the program BISS is done with the provided installation file *BISS-5.X.X-setup.exe*. Run the file and follow the installation instructions.

To start BiSS you need a *dongle license*. Make sure that your license dongle, with a valid BiSS license, is connected to your computer before you start the program.

If you have a *BiSS multi-user network license*, please refer to the following section:

3.2.1 BiSS multi-user network license

In order for the network dongle to be recognized within your network, the following settings must be set before BiSS can be started the first time:

- ✓ Install BiSS
- ✓ Insert the network dongle into the device
- ✓ Open the installation directory of BiSS (on the same device)
- ✓ Run *DinkeyServer.exe* as Administrator
- ✓ Under *Startup Modes* on the left, select *Windows Service*
- ✓ Under *Network Configuration* on the right, select *Automatic*
- ✓ Click Start

Your firewall must recognize and allow Dinkey Server. Therefore, select *Automatically Configure Windows Firewall* when prompted to do so.

Dinkey Server now runs as a background service and doesn't need to be restarted manually after rebooting the device.

> ***Note:*** *If you remove the dongle, add another dongle or perform a dongle update, it may be necessary to restart the Dinkey server.*

BiSS can now be started from all devices of your network, according to the number of purchased licenses.

3.3 Das Programm starten

When you have started BiSS, the window shown in image 1 appears. Here you get an overview of the available modules for BiSS Dental Software Suite. These are PRINT, MILLING, TRAYS, LOCATE, PUZZLE, FREEFORM and EDIT.

You can see from the green checkmarks, which modules are enabled according to your license. You can now select which application you want to launch. To start EDIT, click on the blue button ***start software.***

Furthermore, you have the possibility to be forwarded directly to your retailer via the button ***visit shop***, but also to purchase further BiSS modules. This button only appears if there is an existing internet connection.

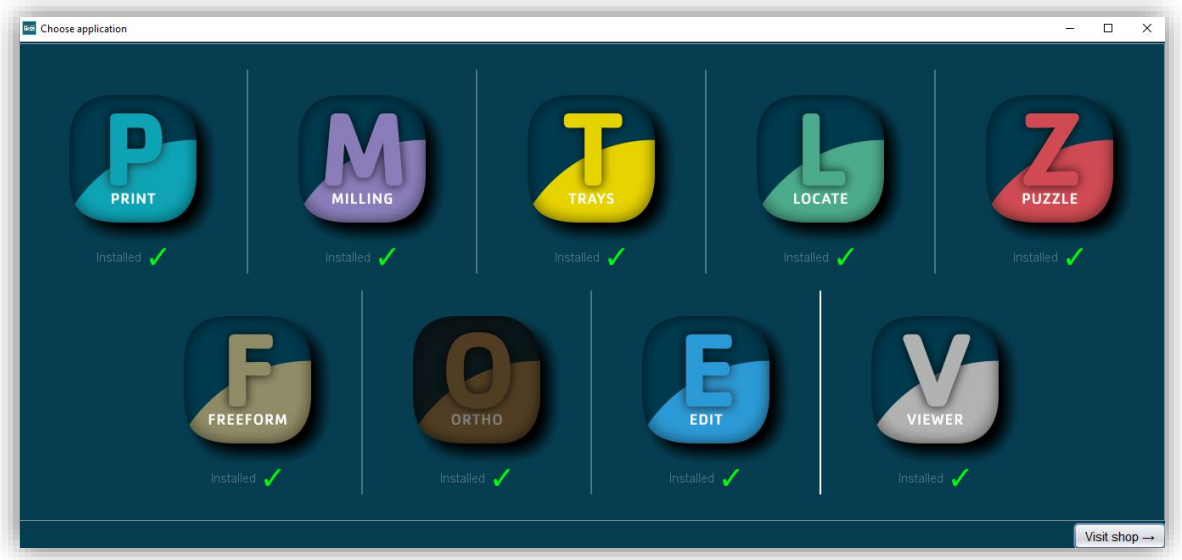

image 1: Welcome window after program launch.

3.4 Overview

Familiarize yourself with your BiSS workstation. The user interface is divided into the three main areas: navigation - action - model view

- ✓ You can access the various EDIT settings via the navigation bar at the top
- ✓ In the middle you will find the action window. This is where you make the specific settings.

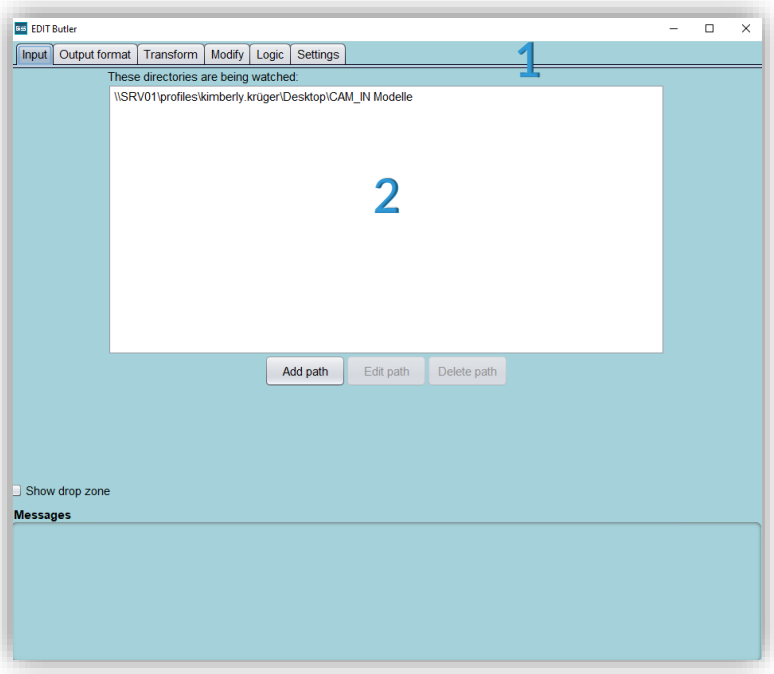

image 2: The BiSS program after starting. 1) Menu, 2) Action window.

3.5 Closing the Program

To close the program, select the *X icon* at the upper right corner of the program window and choose *close* under the *menu* button.

4 Edit you files

4.1 Input

This menu item is about creating a folder in which the data to be converted is moved. EDIT works via data monitoring and then automatically takes the data from the folder, converts it and saves it again in the same folder.

To create one or even several folders, click on Add path (image 6) and select a suitable folder.

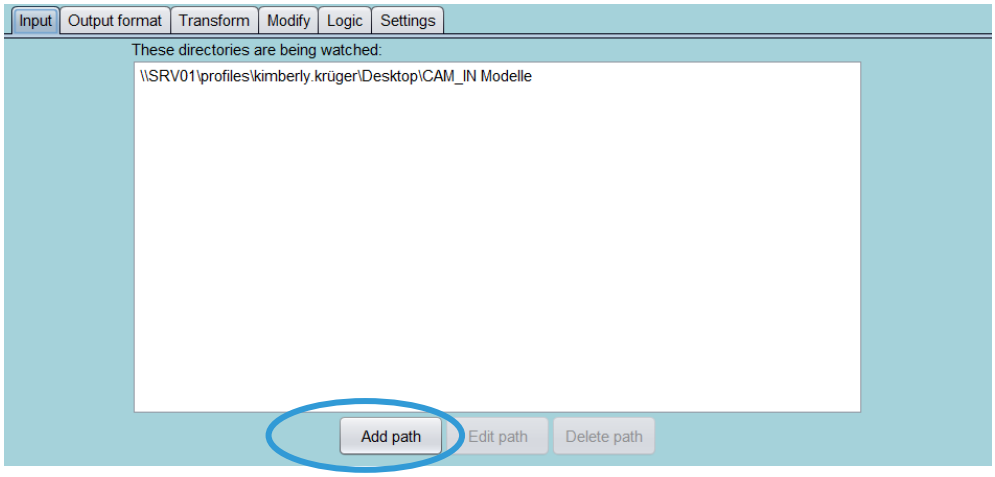

image 6: Input: All added paths are listed.

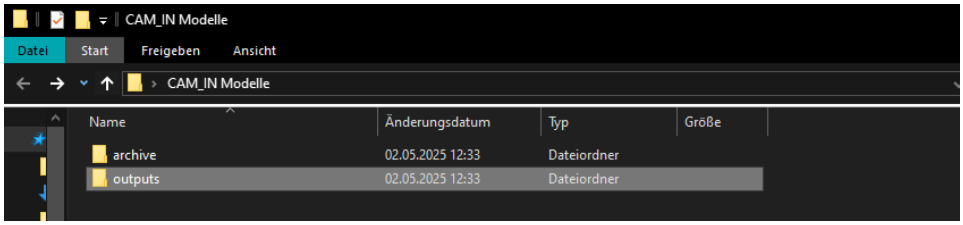

image 5: Main folder with both newly created subfolders.

A new folder called ***outputs*** is automatically created so that the new data can be properly distinguished from the old data. All data that has been converted, e.g. has a new data format, is stored in this folder. There is also a second automatically created folder called ***archive***. All data that has been processed is stored here. This ensures that the main folder is always kept tidy. In the input directory, you can check the ***Show drop zone*** box, see image 4. A small symbol now appears on the screen. This symbol is there so that you can store the data there directly without having to create a new folder first. You will find the converted data in the original folder. As soon as you convert data, all important information about the conversion appears in the message window (image 3).

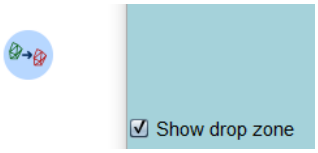

image 4: The direct drop-down zone.

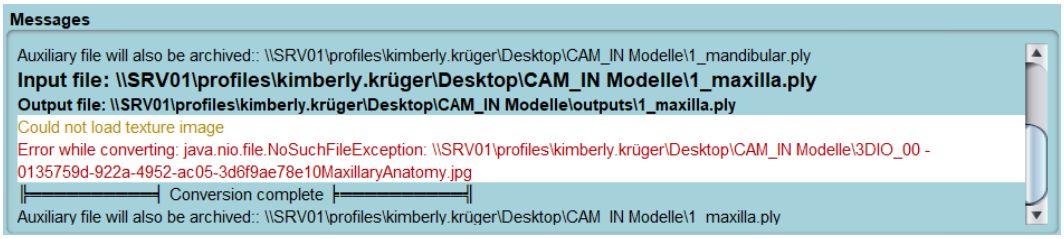

image 3: Messages of the converted files including error messages.

Note: The drop-down zone or a path must first be added to the input directory before data can be converted. The settings for the type of conversion or transformation only follow in the next settings!

4.2 Output format

In these settings, you can select which output format the data should have. There are also specific options for each output format:

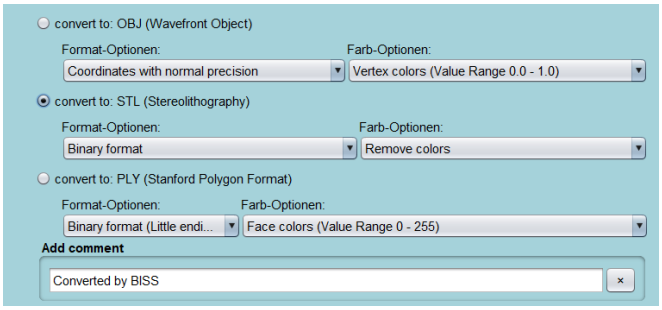

image 7: Settings of the output format.

SETTINGS	DESCRIPTION
OBJ: Coordinates with normal precision	The data is output in OBJ, whereby the coordinate system has a normal accuracy, i.e. a normal position in the coordinate system.
OBJ: Coordinates with high precision	The data is output in OBJ, whereby the coordinate system has a high accuracy, i.e. a specified position in the coordinate system.
OBJ: Remove colors	The OBJ data will not have any color information.
OBJ: Keep colors	The OBJ data will leave the existing color information untouched.
OBJ: With texture	The OBJ data not only has a geometric color form, but also a surface with a 2D graphic (texture).
OBJ: Vertex colors (Value Range 0,0 – 1,0)	The OBJ data has a vertex color, i.e. each corner (vertex) of the scan has its own color, which is mapped on the scan in a value range of 0.0 - 1.0.
OBJ: Vertex colors (Value Range 0 – 255)	The OBJ data has a vertex color, i.e. each corner (vertex) of the scan has its own color, which is mapped on the scan in a value range of 0 - 255.
STL: ASCII text format	This STL format is easier to read and edit.
STL: Binary format	This STL format is smaller and more efficient for 3D printing.
STL: Remove colors	STL cannot have any color information, which is why it is removed by default.
PLY: ASCII text format	This PLY format is easier to read and edit.
PLY: Binary format (little endian)	This PLY format is smaller and more efficient for 3D printing. The sequence of bytes for numerical values such as color, coordinates, etc. is saved with the most significant byte first.

PLY: Binary format (big endian)	This PLY format is smaller and more efficient for 3D printing. The sequence of bytes for numerical values such as color, coordinates etc. is saved with the least significant byte first.
PLY: Remove colors	The PLY data will not have any color information.
PLY: With texture	The PLY data not only has a geometric color form, but also a surface with a 2D graphic (texture).
PLY: With texture (Enforce per-wedge texture coordinates)	The PLY data not only has a geometric color shape, but also a surface with a 2D graphic (texture) with a more precise and detailed texturing.
PLY: Keep colors	The PLY data will leave the existing color information untouched.
PLY: Vertex colors (Value Range 0,0 – 1,0) Warning: this is non-standard!	The PLY data has a vertex color, i.e. each corner (vertex) of the scan has its own color, which is mapped onto the scan in a value range of 0.0 - 1.0, resulting in smoother color gradients and a realistic representation.
PLY: Vertex colors (Value Range 0 – 255)	The PLY data has a vertex color, i.e. each corner (vertex) of the scan has its own color, which is mapped on the scan in a value range of 0 - 255, resulting in smoother color gradients and a realistic representation.
PLY: Face colors (Value Range 0 – 255)	The PLY data has a surface color, i.e. each surface of the scan has its own color, which is displayed on the scan in a value range of 0 - 255, resulting in a striking display with clearly recognizable transitions between the surfaces.
Add comment	Here you can include a comment of your choice in the files.

table 1: Settings of the output format.

4.3 Transform

By default, no values are specified here and the centering is not moved.

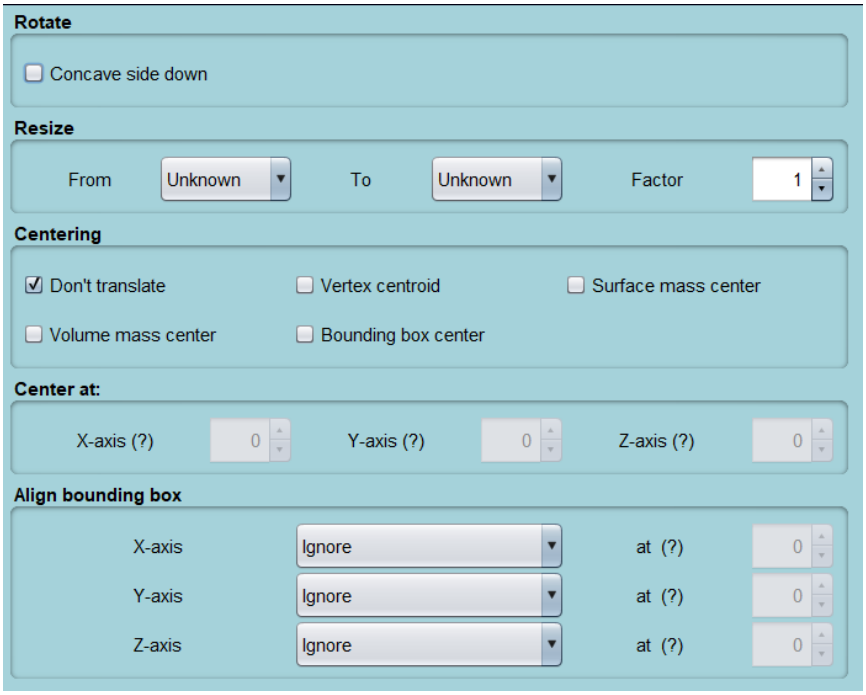

image 8: Settings for transforming.

SETTIINGS	DESCRIPTION
Rotate: Concave side down	The file is rotated so that the concave side is facing downwards, e.g. the basal side of a rail is rotated downwards.
Resize	You can scale the data larger or smaller. To do this, select a current unit of measurement and a future unit of measurement and the factor by which the data is to be scaled.
Centering: Don't translate	The data remains in a coordinate system in the previous position
Centering: Volume mess center	The data is shifted in the coordinate system so that the zero point lies in the common center of gravity.
Centering: Vertex- centroid	The data is shifted in the coordinate system so that the zero point lies in the geometric center of all corner points.
Centering: Bounding box center	The data is shifted in the coordinate system so that the zero point lies in the center of the bounding box.
Centering: Surface mass center	The data is shifted in the coordinate system so that the zero point lies in the geometric center of all surfaces.
Center at:	Here you specify the displacement of the zero point of the coordinate system on the respective axes.
Align bounding box	Here you specify the displacement of the bounding box. Select an axis and specify whether the lowest, middle or highest point of the bounding box is to be moved along this axis to the entered value.

Table 2: Settings for transforming.

4.4 Modify

The meshes can be changed or improved here:

SETTINGS	DESCRIPTION
Texture-adapted refininement	The data is given refined image information.
Only of texture is converted	The data is only changed, e.g. refined, if the corresponding texture has also been selected under Output format.
Simplify	The number of polygons in the file (mesh) is reduced.
Not if colored	The data is only changed if it has been selected under the output format without color.
Always convert to triangle mesh	The geometry of all surfaces (whether quadrilaterals, complex polygons, etc.) is always converted into pure triangles.

Table 3: Settings for changing data.

4.5 Logic

Under the logic, you can create/write a script yourself and integrate it into EDIT by clicking on Browse, clicking on the script and opening it. This allows you to connect the BiSS Dental Software Suite with other software to create an automatic workflow.

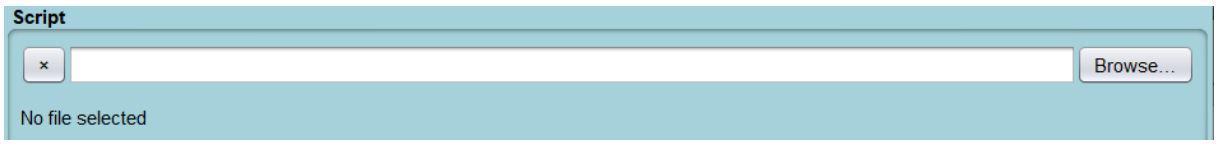

image 9: Load script in EDIT.

4.6 Settings

Under the Settings tab, you can customize the appearance of the EDIT application by selecting a design under Look and Feel and the language to suit your needs. You can also check whether new updates are available for BiSS. To do this, click the Check for updates button, see image 7.

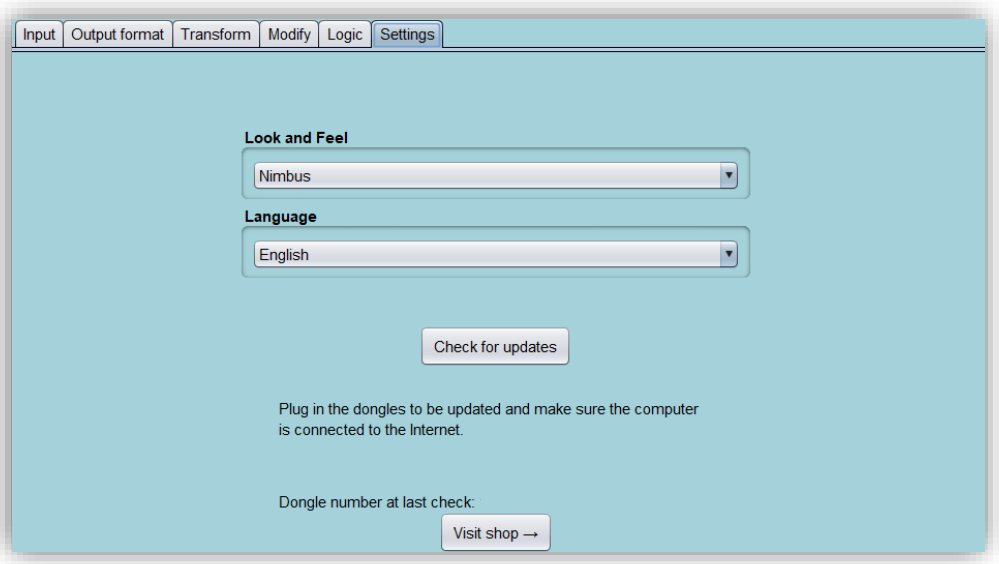

image 11: Update management

4.6.1 Update-Availability

A window like the one shown in Image 8 will then open and inform you about available updates. This could be a new software version that is ready for you to download or a license update for your dongle. You will need this function, for example, when purchasing additional modules or renewing a license.

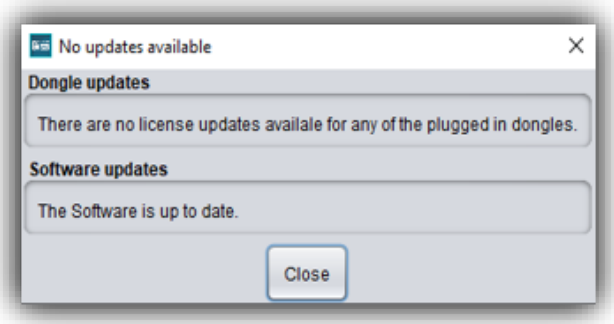

Image 10: No software-update available.

4.6.2 Dongle-Updates

In some cases, a dongle update is required:

- ✓ Your monthly license has expired, and you would like to extend it
- ✓ You have purchased another BiSS module, e.g., Premium Business
- ✓ You have purchased another workstation for your multi-user network license
- ✓ For more extensive updates, a dongle update may also be required so that you can benefit fully from the BiSS updates.

4.6.3 How to know that a dongle update is required?

You will be notified when a dongle update is ready for you:

4.6.3.1 At Startup

You will automatically receive a message when you start BiSS if there is a new update available for your dongle. The prerequisite is that your dongle has not yet expired.

4.6.3.2 About the settings

Go to the Settings tab. Click on the ***Check for updates*** button. If there is a pending license update for your dongle, this will be displayed.

4.6.3.3 Execute the UpdateClient.exe

In the installation directory of BiSS is the ***UpdateClient.exe***. If BiSS does not start anymore, because your license has expired, you can start the update client this way, for updating your dongle or the software.

4.6.4 Execute Dongle-Update

Make sure that your BiSS dongle is plugged into the PC from which you will perform the dongle update.

Start the update client and follow the instructions.

5 Warning and Notes - Disclaimer

The software does not create dental prostheses and is only suitable for the further processing of digitally produced components in dentistry and orthodontics. Further use outside dentistry and orthodontics is not suitable.

The software leaves behind temporary files if it has not been terminated properly, e.g., in the event of a system crash. The user must then manually delete these files from his temporary files folder to free up disk space.