VistaSoft 2.3

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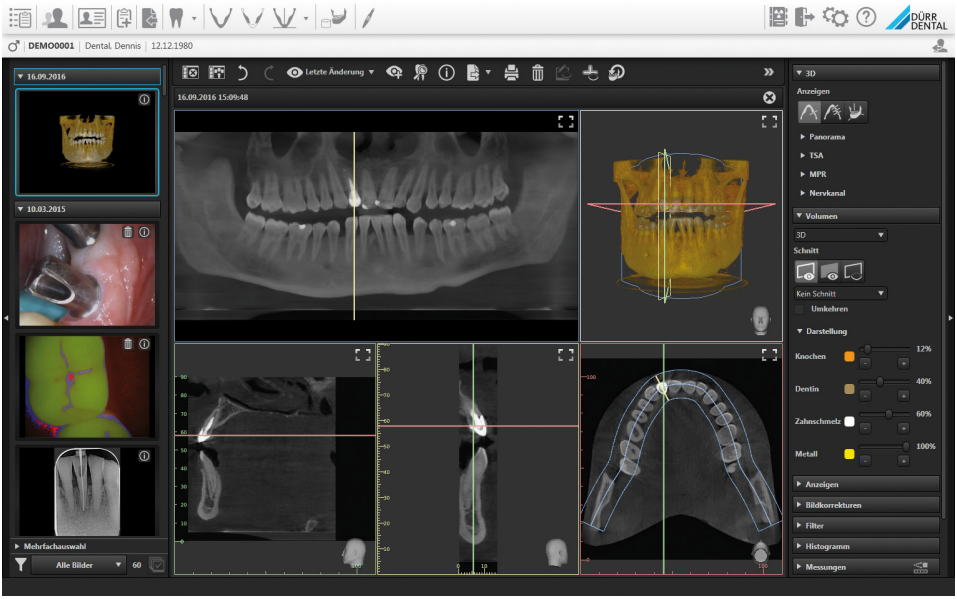

Manual

CE 0297

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DÜRR DENTAL

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Important information

This manual forms part of the software. It conforms to the version of the software and the technical standards valid at the time of installation.

Dürr Dental accepts no liability or responsibility for safe operation of this unit and the software if the notes and instructions contained in this manual are not observed.

This translation was prepared to the best of our knowledge. The original German language version of the manual is the definitive version.

The Installation and Operating Instructions must not be copied or reprinted, neither in full nor in part, without written authorisation from Dürr Dental.

– "1 Warnings and symbols"
– "2 Safety"
– "3 Software license agreement (EULA)"
– "4 System requirements"

1 Warnings and symbols

The warnings in this document are intended to draw your attention to possible risks of personal injury or material damage.
The following warning symbols are used:

General warning symbol

The warnings are structured as follows:

SIGNAL WORD

Description of the type and source of danger

Here you will find the possible consequences of ignoring the warning

› Follow these measures to avoid the danger.

The signal word differentiates between four levels of danger:

– **DANGER**
  Immediate danger of severe injury or death
– **WARNING**
  Possible danger of severe injury or death
– **CAUTION**
  Risk of minor injuries
– **NOTICE**
  Risk of extensive material/property damage

These symbols are used in the document and on or in the unit:

Note, e.g. specific instructions regarding efficient and cost-effective use of the unit.

Comply with the Operating Instructions.

CE 0297 CE labelling with the number of the notified body

Action instructions are identified specifically in this document:

› Perform this action.

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2 Safety

This section contains important safety information.
This section is divided into the following sub-sections:
– "2.2 Intended purpose"
– "2.3 Intended use"
– "2.4 Improper use"
– "2.5 Functions"
– "2.6 Qualified personnel"

2.1 Classification

Classification	
Medical product class Medical Devices Directive 93/42/EEC	IIb

2.2 Intended purpose

The VistaSoft software features functions for recording, displaying, analyzing, diagnosing, managing and sending digital or digitized video and X-ray images in dental practices and specialist dental clinics.

2.3 Intended use

VistaSoft is intended for the viewing and diagnosis of image data in relation to dental issues. Its proper use is documented in the operating instructions of the corresponding image-generating systems. Image-generating systems that can used with the software include optical video cameras (e.g. VistaCam), digital X-ray cameras (e.g. VistaRay), image plate scanners (e.g. VistaScan), extraoral X-ray devices (e.g. VistaPano) and optical light beam scanners.

VistaSoft must only be used by trained, qualified personnel (e.g. dentists, specialist consultants or other qualified personnel) in dental areas for the following tasks:
– Filter optimisation of the display of X-ray images for improved diagnosis
– Acquisition, storage, management, display, analysis and editing of digital/digitised optical video recordings
– Acquisition, storage, management, display, analysis, diagnosis and editing of digital/digitised X-ray images
– Forwarding of images and additional data to external software (third-party software)

2.4 Improper use

VistaSoft must not be used for the following:
– Performance of measurements on images that are not suitable for this purpose due to the way in which the images were created. The software does not provide a measuring function due to the unavoidable geometric image properties of X-ray images. Here, displayed values are only intended to serve as guide values. This also applies after use of the calibration function.
– Use for contraindicated purposes for the image-generating system. The operating instructions of the image-generating system must be followed here.

Any other usage or usage beyond this scope is deemed to be improper. The manufacturer accepts no liability for damages resulting from improper use. In these cases the user/operator will bear the sole risk.

2.5 Functions

The patient data can be copied from external programs via defined interfaces.
The 2D or 3D image data is saved for the selected patient in a database and can be displayed in an optimised manner to help with diagnosis.
Different views for reconstructed X-ray image layers (MPR) and 3D volumes from 3D image data are available.
Image data can be imported and exported in various graphics formats together with the metadata or sent to external programs via defined inter-

faces.
VistaSoft can be used both as a single workstation system and as a multi-station system in client/server operation.

2.6 Qualified personnel

Persons using the software must be able to guarantee safe and correct operation based on their training and experience.

- Make sure every user is trained in the use of the software.
- Installation, readjustments, alterations, upgrades and repairs must be carried out by Dürr Dental or by qualified personnel specifically approved and authorized by Dürr Dental.

2.7 Protection from threats from the Internet

The software runs on a computer that can be connected to the Internet. Therefore, the system needs to be protected from threats from the Internet.

- Use antivirus software and update it regularly. Look for evidence of possible virus infection and, if applicable, check with the antivirus software and remove the virus.
- Use, properly configure and regularly update your firewall.
- Update the computers operating system regularly.
- Perform regular data backups.
- Provide access to computers to authorised users only, e.g. by means of user name and password.
- Make sure that only trustworthy content is downloaded. Only install software and firmware updates that have been authenticated by the manufacturer.

3 Software license agreement (EULA)

between
DÜRR DENTAL SE
Höpfigheimer Str. 17
D-74321 Bietigheim-Bissingen
and
you as the User

For the current End User Licensing Agreement (EULA), please refer to Installation Process.

§1 Object of the Agreement
(1) The object of this Agreement is the Dürr Dental VistaSoft software, drivers and interfaces with all associated program components, as well as - as per agreement - additional modules for the VistaSoft software (“Software").
(2) Dürr Dental SE grants the right of use to the rightfully acquired Software to the User for the duration of this agreement and in accordance with the following provisions. The Software is protected by copyright (§§ 69 a pp UrhG [German Copyright Protection Act]).
(3) Articles 5 and 6 (warranty and liability) do not apply if the User does not acquire the Software directly from Dürr Dental SE, but rather procures it via the specialist dental trade, for example. In this case, warranty and liability claims of the User can be asserted only via the direct seller.
(4) If substantiated, legal claims against Dürr Dental SE based on the product liability law remain in force to the full extent and are not the subject of this contract.
(5) The Software shall be maintained by Dürr Dental SE at its own discretion by means of updates and upgrades (further developments and expanded features) and provided with new specifications. Updates are generally free of charge for the User. Upgrades are subject to a charge. The User has no right to updates and upgrades. The prices for the upgrades - and in special cases - updates are based on the current Dürr Dental SE price list. The provisions of this agreement also apply to future updates and upgrades.
§2 Validity of the contract
This contract shall take effect a) when the software is purchased on a data medium of the User provided the User agrees to these provisions by confirming the "Acknowledge" button by clicking on it during the installation of the software, or

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b) in the event that the contract object was purchased as a download product (web version), provided the User accepts these contractual clauses by confirming the "Acknowledge" button by clicking on it prior to the download.

§3 Duplication rights and access protection, recompilation and program changes

(1) The User may duplicate the supplied program insofar as the relevant duplication is necessary in order to use the program. Necessary duplications include the installation of the program from the original data storage device on the hard drive of the hardware used, as well as loading the program into the main memory.

(2) The User has the right to duplicate the Software within the framework of the surgery network used by the User. Where additional modules for individual workstations are licensed by the operator, the usage and duplication rights of the User are subject to the special agreements for the relevant additional module.

(3) The User is permitted to duplicate the Software for backup purposes. However, he may create and store only one single backup copy at a time. The backup copy is to be marked as such.

(4) The User shall not create other copies beyond the above provisions, which includes outputting the program code on a printer.

(5) Copyright notices, serial numbers and other features used for identification of the program must on no account be removed or modified.

(6) No reverse translation into other code forms (recompiling) of the program code provided to the user is permitted, nor are any other types of reverse engineering of the different production stages of the Software, including any program modifications, unless the requirements of § 69 e UrhG [German Copyright Act] are met.

§4 Further sale and renting

(1) The User may sell or give away the software, including the documentation, to a third party provided the third party declares his agreement that these contractual conditions shall continue to apply to him as well. Before passing on the Software, the User must make the third party aware of these contractual conditions.

(2) In the event that the software is transferred, the User must hand over all program copies to the third party, including existing backup copies where applicable, or must destroy the copies that are not handed over (including any VistaSoft database). The right of the User to use the program is ceases when the Software has been passed on.

§5 Warranty

(1) Defects in the software supplied, including the documentation, will be remedied by DÜRR DENTAL SE within a warranty term of two years, starting with the first use of the software and following written notice from the User. This will be carried out through free repair or replacement at the discretion of Dürr Dental SE.

(2) If Dürr Dental SE is not able or willing to perform the repair or deliver a replacement, or if this is delayed beyond a reasonable deadline set by the User or if it fails altogether for other reasons, the User has the right to withdraw from the agreement or to demand a price reduction. Failure to repair the defect may only be assumed if Dürr Dental SE has been given sufficient opportunity to remedy the problem without the desired success, in particular if an attempt at remedy has already failed twice. This shall not prejudice the User's right to claim damages in accordance with § 437 BGB [German Civil Code].

(3) The User is aware that it is generally impossible to create software products that are completely free of defects. A defect in the Software in the sense of this agreement shall therefore be evident only if defects considerably reduce the value or the fitness of the Software for the contractually agreed use.

(4) The User is aware that the Software is a complex IT product whose installation, updates/upgrades and coordination with the individual IT environment of the User requires prior knowledge. Installation, updates/upgrades and the configuration of the Software for the IT environment of the User should therefore be performed only by skilled and qualified personnel, ideally by trained staff of the dental trade and/or the IT industry. Dürr Dental SE accepts no liability for defects and damage resulting from improper use of the Software during installation, updates/upgrades and operation. This applies equally to defects and damage caused by failure of the hardware and software environment (operating system) employed by the User to meet the minimum requirements specified in each case by Dürr Dental SE for the Software.

§6 Liability
(1) Claims of the User for damages or compensation for fruitless expenses must comply with this provision regardless of the legal nature of the claim. This shall not prejudice warranty rights pursuant to the Product Liability Act.
(2) Dürr Dental SE is liable without limitation for damages resulting from injury to life, body or health.
(3) Dürr Dental SE is liable without restriction for any damages resulting from deliberate or gross negligence on the part of Dürr Dental SE. Dürr Dental SE is only liable for damages resulting from minor negligence in cases where obligations are infringed that are of particular importance in terms of fulfilling the contractual purpose (material contractual obligation). This type of material contractual obligation is always given if the correct fulfillment of the contract hinges on satisfaction of the obligation, or in cases where the User may routinely rely on compliance with this obligation. In the case of any infringement of a material contractual obligation, the liability of Dürr Dental SE is limited to damage of the type and extent that can be typically expected to arise during the use of Software or during maintenance and service work (Article 9).
(4) The liability for data loss is limited to the typical recovery cost that would be incurred if regular backup copies had been produced in accordance with the applicable risks.
(5) Paragraphs 1 to 4 shall apply accordingly to the personal liability of employees, representatives, agents or subcontractors of Dürr Dental SE.
§7 Retention of title
Dürr Dental SE retains the ownership of the Software until the Software is paid for in full.
§8 Duration of the contract
(1) The contract shall run indefinitely.
(2) The right of the User to use the Software and the documentation is rescinded if the User significantly infringes the terms of use stipulated in this contract, and in particular if the User contravenes the provisions of use and resale of Articles 3 and 4 and Dürr Dental SE terminates this contact for due cause. In this case the User undertakes to return all data carriers and copies of the data carriers and to delete all copies of the Software (including any VistaSoft database).
§9 Demo versions
(1) Dürr Dental SE grants the User the opportunity of using restricted versions of the Software (“demo versions”) free of charge in order to test the Software. The User can switch from the demo version of the Software to the full version by registering to activate the full version. Activation will incur the standard costs for the acquisition of the Software from Duerr Dental SE or the respective seller.
(2) Dürr Dental SE assumes no warranty for demo versions. Dürr Dental SE's liability arising from the use of demo versions by the user is limited to that as laid down under article 6 paragraphs 2 and 3. Any further liability of Dürr Dental SE is excluded.
§10 Maintenance and service work carried out by Dürr Dental, especially remote maintenance
If DÜRR DENTAL SE carries out maintenance and/or service work on the software installed on the hardware of the User at the request of the customer (hereinafter called "Work"), the following provisions shall apply to this work:
(1) The prices for this work are determined by the relevant current price list of DÜRR DENTAL SE. Invoices from DÜRR DENTAL SE are due for payment within two weeks at the latest of the invoice date. Warranty work carried out by Dürr Dental AG is not subject to reimbursement in accordance with Article 5.
(2) The liability of Dürr Dental SE for the work is defined by Article 6.
(3) Before Dürr Dental SE starts the work, the User is obliged to create a data backup that allows full recovery of the User's data within a reasonable period of time.
(4) If the work is carried out via a remote data transmission system without physical contact with the hardware of the User (referred to as "remote maintenance" hereafter), the User shall bear responsibility for the installation of the remote maintenance software of the third-party manufacturer on its hardware, in particular responsibility for adherence to the licensing terms of the remote maintenance software. Furthermore, the User bears responsibility for the necessary linking of his hardware and software to the data transmission system. Dürr Dental SE accepts no liability for damage resulting from faults of the data transmission system or from unauthorized access by third parties to the hardware and software of the User for which it cannot be held responsible.
§11 Final provisions

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(1) Modifications, amendments and specifications of these contractual provisions as well as assurances and warranties must be made in writing to be effective. The same applies to the cancellation of this requirement for the written form.
(2) If one or more provisions of this agreement are invalid or unenforceable, this does not affect the validity of the remaining provisions.

(3) The invalid or unenforceable provision shall be replaced by a provision that comes closest to the purpose of the invalid or unenforceable provision.
(4) The laws of the Federal Republic of Germany shall apply to the contractual relationship with the User, under exclusion of the UN Convention on Contracts for the International Sale of Goods (CISG).
(5) The place of jurisdiction for all litigation proceedings pertaining to the contract with the User shall be – if the user is a merchant – the place of jurisdiction of Dürr Dental SE or the place of jurisdiction of the User, at the discretion of Dürr Dental SE.

4 System requirements

The following information merely states the requirements for the computer system. Even if the stated system requirements are met, correct operation of the Dürr Dental hardware/software can still be disrupted by specific hardware and software features on the customer side. In these cases, Dürr Dental assumes no liability for trouble-free operation of the Dürr Dental hardware/software.

If additional systems are connected to the PC please note that this may change the system requirements. The system requirements of all connected systems need to be taken into account.

Valid from version 2.2

CPU:	≥ Intel Core i3
RAM:	≥ 4 GB
Operating systems:	Microsoft Windows 7 (Home Premium or above), SP1 and additionally update KB3033929, recommended: KB2921916 Microsoft Windows 8.1 (not Windows RT) Microsoft Windows 10 (Pro or higher) Microsoft Windows Server 2012 Microsoft Windows Server 2016
Hard disk:	Workstation (without database) ≥ 50 GB The database memory requirements depend on the number of images taken at the surgery in question. (Camera image: c. 1 MB, X-ray image: c. 2 MB - 10 MB, CBCT: 200 - 300 MB)
Drive:	DVD ROM
Data backup:	Daily data back-up
Interface:	Ethernet ≥ 100 Mbit Internet connection (only for VistaSoft Cloud) Valid email address (only for VistaSoft Cloud)
Graphics card:	Resolution ≥ 1280 x 1024 Depth of colour 32-bit, 16.7 million colours Recommended for 3D X-ray images: NVIDIA GeForce 750 2 GB
Diagnostic monitor:	In accordance with DIN 6868-157, room category 5 or 6 (depending on the requirements)
Notes:	Data migration is possible from an existing DBSWIN installation in VistaSoft from DBSWIN 5.9 or higher.

Information about the system requirements of supported devices can be found on the DVD (***Display system requirements [Systemvoraussetzungen anzeigen]*** in the Start menu) or in the download area at www.duerrdental.com (document no. 9000-618-148).

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Installation

This section covers the installation and configuration of the software ready for use in the default configuration.
In addition, it also covers uninstallation and migration of data from DBSWIN to VistaSoft.

The installation, configuration and migration of data from DBSWIN must only be performed by Dürr Dental or by a person or company authorised to do so by Dürr Dental.

This section is divided into the following sub-sections:
– "5 Installing the software"
– "6 Data backup"
– "7 Licensing"
– "9 Uninstalling the software"

The Start menu of the installation package for VistaSoft (DVD or download) offers various options:

Install VistaSoft		Installation of the VistaSoft software is started.
Display system requirements		The PDF file with the system requirements is opened. If no PDF viewing software is installed on the computer, Adobe Reader can be installed via the Start menu.
Show the manual and installation instructions		The PDF file of the manual is opened. If no PDF viewing software is installed on the computer, Adobe Reader can be installed via the Start menu.
Install Adobe Reader		The PDF viewer software is installed. It can be used to open the existing PDF documents (system requirements, manual).
Help		
	Open pcvisit	The customer module of pcvisit is opened. This enables the Service Technician to perform remote maintenance on the computer (Internet connection required).
	Start remote support	TeamViewer is started. This enables the Service Technician to perform remote maintenance on the computer (Internet connection required).
	Hotline	A PDF with Service Technician contact data is displayed.
Display ReadMe		Information regarding the current software version is displayed.
Open Dürr Dental website		The website of Dürr Dental is opened in the default browser (Internet connection required).

5 Installing the software

The installation of the imaging software differs depending on the intended application scenario:

– "5.1 Single workstation installation":
  Both the software and the database are installed locally on a computer.
– "5.2 Multi-station installation":
  The software is installed on several clients (computers). The database is installed centrally on a server, which is then accessed by the clients.

When the software is started for the first time after the installation, two settings need to be selected that cannot be changed anymore later on:

– Operating mode (single workstation, server or client):
  Depending on the operating mode, the system then either creates the database or sets up the connection to the database on the server.
– Region:
  Some settings are made along with the region, e.g. dental notation, patient search and retention period for x-ray images. The settings are recommendations and can be changed individually according to need in the configuration. The selection of the region cannot be changed later on.

Before installing the software, we recommend you perform a complete data backup for the software already installed on the computer.
We also recommend that you uninstall any antivirus software while you are performing the installation.
To prevent accidental triggering of antivirus alarms and in order to increase speed, we recommend excluding the following directories from the antivirus scan after installation:

– C:\ProgramData\Duerr\VistaSoft\ (for server, client and single-workstation installation)
– C:\VistaSoftData (for server and single-user installation)
– C:\Program Files (x86)\Duerr
– C:\Program Files\Duerr

The system time of the computer must not be changed during the installation. For this reason, we recommend manually setting the system time during installation or disabling the Windows timer service.

The system time can be reset after installation of the software.
The imaging software uses the system time of the computer as a reference for the acquisition time of the images. In order to prevent faulty documentation of the images, the system time of the computer should be checked regularly.

The directories stated above refer to a default installation. However, they may be different if you select different directories during installation.

5.1 Single workstation installation

– "Installing the software"
– "Launching the software for the first time"

Installing the software

› Place the installation DVD in the drive or download the installation file and save it locally.
› The Start menu will load automatically via Autostart. If the Start menu does not load automatically or if you have downloaded the installation file, run the ***Start.exe*** file.
› Click ***Install VistaSoft***.
VistaSoft automatically detects which operating system is installed (32-bit or 64-bit) and then installs the corresponding version of VistaSoft.

A 64-bit-System is required for the additional component VistaVox.

› Select the installation language you require.
› Accept the Licence Agreement.
› If Mobile Connect is to be installed, activate the software component.
Mobile Connect: Software for connecting the Dürr Dental Imaging iPad app to the VistaSoft database
› Specify the installation directory.
The software is located in the installation directory.
The path can be amended by clicking on .
› Select the installation data directory.
The installation data directory must not reference a network path. It contains and saves all the software settings (e.g. window sizes, window positions etc.). It does not contain the image data database. This will be created and queried when the software is launched for the first time.
The path can be amended by clicking on .

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› Tick all the check boxes for the devices that are to be installed in order to work with them on this computer.
The device drivers are automatically installed, there is no need for manual driver installation. The units can be used immediately after installation.
When *VistaVox* is selected the computer is checked against the system requirements. If the minimum requirements are not met, a notice is displayed and the installation can be continued with or without the additional VistaVox component. We recommend that you do not install VistaVox.
› In the overview, check the installation directories, components and devices that are to be installed.
If an entry needs to be changed again, click *Back [Zurück]* to navigate to the relevant place and change the entry.
› Click *Next*.
The software will then be installed.
VistaSoft Inspect is installed additionally (software for performing and archiving acceptance checks and consistency checks on the image reproduction and X-ray system).
› Click *Finish [Beenden]* to complete the installation.
› Launch the software for the first time (see "Launching the software for the first time").

Launching the software for the first time

The installation is completed when the software is run for the first time.
If a DBSWIN installation is present, the data from the existing DBSWIN installation can also be migrated at the same time.
– "Launching the software without an existing DBSWIN installation"
– "Launching the software with an existing DBSWIN installation"

A practice must be created before you can work with the software.
When running the software for the first time, you must therefore create a practice – unless one is already present from the DBSWIN data migration, see "Create practice".

Launching the software without an existing DBSWIN installation

› Launch the software (see "11 Starting the software").

Use *Next [Weiter]* and *Back [Zurück]* to navigate between the individual steps.

› Under *Select Operating Mode [Betriebsmodus auswählen]* select the option *Single workstation [Einzelplatz]*.
› Click *Next*.
› Select a region.
Some settings are selected once along with the region in the software, e. g. dental notation, patient search and retention period for x-ray images. The settings are recommendations and can be changed according to need in the configuration.
› Click *Next*.
› Specify a path for the image data database.
› Click *Next*.
An empty database is created.

Launching the software with an existing DBSWIN installation

If data is to be migrated from an existing DBSWIN installation, then the following must be taken into account before starting VistaSoft for the first time:
– DBSWIN version 5.9 or higher must be installed – update to a higher version if necessary.
– Images archived in DBSWIN cannot be migrated – retrieve any images as required.
– DBSWIN must be closed.
› Launch the software (see "11 Starting the software").

› If data is to be migrated from an existing DBSWIN installation, launch the import by clicking *Integration of DBSWIN Data and Settings [Integration von DBSWIN Daten und -Einstellungen]*.
For more information on migration refer to "5.3 Migrating the data of a DBSWIN installation".
VistaSoft detects the DBSWIN installation (single workstation, client, server) and migrates the necessary data. If DBSWIN is installed as a single workstation, VistaSoft is configured as a server. After the import it is not necessary to select an operating mode or set up a practice/surgery. Here, the DBSWIN installation is not changed or deleted.
› If there is to be no data migration from the existing DBSWIN installation, skip the migration step by clicking *Skip Integration [Integration Überspringen]*.
No data migration will take place. The operating mode and practice/surgery will need to be set up manually.
› Select a region.
Some settings are selected once along with the region in the software, e. g. dental notation, patient search and retention period for x-ray images. The settings are recommendations and can be changed according to need in the configuration.
› Click *Next*.
› Specify a path for the image data database.
› Click *Next*.
› Check the database path and image path of the practice(s) and change them if necessary.
The practice database is saved under the database path.
The images for the practice are saved under the image path.
› Click *Next*.
A summary will be displayed.
› Click *Finish [Abschließen]*.

Create practice

Unless a practice already exists after data migration from DBSWIN, a practice needs to be created when the software is started for the first time.

› Complete all mandatory fields, also see "20.1 Create practice".
› Check the database path and image path and adjust them if necessary.
The practice database is saved under the database path.
The images for the practice are saved under the image path.
› Click *Next*.
A summary will be displayed.
› Click *Finish [Abschließen]*.
VistaSoft will be configured and launched.
Then you can configure the practice, see "20.2 Configuring the practice".

5.2 Multi-station installation

The following conditions must be fulfilled in order to successfully install the software for use on multiple workstations:

✓ All clients are connected to a network.
✓ The server is connected to the same network as the clients.

Please proceed in the following order to ensure that the software is successfully installed for use on multiple workstations:

1. Install the software and database on the server (see "Installation on the server").
2. Start the software on the server.
3. Install the clients and establish a connection to the database (see "Installation on the client").

Installation on the server

– "Installing the software"
– "Launching the software for the first time"

Installing the software

› Place the installation DVD in the drive or download the installation file and save it locally.
› The Start menu will load automatically via Autostart. If the Start menu does not load automatically or if you have downloaded the installation file, run the *Start.exe* file.
› Click *Install VistaSoft*.
VistaSoft automatically detects which operating system is installed (32-bit or 64-bit) and then installs the corresponding version of VistaSoft.

A 64-bit-System is required for the additional component VistaVox.

› Select the installation language you require.
› Accept the Licence Agreement.

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› If Mobile Connect is to be installed, activate the software component.
Mobile Connect: Software for connecting the Dürr Dental Imaging iPad app to the VistaSoft database
› Specify the installation directory.
The software is located in the installation directory.
The path can be amended by clicking on .
› Select the installation data directory.
The installation data directory must not reference a network path. It contains and saves all the software settings (e.g. window sizes, window positions etc.). It does not contain the image data database. This will be created and queried when the software is launched for the first time.
The path can be amended by clicking on .
› Tick all the check boxes for the devices that are to be installed in order to work with them on this computer.
The device drivers are automatically installed, there is no need for manual driver installation. The units can be used immediately after installation.
When *VistaVox* is selected the computer is checked against the system requirements. If the minimum requirements are not met, a notice is displayed and the installation can be continued with or without the additional VistaVox component. We recommend that you do not install VistaVox.
› In the overview, check the installation directories, components and devices that are to be installed.
If an entry needs to be changed again, click *Back [Zurück]* to navigate to the relevant place and change the entry.
› Click *Next*.
The software will then be installed.
VistaSoft Inspect is installed additionally (software for performing and archiving acceptance checks and consistency checks on the image reproduction and X-ray system).
› Click *Finish [Beenden]* to complete the installation.

Port 3113 is used by default. If it is occupied the next free port is used instead.
The ports that are used can be adapted in the configuration (see "58.2 Workstation" and "58.4 Connection settings").

› Enable the port that is being used.
› Launch the software for the first time (see "11 Starting the software").

Launching the software for the first time

The installation is completed when the software is run for the first time.
If a DBSWIN installation is present, the data from the existing DBSWIN installation can also be migrated at the same time.
– "Launching the software without an existing DBSWIN installation"
– "Launching the software with an existing DBSWIN installation"

A practice must be created before you can work with the software.
When running the software for the first time, you must therefore create a practice – unless one is already present from the DBSWIN data migration, see "Create practice".

Launching the software without an existing DBSWIN installation

› Launch the software (see "11 Starting the software").
› Under *Select Operating Mode [Betriebsmodus auswählen]* select the option *Server*.
› Click *Next*.
› Select a region.
Some settings are selected once along with the region in the software, e. g. dental notation, patient search and retention period for x-ray images. The settings are recommendations and can be changed according to need in the configuration.
› Click *Next*.
› Specify a path for the database.

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› Click *Next*.
An empty database is created.

Launching the software with an existing DBSWIN installation

If data is to be migrated from an existing DBSWIN installation, then the following must be taken into account before starting VistaSoft for the first time:

– DBSWIN version 5.9 or higher must be installed – update to a higher version if necessary.
– Images archived in DBSWIN cannot be migrated – retrieve any images as required.
– DBSWIN must be closed.

› Launch the software (see "11 Starting the software").
› If data is to be migrated from an existing DBSWIN installation, launch the import by clicking *Integration of DBSWIN Data and Settings [Integration von DBSWIN Daten und -Einstellungen]*.
For more information on migration refer to "5.3 Migrating the data of a DBSWIN installation". VistaSoft detects the DBSWIN installation (single workstation, client, server) and migrates the necessary data. If DBSWIN is installed as a server, VistaSoft is also configured as a server. After the import it is not necessary to select an operating mode or set up a practice/surgery. Here, the DBSWIN installation is not changed or deleted.
› If there is to be no data migration from the existing DBSWIN installation, skip the migration step by clicking *Skip Integration [Integration Überspringen]*.
No data migration will take place. The operating mode and practice/surgery will need to be set up manually.
› Select a region.
Some settings are selected once along with the region in the software, e. g. dental notation, patient search and retention period for x-ray images. The settings are recommendations and can be changed according to need in the configuration.
› Click *Next*.
› Specify a path for the image data database.
› Click *Next*.
› Check the database path and image path of the practice(s) and change them if necessary.
The practice database is saved under the database path.
The images for the practice are saved under the image path.
› Click *Next*.
A summary will be displayed.
› Click *Finish [Abschließen]*.

Create practice

Unless a practice already exists after data migration from DBSWIN, a practice needs to be created when the software is started for the first time.

› Complete all mandatory fields, also see "20.1 Create practice".
› Check the database path and image path and adjust them if necessary.
The practice database is saved under the database path.
The images for the practice are saved under the image path.
› Click *Next*.
A summary will be displayed.
› Click *Finish [Abschließen]*.
VistaSoft will be configured and launched.
Then you can configure the practice, see "20.2 Configuring the practice".

Installation on the client

– "Installing the software"
– "Launching the software for the first time"

Installing the software

› Place the installation DVD in the drive or download the installation file and save it locally.
› The Start menu will load automatically via Autostart. If the Start menu does not load automatically or if you have downloaded the installation file, run the *Start.exe* file.
› Click *Install VistaSoft*.
VistaSoft automatically detects which operating system is installed (32-bit or 64-bit) and then installs the corresponding version of VistaSoft.

A 64-bit-System is required for the additional component VistaVox.

› Select the installation language you require.
› Accept the Licence Agreement.

EN

› If Mobile Connect is to be installed, activate the software component.
Mobile Connect: Software for connecting the Dürr Dental Imaging iPad app to the VistaSoft database
› Specify the installation directory.
The software is located in the installation directory.
The path can be amended by clicking on .
› Select the installation data directory.
The installation data directory must not reference a network path. It contains and saves all the software settings (e.g. window sizes, window positions etc.). It does not contain the image data database. This will be created and queried when the software is launched for the first time.
The path can be amended by clicking on .
› Tick all the check boxes for the devices that are to be installed in order to work with them on this computer.
The device drivers are automatically installed, there is no need for manual driver installation. The units can be used immediately after installation.
When *VistaVox* is selected the computer is checked against the system requirements. If the minimum requirements are not met, a notice is displayed and the installation can be continued with or without the additional VistaVox component. We recommend that you do not install VistaVox.
› In the overview, check the installation directories, components and devices that are to be installed.
If an entry needs to be changed again, click *Back [Zurück]* to navigate to the relevant place and change the entry.
› Click *Next*.
The software will then be installed.
VistaSoft Inspect is installed additionally (software for performing and archiving acceptance checks and consistency checks on the image reproduction and X-ray system).
› Click *Finish [Beenden]* to complete the installation.
› Launch the software for the first time (see "Launching the software for the first time").

Launching the software for the first time

The installation is completed when the software is run for the first time.

If a DBSWIN installation is present, the data from the existing DBSWIN installation can also be migrated at the same time.
– "Launching the software without an existing DBSWIN installation"
– "Launching the software with an existing DBSWIN installation"

Launching the software without an existing DBSWIN installation

› Launch the software (see "11 Starting the software").
› Under *Select Operating Mode [Betriebsmodus auswählen]* select the option *Client*.
› Click *Next*.
› Enter the IP address or computer name under which the database is installed under *Server*.
› Enter the port that is to be used.
› Click *Next*.

Launching the software with an existing DBSWIN installation

If data is to be migrated from an existing DBSWIN installation, then the following must be taken into account before starting VistaSoft for the first time:
– DBSWIN version 5.9 or higher must be installed – update to a higher version if necessary.
– Images archived in DBSWIN cannot be migrated – retrieve any images as required.
– DBSWIN must be closed.
› Launch the software (see "11 Starting the software").

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› If data is to be migrated from an existing DBSWIN installation, launch the import by clicking *Integration of DBSWIN Data and Settings [Integration von DBSWIN Daten und -Einstellungen]*.
For more information on migration refer to "5.3 Migrating the data of a DBSWIN installation". VistaSoft detects the DBSWIN installation (single workstation, client, server) and migrates the necessary data. If DBSWIN is installed as a client, VistaSoft is also configured as a client. After the import it is not necessary to select an operating mode or set up a practice/surgery. Here, the DBSWIN installation is not changed or deleted.
› If there is to be no data migration from the existing DBSWIN installation, skip the migration step by clicking *Skip Integration [Integration Überspringen]*.
No data migration will take place. The operating mode and practice/surgery will need to be set up manually.
› Click *Next*.
A summary will be displayed.
› Click *Finish [Abschließen]*.

5.3 Migrating the data of a DBSWIN installation

With VistaSoft you have the option of a one-off migration of certain settings and data from an existing DBSWIN installation. Different data will be migrated depending on how DBSWIN is installed.

– "Migrating the data of a DBSWIN single-user installation"
– "Migrating the data of a DBSWIN server installation"
– "Migrating the data of a DBSWIN client installation"

The VistaSoft operating mode is executed automatically in accordance with the DBSWIN configuration present:

DBSWIN operating mode	VistaSoft operating mode
Client	Client
Server	Server
Single station	Server

The following must be noted for the migration:

– DBSWIN version 5.9 or higher
– Data migration is performed once from DBSWIN to VistaSoft. Afterwards you can continue working with DBSWIN, but there will be no further alignment of data with VistaSoft.
– The DBSWIN installation is not changed.
– Images are not copied to the VistaSoft database. They remain preserved in the DBSWIN directories. VistaSoft creates references to these directories.
– Video films are not managed by VistaSoft and can only be displayed as a preview image, but they cannot be played back.
– Comments contained in the images can be edited in VistaSoft, if they are supported by VistaSoft. Comments that are not supported, e.g. text annotations, are displayed only.

Once the migration has been completed, a summary is displayed with information regarding any problems.

We recommend uninstalling DBSWIN after successful migration. When doing this, the DBSData directory must not be deleted.

It is possible to move the DBSData directory from DBSWIN to the VistaSoftData directory of VistaSoft (see "65.1 Moving the DBSData directory"). As a result of this, only one directory needs to be backed up.

Migrating the data of a DBSWIN single-user installation

With a VistaSoft single-user installation the following data will be migrated from DBSWIN:
Client data:

– Server address (the port is not imported because a different port is used in VistaSoft)
– Import path for the patient import
– VDDS-media settings (active, referenced practice management program, support for level 6)
– If a diagnostic workstation: Monitor tests

EN

Server data:
– Address of the DBSWIN database
– Practices and practice settings
– Patients and patient fields
– Patient image data (X-ray and video)
  The object type from DBSWIN is assigned in VistaSoft to an acquisition type and an image type
– Templates (layouts) for views

Migrating the data of a DBSWIN server installation

With a VistaSoft server installation the following data will be migrated from DBSWIN:
– Address of the DBSWIN database
– Practices and practice settings
– Patients and patient fields
– Patient image data (X-ray and video)
  The object type from DBSWIN is assigned in VistaSoft to an acquisition type and an image type
– Templates (layouts) for views

No client configuration is migrated.

Migrating the data of a DBSWIN client installation

With a VistaSoft client installation the following data will be migrated from DBSWIN:
– Server address (the port is not imported because a different port is used in VistaSoft)
– Import path for the patient import
– VDDS-media settings (active, referenced practice management program, support for level 6)
– If a diagnostic workstation: Monitor tests

6 Data backup

Regular data backups of the VistaSoft database and image directories are absolutely essential. This applies particularly in cases where there is a legal retention period for X-ray images and an X-ray device (e.g. VistaScan, VistaRay, VistaPano) with VistaSoft is used.
Fur a full data backup the following directories must be backed up:
– C:\ProgramData\Duerr\VistaSoft (for server, client and single-user installation)
– C:\VistaSoftData (for server and single-user installation)

The directories stated above refer to a default installation. However, they may be different if you select different directories during installation.
We recommend backing up the above directories via your practice backup. You can request instructions on how to proceed from your system administrator.

EN

7 Licensing

Without a valid licence key it is possible to use the software in the demo version. Here, 30 patients can be created in the software with full functionality. From the 30th patient a 30-day deadline applies within which further patients can be created. Once this deadline has expired it will no longer be possible to use the software without a valid licence key.
With VistaSoft Inspect, unlimited acceptance tests and partial acceptance tests are possible without a valid licence key in demo mode. A licence key is required for the second consistency check of an X-ray station and for the monitor test.

If you wish to move the server or perform a single workstation installation on a different computer, you will need to request a new licence key (see "7.2 Licensing without a licence key").

Licensing depends on whether or not the licence key is already present:
– If a licence key is already present: "7.1 Licensing with a licence key"
– If a licence key needs to be ordered: "7.2 Licensing without a licence key"

The licence key contains information about the licensed modules. If additional modules are required at a later time, then the licensing process needs to be performed again.
The licensing of a module also includes the licensing of the assigned acquisition types.
The following modules are available:

VistaSoft Basis	Basic software functions
VistaSoft X-ray	Taking an X-ray image (Acquisition types of the Intraoral, Panorama and Cephalometric module classes)
VistaSoft Video	Make a video recording (Acquisition types of the Video and Proof module classes)
VistaSoft Mobile-Connect	Display images on the Dürr Dental imaging iPad App
VistaSoft Inspect	Configuring and performing the consistency and acceptance checks
VistaSoft 3D	Make, import and display a CBCT recording (Acquisition types of the CBCT module class)
VistaSoft DICOM Starter	Share images with DICOM systems
VistaSoft Implant / Guide	see "7.3 Acquire licence for VistaSoft Implant / Guide"

When working with a multi-station installation, the module VistaSoft 3D is administered as a so-called floating license, so that the licence is only required if a 3D recording has been started, or a 3D recording is opened on the lightbox. Once the patient is logged-out, the licence is released again and can be used on another work station.
In a multi-station installation, the VistaSoft DICOM Starter module is also administered as a floating license, meaning that the licence is only required if the workstation is logged in as a DICOM workstation.

7.1 Licensing with a licence key

› On the right-hand side of the patient bar (see "10.1 Software interface") click on the information *Trial version: xx patient(s) and xx day(s) remaining. [Testversion: Noch XX Patient(en) und XX Tag(e) übrig.]*.
If you cannot see this information about the trial version, you can also call up the licensing information under >*Application [Anwendung]*.
› Enter the existing licence key in the input field in the *Licensing [Lizenzierung]* area and click on to close the flyout.
› Restart the software.

7.2 Licensing without a licence key

› On the right-hand side of the patient bar (see "10.1 Software interface") click on the information *Trial version: xx patient(s) and xx day(s) remaining. [Testversion: Noch XX Patient(en) und XX Tag(e) übrig.]*.
If you cannot see this information about the trial version, you can also call up the licensing information under >*Application [Anwendung]*.
› Click on *License [Lizenzieren]*.
› Click on *Purchase new licence key...[Neuen Lizenzschlüssel erwerben...]*.

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› In the *Registration [Registrierung]* window activate all the modules you wish to order under *Modules [Module]*.
› Check whether or not all connected/installed devices are being displayed under *Serial Numbers [Seriennummern]*.
If not all of the connected/installed devices are being displayed, click on *Update [Aktualisieren]*. The list of devices is then updated.
If all of the connected/installed devices are still not being displayed properly, click on *Add Device [Gerät hinzufügen]* and manually enter the serial number and reference number.
› Fill in at least all of the required fields under *Address [Adresse]* and *Dealer [Händler]*.
› Confirm that permission has been granted to use the given data for job processing and customer service purposes.
Otherwise it will not be possible to license the imaging software.
› Click on *Register via Internet [Über Internet registrieren]* to send the registration.
Click on *Export Registration Data [Registrierungsdaten exportieren]* to export the registration in XML format to a local directory.
The registration hotline will generate a licence key from the submitted data. Depending on how busy the hotline is this may take a short time. The licence key will be sent to you by e-mail.
› Navigate back via the navigation bar to *Application [Anwendung]*.
› Enter the received licence key in the input field and click on to close the flyout.
› Restart the software.

7.3 Acquire licence for VistaSoft Implant / Guide

VistaSoft Implant / Guide is used for planning implants (not available in all countries). Follow the instructions below to order VistaSoft Implant / Guide:
› Click .
› Click *Application [Anwendung]*.
› Click *Acquire Licence for VistaSoft Implant / Guide...*.
An Internet site will open in the standard browser where you can acquire the licence for VistaSoft Implant / Guide.

8 Software updates

During a software update the user data (e.g. image data, patient data, device configurations, X-ray stations, licensing information and motor checks) is preserved.
In the case of a multi-station installation the software needs to be updated on the server and on all clients. Note the following sequence:
1. Close all clients.
2. Update the software on the server.
3. Update the software on clients.

› Place the installation DVD in the drive or download the installation file and save it locally.
› The Start menu will load automatically via Autostart. If the Start menu does not load automatically or if you have downloaded the installation file, run the *Start.exe* file.
› Click *Install VistaSoft*.
› Select the installation language you require.
› Accept the Licence Agreement.
› Select the required components.
The previously installed components are preselected.
Mobile Connect: Software for connecting the Dürr Dental Imaging iPad app to the VistaSoft database
› Tick all the check boxes for the devices that are to be installed in order to work with them on this computer. The previously installed devices are pre-selected.
The device drivers are automatically installed, there is no need for manual driver installation. The units can be used immediately after installation.
When *VistaVox* is selected the computer is checked against the system requirements. If the minimum requirements are not met, a notice is displayed and the installation can be continued with or without the additional VistaVox component.
› In the overview, check the components and devices that are to be installed.
If an entry needs to be changed again, click *Back [Zurück]* to navigate to the relevant place and change the entry.
› Once you see the message to the effect that the software is ready to install, click *Continue [Weiter]*.
The software is updated.
› Click *Finish [Beenden]* to complete the installation.

9 Uninstalling the software

The VistaSoft software package essentially consists of two components:

– The VistaSoft software itself
– Database

The following conditions must be fulfilled in order to uninstall the software:

✓ The software must be closed
✓ All patient data and the database (incl.X-ray images, etc.) must be backed up

The directories that need to be backed up may vary depending on your specific installation. You can contact our hotline to check that all patient data and the database are backed up.

Proceed as follows to uninstall the software:

› Click *Start* > *All Programs [Alle Programme]* > *VistaSoft* > *Uninstall VistaSoft [Deinstallieren von VistaSoft]* to launch the uninstall program.
› Answer *Yes [Ja]* when asked whether you want to uninstall VistaSoft.
VistaSoft will be uninstalled.

EN

First steps

This section describes the initial steps that need to be taken in order to use the imaging software. This section is divided into the following sub-sections:
– "10 Notes on use"
– "11 Starting the software"
– "12 Managing patient data"
– "13 Importing X-ray images"
– "14 Creating a video image"
– "15 Display Images"
– "16 Image editing"
– "17 Export images"

The following configurations are required in order to work with the software:
– "20.1 Create practice"
– "21 Adding devices"
– "22.1 Creating an X-ray station"*
– "22.2 Configuring an X-ray station"*

* Only required if there is an X-ray station obligation

The following configurations may be required (depending on the connected devices and connections to/from external software) in order to use the software:
– "23.1 Configuring image acquisition types"
– "Acceptance and consistency check"
– "19 Accelerating the image display for 3D images"

CAUTION

Risk of data loss due to incorrect configuration

› Configurations should only be carried out by Dürr Dental or by a company authorised to do so by Dürr Dental.

10 Notes on use

Please refer to the following notes on use of the software:
– "10.1 Software interface"
– "10.2 Saving concept"
– "10.3 User support"

Software help functions can be accessed either via the context-sensitive help in specific sections or via the start page.

Opening the context-sensitive software help:

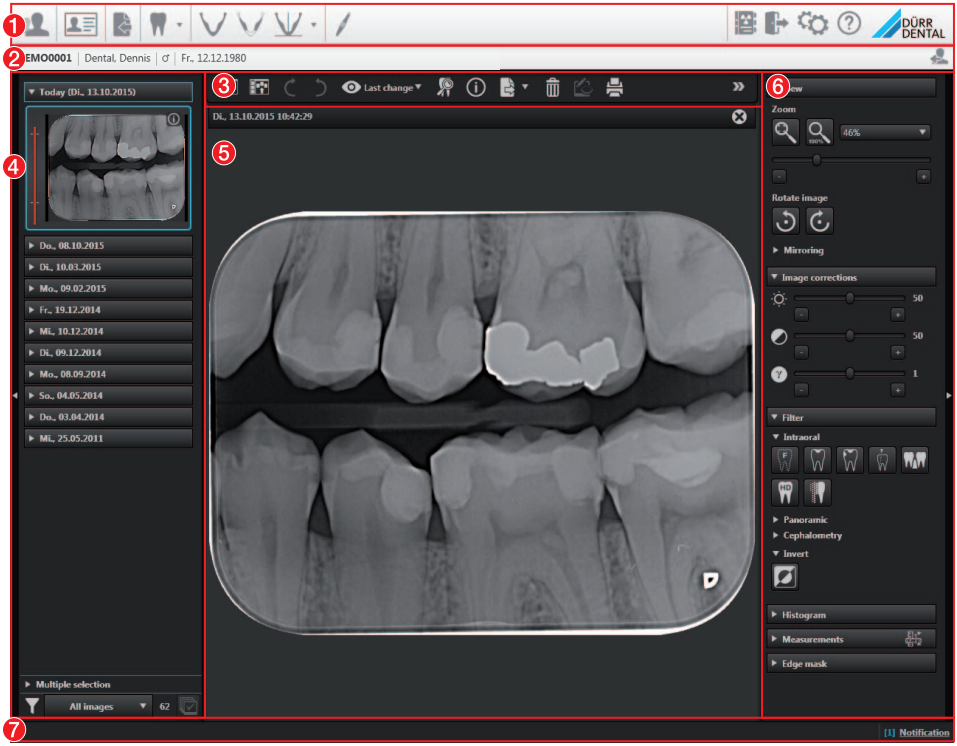
› Press the *F1* key.
The cursor changes to ?.
› Click in the area for which help is required (e.g. Toolbox).
The software help opens in a separate window in the required section (e.g. Toolbox).

Opening the software help function via the start page:

› Click ? > ?.
The software help opens in a separate window with the start page.

EN

10.1 Software interface



1 "Menu bar"
2 "Patient data bar"
3 "Light table menu"
4 "Image inspector"
5 "Light table"
6 "Toolbox"
7 "Status bar"

The software interface is described in the standard configuration. Its appearance may differ from this depending on how it is configured.

Flyouts open for various buttons (e.g. Patient, Configuration or Image Information) – as well as providing information, data can be entered or changed in these flyouts.

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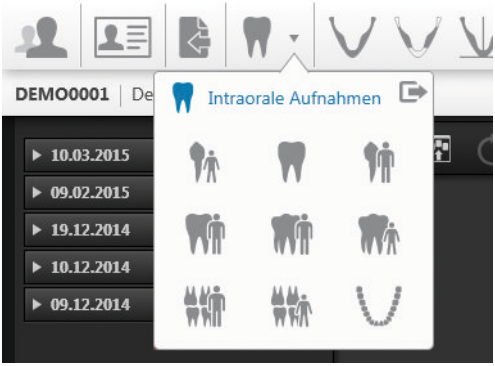
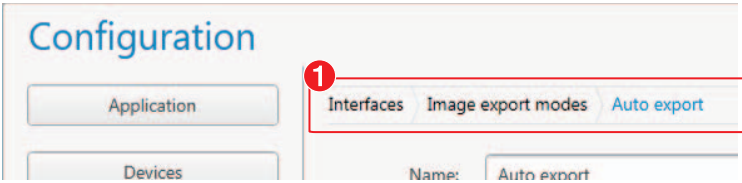
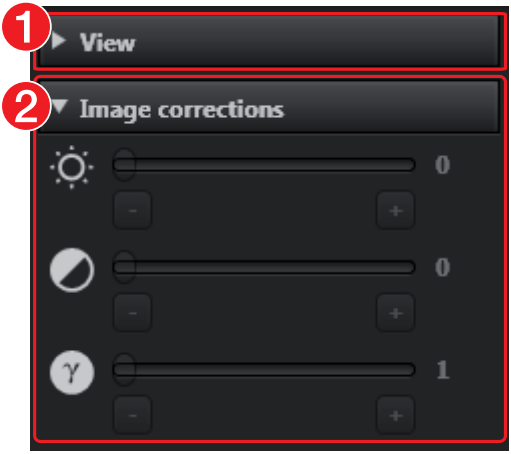


There are different ways to close the flyout again: by clicking on or by clicking outside the flyout.
The data that has been entered or changed will automatically be saved when the flyout is closed (see "10.2 Saving concept").
If a flyout has multiple levels a navigation bar will be displayed. This bar will allow you to switch directly to the higher-level levels.



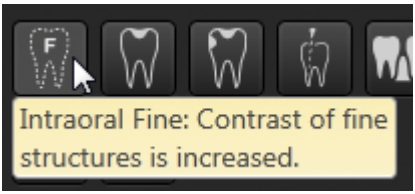
1 Navigation bar

If information is a mandatory requirement in a flyout, the corresponding required fields are shown with a red surround and marked with .
The inputs are checked when a flyout is closed or when you switch to a higher level of the flyout. If information is missing or values are invalid (e.g. outside a defined value range) then the flyout cannot be changed or you will not be able to switch to a higher level. You will either need to correct the inputs or discard the changes first.
Images and functions are grouped in the "Image inspector" and in the toolbox. The groups can be opened or closed by clicking the group title.



1 Function group *View [Ansicht]* (closed)
2 Function group *Image corrections [Bildkorrekturen]* (open)

Quick information with a brief explanation is saved for the buttons on the software interface. If you briefly hover with the mouse cursor over a button the quick information will be displayed.



EN

Menu bar

The menu bar is always divided into two sections:

Left-hand section

- Patient data management (see "12 Managing patient data")
- Job administration (see "33 Managing jobs")
- Image importing (see "36 Importing images")
- X-ray and video images, depending on imaging types (see "13 Importing X-ray images" and "14 Creating a video image")

Right-hand section

- X-ray report (see "39 Displaying the X-ray report")
- Closing registered user and practice (see "40 Change practice (surgery)")
- Configuration (see "Configuration overview")
- Help
  - Display help
  - Create support file (see "42 Creating a support file")
  - Show Info dialog

Patient data bar

The patient data bar is always divided into two sections:

- Left-hand section
  - Information about the currently selected patient (see "12 Managing patient data")
- Right-hand section
  - "12.5 Log out patient"

In addition, the following information is also displayed in the patient data bar where present/configured:

- Information for the active job
- Reminders if checks are due

Light table menu

The light-table menu features various commands for the images displayed on the light table:

	"Clear lightbox"
	"Load view"
	"32.7 Transferring images to the practice management software" (only visible if the VDDS media interface is activated, see "62 Interfaces")
	Repeat or undo actions
	"Displaying and managing the image status"
	Create user-defined image state (see "Displaying and managing the image status")
	"Creating a CBCT view (2D) "
	"32.2 Entering indications"
	"Editing image information on the light table"
	"32.3 Export images"
	"Uploading an image to the cloud"
	"32.4 Exporting an image to an external application"
	"32.5 Transferring an image to PACS"
	"38 Printing images"
	"32.9 Delete image"
 	"Display/hide annotations and measurements"
	"Resetting all MPR and TSA planes"
	"32.8 Assigning an image to a different patient record"
	"37.2 Managing default image settings"

EN

 	"Hide / show all MPR/TSA lines and the panorama curve"
	Opens a selection list with further commands:

Image inspector

The "Image inspector" is divided into three sections:
- Preview window:
  can only be viewed if new images have been recorded
- Image archive for the patient record you are logged into:
  All images are grouped according to the date on which they were recorded.
- Processing and filtering images from the image archive:
  - "Multiple selection"
  - "Filtering images"

Different actions are available in the **image archive** for the X-ray images and video images:
- "Display Images"
- "Editing image information in the image inspector"
- "Multiple selection"
- "Filtering images"
- "Uploading an image to the cloud"
- "32.9 Delete image"

If the retention period required by law is activated (see "63.1 Configure"), then X-ray images cannot be deleted until this period has expired.

When an image is being displayed on the light table, it is highlighted with a blue frame.
If corresponding information is available, the dose indicator is displayed next to each X-ray image in the "Image inspector" as a coloured bar. The dose indicator serves as a guide value for optimum adjustment of the dosage parameters. This shows whether there is a risk of under or overexposing the image, i.e. whether low or high grey values can no longer be displayed, resulting in a loss of image information. If the dosage parameters are set to the correct values, this is indicated by a green bar – if not, this is indicated by a red bar. Borderline settings are indicated with a yellow bar.
The dose indicator cannot be displayed for the following devices/images:
- VistaPano S
- VistaPano S Ceph
- VistaVox S
- VistaVox S Ceph
- Video Images

Bar red and high	->	Decrease X-ray dosage or amplification of the recording system
Bar yellow and high	->	Slightly decrease X-ray dosage or amplification of the recording system
Green bar	->	X-ray dosage and amplification of the recording system are OK
Bar yellow and low	->	Slightly increase X-ray dosage or amplification of recording system
Bar red and low	->	Slightly increase X-ray dosage or amplification of recording system

In the **preview window** you can open the troubleshooting via  if a device error occurs during image acquisition. Not all devices support this function. The scope of the troubleshooting options depends on the connected device.

Light table

All images selected in the "Image inspector" are displayed on the light table.
If you click on an image on the light table, a header appears with the image acquisition date and tooth (if selected in the dental notation system), as well as buttons for the following actions:

	Maximize image on light table
	Minimize image on light table

EN


Maximize image to full screen


Close image

With CBCT images (3D) different views are shown (e.g. volume view, panorama view, axial slice, see "3D"). The views of the CBCT image can be individually maximised. The name of the view is then also displayed in the header (e.g. axial, sagittal).

To increase the size of the light table, the "Image inspector" (to the left) and the toolbox (to the right) can be collapsed. To do this, click on the side bar.

Toolbox

The toolbox contains the various tools and filters required for image editing (see "37.1 Toolbox"). The tools on offer differ depending on the image type.

Status bar

The following information is displayed in the status bar:
- Status messages
- Progress display
- Notifications
- Cloud connection
- Pending PACS transfers

A new status message will pulse blue-grey for around 3 seconds. During image acquisition, device status messages are also displayed.

10.2 Saving concept

The "saving concept" does not require the user to actively save data (e.g. via a *Save [Speichern]* button). The data that has been entered or changed will automatically be saved when a flyout is closed.
Active saving in a flyout is only required in special cases, e.g. during acceptance tests.

› Click to close the flyout.
or
Use the mouse cursor to click next to the active flyout.
or
Switch to a higher level in the navigation bar.
The data that has been entered or changed will automatically be saved. The flyout will be closed.

› If you do not want to save the data that has been entered or changed, click *Discard changes [Änderungen verwerfen]*.
The changes are reset. The flyout remains open.

10.3 User support

When certain actions are performed or certain events occur, the imaging software will display a notification. This notification will appear as a flyout in the bottom right-hand corner. After around five seconds, the notification will automatically disappear. The type of notification is identified by the symbol denoting one of the following categories:


Malfunction


Notice


Note


Information

In addition, a progress bar is shown in the status bar for actions that take a little time.
If a device error or a device warning occurs during the acquisition of images, a dialog window

appears that needs to be confirmed. Device information appears as a message.

Displaying notifications again:

Notifications [Benachrichtigungen] will only be displayed if there actually are any notifications. A notification counter (blue number) will also be displayed.

› Click on *Notifications [Benachrichtigungen]* in the status bar.
All notifications that are no older than 24 hours will be displayed again in the flyout. Notifications that are more than 24 hours old can only be called up in the configuration (see "User notification").

Delete notification:

› Click *Delete notifications [Benachrichtigungen löschen]*.
All notifications will be deleted from the list on the flyout.

The notifications can still be retrieved from the system configuration after they have been deleted (see "User notification").

11 Starting the software

There are two ways to launch the software:

– By clicking on the icon on the desktop
– Via the Start menu: *Start* > *All Programs [Alle Programme]* > *Duerr Dental* > *VistaSoft* > *VistaSoft*

› Double click on the icon on the desktop
or
select the relevant item from the Start menu.
VistaSoft is launched.
If multiple practices have been set up in VistaSoft then you will need to select the corresponding one (see "Creating a further practice").
If password protection is enabled then you will need to enter the password (see "Password settings").

The following configurations are required in order to work with the software:

– "20.1 Create practice"
– "21 Adding devices"
– "22.1 Creating an X-ray station"*
– "22.2 Configuring an X-ray station"*

* Only required if there is an X-ray station obligation

The following configurations may be required (depending on the connected devices and connections to/from external software) in order to use the software:

– "18 Changing the display language"
– "23.1 Configuring image acquisition types"
– "19 Accelerating the image display for 3D images"

CAUTION

Risk of data loss due to incorrect configuration

› Configurations should only be carried out by Dürr Dental or by a company authorised to do so by Dürr Dental.

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12 Managing patient data

CAUTION

Personal injury is possible due to wrong assignment of image data to a patient

› Check the right assignment of the image data (e. g. during image import, change of patient data new assignment of image data to a patient).
› Observe the information displayed in the software.

Every image that is managed in the software is assigned to a patient.
To create or import new images, you must be logged into the record for the patient they relate to (see "12.3 Searching for and logging into a patient record").
In the patient data management section, there are two ways of managing patient data:
– The patient data can be directly managed in the software itself (see "12.1 Creating a patient record")
– The patient data can be imported from the practice management software (see "12.2 Importing patient data")

12.1 Creating a patient record

Once the software has been launched, the *Patient Records [Patienten]* flyout is automatically opened and a new patient record can be created.
› To open the flyout, click in the menu bar.
› Click on the right-hand side of the search field.
The flyout for creating a new patient record will open.

Fields marked ⓘ are mandatory fields and must be completed.
The mandatory fields can be selected in the configuration.

› Fill in all fields or at least the mandatory fields.
› Click to close the flyout.
The patient record will be created and you will be automatically logged into it.
If a patient is already logged in, you will automatically be logged out of this patient's record when you log into another patient's record. Here, all image acquisitions must be finished and all mandatory information for the images must have been entered.

12.2 Importing patient data

Requirements:
✓ Import directory for patient data from a practice management program configured (see "62 Interfaces")
✓ No image acquisition is running on the workstation where the patient is to be logged in (X-ray, video)
› Save the patient data from the practice management program to the import directory (for details, see instructions of the practice management program).
If a patient is not logged-in in the imaging software, the patient will be registered automatically.
If an other patient is already logged-in in the imaging software, a notification will appear and the button *Patient record awaiting log-in* will appear in the patient data bar.
› To log-in the patient whose data has been sent from the practice management program, click *Patient record awaiting log-in [Patient wartet auf Anmeldung]* in the patient data bar.
If a patient is already logged in, this patient will be logged-out automatically when the other patient is logged in. Here, all image acquisitions must be finished and all mandatory information for the images must have been entered.

12.3 Searching for and logging into a patient record

In order to create or import images, you must be logged into a patient record.
The *Patient records [Patienten]* flyout will open automatically when the software is launched.
If a patient is already logged in, you will automatically be logged out of this patient's record when you log into another patient's record. Here, all image acquisitions must be finished and all

mandatory information for the images must have been entered.
The list *Last patient logged in* shows the last 10 patients who were logged in (with the most recent log-in date first). In the case of multi-station installations the list is global across all workstations. The list of last logged-in patients can also be deactivated, see "58.2 Workstation".
The search values in the patient data can be limited to patient ID and name in the selection field. Otherwise, all fields of the patient data are used in the search.

› Click .
The *Patient records [Patienten]* flyout will open.
› If the patient record you are looking for has been logged into very recently, you can select it from the *Recently viewed patient records [Zuletzt angemeldete Patienten]* list.
or
› Enter patient details into the search field (e.g. patient number, name or date of birth).
To enter numbers with the screen keyboard, click on .
The search results will be displayed, either immediately or after pressing the enter key or , in the list below the search field (depends on the configuration, see "63 Practices").
They can be sorted by clicking on the column head.
› Highlight the patient record you require in the list and click to log in.
Alternatively you can open the patient by double-clicking the list entry.
You are now logged into the patient record.
Relevant data for the patient is displayed in the patient data bar. The image archive of the patient appears in the "Image inspector".

12.4 Editing patient data

If the patient was imported from a practice management program via the VDDS-media interface or via patimport.txt, or via the DICOM interface, then it will not be possible to edit all the patient data.

Requirements:
✓ You are logged into the patient record

› Click .
The *Patient data [Patientendaten]* flyout will open.

Fields marked ! are mandatory fields and must be completed.
Different fields may be mandatory fields, depending on the configuration.

› Change the patient data you want to amend.

12.5 Log out patient

If the patient imaging is complete, you can log out from the patient's record.
When you log into another patient's record, you will automatically be logged out of the previous patient's record.
Requirements:
✓ The patient imaging must be complete.
✓ All of the mandatory information for the acquired images has been entered.
› Click in the patient data bar.

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13 Importing X-ray images

Requirements:

✓ You are logged into the patient record

✓ No other image acquisition is in progress (X-ray or video)

› In the menu bar click the desired image acquisition type (e.g. for the preferred intraoral image).
Via you can call up further acquisition types that belong to the grouping.
The imaging types in the favourites may differ depending the configuration (see "23 Acquisition types").

Depending on the configuration of the image types (see "60 Acquisition types") the software is either immediately ready for the X-ray acquisition, or you will first need to select the acquisition source and the image acquisition mode.

› Select the acquisition source and image acquisition mode and enter any X-ray parameters as required (if they are not already defined in the configuration).

› Produce or import an X-ray exposure.
Image acquisition will now start. The preview window opens up.
The status or a preview of the image is shown in the preview window.
The image is automatically saved.

› Produce or import further X-ray exposures if required.

› Once you have finished recording the last image, click *Finish imaging*.
The preview window is closed. All acquired images are transferred to the image archive of the logged on patient. The newest images appear at the top of the image archive. From there, the images can then be opened on the light table and edited (see "16 Image editing"). Similarly, indications can be entered via the functions in the light table menu, or the image information can be edited (see "32 Managing images").

With VistaVox S/VistaVox S Cep and VistaPano S /VistaPano S Ceph, the X-ray parameters are automatically transferred from the device and cannot be altered.

› If the X-ray parameters have not been entered or preselected in the configuration (see "61.2 Parameters") and if the function *X-ray parameters mandatory* is activated (see "63.1 Configure"), then the X-ray parameters will need to be entered separately for each image under .
If the X-ray parameters have been entered or they are preselected in the configuration, the X-ray parameters are automatically adopted for the first imported image. If the preselected parameters are also to be applied to the other images, go to *Image information [Bildinformationen]* for each image and click the button *Apply X-ray parameters [Röntgenparameter anwenden]*.
In addition, where applicable you should also select the tooth (multiple selection is possible) under *Dental notation system* and select the corresponding image acquisition type under *Image acquisition type* for which the image was created. By placing the marker in the dental notation system the image acquisition type is also automatically selected if it has not already been selected beforehand.

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14 Creating a video image

A separate imaging window will open for video images. The imaging window is made up of the preview window and the image inspector.
If the camera is active, the live image from the camera can be seen in the preview window. If the camera is not active an animation is shown in the preview window.
Only the currently acquired images are displayed in the image inspector. When the imaging window is closed the images are transferred to the image archive of the patient.
Requirements:

✓ You are logged into the patient record

✓ No other image acquisition is in progress (X-ray or video)

› Click on in the menu bar.
The image acquisition window opens.
If a camera has already been preselected in the configuration (see "59.2 VistaCam") then the video preview can be seen. If no camera is preselected then a device needs to be selected.
If the camera is not active an animation is shown in the preview window.

› If the video preview is not visible, select the device in the image bar.

› If an animation is shown in the imaging window, activate the camera (e.g. take it out from the handpiece holder or attach an interchangeable head).

› Click to expand the video image to full screen if necessary.

› Depending on the camera or the interchangeable head used the video settings for the preview can be adjusted via (see "Adjusting the video settings").

› If the camera supports the live caries filter then the video preview can be switched between prophylaxis view and caries view .

› Position the camera and take a freeze-frame shot using the capture ring or by clicking .
The acquired images are automatically saved for the logged-in patient and displayed in the image inspector.
For image proofs, select the caries filter or the prophylaxis view .
If there is too much ambient light when an image proof is being recorded, will be displayed. The caries filter cannot be used with this image.

› To view an image again in the preview window, select the image in the image inspector.

› Delete images that are not required by clicking .

› Enter image information via (only the dentition type and the dental notation are available in the image inspector). The image information can be edited or an indication can be entered later on via the functions in the light table menu (see "32 Managing images").

› Use the capture ring or click on to return to the video preview.

› Once you have finished recording the last image, click *Finish imaging [Aufnahme beenden]*.
The imaging window will be closed. All images are displayed in the image archive of the logged-in patient. From there, the images can then be opened on the light table and edited (see "37.1 Toolbox").

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15 Display Images

Requirements:

✓ You are logged into the patient record

✓ The patient images are in the "Image inspector"

Displaying one or more images on the light table (multiple selection closed):

› Click to select the relevant preview image in the "Image inspector".
or
Click the preview image in the image inspector and drag and drop it to the light table.
The image will be displayed on the light table and highlighted with a blue frame in the "Image inspector".
Multiple selected images will be displayed next to and above and below one another on the light table, and they are highlighted with a blue frame in the "Image inspector". The available space on the light table will be divided up dynamically between all of the images.

Displaying multiple images on the light table (multiple selection open):

› In the "Image inspector" click on *Multiple selection [Mehrfachauswahl]* to open the function group and activate the multiple selection.

› Select the corresponding images with a click. Alternatively, enable the check box in the date row to select all images for the day. The images are marked with ☑.

› Click  to load the marked images to the light table.
or
Click and hold your mouse button on one of the selected preview images in the "Image inspector" and then move it to the light table (drag & drop).
The images will be displayed next to and above and below one another on the light table. The available space on the light table will be divided up dynamically between all of the images.

Display all of the images from a single day on the light table:

› Move the mouse cursor over the required date row in the "Image inspector".
The  section will appear in the right-hand part of the date row. This shows that the date row can be moved.

› Click on the date row with the left-hand mouse button and hold.

› Drag the date row onto the light table and release the left-hand mouse button.
All the images from the day will be displayed next to and above and below one another on the light table, and highlighted in colour in the "Image inspector". The light table will dynamically divide the available space between all the images.

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16 Image editing

The following navigation aids can generally be used:

– Mouse wheel: zoom in/zoom out image section
– Right mouse button: move image section

The images can be edited using the tools from the toolbox in order to highlight details and facilitate diagnosis. The editing tools available depend on the image type.

The following types of image editing are possible on an X-ray image (2D):

– "Display"
– "Image corrections"
– "Filter"
– "Histogram"
– "Measurements"
– "Drawings"
– "Edge mask"
– "Implants"
– "Annotations"

The following types of image editing are possible on an CBCT image (3D):

– "3D"
– "Display"
– "Image corrections"
– "Filter"
– "Histogram"
– "Measurements"
– "Drawings"
– "Implants"
– "Annotations"

The following types of image editing are possible in a CBCT view (2D derived from 3D):

– "Display"
– "Image corrections"
– "Drawings"
– "Annotations"

The following types of image editing are possible on a video image:

– "Display"
– "Filter" (for proof images only)
– "Image corrections" (not for proof images)
– "Measurements"
– "Drawings"
– "Annotations"

The changes to the image will be saved alongside the original image as the ***Last change [Letzte Änderung]***. In the light table menu you can use  to display the ***Original*** and the ***Original image [Erstansicht]*** (original with preselected image processing steps). See also "Displaying and managing the image status".

› Click on the image on the light table.
› Edit the image as required using the tools from the toolbox.
› Either close the image on the light table or click somewhere else on the light table to save the image editing.

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17 Export images

Various predefined image export modes and a user-defined export are available for image exporting. The predefined modes can be adapted (see "Image export modes...").
The following settings can be selected during the user-defined export (see also "Image export modes..."):

– Destination type
– File path
– File name
– Image state
– 2D/3D X-ray format or video format
– Anonymization of the data
– Embed viewer

The selected settings for the user-defined export are saved locally and can be reused during the next export.
The images can also be exported to a data carrier, see "Creating a patient medium".

› Click in the light table menu.
The selection list for the image export mode will open.
› Select the correct image export mode.
The selected image will be exported to the defined path.
More than one image can be exported at a time using the ***Multiple selection [Mehrfachauswahl]*** function in the "Image inspector" (see "Multiple selection").

Configuration

The following configurations are required in order to work with the software:
– "20.1 Create practice"
– "21 Adding devices"
– "22.1 Creating an X-ray station"*
– "22.2 Configuring an X-ray station"*

* Only required if there is an X-ray station obligation
The following configurations may be required (depending on the connected devices and connections to/from external software) in order to use the software:
– "18 Changing the display language"
– "23.1 Configuring image acquisition types"
– "19 Accelerating the image display for 3D images"

CAUTION

Risk of data loss due to incorrect configuration

› Configurations should only be carried out by Dürr Dental or by a company authorised to do so by Dürr Dental.

18 Changing the display language

The imaging software supports many different languages. This can be changed in the configuration.

› Click .
› Click *Application [Anwendung]*.
› Click *Workstation...[Arbeitsplatz...]*.
› In the *Display [Anzeige]* area go to *Display language: [Anzeigesprache:}* and use the menu to select the required language.
› Click *Restart [Neustart]*.
The imaging software will be restarted so that the changes become effective.

19 Accelerating the image display for 3D images

The image display can be accelerated for a smoother display of CBCT images (3D) (depending on the graphics card in the workstation).

The GPU-accelerated display can also be activated when a 3D image is first opened.

› Click .
› Click *Application [Anwendung]* > *Workstation [Arbeitsplatz]...*.
› Under *Display* tick the box next to *GPU-accelerated screen display [GPU-beschleunigte Bildanzeige]*.
› Restart the software to activate the changes.

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20 Practices

In the practice configuration you can create, configure and delete practices.

› Click .

› Click *Practices [Praxen]*.

20.1 Create practice

You will need to create at least one practice before you can work with the imaging software. This query is displayed once, when you launch the software for the first time.

› Enter the name of the practice under *Name*.

› Enter the complete address of the practice under *Address [Adresse]*.

› Under *Database path [Datenbankpfad]* you can change the path under which the database is saved for the practice.

› Under *Image path [Bilderpfad]* you can change the path under which the images are saved for the practice.

› Click *Next* to save the practice.

Result:

The practice will then appear in the list of practices.

Creating a further practice

If the workstation is used by multiple practices, these can be created and then easily changed afterwards (see "40 Change practice (surgery)").

› Click *Create practice...[Praxis anlegen...]*.

› Enter the information in the fields.

› Click or *Practices [Praxen]*.
The practice will then appear in the list of practices.

20.2 Configuring the practice

Once you have created practices they can be configured. Configuration options include e.g. settings for the retention period for X-ray images or database settings.

› Select the practice you wish to configure.

› Click *Configure [Konfigurieren]*.
The configuration options are described in more detail under "63.1 Configure".

20.3 Deleting a practice

It is generally possible to delete practices once they have been created.

A practice can only be deleted if the following requirements are met:

– No patient data present

– No user logged into this practice

– At least one other practice remains in the system after deleting

› Select the practice you wish to delete.

› Click *Delete [Löschen]*.

› Click *Delete [Löschen]* to confirm that you want to delete the practice.

21 Adding devices

All devices that are connected with the software are displayed in the list of devices.
The following conditions must be fulfilled in order to display the devices that are connected to the software in the list of devices:

✓ Devices are connected to the network/workstation.
✓ Devices are switched on.
✓ The additional component for the corresponding device is installed (see "21.2 Installing additional components").

You can sort the list of devices by clicking in the corresponding column of the header row.
If a device is not yet fully configured and therefore cannot yet be used, then the row is marked with the icon ⚠.
If all of the requirements are met, then the devices can be displayed in the list of devices and configured. The connection to the software is established automatically.

› Click ⚙.
› Click *Devices [Geräte]*.

21.1 Connecting devices

All connected devices appear automatically in the list of devices. If this is not the case you will need to add the device manually (see "Manually adding a device").

The exact process for installation and configuration of a device is described in the assembly instructions and the instructions for use/installation of the device.

On TWAIN devices you first need to complete the device settings (see "Device settings") to use the device and in order to be able to create an X-ray station.

The tick in the check box next to *Connected* shows that the device is connected to the software.

Manually adding a device

If a connected device is not displayed in the list of devices, then you will need to manually register it.

✓ The IP address of the device is known
› Click *Register network device [Netzwerkgerät registrieren]*.
› Enter the IP address of the device.
› Click *Add device [Gerät hinzufügen]*.

Result:
The system will search for the device in the network and then display it in the list of devices.

21.2 Installing additional components

If the additional component of a device was not installed at the same time during the initial installation process then you will need to reinstall this additional component afterwards.
To do this, proceed in the same way as for the initial installation (see "5 Installing the software").

› During the course of the installation, select the device you wish to reinstall.
› Perform the Installation.
The missing additional components will be reinstalled.
The device drivers are installed automatically.

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22 X-ray stations

If there is a legal requirement for the recording of X-ray data and under *Configuration [Konfiguration]* > *Application [Anwendung]* the option *X-ray stations [Röntgenplätze]* is enabled then you will need to create X-ray stations.
If there is no X-ray station obligation and the option *Manually create X-ray stations [Röntgenplätze manuell anlegen]* under *Configuration [Konfiguration]* > *Application [Anwendung]* is disabled, then the X-ray station will be automatically created in the background when a device is created, and no further configuration is required.
An X-ray station always comprises the following:
– X-ray emitter
– Image acquisition device
– Operator information

Here, e.g. an X-ray emitter can be combined with different image plate scanners or one image plate scanner can be combined with different X-ray emitters into multiple X-ray stations.
The X-ray station that is marked as the favourite in the list of X-ray stations is displayed first in the selection list when the X-ray image acquisition is started.

If an X-ray station is to be permanently assigned to an image type, this can set up in the configuration of the image type (see "23.1 Configuring image acquisition types").

In the X-ray station configuration you can create, configure and delete X-ray stations.
› Click .
› Click *X-ray stations [Röntgenplätze]*.

See also:
– "22.1 Creating an X-ray station"
– "22.2 Configuring an X-ray station"
– "22.3 Entering recommended values for X-ray parameters"
– "22.4 Deleting an X-ray station"

22.1 Creating an X-ray station

If there is a legal requirement for recording X-ray data then the process will depend on the image acquisition device:
– "Creating an X-ray-station using the wizard"
  – VistaPano S
  – VistaPano S Ceph
  – VistaVox S
  – VistaVox S Ceph
– "Creating an X-ray-station manually"
  – All VistaScan devices
  – VistaRay
  – Cephalometric/panoramic devices without digital image receiver (e.g. with image plate)
  – TWAIN devices

If there is no legal requirement for the recording of X-ray data, the option *Create X-ray stations manually [Röntgenplätze manuell anlegen]* can be deactivated in *Configuration [Konfiguration]* > *Application [Anwendung]*. As a result, the X-ray station will be automatically created in the background when a device is created, and no further configuration is required (see "Automatic creation of X-ray stations").

Creating an X-ray-station using the wizard

› Click *Automatic search [Automatische Suche]*.
  The wizard will open.
› Select an X-ray station from the list.
  If the X-ray station is not in the list, this means that the device still needs to be connected to the software (see "21 Adding devices").
› Enter the name and address of the operator.
  The data for the current practice is pre-assigned to the operator information.
› Click *OK* to close the wizard.

Result:
The X-ray station will be displayed in the list of X-ray stations.
The information about the X-ray emitter for the created X-ray station has been automatically generated. The X-ray station can be configured via *Configure [Konfigurieren]* (see "22.2 Configuring an X-ray station").
If an X-ray station already exists with this X-ray device the system will not overwrite the configuration of the X-ray station; instead, a further X-ray station will be created.

Creating an X-ray-station manually

› Click *Create X-ray station...[Röntgenplatz anlegen...]*.
› Under *General [Allgemein]* enter the name of the X-ray station and the information about the operator.
The data for the current practice is pre-assigned to the operator information.
› Under *X-ray emitter [Röntgenstrahler]* assign the X-ray emitter with which the X-ray images will be created.
If the required X-ray emitter is not available in the list, then you will need to create it via *Create X-ray emitter...[Röntgenstrahler anlegen...]* (see "Create X-ray emitter...").
› Under *Image acquisition device [Bildaufnahmegerät]* select the device with which the X-ray images will be imported.
The selection list will only contain the matching image acquisition devices for the X-ray emitter. If the image acquisition device is not in the list, this means that the device still needs to be connected to the software (see "21 Adding devices").
› Click or go to the navigation bar and click *X-ray stations [Röntgenplätze]*.
The X-ray station will be displayed in the list of X-ray stations.

Automatic creation of X-ray stations

› Under > *Application [Anwendung]* > *Configuration [Konfiguration]* disable the option *Manually create X-ray stations [Röntgenplätze manuell anlegen]*.
One or more X-ray stations are automatically created for each device.
› If further devices are connected at a later date, go to > *Devices [Geräte]* and click *Update [Aktualisieren]*.
or
In the preview window of the image inspector go to *Select image acquisition source [Aufnahmequelle wählen]* and click .
One or more X-ray stations are automatically created for each newly connected device.

22.2 Configuring an X-ray station

If the configuration of an X-ray station is changed, it may be necessary to perform a new full or partial acceptance test.

› Select the required X-ray station in the list.
› Click *Configure [Konfigurieren]*.
› Under *General [Allgemein]* enter the name of the X-ray station and the information about the operator.
› Under *X-ray emitter [Röntgenstrahler]* assign the X-ray emitter with which the X-ray images will be created.
If the required X-ray emitter is not available in the list, then you will need to create it via *Create X-ray emitter...[Röntgenstrahler anlegen...]* (see "Create X-ray emitter...").
› Under *Image acquisition device [Bildaufnahmegerät]* select the device with which the X-ray images will be imported.
The selection list will only contain the matching image acquisition devices for the X-ray emitter. If the image acquisition device is not in the list, this means that the device still needs to be connected to the software (see "21 Adding devices").

Create X-ray emitter...

If there is a mandatory X-ray station requirement, then an X-ray emitter must be assigned to every X-ray station.

› Click *Create X-ray emitter...[Röntgenstrahler anlegen...]*.
› Fill in all text fields (where possible).
› Under *Category [Kategorie]* select the category (Intraoral, Panoramic, Cephalometric) for the X-ray emitter.
› Click on the X-ray station name in the navigation bar (go back one level) to save the information.

22.3 Entering recommended values for X-ray parameters

Depending on the unit, you can enter recommended values for the X-ray parameters for each image acquisition type of an X-ray station. It makes the work easier if the X-ray images are always taken with the same values. The recommended values for the X-ray parameters are entered automatically for the first image, but can still be adjusted if required. Depending on the unit, should you have any further images of the

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same exposure, the X-ray parameters will need to be entered manually.
The recommended values are optional. Individual parameters can also be left empty.
If recommended values are entered they are displayed in the preview window in the recording mode.

It is not possible to enter recommended values in X-ray stations with VistaPano and VistaVox. With these units, the X-ray parameters are transferred directly.

› Select the required X-ray station in the list.
› Click *Parameters [Parameter]*.
› Enter the required recommended values for each image acquisition type.
› If one or more values are to be used for all image acquisition types, select the image acquisition type and click *Apply to all [Für alle übernehmen]*.

22.4 Deleting an X-ray station

› Select the required X-ray station in the list.
› Click *Delete [Löschen]*.
› Confirm the deletion in the dialog window.

23 Acquisition types

The image acquisition types define the use of the acquisition source and the acquisition mode for the different X-ray images and video recordings (e.g. Intraoral, Video).
The list of image acquisition types is predefined based on the enabled software modules (e.g. Video, X-ray). The assignment of acquisition source and image acquisition mode can be configured (see "23.1 Configuring image acquisition types").
The image acquisition types marked as *Favourite [Favorit]* appear as a button in the menu bar.
If the acquisition source and the image acquisition mode are fixed for an image acquisition type, the image acquisition will start immediately as soon as the image acquisition type is clicked in the menu bar.

The configuration of image acquisition types and the selection of favourites is always saved locally on the computer.

23.1 Configuring image acquisition types

The list of image acquisition types is predefined. For every image acquisition type you can set which acquisition source (image acquisition device) and which image acquisition mode are to be used to generate the image.

› Click .
› Click *Acquisition types [Aufnahmetypen]*.
› Select the required image acquisition type in the list.
› Click *Configure [Konfigurieren]*.
› Under *acquisition source [Aufnahmequelle]* select whether the device is to be manually selected for each image acquisition, or whether a specific device or the last used device should be selected.
If the image acquisition device is not in the list, this means that the device still needs to be connected to the software (see "21 Adding devices").
› The selected mode is displayed under *Image acquisition mode [Aufnahmemodus]*. Click ... to change the mode. The image acquisition mode depends on the selected acquisition source.

› If the image acquisition type is to be displayed in the menu bar, tick the check box next to *Favourite [Favorit]*.

Result:
The configuration is active for the next image acquisition with this image acquisition type.
The option ***Restore default settings [Werkseinstellungen wiederherstellen]*** can be used to reset the configuration of an image acquisition mode.

24 Importing implant packages

Implant models from different manufacturers can be imported. The implant models can be inserted in the images schematically (see "Implants").
Dürr Dental provides a number of implant packages from different manufacturers.

› Click on > *Application*.
› With *implants* click on *Import...*.
› Select the implant package and click on *Open*.
The implant models are imported.
When performing a fresh import of the implant package of a manufacturer, the implant models are updated.
Implants stored in the software which are no longer available from a certain manufacturer are deleted. The previous use of these implants in the images is not changed.

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25 Dürr Dental Mobile Connect

The software component Mobile Connect configures and connects the VistaSoft database with the Dürr Dental Imaging iPad app. The images saved in the VistaSoft database are transferred via Mobile Connect to the iPad and displayed. For a multi-station installation it is sufficient to install Mobile Connect on one workstation.
When Mobile Connect is active is shown in the Windows task bar.
To be able to use the Dürr Dental Imaging iPad app you will first need to enter the connection data in the iPad app.
Requirements:

✓ The software component *Mobile Connect* is also installed on the workstation (enabled during installation of VistaSoft).

› Right-click on .

› In the context menu, left-click on ? .
The Mobile Connect help function opens.

› Enter the connection settings in the Imaging iPad app (*IP address, IP port, user name, password*).
If the Mobile Connect module is not licenced, a water mark is displayed on the images displayed on the imaging iPad app.

› Activate Mobile Connect (see "7 Licensing").
As soon as Mobile Connect module has been activated, and both VistaSoft and Mobile Connect have been started, the watermark will disappear from the images on the imaging iPad app.

26 Configure VDDS-media interface to practice management program

The VDDS-media interface (VDDS = Verband Deutscher Dentalsoftwareunternehmen, Association of German Dental Software Developers) is an interface between the practice management program and the imaging software. It can be used to exchange patient data and image data between the practice management program and the imaging software. The imaging software can be opened from within the practice management program.
The interface options depend on the practice management program used. The imaging software supports levels 1 to 6 of the VDDS interface.
Requirements:

✓ Practice management program installed

✓ VDDS interface configured in practice management program

✓ VDDS multimedia interface activated in the practice management program (where supported)

› Click > *Interfaces [Schnittstellen]*.

› In *VDDS-media*, activate the option *Use VDDS*.

› Select the referenced practice management program from the selection list.

› If the practice management program supports level 6, activate the option.
If level 6 is activated, then the updates of image data can be triggered directly in the imaging software.

27 Configuring the DICOM interface

The meanings of the abbreviations used here are explained under "66 Abbreviations used".
The configuration of the DICOM interface varies depending on the application.
So that jobs can be called up from an RIS, the following configurations have to be made:
– "Creating an RIS partner"
– "Configuring the RIS query"

In order to return images to a PACS the following configuration must be made:
– "Creating a PACS partner"

In the DICOM interface configuration you can create, configure and delete the DICOM partner (RIS, PACS).
› Click .
› Click *Interfaces [Schnittstellen]*.

27.1 Defining workstation as a DICOM workstation

In order to be able to use the DICOM functionality, at least one workstation has to be defined as a DICOM workstation.
› In the *DICOM* area, check *DICOM Workstation: [DICOM-Arbeitsplatz:]*.
The workstation will be defined as a DICOM workstation.
As soon as a practice is logged in on a workstation that has been defined as a DICOM workstation, a licence will be locked. Once the practice logs off, the licence will be unlocked again.

27.2 Configuring the RIS connection

CAUTION

Personal injury is possible due to wrong assignment of image data to a patient

› Check the right assignment of the image data (e. g. during image import, change of patient data new assignment of image data to a patient).
› Observe the information displayed in the software.

If multiple RIS partners exist, a patient must possess the same unique patient ID for all RIS partners. Otherwise the same RIS partner would have be configured on each DICOM workstation.
Examples:
– An existing RIS partner is replaced by a new RIS partner. The patients of the old RIS partner are stored in the imaging software. When the patients of the new RIS partner are imported, it is possible that different patients are assigned the same patient ID.
– DICOM workstations have different RIS partners. DICOM workstation A is linked to RIS partner A. DICOM workstation B is linked to RIS partner B. But both DICOM workstations share patient data through the imaging software. This means that different patients may have the same patient ID.

Creating an RIS partner

DICOM communication can only take place between known workstations (DICOM partners). A list of all the created DICOM partners is displayed in the *DICOM Partners... [DICOM-Partner...]* configuration.
› Click on *DICOM Partners... [DICOM-Partner...]*.
› Click on *Create DICOM Partner... [DICOM-Partner anlegen...]*.
› Under *General Settings [Allgemeine Einstellungen]*, enter the connection data for the DICOM partner.
The meaning of the various fields is described under "DICOM partners...".
Under *Role: [Rolle:]*you must select *RIS (Modality Worklist SCP)*.
› Click on *Start Test [Test starten]*.
The imaging software will carry out a connection test and check whether the RIS system can be reached using the values entered.
An RIS query has to be configured so that jobs can be called up from the RIS (see "Configuring the RIS query").

Configuring the RIS query

Requirements:
✓ At least one RIS partner has been created ("Creating an RIS partner")
› Click on *RIS query... [RIS-Abfrage...]*.
› Under *RIS Partners: [RIS-Partner:]*, select an existing RIS partner on which the query is to be started.

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› Enter or select your desired query parameters (see "RIS query...").

Test the query

› Close the configuration.
› Open the *Job Overview [Auftragsübersicht]* (see "33 Managing jobs").
› Click *RIS Query [RIS-Abfrage]*.
› Check whether the parameters you set result in the desired query.

Deleting RIS partners

Requirements:
✓ The DICOM partner to be deleted is not being used
› Click on *DICOM Partners... [DICOM-Partner...]*.
› Select the desired DICOM partner.
› Click *Delete [Löschen]*.
The DICOM partner will be deleted.

27.3 Configuring the PACS connection

Creating a PACS partner

› Click on *DICOM Partners... [DICOM-Partner...]*.
› Click on *Create DICOM Partner... [DICOM-Partner anlegen...]*.
› Under *General Settings [Allgemeine Einstellungen]*, enter the connection data for the DICOM partner.
The meaning of the various fields is described under "DICOM partners...".
Under *Role: [Rolle:]*you must select *PACS (Modality Storage SCP)*.
› Click on *Start Test [Test starten]*.
The imaging software will carry out a connection test and check whether the PACS system can be reached using the values entered.

If multiple image states of a single image are to be transferred to the PACS, one PACS partner has to be created for each image state.

› Under *Transfer Settings [Übertragungseinstellungen]*, tell the system which image state and which format are to be used for transferring the images.
If you check *Anonymization of the Data: [Anonymisierung der Daten:]*, the data will be made anonymous prior to being transferred to the PACS.
If you check *Send Automatically: [Automatisch senden:]*, the imaging software will transfer the recorded images automatically as soon as the job is finished. Otherwise the images must be transferred manually to the PACS (see "32.3 Export images").

Deleting PACS partners

Requirements:
✓ The DICOM partner to be deleted is not being used
› Click on *DICOM Partners... [DICOM-Partner...]*.
› Select the desired DICOM partner.
› Click *Delete [Löschen]*.
The DICOM partner will be deleted.

27.4 Assigning DICOM attributes to certain acquisition types

The imaging software allows you to assign certain DICOM attributes to an acquisition type (for instance DICOM attribute *IO* to the acquisition type *Intra*). Depending on the configuration of the imaging software, this will cause acquisition to begin directly using the appropriate acquisition type.
If no appropriate assignment is found, or if no assignment has been made, the standard assignment will be used:

DICOM attribute	Meaning	Acquisition type
No DICOM attribute present		Undefined
OT	Other type	
CR	Computed Radiography	
DX	Digital Radiography	
DICOM attribute is not one of the attributes below		
IO	Intra-Oral X-ray	Intraoral
XC	External Camera Photography	Video
ES	Endoscopy	Video
PX	Panoramic X-ray	Panoramic Standard
CT	Computed Tomography	CBCT

› Click *Assignment of Acquisition Types... [Zuordnung der Aufnahmetypen...]*.
› In the upper section select the DICOM attribute used for assignment.
› In the lower section, click on +.
› Under *Acquisition Type [Aufnahmetyp]* select the acquisition type to which you wish to assign a DICOM attribute.
› Under *Values [Werte]* enter the DICOM attribute you wish to use for the acquisition type.
› If you want to add further assignments, click directly on +.
If you do not wish to add any more assignments, click on or *Interfaces [Schnittstellen]*.

Deleting an assignment

The assignment of DICOM attributes to an acquisition type can be deleted.
› Click *Assignment of Acquisition Types... [Zuordnung der Aufnahmetypen...]*.
› Find the assignment in the list and click .

27.5 Customising the job list

When working with DICOM jobs, you can configure which DICOM attributes are to be displayed in the job list.

List	The attribute is shown as a column in the job list
Details	The attribute is shown in the *DICOM* area when a job is selected
Hidden	The attribute will not be displayed

› Click on *Show Job List... [Anzeige der Auftragsliste...]*.
A list containing all DICOM attributes will appear.
› In the *Visibility [Sichtbarkeit]* area, select how you wish to have the DICOM attribute displayed.

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28 Setting up the cloud

The VistaSoft Cloud cannot be used in all countries. For a list of countries where support for the VistaSoft Cloud is available, go to www.duerrdental.com/vistasoft .

Information on using the cloud is available under "34 Managing cloud cases".
In the cloud configuration you can create a new cloud account, link an existing cloud account with the imaging software or remove an existing cloud link.

› Click .
› Click *Practices [Praxen]*.
› Select the desired practice and click *Cloud Settings [Cloud-Einstellungen]*.

28.1 Creating a new cloud account

A cloud account must be created in order to use the VistaSoft Cloud.
If you already have a cloud account, you can simply link it to a practice in the imaging software (see "28.2 Linking a practice with an existing cloud account").

› Click on *Create New Cloud Account... [Neues Cloud-Konto anlegen...]*.
› Fill in all the fields.
› Read and accept the data protection notice.
The cloud can only be used if the data protection notice is accepted.
› Click on *Create [Anlegen]*.
The cloud account will be created.
The icon in the status bar indicates that the imaging software has been linked with the cloud. If the link up failed, this will be indicated by the icon.

You will need to confirm your email address prior to using the cloud for the first time. For this purpose an email containing a confirmation link will be sent to the email address you entered.
In addition, you must accept the license agreement (EULA) when logging in for the first time. If the license agreement is changed, you need to accept the changes by entering your cloud password.

28.2 Linking a practice with an existing cloud account

If you already have a cloud account, you can simply link it to a practice in the imaging software.

› In the *Use Existing VistaSoft Cloud Account [Vorhandenes VistaSoft Cloud-Konto benutzen]* area, enter the email address and password for the cloud account.
› Click on *Link [Verknüpfen]*.
The cloud account will be linked with the practice.
The icon in the status bar indicates that the imaging software has been linked with the cloud. If the link up failed, this will be indicated by the icon.

28.3 Configuring the cloud account

After creating the cloud account you can configure it (for example by completing the profile or selecting a package)

› Go to the cloud.vistasoft.eu website.
› Enter your login details.
In the settings area you can, for example, enter a billing address or select a package.

28.4 Unlinking the cloud account

If the cloud is no longer needed the link can be removed.

› Click on > *Practices [Praxen]*.

› Select a practice and click *Cloud Settings [Cloud-Einstellungen]*.
› Click *Unlink [Verknüpfung aufheben]*.
The link between the practice and the cloud will be removed.
This will not delete your account.

29 Interface to external applications

This function is used to transfer images to an external application. The external application is started automatically and the image will be transferred. Whether or not the image will be loaded in the external application primarily depends on the functions available in the external application.
In the external applications configuration you can create, configure and delete external applications.

› Click .
› Click *Interfaces [Schnittstellen]*.
› Click on *Edit External Applications... [Externe Anwendungen bearbeiten...]*.

See also:
– "29.1 Creating an external application"
– "29.2 Configuring an external application"
– "29.3 Deleting an external application"

29.1 Creating an external application

› Click on *Create External Application... [Externe Anwendung erstellen...]*.
› Under *Name:* choose any name you wish for the external application.
› Under *Path: [Pfad:]* enter the path to the EXE file of the external application.
› Under *Parameters: [Parameter:]* select the parameters that are to transferred to the external application along with the image.
Multiple parameters can be selected here. You may choose from among the various parameters found in the selection list. Clicking on a further parameter will automatically add it to the existing parameters (see "62.4 External application settings").
As a minimum, the parameters "*%PathToFile%*" or "*%PathToFolder%*" must be selected.
› You can also set the image state and formats for the different image types (see "62.4 External application settings").

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› Click on or go to the navigation bar and click *External Applications [Externe Anwendungen]*.
The external application will appear in the list of external applications.

29.2 Configuring an external application

› Select the desired external application in the list.
› Click *Configure [Konfigurieren]*.
› Edit the entries you wish to change (see "62.4 External application settings").
› Click on or go to the navigation bar and click *External Applications [Externe Anwendungen]*.
The external application will be changed.

29.3 Deleting an external application

› Select the desired external application in the list.
› Click *Delete [Löschen]*.
› Confirm the deletion in the dialog window.

Operation

The section titled "Operation" explains how to operate the imaging software once you have got started (see "30 Managing patient data" to find out how to get started). This section is divided into the following sub-sections:
– "30 Managing patient data"
– "31 Display Images"
– "32 Managing images"
– "35 Acquiring images"
– "36 Importing images"
– "37 Editing images"
– "38 Printing images"
– "39 Displaying the X-ray report"
– "40 Change practice (surgery)"
– "42 Creating a support file"

30 Managing patient data

CAUTION

Personal injury is possible due to wrong assignment of image data to a patient

› Check the right assignment of the image data (e. g. during image import, change of patient data new assignment of image data to a patient).
› Observe the information displayed in the software.

This section explains how to manage patient data.
This section is divided into the following sub-sections:
– "30.1 Creating a patient record"
– "30.2 Importing patient data"
– "30.3 Searching for and logging into a patient record"
– "30.4 Editing patient data"
– "30.5 Log out patient"
– "30.6 Delete patient"

30.1 Creating a patient record

A patient can always be created unless an image acquisition is currently in progress.
Once the software has been launched, the *Patient Records [Patienten]* flyout is automatically opened and a new patient record can be created.
› To open the flyout, click in the menu bar.
› Click on the right-hand side of the search field.
The flyout for creating a new patient record will open.

Fields marked ! are mandatory fields and must be completed.
The mandatory fields can be selected in the configuration.

› Fill in all fields or at least the mandatory fields.
› Click to close the flyout.
The patient record will be created and you will be automatically logged into it.
If a patient is already logged in, you will automatically be logged out of this patient's record when you log into another patient's record. Here, all image acquisitions must be finished and all mandatory information for the images must have been entered.

30.2 Importing patient data

The patient data can be imported individually from practice management program. If you are not logged into a patient record, you will automatically be logged into the patient's record when you import their data.
There are two ways to import patient data into the imaging software (see "62 Interfaces"):
– "Import patient data with patimport.txt"
– "Importing patient data via the VDDS media interface"

Import patient data with patimport.txt

Requirements:
✓ Import directory for patient data from a practice management program configured (see "62 Interfaces")
✓ No image acquisition is running on the workstation where the patient is to be logged in (X-ray, video)

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› Save the patient data from the practice management program to the import directory (for details, see instructions of the practice management program).
If a patient is not logged-in in the imaging software, the patient will be registered automatically.
If an other patient is already logged-in in the imaging software, a notification will appear and the button *Patient record awaiting log-in* will appear in the patient data bar.
› To log-in the patient whose data has been sent from the practice management program, click *Patient record awaiting log-in [Patient wartet auf Anmeldung]* in the patient data bar.
If a patient is already logged in, this patient will be logged-out automatically when the other patient is logged in. Here, all image acquisitions must be finished and all mandatory information for the images must have been entered.

Importing patient data via the VDDS media interface

Requirements:
✓ VDDS-media interface configured in the imaging software and in the practice management program (see "62 Interfaces")
✓ No image acquisition is running on the workstation where the patient is to be logged in (X-ray, video)

› Send the patient data from the practice management program to the imaging software (for details, see instructions of the practice management program).
If a patient is not logged-in in the imaging software, the patient will be registered automatically.
If a patient from another practice is to be logged in, then the practice is changed automatically.
If an other patient is already logged-in in the imaging software, a notification will appear and the button *Patient record awaiting log-in* will appear in the patient data bar.
› To log into the record for the patient whose data has been sent from the practice management software, click *Patient record awaiting log-in [Patient wartet auf Anmeldung]* in the patient data bar.
If a patient is already logged in, this patient will be logged-out automatically when the other patient is logged in. Here, all image acquisitions must be finished and all mandatory information for the images must have been entered.

30.3 Searching for and logging into a patient record

In order to create or import images, you must be logged into a patient record.
The *Patient records [Patienten]* flyout will open automatically when the software is launched.
If a patient is already logged in, you will automatically be logged out of this patient's record when you log into another patient's record. Here, all image acquisitions must be finished and all mandatory information for the images must have been entered.
The list *Last patient logged in* shows the last 10 patients who were logged in (with the most recent log-in date first). In the case of multi-station installations the list is global across all workstations. The list of last logged-in patients can also be deactivated, see "58.2 Workstation".
The search values in the patient data can be limited to patient ID and name in the selection field.

Otherwise, all fields of the patient data are used in the search.

› Click .
The *Patient records [Patienten]* flyout will open.

› If the patient record you are looking for has been logged into very recently, you can select it from the *Recently viewed patient records [Zuletzt angemeldete Patienten]* list.
or

› Enter patient details into the search field (e.g. patient number, name or date of birth).
To enter numbers with the screen keyboard, click on .
The search results will be displayed, either immediately or after pressing the enter key or , in the list below the search field (depends on the configuration, see "63.1 Configure").
They can be sorted by clicking on the column head.

› Highlight the patient record you require in the list and click to log in.
Alternatively you can open the patient by double-clicking the list entry.
You are now logged into the patient record.
Relevant data for the patient is displayed in the patient data bar. The image archive of the patient appears in the "Image inspector".

30.4 Editing patient data

If the patient was imported from a practice management program via the VDDS-media interface or via patimport.txt, or via the DICOM interface, then it will not be possible to edit all the patient data.

Requirements:

✓ You are logged into the patient record

› Click .
The *Patient data [Patientendaten]* flyout will open.

Fields marked ! are mandatory fields and must be completed.
Different fields may be mandatory fields, depending on the configuration.

› Change the patient data you want to amend.

30.5 Log out patient

If the patient imaging is complete, you can log out from the patient's record.
When you log into another patient's record, you will automatically be logged out of the previous patient's record.

Requirements:

✓ The patient imaging must be complete.

✓ All of the mandatory information for the acquired images has been entered.

› Click in the patient data bar.

30.6 Delete patient

Provided certain requirements are met it is possible to delete a patient. When a patient's record is deleted, their images will be deleted with it.
The following conditions must be fulfilled in order to delete a patient:

✓ The patient must not be logged in at any other workstation.

✓ There must be no X-ray images with a legal retention period that has not yet expired (see "63.1 Configure").

› Click .
The *Patient records [Patienten]* flyout will open.

› If the patient record you are looking for has been logged into very recently, you can select it from the *Recently viewed patient records [Zuletzt angemeldete Patienten]* list.
or

› Enter patient details into the search field (e.g. patient number, name or date of birth).
The search results will be displayed immediately in the list below the search field.

› Highlight the patient record in the list.

› Click .

› Confirm the popup checking that you definitely wish to delete the patient.

Result:
The patient's record and all their images will be deleted.

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31 Display Images

A preview of all of a patient's images will be displayed in the "31.1 Image inspector". The images are grouped according to the date on which they were recorded.
To view or edit the images, they can be opened on the "31.2 Light table".

31.1 Image inspector

The image inspector comprises the image archive with all of the images of the logged-in patient and the multiple selection and filter tools. The images in the image archive are grouped according to the date on which they were recorded.
If new images are recorded, the preview window will also be displayed above the image archive.
The grading is displayed if the image quality has been graded in the image information:

 Very good

 Acceptable

 Not acceptable

The following actions can be performed with the images in the image archive:
- Opening the image on the light table (see "Display Images")
- "Editing image information in the image inspector"
- "Uploading an image to the cloud"
- "32.5 Transferring an image to PACS"
- Opening, exporting, uploading to the cloud or deleting multiple images simultaneously (see "Multiple selection")
- "Filtering images"
- "32.9 Delete image"

Display Images

Requirements:
✓ You are logged into the patient record
✓ The patient images are in the "Image inspector"

Displaying one or more images on the light table (multiple selection closed):
› Click to select the relevant preview image in the "Image inspector".
or
Click the preview image in the image inspector and drag and drop it to the light table.
The image will be displayed on the light table and highlighted with a blue frame in the "Image inspector".
Multiple selected images will be displayed next to and above and below one another on the light table, and they are highlighted with a blue frame in the "Image inspector". The available space on the light table will be divided up dynamically between all of the images.

Displaying multiple images on the light table (multiple selection open):
› In the "Image inspector" click on ***Multiple selection [Mehrfachauswahl]*** to open the function group and activate the multiple selection.
› Select the corresponding images with a click.
Alternatively, enable the check box in the date row to select all images for the day.
The images are marked with  .
› Click  to load the marked images to the light table.
or
Click and hold your mouse button on one of the selected preview images in the "Image inspector" and then move it to the light table (drag & drop).
The images will be displayed next to and above and below one another on the light table. The available space on the light table will be divided up dynamically between all of the images.

Display all of the images from a single day on the light table:
› Move the mouse cursor over the required date row in the "Image inspector".
The  section will appear in the right-hand part of the date row. This shows that the date row can be moved.
› Click on the date row with the left-hand mouse button and hold.

› Drag the date row onto the light table and release the left-hand mouse button.
All the images from the day will be displayed next to and above and below one another on the light table, and highlighted in colour in the "Image inspector". The light table will dynamically divide the available space between all the images.

Editing image information in the image inspector

Information on each of the images can be displayed and edited in the image inspector.

› Click .
The image information will be displayed in a flyout.
Certain information (e.g. the dental notation system) can also be edited.
Similarly, the image information can also be displayed and edited on the light table (see "32.1 Displaying and editing image information").

Multiple selection

One or more images can be edited using the "Image inspector's" multiple selection tool without the images being open on the light table.

Opening multiple selection:

› Click on *Multiple selection [Mehrfachauswahl]* to open the function group.

› Tick the check box next to the preview image for each image that is to undergo further processing using the multiple selection tool.
The check box can also be activated in the data bar. This selects all images recorded on the same day.

Exporting images:

› Click .
The selection list for the image export mode will open.

› Select the correct image export mode.
The image-export modes can be modified (see "Configure"). The user-defined export can be adjusted for every export, and the chosen settings are saved locally for the next use.
The images can also be exported to a data carrier, see "Creating a patient medium".
The selected images will be exported to the defined path.
You can also use the light table to export a single image (see "32.3 Export images").

Uploading images to the cloud:

› Click .
A flyout will open.

› If you want you can enter a comment for the recipients.

Do not include any patient data in the comment as this would compromise anonymity.

› For more information on the VistaSoft Cloud, see "32.6 Using VistaSoft Cloud".

› Select image state and format.
These settings depend on the individual image and may not be available.

› Click on *Upload [Hochladen]*.
The images will be uploaded to the cloud.

Load to light table:

› Click .

› Click *Load [Laden]*.
All selected images will be loaded to the light table.

Delete:

› Click .

› A prompt will be displayed to check whether you definitely want to delete the selected images.

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› Confirm the question.
The images are then permanently deleted. X-ray images that are still within their legally required retention period cannot be deleted. A notification message is displayed.

Transfer to practice management program (if the VDDS-media interface is enabled):

› Click VDDS media.
The selected images are transferred to the practice management software.

Filtering images

Over time, the dental practice and patient records will accumulate a large number of different images. The images can be filtered so that you can quickly find the images you require. VistaSoft offers the following filtering options:

All images	All images recorded for a particular patient will be displayed
Date range	All images recorded during the selected time frame will be displayed.
Acquisition types	All images of the selected image type for a particular patient will be displayed (multiple selection possible).
No indication	All images will be displayed for which no indication is entered.
Acquisition types	All images are displayed that were created with the selected image acquisition type (multiple selection possible).
No tooth assignment	All images are displayed for which no tooth is selected in the dental notation system, as well as the images that have no dental notation system in their properties (e.g. Pano image).
Dental notation	All images are displayed on which the filter selection matches the assigned teeth in the dental notation system. If several teeth are selected for the filtering, then all images are displayed that are assigned to at least one of these teeth.
Image grading	All images with the selected image grading are displayed (multiple selection possible).

The filters cannot be combined with each other. Upon a change of the filter, the software remembers the settings (except to date range). If the filter is selected again, it is pre-set already.

Select filter:

› Click in the selection box next to the filter symbol .
› A dropdown list of filtering options is displayed.
› Select a filter.
Depending on the filter selected, further information may need to be entered.
› Enter the information required (e. g. "Date from ... to" [Datum von ... bis] or "Image type" [Bildtyp]).
With ***Image types [Bildtypen]***, all images highlighted in blue will be displayed. Image types that you do not want displayed must be deselected (grey).
All images with the selected filter properties will be displayed.

Clearing filters:

› To clear the selected filter, select ***All images [Alle Bilder]***.

Modifying filter properties:

› Click the filter symbol (e.g. ,).
The properties can be modified in the flyout.

31.2 Light table

All images selected in the "Image inspector" are displayed on the light table.
The following actions can be performed with the images on the light table:

– "Display Images"
– "Maximise image"
– "Enlarging and moving image details"
– "Editing image information on the light table"
– "Close image"
– "Clear lightbox"
– "Load view"
– "Displaying and managing the image status"
– "Display/hide annotations and measurements"
– "Resetting all MPR and TSA planes"
– "Hide / show all MPR/TSA lines and the panorama curve"

If the VDDS-media interface is enabled, then the display of an image can also be triggered via the practice management program. Here, the corresponding patient is logged in via the imaging software and the image is opened on the light table.

Display Images

Requirements:

✓ You are logged into the patient record

✓ The patient images are in the "Image inspector"

Displaying one or more images on the light table (multiple selection closed):

› Click to select the relevant preview image in the "Image inspector".
or
Click the preview image in the image inspector and drag and drop it to the light table.
The image will be displayed on the light table and highlighted with a blue frame in the "Image inspector".
Multiple selected images will be displayed next to and above and below one another on the light table, and they are highlighted with a blue frame in the "Image inspector". The available space on the light table will be divided up dynamically between all of the images.

Displaying multiple images on the light table (multiple selection open):

› In the "Image inspector" click on ***Multiple selection [Mehrfachauswahl]*** to open the function group and activate the multiple selection.

› Select the corresponding images with a click. Alternatively, enable the check box in the date row to select all images for the day. The images are marked with ☑.

› Click  to load the marked images to the light table.
or
Click and hold your mouse button on one of the selected preview images in the "Image inspector" and then move it to the light table (drag & drop).
The images will be displayed next to and above and below one another on the light table. The available space on the light table will be divided up dynamically between all of the images.

Display all of the images from a single day on the light table:

› Move the mouse cursor over the required date row in the "Image inspector".
The  section will appear in the right-hand part of the date row. This shows that the date row can be moved.

› Click on the date row with the left-hand mouse button and hold.

› Drag the date row onto the light table and release the left-hand mouse button.
All the images from the day will be displayed next to and above and below one another on the light table, and highlighted in colour in the "Image inspector". The light table will dynamically divide the available space between all the images.

Maximise image

If more than one image is open on the light table, these will be displayed next to and above and

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below one another. Each of these images can be maximised for a detailed view.

Maximize image on light table::

› Click the required image to select it.
The image bar

will appear at the top edge of the image. This shows that the image is active.

› Click .
Alternatively, you can also double-click on the image bar to maximise the image.
The image will be expanded to fit the light table.

› To reduce the size of the image, click on .
Alternatively, you can also double-click on the image bar to minimise the image.
The image will be displayed in the original size again, next to the other open images.

Maximize image to full screen::

› Click .
The image will be enlarged to fill the screen.

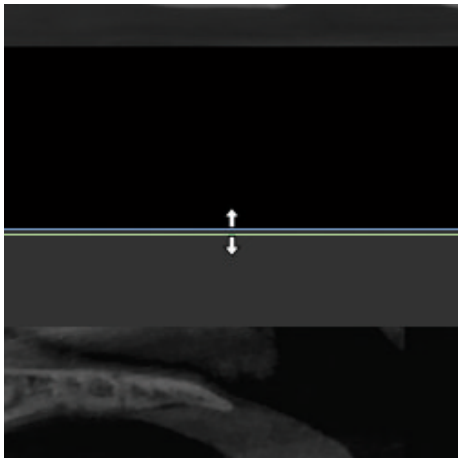
› Exit full-screen mode by pressing the *Esc* key on your keyboard.
The image will be displayed in the original size again, next to the other open images.

Resizing views (only for CBCT)

The views of a CBCT image are opened in a default size. You can resize them as you wish to suit the particular application and your personal preferences. View sizes are not saved. When opened the next time, the CBCT image will again appear in the default size.

Resizing views horizontally:

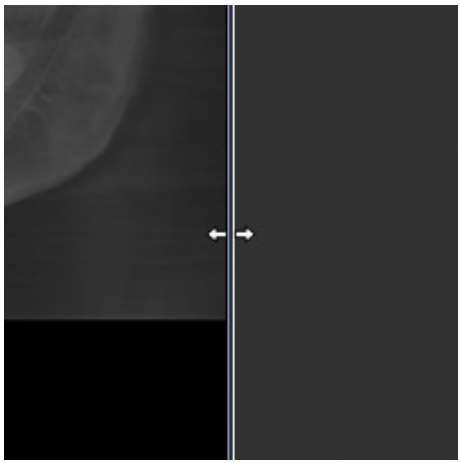
› Move your mouse over the horizontal view divider.



› Press and hold the left mouse button to resize the view.

Resizing views vertically:

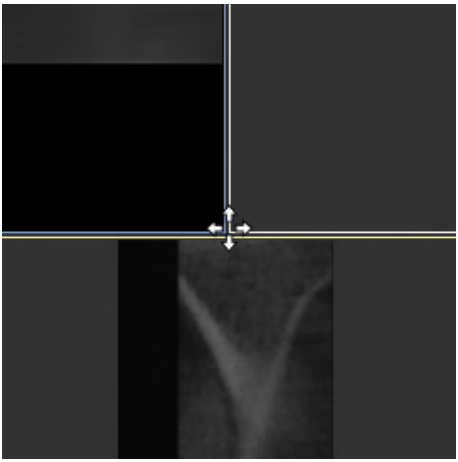
› Move your mouse over the vertical view divider.



› Press and hold the left mouse button to resize the view.

Resizing views horizontally and vertically at the same time:

› Move your mouse over a point where the horizontal and vertical view dividers meet.



› Press and hold the left mouse button to resize the view.

Enlarging and moving image details

The whole image is displayed when it is opened on the light table. To view details, the image can be magnified (zoom). The image detail displayed can be moved around within the frame.

› Click on the required image on the light table to select it.

› Adjust your view of the image detail using the zoom tools in the toolbox (see "Display") or by scrolling with the mouse wheel.

› To move the image detail displayed, click and hold the image with the right-hand mouse button and drag it within the frame.

Editing image information on the light table

Information on each of the images can be displayed and edited on the light table.

› In the light table menu (see "10.1 Software interface") click *Image information [Bildinformationen]*.
The image information will be displayed in a fly-out.
Certain information (e.g. the dental notation system) can also be edited.
Similarly, the image information can also be displayed and edited in the "Image inspector" (see "Editing image information in the image inspector").

Close image

› Click the image on the light table.

› Click .

Result:

The image is removed from the light table. The editing of the image is saved. The current view is saved as image status *Last Change* and displayed as a preview image in the image inspector.

Clear lightbox

If there are too many images open on the light table, or if the light table needs to be cleared to make way for new images, you can make all the images disappear from the light table.

› Click in the light table menu.
All images will disappear from the light table. The changes that have been made will be saved for each image.

Load view

With the aid of *Load view [Ansicht laden]* you can view multiple images at the same time on the light table. There are various predefined schematics for this.

The created views are saved with the date and name of the notation system and can be called

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up again as an *Available view [vorhandene Ansicht]*.

Creating views:

› Click .
The flyout with the available views is displayed.
› Select the required notation system for a new view.
The view is loaded onto the light table.
The first window is highlighted (coloured surround).
› In the "Image inspector" click on the image you wish to display in the window.
The selected image is displayed in the window and the next empty window is highlighted.
› In the Image inspector, again click on an image that you wish to display in the newly highlighted frame.
› If you do not wish a frame of the notation system to be filled, lock the field with .
› Continue the process until all of the frames have been filled with the required images.
Alternatively you can also drag & drop the images to the required frame.
The view is saved with the date and name of the notation system if one of the following events happens:
– Clear lightbox ()
– Load a different or new view
– Log out patient
– Log out practice
– Close the software

Close the view:

› Click .

Loading available views:

› Click .
The flyout with the available views is displayed.
› In *Available views [Vorhandene Ansichten]* click the required view.
The view is opened on the light table.

Removing an incorrectly selected image from the view:

› If an incorrect image has been loaded into the frame you can remove the image by clicking .
The frame is retained.

Delete view:

› Click .
› In the required view click .
The view is then deleted. The images used in the view are retained.

Displaying and managing the image status

Depending on the image processing, certain image statuses are saved for every image. These can be called up for each image.
The following image statuses can be saved for the image:

– *Last change [Letzte Änderung]*: Last changes made to the image using the editing tools in the toolbox; this is automatically saved when the user switches to a different image state, when the image is removed from the light table or when the patient is logged out.
– *Original image*: Original image, configured image processing from the X-ray station has been applied (see "61.3 Image processing")
– *Original*: Image from the device including normalisation (e.g. inversion, mirroring)
– *Diagnosis [Diagnose]*: Image view saved with the diagnosis
– *User-defined image state*: View is saved with date and time, can be deleted again.

Show image status:

› Click .
› Select the required image status from the selection list.
The saved image status is displayed on the light table.

Save user-defined image state:

› Click .
The view is displayed with date and time in the list of image states.

Editing the name of a user-defined image state:

› Click .
You can edit the date and time. Free text is permitted.

Delete user-defined image state:

› Click .
The list with the saved image states appears.
› In the list click on next to the user-defined image state.

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Display/hide annotations and measurements

Depending on whether or not annotations or measurements have been added to an image you can hide or show them.
The first click hides the added annotations and measurements. A second click shows them again.

› If annotations or measurements are present, click on .
The annotations and measurements are hidden.
› Click .
The annotations and measurements are shown again.

Resetting all MPR and TSA planes

If the slice planes in a CBCT image have been changed, then they can be accurately restored to their axial, sagittal and coronal orientations. With panorama views and TSA views the axial slice plane is restored to the plane on which the panorama curve was originally defined.

› Click .

Hide / show all MPR/TSA lines and the panorama curve

In CBCT recordings, working in the lightbox menus, the interfaces in the MPR and TSA slices and the Panorama view can be shown and hidden. The slice planes are always displayed in the volume view.

› Click on to fade in the lines.
› Click on to display the lines.

Creating a CBCT view (2D)

You can use CBCT images (3D) that are opened on the light table to create views (2D).
The views are screenshots of the CBCT images. The view is saved in the same way that the active CBCT image was configured on the light table (size of the individual views, orientation of the volume view, etc.).
When a view is generated it is assigned the same acquisition date as the CBCT image. In the image information, the exposure values are also taken from the CBCT image.

› Click .
A view of the CBCT image currently opened on the light table will be generated and saved.
After the view is saved it can be selected in the "Image inspector" and opened on the light table.

32 Managing images

The following different kinds of information can be saved for each image:

– Image information (e.g. patient, dental notation system, image size, X-ray dose, device)
– Diagnosis (indications, comments)

The image information can be displayed and edited:

– "32.1 Displaying and editing image information"
– "32.2 Entering indications"
– "32.3 Export images"
– "32.8 Assigning an image to a different patient record"
– "32.9 Delete image"
– "32.10 Multiple selection"

32.1 Displaying and editing image information

The image information can be displayed via the "Image inspector" or the light-table menu.
The image information is split into different areas depending on the image type:

Dental notation	Assignment of the image to one or more teeth The version of the dental notation system (FDI, UNS, Palmer) is defined in the configuration (see "58.7 Dental notation").
X-ray parameters	Properties of the X-ray image Depending on the image acquisition device, the values are entered manually or transferred by the unit. The X-ray parameters can be defined as mandatory fields (see "20.2 Configuring the practice"). Then they need to be filled in before a patient can be logged out or an image can be exported.
Acquisition type	Information about the image acquisition mode and acquisition source of an X-ray image that are used
Image grading	The quality of an image can be graded as *Very good*, *Acceptable* or *Not acceptable*

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Findings	Documentation of the diagnosis Once the flyout has been closed the diagnosis can no longer be changed, but the comments can still be changed. A diagnosis view of the image is saved along with the diagnosis.
Image details	Details about the image cannot be changed.

The X-ray parameters can be changed as long as the patient is logged in and the image has not been exported. When you log out from the patient or export the image, the X-ray data is finally saved and can then no longer be changed.

It is not feasible to change the X-ray parameters and acquisition type of images created with VistaPano or VistaVox.

› Select an image in the "Image inspector".
or
Click on the image on the light table.
› Click in the light table menu or click on the preview image in the "Image inspector".
The *Image information [Bildinformationen]* flyout will open.
› Change the data as required.
Under *Image acquisition type [Aufnahmetyp]* you can only choose the image acquisition types for the mode class selected during creation of the image.
If the image acquisition type is changed then the saved recommended values for the X-ray parameters can be applied.
› Under *Dental notation system* click on one or multiple teeth to select them.
To select more than one tooth at the same time, click on a tooth and keep the mouse button pressed. Then move the mouse cursor over more teeth while keeping the mouse button pressed.
To cancel the marking of a tooth, click on the tooth again.
The dental notation system can change between milk teeth and adult teeth .
› Click to close the flyout.

If the image has been matched to the wrong patient's record, it can be reassigned (see "32.8 Assigning an image to a different patient record").

32.2 Entering indications

A diagnosis, comprising indications and comments, can be added to each image.
A "diagnosis" view of the image is saved along with the diagnosis, and can be retrieved via the light-table menu (see "Light table menu").

The indications can no longer be changed once the *Diagnosis [Befund]* flyout has been closed. The comments can still be edited.

› Click in the light table menu on or .
The Flyout *Diagnosis [Befund]* or *Image information [Bildinformationen]* will open.
› Enter indications and comments.
› Close the flyout.
The message appears that the indication cannot be changed afterwards.
› Click *Save [Speichern]* to save the diagnosis.
In the light table menu the symbol changes to .
› Click *Discard [Verwerfen]* to close the flyout without saving.
› Click *Cancel [Abbrechen]* to return to editing the flyout.

32.3 Export images

Various predefined image export modes and a user-defined export are available for image exporting. The predefined modes can be adapted (see "Image export modes...").
The following settings can be selected during the user-defined export (see also "Image export modes..."):

– Destination type
– File path
– File name
– Image state
– 2D/3D X-ray format or video format
– Anonymization of the data
– Embed viewer

The selected settings for the user-defined export are saved locally and can be reused during the next export.
The images can also be exported to a data carrier, see "Creating a patient medium".

› Click in the light table menu.
The selection list for the image export mode will open.
› Select the correct image export mode.
The selected image will be exported to the defined path.
More than one image can be exported at a time using the *Multiple selection [Mehrfachauswahl]* function in the "Image inspector" (see "Multiple selection").

Creating a patient medium

If the computer has a CD/DVD burner then you can burn individual images or multiple images for a patient onto a data carrier (CD or DVD). In addition to the images you can also burn a viewer onto the data carrier as well (see "Image export modes...").

Exporting individual images from the light table to a patient medium:

› Select an image on the light table.
› In the light table menu click > *Patient medium [Patientenmedium]*.
The data will be saved to the burning directory of the CD/DVD burner (e.g. *DVD-RW drive (E:)*) or to the virtual burning directory.
› Change to the burning directory and click *Burn to data carrier [Auf Datenträger brennen]*.
You may also use your own burning software instead. For this, the data from the imaging software is also placed in a directory. This directory will be identified in the notifications. You can then use your own burning software to burn the data from this directory onto a CD/DVD.
› Insert the data carrier and follow the instructions in the disc burning software.

Exporting multiple images from the light table to a patient medium (Windows):

› In the multiple selection choose all images that are to be exported.
› In the multiple selection click > *Patient medium [Patientenmedium]*.
The data will be saved to the burning directory of the CD/DVD burner (e.g. *DVD-RW drive (E:)*) or to the virtual burning directory.
› Change to the burning directory and click *Burn to data carrier [Auf Datenträger brennen]*.
You may also use your own burning software instead. For this, the data from the imaging software is also placed in a directory. This directory will be identified in the notifications. You can then use your own burning software to burn the data from this directory onto a CD/DVD.
› Insert the data carrier and follow the instructions in the disc burning software.

32.4 Exporting an image to an external application

This function is used to transfer any image to an external application. The image is saved to a temporary folder. When the external application is launched the image is automatically loaded to the external application.
Requirements:

✓ External application has been added to the configuration (see "29.1 Creating an external application")
✓ At least one image is opened on the light table (see "31 Display Images")

› Click in the light table menu.
If more than one external application has been configured, a selection list will open.
If only one external application has been configured, the image will be transferred immediately.
› Select the desired external application.
The selected image will be transferred to the external application. During transfer, the imaging software is disabled for other operations. Work can continue once the transfer has been successfully completed.

32.5 Transferring an image to PACS

This function makes it simple to transfer images to a PACS. This requires that the PACS be con-

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figured (see "27.3 Configuring the PACS connection").
For images acquired without an active DICOM job (but with defined RIS partner and RIS query), the following options are available for transferring them to the PACS:
– Send images without job data to PACS
– Send images later via the pending transfer list
– Assign images to RIS job and send to PACS
Multiple images can be exported using the *Multiple Selection [Mehrfachauswahl]* function in the "Image inspector" (see "Multiple selection").
If the transfer to PACS does not succeed, the transfers will be saved in a list (see "Pending transfers to PACS partner").

Send images without job data to PACS:
› Click in the light table menu.
› Select desired PACS.
› Click on *Send Without Job Data to PACS [Ohne Auftragsdaten zu PACS senden]*.
The image is sent to the PACS without reference to data so that it can be integrated into the clinical workflow. The image is not assigned to any specific examination, requested procedure, job number or other data provided by the RIS.

Send images later via the pending transfer list:
› Click in the light table menu.
› Select desired PACS.
› Click on *Add to Pending Transfers [Zu ausstehenden Übertragungen hinzufügen]*.
The image will not be sent at this time. It will be added to the list of pending transfers and sent at a later time, e.g. when the RIS is again active and a corresponding RIS job can be assigned.

Assign images to RIS job and send to PACS:
› Click in the light table menu.
› Select desired PACS.

CAUTION
Personal injury is possible due to wrong assignment of image data to a patient
› Check the right assignment of the image data (e. g. during image import, change of patient data new assignment of image data to a patient).
› Observe the information displayed in the software.

› In the section *Assign to RIS Job and Send to PACS [Zu RIS-Auftrag zuweisen und zu PACS senden]* select the appropriate RIS job.
The list can be updated with *RIS Query [RIS-Abfrage]*.
› Click on *Assign RIS Job [RIS-Auftrag zuweisen]*.
The image will be sent to the PACS with reference to the data of the selected RIS job.

User-defined transfer to PACS partner

If you want to transfer images with different transfer settings to a configured PACS, you can use the function *User-Defined Transfer to PACS Partner [Benutzerdefinierte Übertragung zu PACS-Partner]*.
› Click in the light table menu.
› Select *User-Defined Transfer to PACS Partner [Benutzerdefinierte Übertragung zu PACS-Partner]*.
› In the flyout that opens, select the desired PACS.
› Under *Transfer Settings [Übertragungseinstellungen]* select the desired image settings.
› Click *Send [Senden]*.
The selected image with the different transfer settings will be sent to the PACS.
If the transfer to PACS does not succeed, the transfers will be saved in a list (see "Pending transfers to PACS partner").

Pending transfers to PACS partner

If the images cannot be transferred to the PACS (e.g. due to failed connection to network or server/PACS), they will be saved in a list. In addi-

tion, the *Notifications [Benachrichtigungen]* flyout will appear.

› In the lower right, click on .
A list with the pending transfers will open.

› Select one transfer and click on *Details*.
The details will be shown with information on the transfer error.

› Remedy the transfer error (e.g. re-establish connection to network or server/PACS).

› If you wish to have all pending transfers sent to the PACS again, click *Retry All [Alle erneut versuchen]*.
If you only want to retry one transfer, select it in the list and click *Retry [Erneut versuchen]*.
The transfer will be restarted.
Deleting a pending transfer:

› In the list, select the transfer you wish to delete and click *Delete [Löschen]*.
The transfer will be cancelled and the image will not be transferred again to the PACS.

32.6 Using VistaSoft Cloud

You can use the VistaSoft Cloud feature to upload acquired images to the VistaSoft Cloud. Using the uploaded image data, the recipients can view and discuss the image data.
Notes on data protection:

– All data is anonymized before being transferred to the cloud. There is therefore no way for recipients to match the data to the patient.
– A secure protocol (HTTPS) is used for data transfer.

Uploading an image to the cloud

The management of cloud cases is described in section "34 Managing cloud cases".
Requirements:

✓ Practice is linked with the cloud (see "28 Setting up the cloud")
✓ There is enough data volume available

› Click in the light table menu.
A flyout will open.

› Enter the recipient's email address.
You can enter multiple email addresses if you wish. Keep in mind that posted comments can be read by all subscribers.

› If you want you can enter a comment for the recipients.

Do not include any patient data in the comment as this would compromise anonymity.

› Select image state and format.
These settings depend on the individual image type and may not be available in some cases.

› Click *Upload*.
The image will be uploaded to the cloud.
All uploaded images will be flagged with the symbol in the "Image inspector".
The *Multiple selection [Mehrfachauswahl]* function in the "Image inspector" can be used to simultaneously upload multiple images to the cloud (see "32.10 Multiple selection").
When this is done, only one cloud case will be stored for all selected images.

32.7 Transferring images to the practice management software

This function is only visible if the VDDS-media interface is activated (see "62 Interfaces").

If an image acquisition request is sent from the practice management software to the imaging software then the new images and changes to the image information of existing images can be sent to the practice software without logging out from the patient.
When you log out the patient or close the imaging software the new images and changes to the image information are automatically sent to the

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practice management program if the VDDS-media interface is enabled.
The VDDS button is active if new images from a VDDS image acquisition request are present.

› Click VDDS in the light table menu.
The images and image information are transferred to the practice management software.
You cannot continue working during the transfer.

32.8 Assigning an image to a different patient record

If images have been saved under the wrong patient's record, they can be reassigned to the correct patient's record on the light table.

CAUTION

Personal injury is possible due to wrong assignment of image data to a patient

› Check the right assignment of the image data (e. g. during image import, change of patient data new assignment of image data to a patient).
› Observe the information displayed in the software.

› Click in the light table menu.
The search window for the patient records is displayed in a flyout.
› Search for the patient record under *Recently viewed patient records*.
If the patient record is not listed under *Recently viewed patient records*, you can search the patient database via the search field.
› Highlight the patient record you require in the list and click to select it.
The image is matched to the selected patient record.
If the VDDS-media interface is enabled, the change will be automatically transferred to the practice management program.

32.9 Delete image

If images are no longer required, they can be deleted.
In the image archive the button is displayed on the image if the image can be deleted.

X-ray images cannot be deleted until the retention period required by law has expired (see "63.1 Configure").

› In the image archive click on the image.
or
If the image is open on the light table, go to the light table menu and click .
If it is possible to delete the selected image, you will be asked whether you really want to delete it.
› Answer *Yes [Ja]* to confirm.
The image will be permanently deleted.

32.10 Multiple selection

One or more images can be edited using the "Image inspector's" multiple selection tool without the images being open on the light table.

Opening multiple selection:

› Click on *Multiple selection [Mehrfachauswahl]* to open the function group.

› Tick the check box next to the preview image for each image that is to undergo further processing using the multiple selection tool.
The check box can also be activated in the data bar. This selects all images recorded on the same day.

Exporting images:

› Click .
The selection list for the image export mode will open.
› Select the correct image export mode.
The image-export modes can be modified (see "Configure"). The user-defined export can be adjusted for every export, and the chosen settings are saved locally for the next use.
The images can also be exported to a data carrier, see "Creating a patient medium".
The selected images will be exported to the defined path.
You can also use the light table to export a single image (see "Multiple selection").

Uploading images to the cloud:

› Click .
A flyout will open.
› If you want you can enter a comment for the recipients.

Do not include any patient data in the comment as this would compromise anonymity.

› For more information on the VistaSoft Cloud, see "32.6 Using VistaSoft Cloud".
› Select image state and format.
These settings depend on the individual image and may not be available.
› Click on *Upload [Hochladen]*.
The images will be uploaded to the cloud.

Load to light table:

› Click .
› Click *Load [Laden]*.
All selected images will be loaded to the light table.

Delete:

› Click .
› A prompt will be displayed to check whether you definitely want to delete the selected images.
› Confirm the question.
The images are then permanently deleted.
X-ray images that are still within their legally required retention period cannot be deleted.
A notification message is displayed.

Transfer to practice management program (if the VDDS-media interface is enabled):

› Click VDDS media.
The selected images are transferred to the practice management software.

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33 Managing jobs

For every pending image acquisition you can create a job that can then be accepted and edited via the job overview at every workstation of a multi-station installation.
This allows the jobs to be processed at the workstation to which the corresponding image acquisition device is connected.
The jobs are listed in the job overview .
See also:
- "33.1 Displaying a job overview"
- "33.2 Create job"
- "33.3 Editing a job"
- "33.4 Cancelling a job"

33.1 Displaying a job overview

All pending jobs (VistaSoft and DICOM) are listed in the job overview. If several practices have been created then only the jobs for the currently logged-in practice are visible. Jobs that have been accepted at a different workstation are not displayed (this applies to VistaSoft jobs only - DICOM jobs remain visible). DICOM jobs are only displayed if the workstation has been defined as a DICOM workstation.
The status of the jobs is indicated by means of an icon. A distinction is made between VistaSoft and DICOM jobs:

Imaging software job	DICOM job	Description
		New job
		Job active
		Job paused
		Job completed
		Job cancelled

The jobs can be sorted by column (e.g. date, image acquisition type).
In addition, the following filters are available (in the upper area click on *Show options [Optionen einblenden]*):

Display favourites only [Nur Favoriten anzeigen]:	If this is activated then jobs will only be displayed for the X-ray stations that have been marked as favourites for this workstation.
Show finished and cancelled jobs:	If this option is not enabled then only jobs with the status *New [Neu]*, *Active [Aktiv]* (own workstation only) or *Paused [Pausiert]* will be displayed. If enabled, jobs with the status *Finished [Abgeschlossen]* or *Cancelled [Abgebrochen]* will also be displayed.

The filter settings are saved separately for each each workstation.

› In the menu bar click on Job overview [Auftragsübersicht].
The flyout *Jobs [Aufträge]* opens.
› Select the job in the list to view the details for a job.
The job details are displayed.

33.2 Create job

A new image acquisition job can be created in two ways depending on whether or not the patient is currently logged in.

It is only possible to create VistaSoft jobs. For DICOM jobs, the imaging software can only be used to process jobs but not to create them.

› If the patient is logged in: click in the menu bar.
or
If the patient is not logged in: select the patient in the patient administration and click .
The flyout *Create job [Auftrag erstellen]* opens.
› Select the image acquisition type.
If under *Displayed image acquisition types [Angezeigte Aufnahmetypen]* the view *Favourites [Favoriten]* is enabled then only the image acquisition types that are defined as favourites for the workstation are displayed. If the selection *All [Alle]* is enabled then all available image acquisition types are displayed.

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› Select the acquisition source with which the job is to be performed.
If *Any acquisition source [Beliebige Aufnahmequelle]* is selected then the acquisition source is not defined until the job is carried out.
› Add comments as required.
The comments are also displayed in the job overview.
› Close the flyout.
The job appears as a new job in the job overview, see "33.3 Editing a job".
If a work station is linked in the X-ray station (see "61.4 Task management"), the job is automatically accepted and the recording unit is ready in standby.

33.3 Editing a job

Requirements:
✓ No other image acquisition is in progress (X-ray or video)

Accept task:
› Click on in the menu bar.
The flyout *Jobs [Aufträge]* opens.
› Select the job you wish to edit from the list.
Jobs with the status *New [Neu]* or *Paused [Pausiert]* can be accepted.
DICOM jobs can also be accepted if they have the status of *Finished [Abgeschlossen]* or *Cancelled [Abgebrochen]*.
DICOM jobs must be loaded by the RIS via *RIS Query [RIS-Abfrage]* unless the automatic query option is enabled (see "Configuring the RIS query"). If the automatic query option is disabled, update the list regularly using *RIS Query [RIS-Abfrage]*.
The details for the job are displayed.
› Click .
or
Double-click the job in the list.
The image acquisition is started, if necessary you will still need to select the acquisition source and acquisition mode.
The job disappears from the list on the other work stations.
If the job is a DICOM job, the patient's data will be passed to the imaging software.

The information about the active job can be called up in the patient data bar under *Job information [Auftragsinformation]*.

Interrupt job processing:
› Click in the patient data bar.
The job is interrupted. It can be continued from any workstation of a multi-station installation.
› To continue processing the paused job, re-accept the job in the job overview [Auftragsübersicht].

Finalise a task:

The job can only be concluded if all mandatory information for the acquired images has been entered.

› Click in the patient data bar.
Depending on the configuration, the job will also be automatically finished when a new job is accepted, the patient or practice is logged out or the imaging software is closed down.

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33.4 Cancelling a job

A job can only be cancelled if it has the status *Waiting [Wartend]* or *Paused [Pausiert]*.

In the *Jobs [Aufträge]* flyout, the cancelled jobs are also displayed if the option *Show finished and cancelled jobs [Abgeschlossene und abgebrochene Aufträge anzeigen]* has been activated.

› Click on in the menu bar.
The flyout *Jobs [Aufträge]* opens.
› Select the job you wish to cancel from the list.
The details for the job are displayed.
› Click .
The job is cancelled.

34 Managing cloud cases

You can use the VistaSoft Cloud feature to upload acquired images to the VistaSoft Cloud. Using the uploaded image data, the recipients can view and discuss the image data.
Notes on data protection:
– All data is anonymized before being transferred to the cloud. There is therefore no way for recipients to match the data to the patient.
– A secure protocol (HTTPS) is used for data transfer.

Because image data in lossy file formats (such as JPEG) can be uploaded to the VistaSoft Cloud, it is not possible to make a diagnosis.

Uploaded images are deleted after 30 days. So the VistaSoft Cloud is not suited for use an archive.

A cloud case is created for each image that is uploaded to the cloud. The cloud cases can be viewed using the overview at any workstation of a multi-station installation. To do so, the practice through which the image was uploaded to the cloud must be logged in to the workstation.
Any comments posted for a cloud case will be displayed (see "34.1 Finding and displaying cloud cases").
See also:
– "34.1 Finding and displaying cloud cases"
– "34.2 Editing a cloud case"
– "34.3 Deleting a cloud case"

34.1 Finding and displaying cloud cases

All of the cloud cases are shown in the overview. If several practices have been created then only the cloud cases for the currently logged-in practice will be visible.
New comments are indicated in the menu bar by means of a button with counter.
The amount of data remaining is shown in the upper right-hand corner of the overview. The available amount depends on the data plan that was booked.

Show VistaSoft Cloud cases

Counter for new comments

› In the menu bar, click on *Show VistaSoft Cloud cases [VistaSoft Cloud-Fälle anzeigen]*.
The flyout *VistaSoft Cloud cases [VistaSoft Cloud-Fälle]* will open.
› If the flyout has already been open for some time, click on *Refresh [Aktualisieren]*.
The list of cloud cases will be reloaded. You will then also be shown any cloud cases that were created in the meantime at other workstations.
› If you are looking for a cloud case for a particular patient, enter the patient's details into the search field (e.g. patient number, name or date of birth).
This search operates in much the same way as when searching for a patient in Patient Management (see "12.3 Searching for and logging into a patient record").
The cloud cases can be sorted by column (e.g. creation date, name).
› If a cloud case is selected, the details will be shown. There you can view the preview images and read or post comments (see "34.2 Editing a cloud case").

34.2 Editing a cloud case

In the Details area of every cloud case you can view previews of the uploaded images and post or read comments.

› Select a cloud case in the list (see "34.1 Finding and displaying cloud cases").
The details will be displayed.
Read and post comments:
  › Click in the lower part of the text field and write a comment.
  › Click *Send [Senden]*.
  The comment will be displayed above the text field. The comments are listed in descending order (oldest at top, latest at bottom).

34.3 Deleting a cloud case

› Click on in the menu bar.
The flyout *VistaSoft Cloud cases [VistaSoft Cloud-Fälle]* will open.
› In the list, select the cloud case that you wish to delete.
The details of the cloud case will be displayed.
› Click *Delete [Löschen]*.
The job will be cancelled and all compiled comments deleted along with the cloud case. The flyout *Jobs [Aufträge]* is closed.

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35 Acquiring images

The imaging software allows the user to create or import X-ray and video images using the connected devices.

See

– "35.1 Importing X-ray images with VistaScan"
– "35.2 Creating an X-ray image with VistaPano"
– "35.3 Taking an X-ray image with VistaVox"
– "35.6 Creating a video image with an intraoral camera"

35.1 Importing X-ray images with VistaScan

Requirements:

✓ Patient is logged-in.
✓ No other image acquisitions are in progress (X-ray or video).

› In the menu bar click the desired image acquisition type (e.g. for the preferred intraoral image).
Via you can call up further acquisition types that belong to the grouping.
The imaging types in the favourites may differ depending the configuration (see "60.1 Configure").

Depending on the configuration of the image types (see "60 Acquisition types") the software is either immediately ready for the X-ray acquisition, or you will first need to select the acquisition source and the image acquisition mode.

› Select the acquisition source and image acquisition mode and enter any X-ray parameters as required (if they are not already defined in the configuration).
› Import the X-ray image at the image plate scanner.

For more information about this refer to the installation and operating instructions for the device.

Image acquisition will now start. The preview window opens up.
The status or a preview of the image is shown in the preview window.
The image is automatically saved.
› Import further images if required.
› Once you have finished recording the last image, click *Finish imaging*.
The preview window is closed. All acquired images are transferred to the image archive of the logged on patient. The newest images appear at the top of the image archive. From there, the images can then be opened on the light table and edited (see "37 Editing images"). Similarly, indications can be entered via the functions in the light table menu, or the image information can be edited (see "32 Managing images").
› If the X-ray parameters have not been entered or preselected in the configuration (see "61.2 Parameters") and if the function *X-ray parameters mandatory* is activated (see "63.1 Configure"), then the X-ray parameters will need to be entered separately for each image under .
If the X-ray parameters have been entered or they are preselected in the configuration, the X-ray parameters are automatically adopted for the first imported image. If the preselected parameters are also to be applied to the other images, go to *Image information* for each image and click the button *Apply values*.
In addition, where applicable you should also select the tooth (multiple selection is possible) under *Dental notation system* and select the corresponding image acquisition type under *Image acquisition type* for which the image was created. By placing the marker in the dental notation system the image acquisition type is also automatically selected if it has not already been selected beforehand.

35.2 Creating an X-ray image with VistaPano

The image can only be taken with the reconstruction PC that is directly connected to the image acquisition device. After the image has been saved in the database, the image can be viewed and edited at all workstations.

Requirements:

✓ VistaSoft has been opened.
✓ Patient is logged in.
✓ No other image acquisitions are in progress (X-ray or video).

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› In the menu bar click on the required image (e.g. for a standard panoramic image). Via you can call up further acquisition types that belong to the grouping.

Depending on how the image acquisition types are configured, the acquisition of the X-ray will start either immediately or you will first need to select an X-ray station.

› If image acquisition does not begin automatically, select the X-ray station.
The patient type, maxillary arch and imaging program parameters are preselected according to the patient.

› Check the parameters.
Single-click on  to open the fly-out for setting the parameters. The changed parameters are immediately synchronised with the device.

› If the preselected parameters are correct, continue to work directly on the unit.

The status or progress of the image is shown in the preview window.
The image is automatically saved.

For information about operating the X-ray image acquisition device refer to the operating instructions of the device.

› If the option *Automatically adopt S-PAN image* is disabled in the configuration (see "Device settings"), select the image from the image selection (S-PAN or PAN).
The selected image is saved, the other one is discarded.
If the option is enabled (preselected) then the S-PAN image is automatically adopted.
The preview window is closed. The image is transferred to the image archive of the patient logged-on. The newest image appears at the top of the image archive. From there, the images can then be opened on the light table and edited (see "37 Editing images"). In addition, the image information can be edited or an indication can be entered via the functions in the light table menu (see "32 Managing images").

Parameter overview

Patient type

Selection of patient type will depend on the patient's size or their head circumference. This means that the preset patient type may need to be changed if necessary.
The X-ray parameters are preset using the patient type.
If a child is selected then the x-ray parameters are different:
– Reduced dose
– Shorter circulation time
– Smaller radiation field

	Tall, well-built patient
	Adult male
	Adult female
	Child (< 13 years)

Panotype

Multiple layers are recorded with the S-PAN technology. The optimum Pano recording is produced by selecting the sharpest layer for the horizontal and vertical image areas and then merging these image areas into a single image.
S-PAN is preset.

	S-PAN
	PAN

Image quality

	HD panoramic images An improved signal/noise ratio is achieved via an extended exposure time.
	SD panoramic images This setting is used for standard images.

Arch

The selected jaw form influences the rotational behaviour of the C-shaped angle connector piece during image acquisition. This enables an image with an ideal layer position to be captured even on a particularly narrow or wide jaw.

	Normal arch
	Narrow arch
	Wide arch
	Child arch

EN

Imaging program, adult

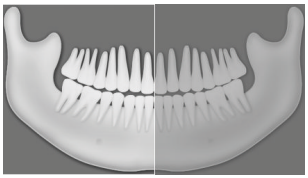
The selection of the imaging programs depends on the image acquisition device.

For panoramic images of children, the size of the radiation field is reduced with the aid of an additional collimator. The radiation dose is significantly reduced for this image.

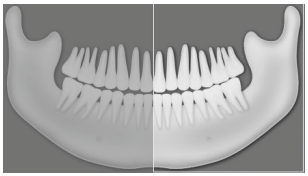
Panoramic images


Default
The standard panoramic image records the complete dental area with ascending dental branches and maxillary joints.


Front
The image shows a reduced dental area without ascending dental branches.

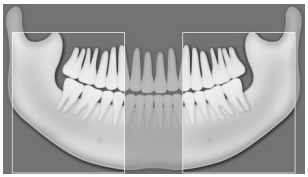



Right
The image only shows the right dental area.

Left
The image only shows the left dental area.

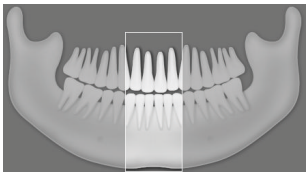

Orthogonal
The image shows the complete dental area and is generated perpendicular to the maxillary arch. This prevents overlapping crowns.

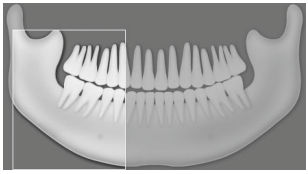
Bite wing
The image shows the lateral dental area with a size limited to the bite wings.

EN

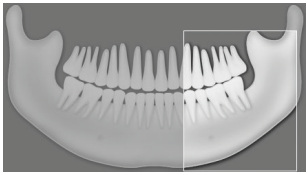
Panoramic images



Bite wing front
The image shows the anterior area with a size limited to the bite wings.



Bite wing right
The image shows the right posterior region with a size limited to the bite wings.



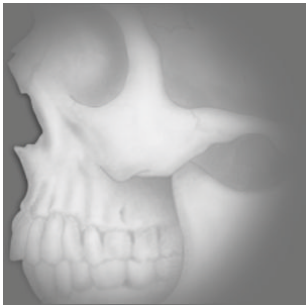
Bite wing left
The image shows the left posterior region with a size limited to the bite wings.

Maxillary joint imaging

Maxillary joint, lateral
The image shows the lateral maxillary joints with an open and closed mouth in 4-fold depiction on one image.

Maxillary joint, PA
The image shows the posterior-anterior maxillary joints with an open and closed mouth in 4-fold depiction on one image.

Sinus images



Sinus, lateral
The image shows the lateral sinuses.

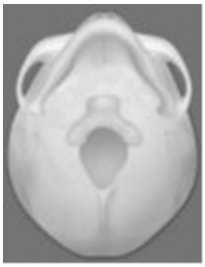
Sinus images

Sinus, PA
The image shows the posterior-anterior sinuses.

Cephalometric exposures

Head, lateral
The image shows the front of the head of the patient.

Head, PA
The image shows the posterior/anterior cranium. It is suitable for semi-axial cranial images and provides a cranial eccentric overview.



SMV
The image shows the cranium in a submentovertex projection. It is suitable for recording the maxillary arch and the maxillary joints, for example.

EN

Cephalometric exposures

Waters View
This view is suitable for recording the articular head in the mandibular joint socket, for example.

Carpus
The image shows the carpus of the patient. It is suitable for providing conclusions on the growth stage of the body/jaw.

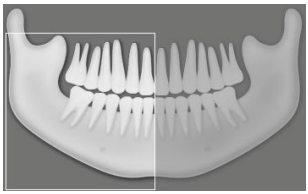
Imaging program, child

For panoramic images of children, the size of the radiation field is reduced with the aid of an additional collimator. The radiation dose is significantly reduced for this image.

Panoramic images

Default
The standard panoramic image records the complete dental area with ascending dental branches and maxillary joints.

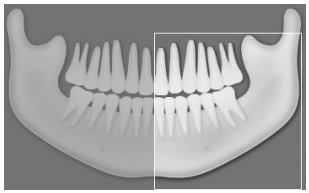
Front
The image shows a reduced dental area without ascending dental branches.



Right
The image only shows the right dental area.

EN

Panoramic images



Left
The image only shows the left dental area.

EN

35.3 Taking an X-ray image with VistaVox

The image can only be taken with the reconstruction PC that is directly connected to the image acquisition device. After the image has been saved in the database, the image can be viewed and edited at all workstations.

Requirements:
- ✓ VistaSoft is started.
- ✓ Patient is logged-in.
- ✓ No other image acquisitions are in progress (X-ray or video).

› In the menu bar click on the required image (e.g. for a CBCT image).
Via you can call up further acquisition types that belong to the grouping e. g. for 5x5 Maxilla Molar right (see "Acquisition types").

Depending on how the image acquisition types are configured, the acquisition of the X-ray image will start either immediately or you will first need to select an X-ray station.

› If image acquisition does not begin automatically, select the X-ray station.
The parameters, imaging volume and patient shape, are preselected according to the patient.

› Check the parameters.
Single-click on to open the fly-out for setting the parameters. The changed parameters are immediately synchronised with the device.

› If the preselected parameters are correct, continue to work directly on the unit.

The status or progress of the image is shown in the preview window.

For information about operating the X-ray image acquisition device refer to the operating instructions of the device.

The image is automatically saved.
The preview window is closed. All acquired images are transferred to the image archive of the logged on patient. The newest images appear at the top of the image archive. From there, the images can then be opened on the light table and edited (see "37 Editing images").

Similarly, indications can be entered via the functions in the light table menu, or the image information can be edited (see "32 Managing images").

Parameter overview

Acquisition types

The selection of the imaging programs depends on the image acquisition device.

CBCT images	
	**CBCT** The CBCT image shows the jaw area. The size of the jaw area shown depends on the selected image volume. Resolution: 200 µm
	**CBCT 5x5 Maxilla Front** The X-ray image depicts the front region of the maxilla with a volume of 5x5 cm. Resolution*: 120 µm
	**CBCT 5x5 Maxilla Premolar left** The X-ray image depicts the left premolar region of the maxilla with a volume of 5x5 cm. Resolution*: 120 µm
	**CBCT 5x5 Maxilla Premolar right** The X-ray image depicts the right premolar region of the maxilla with a volume of 5x5 cm. Resolution*: 120 µm
	**CBCT 5x5 Maxilla Molar left** The X-ray image depicts the left molar region of the maxilla with a volume of 5x5 cm. Resolution*: 120 µm
	**CBCT 5x5 Maxilla Molar right** The X-ray image depicts the right molar region of the maxilla with a volume of 5x5 cm. Resolution*: 120 µm
	**CBCT 5x5 Mandible Front** The X-ray image depicts the front region of the mandible with a volume of 5x5 cm. Resolution*: 120 µm

EN

CBCT images

CBCT 5x5 Mandible Premolar left
The X-ray image depicts the left premolar region of the mandible with a volume of 5x5 cm.
Resolution*: 120 µm

CBCT 5x5 Mandible Premolar right
The X-ray image depicts the right premolar region of the mandible with a volume of 5x5 cm.
Resolution*: 120 µm

CBCT 5x5 Mandible Molar left
The X-ray image depicts the left molar region of the mandible with a volume of 5x5 cm.
Resolution*: 120 µm

CBCT 5x5 Mandible Molar right
The X-ray image depicts the right molar region of the mandible with a volume of 5x5 cm.
Resolution*: 120 µm

* The resolution can be changed to 80 µm in the service menu of the unit.
For panoramic images of children, the size of the radiation field is reduced with the aid of an additional collimator. The radiation dose is significantly reduced for this image.

Panoramic images

Default
The standard panoramic image records the complete dental area with ascending dental branches and maxillary joints.

Front
The image shows a reduced dental area without ascending dental branches.

Right
The image only shows the right dental area.

Left
The image only shows the left dental area.

Panoramic images

Orthogonal
The image shows the complete dental area and is generated perpendicular to the maxillary arch. This prevents overlapping crowns.

Bite wing
The image shows the lateral dental area with a size limited to the bite wings.

Bite wing front
The image shows the anterior area with a size limited to the bite wings.

Bite wing right
The image shows the right posterior region with a size limited to the bite wings.

Bite wing left
The image shows the left posterior region with a size limited to the bite wings.

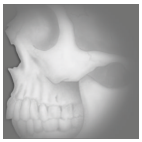
Maxillary joint imaging

Maxillary joint, lateral
The image shows the lateral maxillary joints with an open and closed mouth in 4-fold depiction on one image.

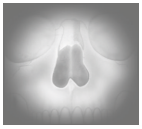
Maxillary joint, PA
The image shows the posterior-anterior maxillary joints with an open and closed mouth in 4-fold depiction on one image.

EN

Sinus images



Sinus, lateral
The image shows the lateral sinuses.



Sinus, PA
The image shows the posterior-anterior sinuses.

Cephalometric exposures

Head, lateral
The image shows the front of the head of the patient.

Head, PA
The image shows the posterior/anterior cranium. It is suitable for semi-axial cranial images and provides a cranial eccentric overview.

SMV
The image shows the cranium in a submentovertex projection. It is suitable for recording the maxillary arch and the maxillary joints, for example.

Waters View
This view is suitable for recording the articular head in the mandibular joint socket, for example.

Carpus
The image shows the carpus of the patient. It is suitable for providing conclusions on the growth stage of the body/jaw.

Image acquisition volume

The selection of the imaging volume will depend on the patient's size or their head circumference.

Standard imaging volume for adults
The image acquisition covers a cylindrical region (diameter approx. 10 cm, height approx. 8 cm).

Smaller imaging volume for children

Image quality

An improved signal/noise ratio is achieved via an extended exposure time and a higher dosage.

This setting is used for standard images.

Patient shape

Selection of patient type will depend on the patient's size or their head circumference. This means that the preset patient type may need to be changed if necessary.
The X-ray parameters are preset using the patient type.
If a child is selected then the x-ray parameters are different:

- Reduced dose
- Shorter circulation time
- Smaller radiation field

Tall, well-built patient

Adult male

Adult female

Child (< 13 years)

Arch

The selected jaw form influences the rotational behaviour of the C-shaped angle connector piece during image acquisition. This enables an image with an ideal layer position to be captured even on a particularly narrow or wide jaw.

	Normal arch
	Narrow arch
	Wide arch
	Child arch

35.4 Taking an X-ray with VistaRay

Every VistaRay sensor requires individual calibration data. This data is enclosed with the sensor on a calibration CD and needs to be installed for each sensor.

Requirements:

✓ Patient is logged-in.

✓ No other image acquisitions are in progress (X-ray or video).

› In the menu bar click the desired image acquisition type (e.g. for the preferred intraoral image).
Via you can call up further acquisition types that belong to the grouping.
The imaging types in the favourites may differ depending the configuration (see "60.1 Configure").

Depending on the configuration of the image types (see "60 Acquisition types") the software is either immediately ready for the X-ray acquisition, or you will first need to select the acquisition source and the image acquisition mode.

› Select the acquisition source and image acquisition mode and enter any X-ray parameters as required (if they are not already defined in the configuration).

› Taking an X-ray image with VistaRay

For more information about this refer to the installation and operating instructions for the device.

Image acquisition will now start. The preview window opens up.
The status or a preview of the image is shown in the preview window.
The image is automatically saved.

› Import further images if required.

› Once you have finished recording the last image, click ***Finish imaging***.
The preview window is closed. All acquired images are transferred to the image archive of the logged on patient. The newest images appear at the top of the image archive. From there, the images can then be opened on the light table and edited (see "37 Editing images"). Similarly, indications can be entered via the functions in the light table menu, or the image information can be edited (see "32 Managing images").

› If the X-ray parameters have not been entered or preselected in the configuration (see "61.3 Image processing") and if the function ***X-ray parameters mandatory*** is activated (see "63.1 Configure"), then the X-ray parameters will need to be entered separately for each image under .
If the X-ray parameters have been entered or they are preselected in the configuration, the X-ray parameters are automatically adopted for the first imported image. If the preselected parameters are also to be applied to the other images, go to ***Image information*** for each image and click the button ***Apply values***.
In addition, where applicable you should also select the tooth (multiple selection is possible) under ***Dental notation system*** and select the corresponding image acquisition type under ***Image acquisition type*** for which the image was created. By placing the marker in the dental notation system the image acquisition type is also automatically selected if it has not already been selected beforehand.

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35.5 Taking an X-ray image with a TWAIN device

Requirements:
✓ You are logged into the patient record
✓ No other image acquisition is in progress (X-ray or video)
› In the menu bar click the desired image acquisition type (e.g. for the preferred intraoral image).
Via you can call up further acquisition types that belong to the grouping.
The imaging types in the favourites may differ depending the configuration (see "60.1 Configure").

Depending on the configuration of the image types (see "60 Acquisition types") the software is either immediately ready for the X-ray acquisition, or you will first need to select the acquisition source and the image acquisition mode.

› Select the acquisition source.
The TWAIN logo is displayed in the preview window.
The software of the TWAIN device opens.
› Produce or import an X-ray image on the device.

For more information about this refer to the installation and operating instructions for the device.

The image is automatically saved.
The image is transferred to the image archive of the patient logged-on. The newest images appear at the top of the image archive. From there, the image can be opened and edited on the lightbox (see "37 Editing images"). Similarly, indications can be entered via the functions in the light table menu, or the image information can be edited (see "32 Managing images").

› If an image acquisition needs to be cancelled, e.g. due to a device fault, click > in the preview window.
The image acquisition is cancelled. During the next image acquisition with the TWAIN device the image transfer will be repeated if necessary, and it is possible that the image will be assigned to the wrong patient.
› Import further images if required.
› If the X-ray parameters have not been entered or preselected in the configuration (see "Parameters") and if the function ***X-ray parameters mandatory*** is activated (see "63.1 Configure"), then the X-ray parameters will need to be entered separately for each image under .
If the X-ray parameters have been entered or they have been preselected in the configuration, the X-ray parameters are automatically adopted for the first imported image. If the preselected parameters are also to be applied to the other images, go to ***Image information*** for each image and click the button ***Apply values***.
In addition, where applicable you should also select the tooth (multiple selection is possible) under ***Dental notation system*** and select the corresponding image acquisition type under ***Image acquisition type*** for which the image was created. By placing the marker in the dental notation system the image acquisition type is also automatically selected if it has not already been selected beforehand.

35.6 Creating a video image with an intraoral camera

A separate imaging window will open for video images. The imaging window is made up of the preview window and the image inspector.
If the camera is active, the live image from the camera can be seen in the preview window. If the camera is not active an animation is shown in the preview window.
Only the currently acquired images are displayed in the image inspector. When the imaging window is closed the images are transferred to the image archive of the patient.
Requirements:
✓ You are logged into the patient record
✓ No other image acquisition is in progress (X-ray or video)
› Click on in the menu bar.
The image acquisition window opens.
If a camera has already been preselected in the configuration (see "59.2 VistaCam") then the video preview can be seen. If no camera is preselected then a device needs to be selected.
If the camera is not active an animation is shown in the preview window.
› If the video preview is not visible, select the device in the image bar.

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› If an animation is shown in the imaging window, activate the camera (e.g. take it out from the handpiece holder or attach an interchangeable head).
› Click to expand the video image to full screen if necessary.
› Depending on the camera or the interchangeable head used the video settings for the preview can be adjusted via (see "Adjusting the video settings").
› If the camera supports the live caries filter then the video preview can be switched between prophylaxis view and caries view .
› Position the camera and take a freeze-frame shot using the capture ring or by clicking .
The acquired images are automatically saved for the logged-in patient and displayed in the image inspector.
For image proofs, select the caries filter or the prophylaxis view .
If there is too much ambient light when an image proof is being recorded, will be displayed. The caries filter cannot be used with this image.
› To view an image again in the preview window, select the image in the image inspector.
› Delete images that are not required by clicking .
› Enter image information via (only the dentition type and the dental notation are available in the image inspector). The image information can be edited or an indication can be entered later on via the functions in the light table menu (see "31.2 Light table").
› Use the capture ring or click on to return to the video preview.
› Once you have finished recording the last image, click *Finish imaging [Aufnahme beenden]*.
The imaging window will be closed. All images are displayed in the image archive of the logged-in patient. From there, the images can then be opened on the light table and edited (see "37 Editing images").

Adjusting the video settings

Depending on the camera used the video settings can be adjusted in the preview window.

	Brightness	Adjust the brightness of the preview image with the slider
	Contrast	Adjust the contrast of the preview image with the slider
	Saturation	Adjust the saturation of the preview image with the slider
	Sharpness	Adjust the sharpness of the preview image with the slider
	Gamma	Adjust the gamma value of the preview image with the slider
	Resolution	Adjust the resolution of the preview image

The video settings are reset to the standard values with *Reset*.

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36 Importing images

An image can be imported into the software in any of the following ways:

– "36.1 Importing image files (single image import)"
– "36.5 Importing an image from the image cache (cache image import)"
– "36.3 Importing the DICOMDIR directory (DICOMDIR import)"
– "36.4 Importing an image from the device memory (standalone / retrieve)"
– "36.2 Importing CBCT series (DICOM series import)"

Patient metadata can be saved along with the image, allowing the image to be saved under a new patient record or allowing it to be matched to the relevant patient record that already exists. In addition, the image can also be matched to an existing patient record.
Depending on the information saved with the image, the image may be matched to an existing patient record, or new patient record can also be created.
the following file formats may be imported:

– DICOM (*.dcm)
– PNG (*.png)
– TIFF (*.tif, *.tiff)
– JPEG (*.jpg)
– JPEG 2000 (*.jp2, *j2k)
– Bitmap (*.bmp)
– XTF (original image state) (*.xtf)
– VTF (*.vtf)
– XYZ (*.xyz)

In addition, a DICOM series, i.e. a directory with individual layer images, can be imported. However, the DICOM series must have been taken with a Dürr Dental X-ray unit.

36.1 Importing image files (single image import)

› Click on in the menu bar.
› In the *Image import [Bildimport]* flyout click on .
› Select one or more image files.
› Click *Open [Öffnen]*.
› Select the image type for the image.
› A separate image acquisition date can be entered for each image.
If there are images without an image acquisition date, it is possible to define a global acquisition date for them in the upper area of the flyout.
› If you want to match the image to the patient record you are logged into, click *Import to current patient record [Zum angemeldeten Patienten importieren]*.
› If the image contains patient data that you want to transfer into the software, click *Import via image information [Mittels Bildinformationen importieren]* to import.
› If you want to match the image to another patient record, click *Import to a different patient record [Zu anderem Patienten importieren]* and select the patient record.

36.2 Importing CBCT series (DICOM series import)

CBCT images which are available as a series of DICOM files (CT image storage) can be imported (layers stored individually in a directory).
CBCT images that exist as a single DICOM file (just one file with the ending dcm), can be imported with (see "36.1 Importing image files (single image import)").
Requirements:
✓ Licensing the VistaSoft 3D module
› Click on in the menu bar.
› In the *Image import [Bildimport]* flyout click on .
› Select a directory.
› Click *Open [Öffnen]*.
› If you want to match the image to the patient record you are logged into, click *Import to current patient record [Zum angemeldeten Patienten importieren]*.
› If the image contains patient data that you want to transfer into the software, click *Import via image information [Mittels Bildinformationen importieren]* to import.
› If you want to match the image to another patient record, click *Import to a different patient record [Zu anderem Patienten importieren]* and select the patient record.

36.3 Importing the DICOMDIR directory (DICOMDIR import)

› Click in the ribbon.
› In the *Image import [Bildimport]* flyout click on DCM.
› Select the DICOMDIR directory that is to be imported.
› In the flyout select the images that are to be imported.
On the right-hand side you will see the images that are being imported.
› If necessary select the image type.
› A separate image acquisition date can be entered for each image.
If there are images without an image acquisition date, it is possible to define a global acquisition date for them in the upper area of the flyout.
Images without an acquisition date are not imported.
› If you want to assign the images contained in the directory to the patient record you are logged into, click *Import to current patient record [Zum angemeldeten Patienten importieren]*.
If you want to assign the images contained in the directory to a different patient, click *Import to a different patient record [Zum angemeldeten Patienten importieren]*.
If the included patient data is to be used click on *Import via image information [Mittels Bildinformationen importieren]* to import.

36.4 Importing an image from the device memory (standalone / retrieve)

› Click in the ribbon.
› In the *Image import [Bildimport]* flyout click on .
› Select the required device.
› In the flyout select the images that are to be imported.
On the right-hand side you will see the images that are being imported.
› If necessary select the image type.
› A separate image acquisition date can be entered for each image.
If there are images without an image acquisition date, it is possible to define a global acquisition date for them in the upper area of the flyout.
Images without an acquisition date are not imported.
› If you want to assign the images contained in the directory to the patient record you are logged into, click *Import to current patient record [Zum angemeldeten Patienten importieren]*.
If you want to assign the images contained in the directory to a different patient, click *Import to a different patient record [Zum angemeldeten Patienten importieren]*.
If the included patient data is to be used click on *Import via image information [Mittels Bildinformationen importieren]* to import.

36.5 Importing an image from the image cache (cache image import)

If it is not possible to transfer an image to the server after it is created, then it is saved in the image cache of the workstation (see "58.1 Image cache").
The import from the image cache can then be manually triggered from the workstation.
› Click in the ribbon.
› In the *Image import [Bildimport]* flyout click on .
› Select one or more image files.
› If you want to match the image to the patient record you are logged into, click *Import to current patient record [Zum angemeldeten Patienten importieren]*.
› If you want to match the image to another patient record, click *Import to a different patient record [Zu anderem Patienten importieren]* and select the patient record.

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37 Editing images

The images can be edited on the light table (see "37.1 Toolbox").
In addition, default image settings can be saved for each X-ray station, so that every time a new image is recorded, it is automatically displayed on the light table with these settings (see "37.2 Managing default image settings").

37.1 Toolbox

The toolbox contains tools for editing the images on the light table.
The tools are divided into the following groups and can be expanded or collapsed by clicking :

- "3D"
- "Display"
- "Image corrections"
- "Filter"
- "Histogram"
- "Measurements"
- "Drawings"
- "Edge mask"
- "Implants"
- "Annotations"

The selection of tools depends on the image selected on the light table.
Once it has been edited, the image is saved with the preview in the "Image inspector" as soon as another image is selected on the light table or the image is cleared from the light table.

The changes to the image will be saved alongside the original image. The original image [Erstansicht] *can be displayed again by clicking on* in the light-table menu.

3D

In digital volume tomography (CBCT), three-dimensional volume data is reconstructed from a large number of individual two-dimensional X-ray images (layer images). These 3D renderings are used for display purposes only and can be viewed and evaluated in different views and slices.
There are three different views (see "Navigating in CBCT images (3D)") based on multiplanar reconstruction (MPR). Alongside the volume view, the MPR view shows three slices: the axial, sagittal and coronal slices. These slices can be individually modified.
In the panoramic view the axial and sagittal slice are shown, as well as the panoramic view (similar to a 2D panoramic X-ray image) and a transversal layer image (TSA).
With the TSA view the axial slice, the panoramic view and also several transversal layer images (TSA) are displayed. The number of TSA views can be adjusted.

– "Display"
– "Panoramic"
– "TSA"
– "MPR"
– "Nerve canal"
– "Volume"
– "Slice"

Navigating in CBCT images (3D)

Various functions can be used to navigate through the slice planes/layers in the CBCT images. With the aid of these functions the slice planes can be moved or rotated in such a way that the important regions can be made visible for the examination.
In the illustration below all of the navigation functions have been made visible. Depending on the view (Panorama, TSA, MPR) and slice plane not all of the functions may be available.

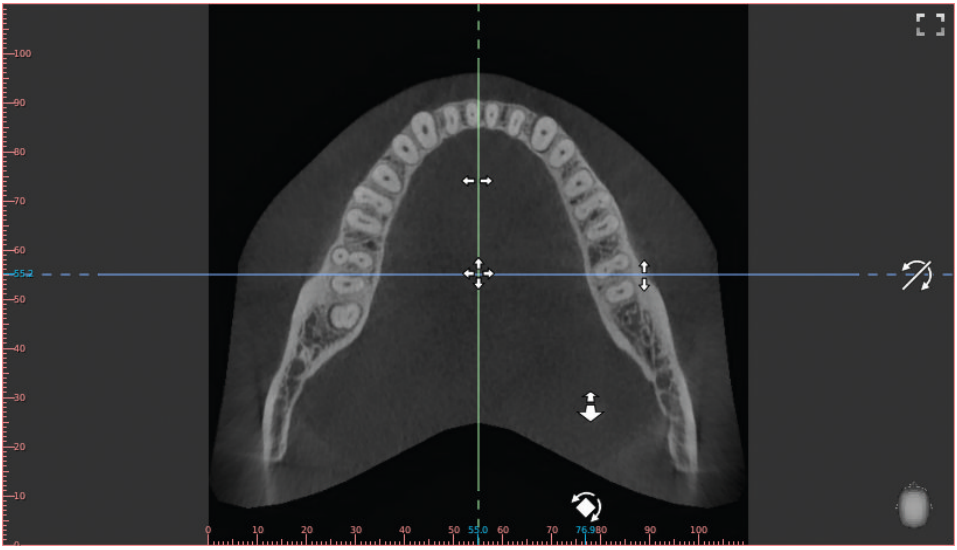

Fig. 1: Example image showing all of the navigation functions

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	Move individual slice plane	Press and hold the left mouse button on a slice plane to drag it horizontally/vertically.
	Move two slice planes together	Press and hold the left mouse button on the intersection between two slice planes to move them together at the same time.
	Rotate slice plane	Press and hold the left mouse button on the dotted edge of a slice plane to rotate it.
	Tilt slice plane	Press and hold the left mouse button in the edge region of the view to tilt the view.
	Scroll layers	Press and hold the left mouse button in a free area in the view to scroll through the layers. You can also press and hold the shift key and then use your mouse wheel to scroll through the layers. This function is useful if you are using the left mouse button to set anchor points (for example, when setting a nerve channel).

An orientation button  is displayed at the bottom right of each view showing the current viewing angle onto the patient.

The standard orientation of the slice planes can be restored in the light table menu ().

The view can be changed in the volume view. The slice planes are displayed in the volume view, but they cannot be changed here.

	Move image section	Press and hold the right mouse button to move the image section upwards/downwards or to the left/right. You can also hold the shift key and use your right mouse button to move the image section up/down and left/right. This function is useful if you are using the right mouse button to set anchor points (for example, when setting a nerve channel).
	Rotate view	Press and hold the left mouse button to rotate the view.
Zoom image section in/out		Rotate the mouse wheel to increase or reduce the image section. The zoom tools of the toolbox (*Display [Anzeigen]*) are not active in the volume view.

The orientation head always displays the current viewing angle onto the patient. In the volume view the viewing angle can be selected directly via the orientation head:

	Orientation head front	Move the mouse cursor onto the orientation head. The views onto the orientation head are displayed and can be clicked on to select them.
	Orientation head rear	
	Orientation head left	
	Orientation head right	
	Orientation head top	
	Orientation head bottom	

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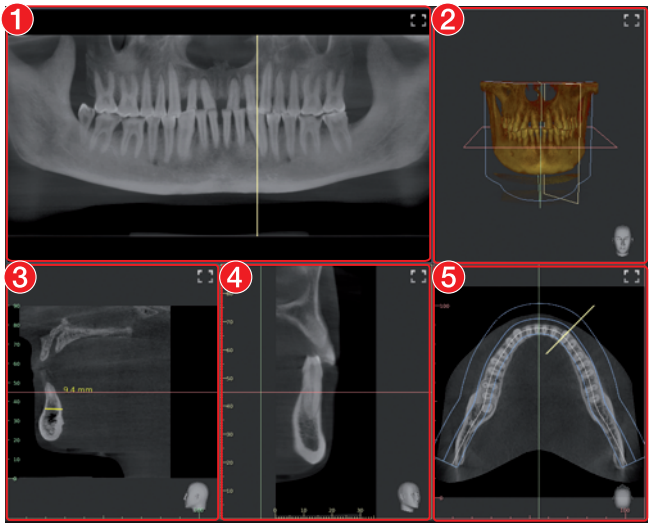
Display

In digital volume tomography (CBCT), three-dimensional volume data is reconstructed from a large number of individual two-dimensional X-ray images (layer images). Different views are available for evaluation of the data. These views can be selected under *View [Anzeigen]*.

Panoramic view

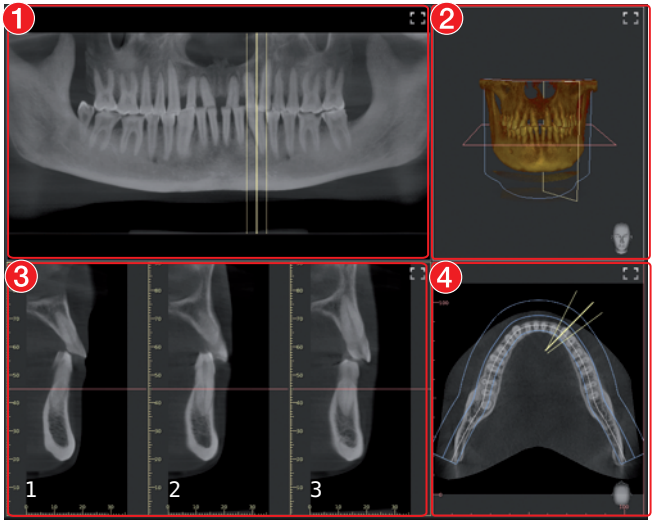
In the panoramic view a panoramic view is also displayed in addition to the slices. This panoramic view is calculated on the basis of the panoramic curve along the arch of the jaw. In addition, a slice of a transversal layer image (TSA slice) is displayed, which is calculated orthogonally to the panoramic curve.
Every CBCT image is initially opened in the panoramic view.



1 Panoramic view (calculated along the arch of the jaw)
2 Volume view
3 Sagittal MPR slice (view from left/right)
4 TSA slice (orthogonal to the panoramic curve)
5 Axial MPR slice (view from the top/bottom)

TSA view

With the TSA view, several transversal layer images (TSA) are displayed in addition to the panoramic view.
The TSA slices are numbered (bottom left). The numbering allows adjacent TSA slices to be recognised, which makes drawing the nerve channel easier.



1 Panoramic view (calculated along the arch of the jaw)
2 Volume view
3 TSA slices (orthogonal to the panoramic curve), the number of slices can be chosen via the layout
4 Axial MPR slice (view from the top/bottom)

If the mouse cursor is positioned above one of the TSA slices, this TSA slice is highlighted in colour in the other views.

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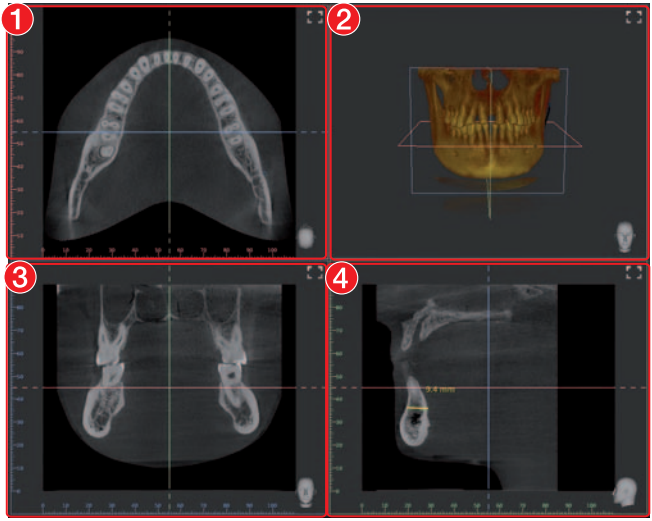
MPR view

With the multiplanar reconstruction (MPR), any two-dimensional layer and slice images can be displayed.



1 Axial MPR slice (view from the top/bottom)
2 Volume view
3 Coronal MPR slice (view from the front/rear)
4 Sagittal MPR slice (view from left/right)

Panoramic

	Standard panoramic curve, lower jaw	The standard curve form is automatically positioned on an axial layer that extends through the lower jaw
	Standard panoramic curve, upper jaw	The standard curve form is automatically positioned on an axial layer that extends through the upper jaw
	Standard panoramic curve on current slice plane	The standard curve form is manually positioned on the current axial slice. The centre point of the arch of the jaw is manually positioned by the user.
	User-defined panoramic curve on current slice plane	A free curve form is manually positioned on the current axial slice. The individual points of the panoramic curve are manually positioned one after the other.
	Abort creation of user-defined panoramic curve	During creation of the user-defined panoramic curve the points that have already been positioned are deleted again.
	Panorama thickness	The layer thickness of the panoramic curve can be freely adjusted with a slider. With a lower thickness the panoramic view is sharper but noisier. With increasing thickness the noise is reduced, but the panoramic view appears less sharp. Here, with increasing thickness the panoramic view approaches the character of a panoramic X-ray image (2D).

The panoramic curve can be moved and edited once it has been positioned.
The panoramic curve is also shown in the annotations.

Position standard panoramic curve, upper or lower jaw:

› Click  (upper jaw) or  (lower jaw).
The standard panoramic curve is positioned. The panoramic view is calculated.

Position standard panoramic curve on current slice plane:

› Adjusts the slice plane in the axial MPR slice.
› Click  .
› In the axial MPR slice click on the centre point of the arch of the jaw.
The standard panoramic curve is positioned. The panoramic view is calculated.

Creating a user-defined panoramic curve:

› Adjusts the slice plane in the axial MPR slice.
› Click  .
› In the axial MPR slice left-click on the edge of the arch of the jaw.
› Position the further points of the arch of the jaw with the left mouse button.
› Place the end point of the arch of the jaw with the right mouse button.
The panoramic view is calculated.

Moving a panoramic curve:

› Press and hold the left mouse button on the line of the panoramic curve (not on a point) and move the curve.
The entire panoramic curve is moved. The active layer is moved at the same time in parallel.

Editing a panoramic curve:

› To move a point of the panoramic curve, press and hold the mouse button on the point and drag it.
› To add a point, press the Ctrl key and left-click on the panoramic curve between the points.
› To delete a point, press the Ctrl key and left-click on the point on the panoramic curve.

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› To scale the panoramic curve, press the Shift key, left-click on the panoramic curve and hold the button pressed while increasing/reducing the panoramic curve.

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TSA

	Select TSA layout	Flyout for selection of the layouts or the number of transversal slices that are to be displayed (maximum of 3 rows x 6 columns)
	TSA distance	With the aid of a slider the distance between the transversal slices can be changed (0.2 mm - 10.0 mm).
	TSA length	With the aid of a slider the length of the transversal slices can be changed (2 mm - 200 mm).
	TSA width	With the aid of a slider the width of the transversal slices can be changed (0.1 mm - 10.0 mm).

The TSA settings are saved when the user switches to a different view, closes the image or exits the software.

Select TSA layout:

› Click  .
The flyout with the matrix for selection of the TSA views opens.

› Move the mouse cursor over the matrix.

› When the required TSA views are selected (marked blue) click on the matrix.

Result:

The TSA slices are displayed and shown in the other views.

Moving TSA slices:

› In the panoramic view or the axial slice use the left mouse button  to move the TSA slices.
All TSA slices are moved together along the panoramic curve.

Tilting TSA slices:

› In the panoramic view, use the left mouse button  to tilt the TSA slices.
The TSA slices can be tilted by max. ±75°.
TSA slices are tilted together in parallel. The position of the TSA slices is also displayed in the volume view, but cannot be changed in this view.

MPR

	Thickness of MPR slices	The thickness of the MPR slices can be changed with the slider. The lower the thickness, the sharper but the noisier the image. The higher the thickness, the lower the noise but the less sharp the image.

The adjustment always applies to all slices (sagittal, coronal, axial) of an MPR view. The set thickness is saved when the user switches to a different view, closes the image or exits the software.

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Nerve canal

	Draw nerve channel in image	The nerve channel can be drawn in all two-dimensional views (panoramic view and slices). The individual anchor points of the nerve channel are manually positioned one after the other. Once the nerve channel has been drawn, it is visible as a semitransparent "tube" in all views, including the volume view. It is saved as an annotation.
	Delete nerve channel	Deletes a nerve channel that has already been created. To do this, the nerve channel must be selected in a view or in the annotations.

In the list of annotations, the drawn nerve channel can be called up again. When it is called up, the slices and the panoramic view are reset to the representation in which the nerve channel was drawn.

Draw nerve channel in image:

The nerve channel can be drawn in all two-dimensional views (slices and panoramic view) and is displayed in all views (including the volume view).

› Click .
› Left-click with the mouse to position the anchor points of the nerve channel.
You can also hold the shift key and use your mouse wheel to scroll through the layers.
› Set the last anchor point with the right mouse button.

Edit nerve channel:

› To move an anchor point of the nerve channel, click on the anchor point, hold the mouse button and move the point.
› To add an anchor point, press the Ctrl key and left-click on the nerve channel between the anchor points.
› To delete an anchor point, press the Ctrl key and left-click on the point of the nerve channel.
›

Change display of nerve channel:

› To change the colour and thickness, select the nerve channel in the annotations and click .

Delete nerve channel:

› Select the nerve channel in a two-dimensional view or in the annotations.
› Click .

Volume

There are different display options in the volume view:

X-ray	Simulated X-ray projection image
Maximum value	Simulated X-ray projection image, the brightest point is shown for every image point in the viewing direction
ISO layer	View of the volume combining two opaque surfaces: soft tissue (brown) and bone structures (white)
3D	3D rendering
User-defined	3D rendering with simulated illumination. Skin tissue and muscle tissue are displayed in addition.

In the ***3D*** and ***User-defined [Benutzerdefiniert]*** views, different tissue types are shown with different colours. The visibility of the tissue types can be adjusted with the relevant slider.
Tissue types in the ***3D*** view:
– Bone
– Dentine
– Enamel
– Metal

Tissue types in the ***User-defined [Benutzerdefiniert]*** view:
– Skin
– Muscle
– Bone
– Dentine
– Enamel
– Metal

The colours for the tissue types can each be chosen via a flyout in the ***User-defined [Benutzerdefiniert]*** view.

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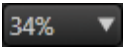
Slice

Slice		Display of the slice planes in the volume view
	Show slice plane edges only	Only the edges of the slice planes are displayed (may be masked by the volume display).
	Show slice planes with semitransparent surface	The slice planes are displayed with colour-filled surfaces (may be masked by the volume display or other slice planes).
	Hide slice planes	The slice planes are not visible.
Axial		Region above or below the slice plane is hidden.
Sagittal		Region to the left or right of the slice plane is hidden.
No slice		Everything is visible, all regions are displayed.
Reverse		Hidden regions are inverted (top/bottom or left/right).

Display

These tools allow you to alter the image view.
The zoom tools change the size that the image is displayed on the light table. The settings are not saved.
The settings for rotating and inverting an image are saved.
The zoom tools in CBCT images (3D) can be used for all views. If the option *Same zoom in all views [Gleicher Zoom in allen Sichten]* is enabled, then all views, except panoramic and volume view, are displayed at the same zoom factor. If the option is disabled, each view can be changed individually. The tools for image rotation and mirroring are not available for CBCT images (for information on how to rotate a slice refer to "Navigating in CBCT images (3D)").

Zoom	
	This matches the size of the image to the size of the window.
	This magnifies the image so that one screen pixel equals one image pixel. Is displayed centred in the window.
	The current zoom factor is displayed. A defined zoom factor can be selected.
	The zoom can be adjusted to any required setting via the slider. You can also use the mouse wheel to adjust the zoom.

Rotate image	
	Rotate the image anti-clockwise by 90°.
	Rotate the image clockwise by 90°.

Mirroring	
	Horizontally invert the image
	Vertically invert the image

Image corrections

The image brightness, contrast and gamma can be corrected. As you adjust the sliders, you can see the changes in the image itself.

	Adjust the image brightness

	Adjust the image contrast
	Adjust the image gamma value < 1: Bright areas become darker > 1: Dark areas become brighter

Mouse pointer icon

	Brightness and contrast can also be changed directly in the image using the left mouse button. For this purpose, go to *Toolbox > Image corrections [Bildkorrekturen]* and enable the option *Mouse mode [Mausmodus]*. When the left mouse button is held down, making horizontal motions over the image changes the brightness, while vertical motions adjust the contrast. The sliders in the toolbox move along accordingly. This option can be enabled separately for 2D X-ray/video images and for 3D X-ray images. It is preset for 2D X-ray/video images.

Filter

Filters facilitate diagnosis when analysing X-ray images by highlighting interesting structures so that they can be more easily identified. Here, there are different filters for the different image types (e.g. intra, panoramic, cephalometric, ...).
Depending on the X-ray image type, the matching filters are automatically displayed in the toolbox.

Filters for intra X-ray images

	Intraoral Fine	This increases the contrast for fine structures.
	Intraoral Caries 1	This increases the contrast for areas in which caries can be found. Fine structures are emphasised.
	Intraoral Caries 2	This increases the contrast for areas in which caries can be found. Coarser structures are emphasised.
	Intraoral Endo	For optimal visualisation of the file in the root canal.
	Intraoral Paro	The contrast is increased in areas of the periodontal spaces.
	Intraoral High Diagnostic	Increased contrast for optimal visualisation of objects of a specific size.
	Intraoral Noise Reduction	This cancels disruptive image noise and maintains image sharpness.

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Filters for panoramic X-ray images		
	Panoramic fine	This increases the contrast for fine structures.
	Panoramic Standard	This increases the contrast for relatively coarse structures.
	Panoramic High Diagnostic	Increased contrast for optimal visualisation of objects of a specific size.
	Panoramic Noise Reduction	This cancels disruptive image noise and maintains image sharpness.

Filters for cephalometric X-ray images		
	Ceph Fine	This increases the contrast for fine structures.
	Cephalometric 1	This increases the contrast for relatively coarse structures.
	Cephalometric PA	Posterior-anterior: View from back to front; this considerably increases the contrast for coarse structures.
	Cephalometric High Diagnostic-10	Increased contrast for optimal visualisation of 10 mm objects.
	Cephalometric High Diagnostic 5s	Increased contrast for optimal visualisation of 5 mm objects. Subsequent image sharpening via unsharp mask filter.
	Cephalometric High Diagnostic 5g	Increased contrast for optimal visualisation of 5 mm objects. Subsequent image sharpening via Gaussian filter.
	Cephalometric Noise Reduction	This cancels disruptive image noise and maintains image sharpness.

Filters for cephalometric X-ray images		
	Invert	The brightness values are inverted. The filter can be combined with any other filter for X-ray images.

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On video images filters are only available for images taken with the Proof camera.

Filters for video images recorded with a proof camera		
	Caries filter	Analyses the autofluorescence of the substances. The colour scale and the numeric values provide reliable information on carious lesions. The colour scheme legend can be called up with ⓘ.
	Prophylaxis view	Original image recorded by the proof camera

Histogram

The histogram shows the brightness distribution of the image.
Histogram windowing allows you to alter the image's grey scale values. The ***black limit [Grenze schwarz]*** shows the percentage of grey scale values changing to black, and the ***white limit [Grenze weiß]*** shows the percentage of grey scale values changing to white. The limits can be altered to suit your requirements. The settings you have applied will be immediately apparent in the X-ray image on the light table.
The changes this makes to the image emphasise structures that are otherwise too small to be distinguished by the human eye so that they can now be identified.
If a filter is used then the histogram is automatically recalculated.
The image processing can be saved along with the changes you have made (see "37.2 Managing default image settings"). To prevent the quality of future X-ray images being impaired excessively by the saved image processing, both limits are restricted to 10% on saving.

Editing a histogram:

› Use the two sliders to adjust the black and white limits.

› To move the entire selected range between the black and white limits click  in the middle of the region and move it with the mouse button pressed.

Measurements

In order to estimate lengths and angles in 2D X-ray images, the image needs to be calibrated with the aid of a reference image object. Despite calibration, this estimation does not show the accuracy of a measurement and must not be used as a measured result. The accuracy depends greatly on the projection distortion of the object on the image detector area.

In video images, lengths and angles cannot be estimated to scale. Panoramic X-ray images are not suitable for measuring due to their projection technique.

On CBCT images (3D) the calibration is calculated geometrically. Measurements are only possible in the slices (axial, sagittal, coronal and TSA), but not in the volume view or panoramic view. The length and angular values in displayed layers (MRI) are calculated on the basis of the voxel dimensions defined in the 3D image data set (measuring unit e.g. mm). The accuracy with regard to the anatomical relationships is dependent on these voxel dimensions. The values calculated in the software therefore only reflect the relationships of the voxel data in defined accuracy. The display accuracy is equivalent to 50% of the last decimal place (e.g. if the resolution is 0.1 mm the accuracy is 0.05 mm).

The following measurements can be performed:

	Simple line (start and end point)
	Polyline (start, intermediate point and end point)
	Angle (between two straight lines)

The measurements are saved as an annotation. The image needs to be calibrated for the measurements. The symbol shows the calibration type:

	Calibration, geometrically calculated: The known geometry of the image acquisition system (e.g. resolution of the image acquisition mode, magnification factor) is incorporated in the calculation.

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	Calibration with a reference object: The known size of a reference object included in the image has been measured and saved. The reference object must be located in the direct area of the area being measured during imaging.

Rulers can be displayed on calibrated images. Rulers are not available for uncalibrated images or for the measurement unit 'pixels' (px).

	Show rulers
	Hide rulers

Perform calibration with a reference object:

WARNING

Incorrect measurement result due to projection distortion or incorrect calibration

- Perform calibration with a reference object.
- Keep the projection distortion as low as possible during the X-ray acquisition.
- Do not use a panoramic image for the measurement.

- Click  .
- In the image, click on the start point with the left mouse button.
- Click with the left mouse button on the end point.
- Under *Tools* and *Calibration* enter the actual length of the measured length (e.g. the diameter of a steel sphere).
- Click  .
  The values are copied to the image.

Measuring a simple line:

- Click  .
- In the image, click on the start point with the left mouse button.
- Click with the left mouse button on the end point.
  The measured result is displayed directly on the measurement line.

Measuring a polyline:

- Click  .
- In the image, click on the start point with the left mouse button.
- Use the left mouse button to add as many intermediate points as you want.
- Click with the right mouse button on the end point.
  The measured result for the overall distance is displayed directly on the measurement line.

Measuring an angle:

- Click  .
- In the image, click on the start point of the first straight line with the left mouse button.
- Click with the left mouse button on the end point of the first straight line.
- Click on the start point of the second straight line with the left mouse button.
- Click with the left mouse button on the end point of the second straight line.
  The angle between the two straight lines is displayed.

Editing a measurement:

- In the image, click on the measurement with the left mouse button.
  This activates the measurement and the anchor points are displayed.
- To move the anchor point, click on the anchor point with the left mouse button  , hold the mouse button and move it.

Change the display of the measurement:

- To change the colour and line thickness, select the measurement in the *Annotations* and click  .

Delete measurement:

- Mark the measurement in *Annotations* in order to activate it.
- Click  .

Drawings

Drawings can be inserted into the image. All drawings are saved as annotations.
The following drawing tools are available:

	Create free-hand drawing
	Create a line
	Create an arrow
	Create a rectangle

Create an ellipse

Create free-hand drawing:
› Click .
› In the image, click on the start point of the free-hand drawing using the left mouse button.
› Keep left mouse button down and create a freehand drawing.
› Release the mouse button to finish the free-hand drawing.
The mouse cursor retains the function of the free-hand drawing.
› To create a second free-hand drawing, press the left mouse button and keep it pressed while you draw.
› To finish the free-hand drawing, press the right mouse button.

Create a line:
› Click .
› In the image, click on the start point of the line using the left mouse button.
› Click on the end point of the line using the left mouse button.

Create an arrow:
› Click .
› In the image, click on the start point of the arrow using the left mouse button.
› Click on the endpoint of the arrow using the left mouse button.

Create a rectangle:
› Click .
› Click in the image with the left mouse button to place the first corner of the rectangle.
› Move the mouse cursor.
A preview of the rectangle is displayed.
› Click with the left mouse button to define the size of the rectangle.

Create an ellipse:
› Click .
› In the image, click on the start point of the ellipse using the left mouse button.
› Move the mouse cursor.
A preview of the ellipse is displayed.
› Click with the left mouse button to define the size of the ellipse.

Shift drawing:
› In the image, click on the drawing using the left mouse button.
This activates the drawing and the anchor points are displayed.
› Keep the mouse cursor pressed and shift the drawing.
› Release the mouse button.

Edit drawing:
› In the image, click on the drawing using the left mouse button.
This activates the drawing and the anchor points are displayed.

The anchor points of pre-hand drawings cannot be edited.

› To move the anchor point, click on the anchor point with the left mouse button , hold the mouse button and move it.

Change the display of the drawing:
› To change the colour and line thickness, select the drawing in the *Annotations* and click .

Delete drawing:
› Mark the drawing in *Annotations* in order to activate it.
› Click .

Edge mask

X-ray images can be masked at the edges to prevent the occurrence of effects that may hinder diagnosis. The area beyond the edge mask is hidden.
The edge mask can be activated or deactivated.
The edge mask is automatically activated for intraoral X-ray images.
The edge mask and background colour can be configured for every X-ray station.

Implants

For visualisation purposes, implants can be schematically inserted in two-dimensional and three-dimensional images. This function is included in VistaSoft Basis.
Implant planning can be done using VistaSoft Implant / Guide. This requires purchasing a

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license for VistaSoft Implant / Guide (see "7.3 Acquire licence for VistaSoft Implant / Guide").
In a CBCT image the implant can only be added in the slices and in the panoramic view, but not in the volume view. It is shown in all slices and views if it is in the indicated view or slice.
There are two types of implants that can be inserted:

Standard implant (length and diameter can be freely defined)

Implant from manufacturer's database At www.duerrdental.com in the ***Services/Download Centre***, Dürr Dental offers free downloads of implant packages for various manufacturers.

The implant is depicted as a cylinder (standard implant) or a 3D model (manufacturer implant, see "24 Importing implant packages"). If the implant is activated then it can be aligned via the two control points (circles).

Fig. 2: Depiction of a standard implant

The implant is saved as an annotation. With standard implants it is possible to change the size and colour of the implant, while on manufacturer's implants only the colour can be changed (see "Annotations").

Inserting a standard implant:

› Click .
The implant is displayed schematically with the mouse cursor.
› Use the left mouse button to click on the required point in the image.
The implant is positioned. It is displayed as a cylinder with a diameter of 5 mm and a length of 10 mm. The size, colour and position can be changed (see "Annotations").

Inserting a manufacturer's implant:

› Click .
The flyout for selection of the implant opens.
› Select the manufacturer, product and model.
› Click *Select implant [Implantat wählen]*.
The flyout closes, the implant is displayed schematically with the mouse cursor.
› Use the left mouse button to click on the required point in the image.
The implant is positioned. It is shown with the manufacturer's dimensions. The colour can be changed (see "Annotations").

Deleting an implant:

› Click on the implant to activate it.
› Click .
or
Press the Del key.

Moving an implant:

› Move the mouse cursor over the implant.
The mouse cursor changes to .
› Click on the implant between the control points.
› Hold the mouse button pressed and move the implant.
› Release the mouse button in the desired position.

Rotating an implant:

› Click on the implant to activate it.
› Click on a control point, hold the mouse button pressed and rotate the control point around the other control point.
› With the Alt key pressed, click on the implant and hold the mouse button to rotate the implant around its longitudinal axis.
› Release the mouse button once the desired position is reached.

Annotations

All measurements, nerve channels and implants of an image are saved as annotations. The annotations are displayed in the list and can be called up again.
When an annotation is called up on a 3D image, the views/slices return to the view in which the annotations were drawn.
Every measurement is indicated in the list with the type, colour and numerical value.

Type of annotation	
	Simple line
	Polyline
	Angle

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Type of annotation
 Nerve channel (3D only)
 Implant
 Panorama curve

Display annotation in the image:

› Click on an annotation in the list.
If the annotation cannot be shown in the current view, the annotation cannot be selected.

Change the display of an annotation:

› Click on  at an annotation in the list.
The flyout opens.
› Select the colour.
› For lines: select the line thickness.
› For nerve channels: adjust the diameter of the line.
› For implants: adjust the diameter and length.
› Click outside the flyout to close it.

Edit annotation:

› Click on an annotation in the list or an annotation in the image.
The anchor points of the annotation are visible.
› Move the mouse cursor over one of the anchor points of the annotation.
The mouse cursor changes to  .
› Press and hold the left mouse button and drag the anchor point to the required position.
› Release the mouse button.

Shift annotation:

› Click on an annotation in the list or an annotation in the image.
The anchor points of the annotation are visible.
› Click on the annotation between the anchor points.
The mouse cursor changes to  .
› Press and hold the left mouse button and drag the annotation to the required position.
› Release the mouse button.

Delete annotation:

› Click  .
This deletes the annotation. The deletion cannot be undone.

37.2 Managing default image settings

Default image editing settings are saved for every X-ray station (see also "61.3 Image processing"). Every newly created image will automatically be displayed on the light table with these default settings.

The default settings can also be saved via the light-table menu with the settings on an image:

› Edit an image as required on the light table.
› In the light table menu click  and then  .
The image processing settings will be displayed.
› Click *Save [Speichern]* to save the image processing settings.
› Click *Cancel [Abbrechen]* to discard the image processing settings.

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38 Printing images

Images that are open on the light table can be printed out via the function *Print active image [Aktives Bild drucken]*.
In case of CBCT images (3D), the current view on the monitor (panoramic, TSA or MPR) is printed. All views are printed in this context, even if one view is maximised.

› Open the image you wish to print on the light table.
If you have multiple images open on the light table, you will need to select the one you wish to print.
› Click .
The *Print [Drucken]* flyout will open.
› Select the required printer via the button *Select... [Auswählen...]*.
› To print out the image in its original size check the box *Original image size: [Original Bildgröße:]*.
If necessary you may need to adjust the paper size in the printer settings.
The image is printed out in the original size.
› Check the printer settings under *Print resolution / Page size: [Druckauflösung / Seitengröße:]*.
› To print the image in landscape format check the box *Landscape: [Querformat:]*.
› To print the image in colour check the box *Colour: [Farbe:]*.
› Select the required number of copies under *Copies: [Kopien:]*.
› Click the button *Preview...[Vorschau...]* to check whether the chosen settings are correct.
A separate preview window will open.
› Click the button *Print [Drucken]* to start the print task.

Result:
The selected image will be printed with the chosen settings. The additional information (e.g. patient number, date of acquisition, indications) is always printed as well.

39 Displaying the X-ray report

The X-ray report displays all images, along with the date, exposure values, X-ray station and indications.

› Click in the ribbon.
The *X-ray report [Röntgenbericht]* flyout will open.
› Select the sorting method you require.
› If necessary, activate the check boxes for the time period (from ...to).
A beginning and end date can be entered. If the check box has been deactivated (default option), all images will be included.
› If necessary, tick the *X-ray stations [Röntgenplätze]* check box.
After ticking the *X-ray stations [Röntgenplätze]* check box, you have to activate the X-ray stations you require.
If this check box has been ticked, the X-ray report will be created for the selected X-ray stations. If this check box has been deactivated (default option), all X-ray stations will be included when the report is created.
› If necessary, tick the *Patient record [Patient]* check box.
Once you have ticked this check box you can search for the patient record you require.
The procedure for searching for patient records is the same as the patient-data-management search procedure (see "12.3 Searching for and logging into a patient record").
If this check box has been ticked, the X-ray report will be created for the selected patient records. If this check box has been deactivated (default setting), all patient records will be included when the report is created.
› Click on *Show report [Bericht anzeigen]*.
The X-ray report will be displayed with the selected settings.

40 Change practice (surgery)

If multiple practices (surgeries) have been created you can switch between them.
The following conditions must be fulfilled in order to switch practice:

✓ No active X-ray acquisition

✓ No active video acquisition

› Click .
The practice is logged out and the log-in screen opens.

› Under *Practice [Praxis]* select the practice you wish to log in.

› Click *Login*.
The selected practice will be logged in.
If password protection is enabled then you will need to enter the password (see "Password settings").

41 Using the VDDS-media interface to practice management program

CAUTION

Personal injury is possible due to wrong assignment of image data to a patient

› Check the right assignment of the image data (e. g. during image import, change of patient data new assignment of image data to a patient).

› Observe the information displayed in the software.

Depending on the options available in the practice management program (PVS), patient data and image data can be exchanged via the VDDS media interface between the imaging software and the practice management program:

– Importing patient data from PVS into the Imaging Software and requesting image acquisitions, see "30.2 Importing patient data".

– Opening a patient image from PVS in the Imaging Software, see "30.2 Importing patient data".

– Transferring images from the Imaging Software to PVS and transferring changes to images (see "32.7 Transferring images to the practice management software", "32.10 Multiple selection".

The VDDS media interface must be configured in the practice management program and in the imaging software for this purpose (see "62 Interfaces").

For information about the configuration and handling of the interface in the practice management program, please refer to the relevant PVS handbook.

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42 Creating a support file

In the event of a fault a support file can be created. This can be forwarded to the support/ service technician for diagnosis.

› Click the entry in the start menu *Start* > *All programs [Alle Programme]* > *VistaSoft* > *Create support file [Erstelle Datei für Support]*.
or
Click ⓘ > in the software.
A .safe file with all the required files and data is created on the desktop.
This file is encrypted to protect it during transmission in case it contains any personal data.

› Send the file created in this way to the support/ service technician.

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Acceptance and consistency check

With VistaSoft Inspect it is possible to perform acceptance tests, consistency checks and partial acceptance tests on the image reproduction and X-ray system in full. No third-party software is required for this.
With VistaSoft Inspect you can carry out the following tests:
- Acceptance test of the image reproduction and X-ray system
  - "46 Performing an acceptance test"
- Consistency checking of the image reproduction and X-ray system
  - "47 Performing a consistency check"
- Partial acceptance test of the image reproduction and X-ray system
  - "48 Performing a partial acceptance check"

Here, VistaSoft Inspect detects which device is being tested and adapts the test that is to be performed to the requirements of the device.
VistaSoft Inspect office the additional opportunity to check the condition of the image plates:
- "51 Perform plate surface quality check"

The following standards are primarily applicable with the acceptance test:
- DIN 6868-151 Acceptance test in accordance with RöV on dental X-ray equipment
- DIN 6868-161: Acceptance test in accordance with RöV of dental X-ray units for digital volume tomography
- DIN 6868-157: Acceptance test and consistency check of the image playback system

The following standards are primarily applicable in the consistency check:
- DIN 6868-5: Consistency check according to X-Ray Ordinance (RöV) on dental X-ray equipment
- DIN 6868-15: Consistency check in accordance with the X-Ray Ordinance (RöV) on dental X-ray equipment for digital volume tomography
- DIN 6868-157: Acceptance test and consistency check of the image playback system

The following guidelines and directives apply as well:
- German X-ray Directive (Röntgenverordnung, RöV)
- Guidelines for Expert Qualifications (Sachverständigen-Richtlinie, SV-RL)
- Quality Assurance Guidelines (Qualitätssicherung-Richtlinie, QS-RL)
- Specialist Knowledge Guidelines (Fachkunde-Richtlinie, (FK-RL)

The Acceptance and consistency check chapter is subdivided as follows:
- "43 Notes on use"
- "44 Launching VistaSoft Inspect"
- "45 Configuring VistaSoft Inspect"
- "46 Performing an acceptance test"
- "47 Performing a consistency check"
- "48 Performing a partial acceptance check"
- "49 Managing the tests of the X-ray tests"
- "50 Managing the tests of the image reproduction system"
- "51 Perform plate surface quality check"
- "52 VistaSoft Inspect configuration overview"

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43 Notes on use

From the start page of VistaSoft Inspect you can switch directly to the different tests and to the configuration screen.
The left-hand part of the menu bar contains the navigation bar.

This bar will allow you to switch directly to the higher-level levels.
The tests open as a list of all previous tests. If a test has not yet been completed then it is marked with ⚠ and can be further processed.
The tests comprise several tabs. If any information is missing in a tab then the tab is marked with ⚠.

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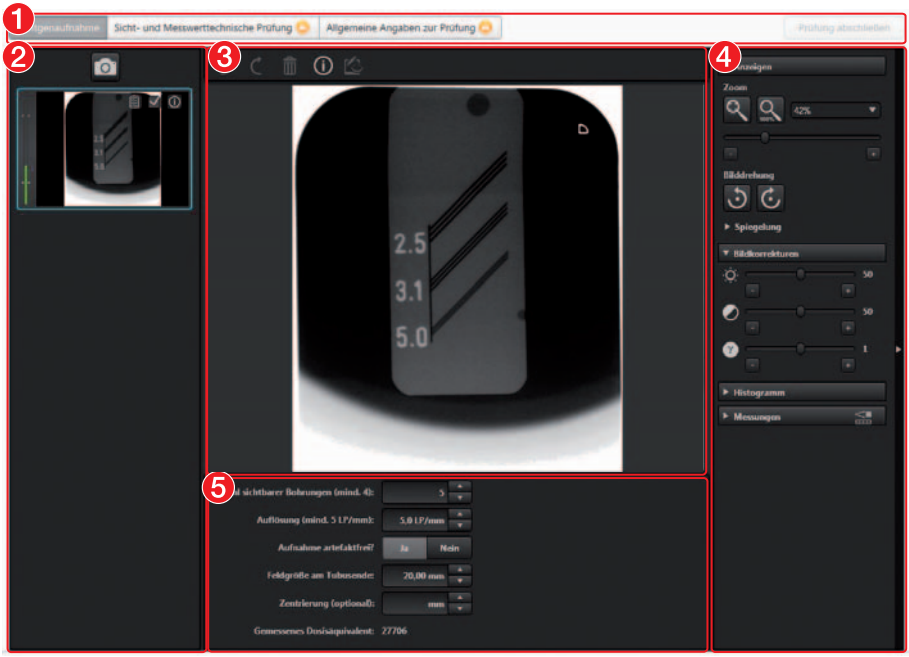
43.1 X-ray image acquisition

The tests of the X-ray system (acceptance test, partial acceptance test and consistency check) are made up of various tabs. A test always opens with the tab *X-ray image acquisition [Röntgenaufnahme]*.

The X-ray image acquisition [Röntgenaufnahme] tab has a similar layout to the user interface of VistaSoft.



1 Tabs for the test
2 "Image inspector"
3 "Light table"
4 "Toolbox"
5 Image details

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Image inspector

All of the images for the current test are displayed in the image inspector. The image designation is displayed on the images if it is entered in the image information. It is possible to select the reference image and edit image information as long as the test has not yet been completed.


Displaying and editing image information


Image is the reference image for the test


Image is not the reference image for the test

Light table

If an image is selected in the image inspector (blue surround) then this image is displayed on the light table. Only one image can be displayed at a time on the light table of the acceptance tests and consistency checks.
CBCT images are always displayed as an axial MPR slice. You can navigate in the view using the mouse:

	Scroll layers	Press and hold the left mouse button in the view to scroll through the layers. The number of the layer is displayed on the bottom left-hand during scrolling.
	Tilt slice plane	Press and hold the left mouse button in the edge region of the view to turn the slice plane.

Questions and details for the active image are displayed under the light table.
The light-table menu features various commands for the images displayed on the light table:

	Repeat or undo actions
	Delete image
	Displaying and editing image information
 	Displaying the currently acquired image and the reference image side-by-side or one above the other (for the consistency check only)
 	Displaying or hiding measurements

Toolbox

The toolbox contains tools for editing the images on the light table.
The tools are divided into the following groups and can be expanded or collapsed by clicking :

- "Display"
- "Image corrections"
- "Histogram"
- "Measurements"
- "Dose equivalent" (only if equivalent dose measurements are enabled in the configuration)

The edited image is saved with the preview in the image inspector as soon as the user switches to the next registration card of the test or the test itself is closed.

Display

These tools allow you to alter the image view.
The zoom tools change the size that the image is displayed on the light table. The settings are not saved.
The settings for rotating and inverting an image are saved.
The zoom tools in CBCT images (3D) can be used for all views. If the option *Same zoom in all views [Gleicher Zoom in allen Sichten]* is enabled, then all views, except panoramic and volume view, are displayed at the same zoom factor. If the option is disabled, each view can be changed individually. The tools for image rotation and mirroring are not available for CBCT images (for information on how to rotate a slice refer to "Navigating in CBCT images (3D)").

Zoom
 This matches the size of the image to the size of the window.
 This magnifies the image so that one screen pixel equals one image pixel. Is displayed centred in the window.

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Zoom

The current zoom factor is displayed. A defined zoom factor can be selected.

The zoom can be adjusted to any required setting via the slider. You can also use the mouse wheel to adjust the zoom.

Rotate image

Rotate the image anti-clockwise by 90°.

Rotate the image clockwise by 90°.

Mirroring

Horizontally invert the image

Vertically invert the image

Image corrections

The image brightness, contrast and gamma can be corrected. As you adjust the sliders, you can see the changes in the image itself.

Adjust the image brightness

Adjust the image contrast

Adjust the image gamma value
< 1: Bright areas become darker
> 1: Dark areas become brighter

Mouse pointer icon

Brightness and contrast can also be changed directly in the image using the left mouse button. For this purpose, go to ***Toolbox*** > ***Image corrections [Bildkorrekturen]*** and enable the option ***Mouse mode [Mausmodus]***. When the left mouse button is held down, making horizontal motions over the image changes the brightness, while vertical motions adjust the contrast. The sliders in the toolbox move along accordingly.

Mouse pointer icon

This option can be enabled separately for 2D X-ray/video images and for 3D X-ray images. It is preset for 2D X-ray/video images.

Histogram

The histogram shows the brightness distribution of the image.

Histogram windowing allows you to alter the image's grey scale values. The ***black limit [Grenze schwarz]*** shows the percentage of grey scale values changing to black, and the ***white limit [Grenze weiß]*** shows the percentage of grey scale values changing to white. The limits can be altered to suit your requirements. The settings you have applied will be immediately apparent in the X-ray image on the light table.

The changes this makes to the image emphasise structures that are otherwise too small to be distinguished by the human eye so that they can now be identified.

If a filter is used then the histogram is automatically recalculated.

The image processing can be saved along with the changes you have made (see "37.2 Managing default image settings"). To prevent the quality of future X-ray images being impaired excessively by the saved image processing, both limits are restricted to 10% on saving.

Editing a histogram:

› Use the two sliders to adjust the black and white limits.

› To move the entire selected range between the black and white limits click  in the middle of the region and move it with the mouse button pressed.

EN

Measurements

In order to estimate lengths and angles in 2D X-ray images, the image needs to be calibrated with the aid of a reference image object. Despite calibration, this estimation does not show the accuracy of a measurement and must not be used as a measured result. The accuracy depends greatly on the projection distortion of the object on the image detector area.

In video images, lengths and angles cannot be estimated to scale. Panoramic X-ray images are not suitable for measuring due to their projection technique.

On CBCT images (3D) the calibration is calculated geometrically. Measurements are only possible in the slices (axial, sagittal, coronal and TSA), but not in the volume view or panoramic view. The length and angular values in displayed layers (MRI) are calculated on the basis of the voxel dimensions defined in the 3D image data set (measuring unit e.g. mm). The accuracy with regard to the anatomical relationships is dependent on these voxel dimensions. The values calculated in the software therefore only reflect the relationships of the voxel data in defined accuracy. The display accuracy is equivalent to 50% of the last decimal place (e.g. if the resolution is 0.1 mm the accuracy is 0.05 mm).

The following measurements can be performed:

	Simple line (start and end point)
	Polyline (start, intermediate point and end point)
	Angle (between two straight lines)

The measurements are saved as an annotation. The image needs to be calibrated for the measurements. The symbol shows the calibration type:

	Calibration, geometrically calculated: The known geometry of the image acquisition system (e.g. resolution of the image acquisition mode, magnification factor) is incorporated in the calculation.
	Calibration with a reference object: The known size of a reference object included in the image has been measured and saved. The reference object must be located in the direct area of the area being measured during imaging.

Rulers can be displayed on calibrated images. Rulers are not available for uncalibrated images or for the measurement unit 'pixels' (px).

	Show rulers
	Hide rulers

Perform calibration with a reference object:

WARNING

Incorrect measurement result due to projection distortion or incorrect calibration

- Perform calibration with a reference object.
- Keep the projection distortion as low as possible during the X-ray acquisition.
- Do not use a panoramic image for the measurement.

- Click .
- In the image, click on the start point with the left mouse button.
- Click with the left mouse button on the end point.
- Under *Tools* and *Calibration* enter the actual length of the measured length (e.g. the diameter of a steel sphere).
- Click  .

  The values are copied to the image.

Measuring a simple line:

- Click  .
- In the image, click on the start point with the left mouse button.
- Click with the left mouse button on the end point.

  The measured result is displayed directly on the measurement line.

Measuring a polyline:

- Click  .

› In the image, click on the start point with the left mouse button.
› Use the left mouse button to add as many intermediate points as you want.
› Click with the right mouse button on the end point.
The measured result for the overall distance is displayed directly on the measurement line.

Measuring an angle:

› Click .
› In the image, click on the start point of the first straight line with the left mouse button.
› Click with the left mouse button on the end point of the first straight line.
› Click on the start point of the second straight line with the left mouse button.
› Click with the left mouse button on the end point of the second straight line.
The angle between the two straight lines is displayed.

Editing a measurement:

› In the image, click on the measurement with the left mouse button.
This activates the measurement and the anchor points are displayed.
› To move the anchor point, click on the anchor point with the left mouse button , hold the mouse button and move it.

Change the display of the measurement:

› To change the colour and line thickness, select the measurement in the *Annotations* and click .

Delete measurement:

› Mark the measurement in *Annotations* in order to activate it.
› Click .

Edge mask

X-ray images can be masked at the edges to prevent the occurrence of effects that may hinder diagnosis. The area beyond the edge mask is hidden.
The edge mask can be activated or deactivated. The edge mask is automatically activated for intraoral X-ray images.
The edge mask and background colour can be configured for every X-ray station.

Dose equivalent

If the option *Enable equivalent dose measurement [Dosisäquivalenzmessung aktivieren]* is enabled in the configuration, then the tool *Equivalent dose [Dosisäquivalent]* is present in the toolbox (this option is disabled by default, see also "Acceptance and consistency check"). With this tool the equivalent dose values are measured during the X-ray image acquisition for the acceptance test and for the consistency checks and compared with each other.
Measurement of the dose equivalents in imported aperture images or CBCT images is not feasible.

Dose equivalent measurement:

› In the toolbox open the Equivalent Dose [Dosisäquivalent] tool group.
› Click .
› Move the mouse cursor over the image on the light table.
The mouse cursor changes to a pipette .
› Click on the defined point in the test image.
The value is applied as the *Measured equivalent dose [Gemessenes Dosisäquivalent]*.
The position of the measurement is marked with a yellow border. The border is also visible in the reference image of the consistency check.

Displaying and editing image information

The image information can be displayed via the "Image inspector" or the light-table menu.
Certain information (e.g. X-ray parameters, image designation) can also be edited. The image information at the bottom of the flyout cannot be changed. The X-ray parameters can be defined as mandatory fields (see "58.9 X-ray stations"). If these fields are not completed, the symbol for the image information is displayed with a red surround.

The information can only be changed if the test has not yet been completed.

› Select an image in the "Image inspector".
or
Click on the image on the light table.
› Click in the light table menu or click on the preview image in the "Image inspector".
The *Image information [Bildinformationen]* flyout will open.
› Change the data as required.

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› Close the flyout with or click outside the flyout.
The image information is saved.

Importing aperture images

Aperture images can be imported for acceptance tests and partial acceptance of a CBCT, Panorama or Cephalometric X-ray system.
The following file formats can be imported:
– DICOM (*.dcm)
– PNG (*.png)
– TIFF (*.tif, *.tiff)
– JPEG (*.jpg)
– JPEG 2000 (*.jp2, *j2k)
– Bitmap (*.bmp)
– XTF (original image state) (*.xtf)

› Click .
› Select the aperture images.
› Click *Open [Öffnen]*.

43.2 Due tests

The software checks the validity of the tests and reminds you when tests are due (provided this has been configured, see "Acceptance and consistency check").
If no tests are present or the tests are no longer valid the following message appears in the menu bar: *Tests are due [Prüfungen sind fällig]*.

44 Launching VistaSoft Inspect

There are two ways to launch the software:
– By clicking on the icon on the desktop
– Go to the entry in the start menu: *Start > All programs [Alle Programme] > VistaSoft Inspect > VistaSoft Inspect*

Requirements:
✓ VistaSoft is configured (it has been opened for the first time)
✓ VistaSoft is not running

› Double click on the icon on the desktop
or
select the relevant item from the Start menu.

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45 Configuring VistaSoft Inspect

The following configurations are required in order to perform acceptance tests and consistency checks with VistaSoft:

– "45.1 Creating X-ray stations"
– "45.2 Configuring the monitor test"

For information about further configuration options refer to "52 VistaSoft Inspect configuration overview"

If a corresponding configuration is already present VistaSoft, e.g. X-ray stations, this will be adopted by VistaSoft Inspect.

45.1 Creating X-ray stations

The X-ray stations from VistaSoft are automatically displayed in VistaSoft Inspect.
If X-ray stations are created in VistaSoft Inspect they are displayed automatically in VistaSoft.
An X-ray station always comprises the following:

– X-ray emitter
– Image acquisition device
– Operator information

Here, e.g. an X-ray emitter can be combined with different image plate scanners or one image plate scanner can be combined with different X-ray emitters into multiple X-ray stations.
The X-ray station marked as the favourite is displayed first in the selection list when the tests are started.
In the X-ray station configuration you can create, configure and delete X-ray stations. This works in exactly the same way as in VistaSoft. See "22 X-ray stations".

› Click on *X-ray stations [Röntgenplätze]* on the start page.
or
Click > *X-ray stations [Röntgenplätze]*.

See also:

– "22.1 Creating an X-ray station"
– "22.2 Configuring an X-ray station"
– "22.3 Entering recommended values for X-ray parameters"
– "22.4 Deleting an X-ray station"

45.2 Configuring the monitor test

If the work station is a diagnosis station, the monitor check must be performed at regular intervals. The basic setting that the work station is a diagnosis station is performed in the configuration, see "Acceptance and consistency check". In the case of a multi-station installation, the monitor check are stored centrally on the server.
The configuration opens up when you start the monitor test for the first time.
The configuration can be called up at any time from the start window of the monitor test via the *Configuration [Konfiguration]* button.
In the configuration you can edit information about the workstation in the practice/clinic. These are saved and reused during subsequent tests.

"*System" tab:*

› Enter all of the information for the practice/clinic.
› Under *Room class [Raumklasse]* check the option *Diagnostic workstation [Befundungsarbeitsplatz] (RK5)* or *Treatment room [Behandlungsraum] (RK6)* depending on the room in which the monitors are located.
› Under *Test cycles [Prüfzyklen]* choose the required test and enter to the right of it the frequency at which you want the test to be performed.
› Under *Warm-up phase [Aufwärmphase]* enter the time after which the tests can be started at the earliest.
› Place a tick next to DIN 6868-57 if the tests are to be carried out in accordance with this standard. By default testing is performed in accordance with DIN 6868-157.

"*Monitor" tab:*

› Under *Monitor [Bildschirm]* select the monitor for which the subsequent settings are to be made.
Click on *Identify [Identifizieren]* to display a logo on the corresponding monitor.
› Check all entries and correct or add information as required. In some cases, older monitors may not provide all the information.

"*Acquisition source" tab:*

› Enter the software used (including the version) in the area *Application software [Anwendungssoftware]*.

› Click *Save [Speichern]* to close the configuration.

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46 Performing an acceptance test

A complete acceptance test comprises the acceptance test of the image reproduction system and the acceptance test of the X-ray system. The acceptance test needs to be carried out at the following times:

– Before starting up an X-ray system for the first time
– When moving the system to a different location
– If the operating company changes (additional expert qualifications are required in this case)

The acceptance test for the X-ray system must be performed by a certified service technician with proven expertise and specialist knowledge.

– "46.1 Performing the acceptance test for the image reproduction system"
– "46.2 Performing the acceptance test for the X-ray system"

46.1 Performing the acceptance test for the image reproduction system

The main goals of the acceptance test for the image reproduction system (IRS) in accordance with DIN 6868-157 are:

– Ensuring that the required image quality is achieved with the lowest possible radiation exposure
– Defining the operator and device data
– Determining and assessing the light intensity and illuminance of the image reproduction device and its surroundings
– Visual assessment via test images
– Definition of reference values for the consistency checks

› Click *Monitor test [Monitorprüfung]*.
› Under *User [Benutzer]* enter the name of the tester.
› Under *Monitor [Bildschirm]* select the monitor for which the test is to be performed.
› Select the required test.
DIN 6868-157: Acceptance test, acceptance test of multiple monitors
DIN 6868-57: Acceptance test
› Click *Start [Starten]*.
The test is started.
› Answer the questions based on the test images.
› Click *Continue [Weiter]* to proceed with the wizard.
› Once the test has been completed close the monitor test.

46.2 Performing the acceptance test for the X-ray system

The main goals of the acceptance test of the X-ray system are:

– Ensuring that the required image quality is achieved with the lowest possible radiation exposure
– Defining the operator and device data
– Definition of reference values for the consistency checks
– Quality assurance for the system

You can exit from the acceptance test at any time using the navigation bar. This interrupts an ongoing acceptance test, but the test can be continued at a later point in time.

Creating a new acceptance test:
› Click *Acceptance test [Abnahmeprüfung]*.
› Click *New acceptance test [Neue Abnahmeprüfung]*.

An access code is required in order to perform an acceptance test and a partial acceptance test.
The access code is made up as follows: current date (day and month) in reverse sequence. For example: 03 May = 03.05. Access code: "5030"

› Enter the access code.
› Under *X-ray station [Röntgenplatz]* select the X-ray station for which an acceptance test is to be performed.
The image acquisition device and the X-ray emitter are displayed.
› Under *Resolution [Auflösung]* select the monitor with which the acceptance test is to be performed.
If the connected monitor is not displayed then you can also enter the resolution manually instead.

› Enter the brightness and contrast of the monitor under *Brightness/contrast [Helligkeit/Kontrast]*.
› If all of the data has been correctly entered, click *Start acceptance test [Abnahmeprüfung starten]*.
The acceptance test opens with the *X-ray image acquisition* registration card. You can change between the individual registration cards at any time.

The questions posed in the acceptance test depend on the X-ray system.

Taking and checking an X-ray image:
› Under *X-ray image acquisition [Röntgenaufnahme]* click on .
Image acquisition will now start. The preview window opens up. The acquisition mode is saved as a fixed mode for VistaScan, VistaRay and VistaPano and VistaVox. With VistaPano and VistaVox, the current strength and voltage can be altered on the unit, if necessary.
› Import all images.
› Once you have finished recording the last image, click *Finish imaging*.
The preview window is closed. All acquired images are transferred to the image archive. From there, the images can then be opened on the light table and edited. Similarly, it is also possible to edit the image information (see "Displaying and editing image information") or delete images.
The image processing saved in the X-ray station is automatically applied to the images. If the image acquisition device defines its own image processing settings then these are used.
The first image is automatically marked as a reference image. Alternatively, you can use the check box to select any other image as a reference image.

As long as the acceptance test has not been completed, new images can be imported at any time.

› If the X-ray parameters have not been entered automatically (by the device or with the suggested values from the X-ray station), enter the X-ray parameters in the image information .
› If the option *Enable equivalent dose measurement [Dosisäquivalenzmessung aktivieren]* is active then measure the equivalent dose, see "Dose equivalent".
› To enter the X-ray parameters for all images of the acceptance test, click *Apply to all images [Für alle Bilder übernehmen]*.
When you exit the *X-ray image acquisition* tab the X-ray parameters are saved and can no longer be changed.
› Answer all of the questions in the lower area. In order to answer the questions you can change the images using the tools in the toolbox (see "37.1 Toolbox").
› Importing aperture images if necessary (see "Importing aperture images").

Visual inspection and test measurement:
› Change to *Visual test and measurement test [Sicht- und Messwerttechnische Prüfung]*.
› Answer all the questions and enter the measured values.

Entering general information:
› Change to *General information about the test [Allgemeine Angaben zur Prüfung]*.
› Fill in all the fields.

Concluding the acceptance test:

The test can only be completed if all fields have been properly filled in. If the mandatory fields are not filled in or they are only filled in partially, the symbol appears next to the tabs.

› Save the acceptance test by clicking on *Finish test [Prüfung abschließen]*.
The test is completed and saved. Once this has been done it cannot be changed any more.

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47 Performing a consistency check

A complete consistency check comprises the consistency check of the image reproduction system and the consistency check of the X-ray system.

– "47.1 Performing a consistency check on the image reproduction system"
– "47.2 Performing a consistency check on the X-ray test"

47.1 Performing a consistency check on the image reproduction system

The consistency check on the image reproduction system (IRS) in accordance with DIN 6868-157 comprises two different test procedures, which are normally performed every working day and on a yearly basis.
Daily test: visual inspection of a test image on the image reproduction device
Yearly test: measurement of the luminous density and illuminance of the image reproduction device and its surroundings (based on the requirements of the acceptance test)

› Click *Monitor test [Monitorprüfung]*.
› Under *User [Benutzer]* enter the name of the tester.
› Under *Monitor [Bildschirm]* select the monitor for which the test is to be performed.
› Select the required test.
DIN 6868-157: daily testing, 6-monthly testing, yearly testing
DIN 6868-57: daily testing, monthly testing
› Click *Start [Starten]*.
The test is started.
› Answer the questions based on the test image.
› Click *Continue [Weiter]* to proceed with the wizard.
› Once the test has been completed close the monitor test.

47.2 Performing a consistency check on the X-ray test

Consistency checking is carried out by taking X-ray exposures of the test body using the same dosing parameters as used for the acceptance test (benchmark values). The recorded consistency check image (test exposure) is compared with the X-ray of the acceptance test (reference image acquisition), and the measurements are checked for possible deviation from the benchmark values (reference values). The consistency check image is clearly labelled by the software. The requisite tests are determined by the local law. Carry out testing in accordance with local rules and regulations.

You can exit from the consistency check at any time using the navigation bar. This discards the commenced consistency check and the check cannot be continued at a later point in time.

A consistency check can only be performed if a completed valid acceptance test/partial acceptance test result is available.

Creating a new consistency check:
› Click *Consistency check [Konstanzprüfung]*.

› Click *New consistency check [Neue Konstanzprüfung]*.
The window *Start new consistency check [Neue Konstanzprüfung starten]* opens.
› Under *X-ray station [Röntgenplatz]* select the X-ray station for which a consistency check is to be performed.
The image acquisition device and the X-ray emitter are displayed.
› Click *Start consistency check [Konstanzprüfung starten]*.
The consistency check opens with the tab *X-ray image acquisition [Röntgenaufnahme]*.
You can change between the individual registration cards at any time.
If comments were entered by the tester during the acceptance test these are displayed in a flyout. These comments can be opened again at any time via *Acceptance test comments [Anmerkungen zur Abnahmeprüfung]*.

The questions posed in the consistency check depend on the X-ray system.

Taking and checking an X-ray:

New images can be imported at any time. Here, the previously imported image is overwritten.

› Under *X-ray image acquisition [Röntgenaufnahme]* click on .
Image acquisition will now start. The preview window opens up.
The acquisition mode of the reference image is used as the acquisition mode for the consistency check.
› Import the image.
› Click on *Stop acquisition*.
The preview window is closed. The image is automatically opened on the lightbox. If an image is already present on the lightbox, this is discarded and replaced by the new image. The image can be edited. Similarly, the image information can be edited via the functions in the light table menu (see "Editing image information in the image inspector").
The same image processing with which the reference image was processed is automatically applied to the image.
The X-ray parameters from the reference image or from the image acquisition device (if the device also sends the X-ray parameters to the device) are applied.
› Answer all of the questions in the lower area.
The image of the consistency check and the reference image of the acceptance test are depicted on the lightbox (except for CBCT) for the purposes of image comparison.
› If the option *Enable equivalent dose measurement [Dosisäquivalenzmessung aktivieren]* is active then measure the equivalent dose, see "Dose equivalent".

Visual inspection and test measurement:

› Change to *Visual test and measurement test [Sicht- und Messwerttechnische Prüfung]*.
› Answer all of the questions.
In order to answer the questions you can change the images using the tools in the toolbox (see "37.1 Toolbox").

Finalise consistency check:

The test can only be completed if all fields have been properly filled in. If the mandatory fields are not filled in or they are only filled in partially, the symbol appears next to the tabs.

› Save the consistency check by clicking on *Complete test [Prüfung abschließen]*.
The test is completed and saved. Once this has been done it cannot be changed any more.

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48 Performing a partial acceptance check

The scope of a partial acceptance test is defined by the scope and context of changes made to the system.Depending on the nature of the changes, a consistency check or overlapping measurement to validate the relevant criteria will also be required.
Details about this can be found in the Guidelines for Expert Qualifications (Sachverständigen-Richtlinie, SV-RL) and the Quality Assurance Guidelines (Qualitätssicherung-Richtlinie, QS-RL).

A partial acceptance test can only be performed if a completed acceptance test result or partial acceptance test result is available.

Here, the partial acceptance test is prepopulated with the data from the previous test (last acceptance or partial acceptance test). You only need to edit entries that need to be changed.

Creating a partial acceptance test:

› Click ***Partial acceptance test [Teilabnahmeprüfung]***.

› Click ***New partial acceptance test [Neue Teilabnahmeprüfung]***.

An access code is required in order to perform an acceptance test and a partial acceptance test.

The access code is made up as follows: current date (day and month) in reverse sequence. For example: 03 May = 03.05. Access code: "5030"

› Enter the access code.

› Working under ***X-ray station***, select the X-ray station for which a partial acceptance test is to be performed.
The image acquisition device and the X-ray emitter are displayed.

› Under ***Resolution [Auflösung]*** and ***Brightness/contrast [Helligkeit/Kontrast]*** check that the data is correct. If necessary select or enter the correct data.

› If all of the data has been correctly entered, click ***Start partial acceptance test [Teilabnahmeprüfung starten]***.
The partial acceptance test opens with the ***X-ray image acquisition*** registration card. You can change between the individual registration cards at any time.

The questions posed in the partial acceptance test depend on the X-ray system.

Taking and checking an X-ray image:

› Under ***X-ray image acquisition [Röntgenaufnahme]*** click on  .
Image acquisition will now start. The preview window opens up. The acquisition mode is saved as a fixed mode for VistaScan, VistaRay and VistaPano and VistaVox.

› Import all images.

› Once you have finished recording the last image, click ***Finish imaging***.
The preview window is closed. All acquired images are transferred to the image archive. From there, the images can then be opened on the light table and edited. Similarly, it is also possible to edit the image information (see "Displaying and editing image information") or delete images.
The image processing saved in the X-ray station is automatically applied to the images. If the image acquisition device defines its own image processing settings then these are used.
The first image is automatically marked as a reference image. Alternatively, you can use the check box  to select any other image as a reference image.

As long as the acceptance test has not been completed, new images can be imported at any time.

› If the X-ray parameters have not been entered automatically (by the device or with the suggested values from the X-ray station), enter the X-ray parameters in the image information  .

› To enter the X-ray parameters for all images of the partial acceptance test, click ***Apply to all images [Für alle Bilder übernehmen]***.
When you exit the ***X-ray image acquisition*** tab the X-ray parameters are saved and can no longer be changed.

› Check all of the questions in the lower area. If necessary select or enter the correct data. In order to answer the questions you can change the images using the tools in the toolbox (see "37.1 Toolbox").
› Importing aperture images if necessary (see "Importing aperture images").

Visual inspection and test measurement:

› Change to *Visual test and measurement test [Sicht- und Messwerttechnische Prüfung]*.
› Check all of the questions. If necessary select or enter the correct data.

Entering general information:

› Change to *General information about the test [Allgemeine Angaben zur Prüfung]*.
› Fill in all the fields.

Conducting a partial acceptance test:

The test can only be completed if all fields have been properly filled in. If the mandatory fields are not filled in or they are only filled in partially, the symbol ⚠ appears next to the tabs.

› Save the partial acceptance test by clicking on *Finish test [Prüfung abschließen]*.
The test is completed and saved. Once this has been done it cannot be changed any more.

49 Managing the tests of the X-ray tests

The tests and checks that have been performed are managed separately depending on the test type (acceptance test, partial acceptance test, consistency check).
If the last performed test is no longer valid or the test is not yet complete then the test is marked with ⚠.

– "49.1 Viewing the test"
– "49.2 Exporting tests"
– "49.3 Printing out a test"
– "49.4 Deleting a test"

49.1 Viewing the test

› Click *Acceptance test [Abnahmeprüfung]*, *Partial acceptance test [Teilabnahmeprüfung]* or *Consistency check [Konstanzprüfung]*.
› Select the required test.
› Click *Display [Anzeigen]*.
Alternatively, you can also double-click on a test to view it.
The test is opened.
Changes can be made to the image, but they will not be saved.

49.2 Exporting tests

Exporting individual tests

› Click *Acceptance test [Abnahmeprüfung]*, *Partial acceptance test [Teilabnahmeprüfung]* or *Consistency check [Konstanzprüfung]*.
› Select the required test.
› Click *Export*.
The test export dialog opens.
› Select the file path.
As VistaSoft exports individual files, we recommend that you set up a new folder and specify this as the target folder.
› Select the image format.
› If, during checks of a CBCT X-ray unit, all of the 3D X-ray images are to be exported as well, activate the *Export complete volume [Komplettes Volumen exportieren]* option.

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› Click *Export*.
The summary of the test is exported as a PDF file together with the image in the selected format.
When conducting checks of a CBCT X-ray unit, an image acquisition of two layers is exported for every test: an MTF layer and a homogeneity layer. The output also includes the annotations and number of the layers. The aperture images are also exported. If the *Export complete volume [Komplettes Volumen exportieren]* option is activated, the 3D X-ray image is also exported as a DICOM dataset.

Exporting all tests for an X-ray station

If you wish to export more than just one test, then it is possible to export all of the tests for an X-ray station at once.
Requirements:
✓ At least one completed test is available
› Click .
› Select the required X-ray station.
› Select the file path.
The tests are saved in individual folders in the directory.
› Select the image format.
› If, during checks of a CBCT X-ray unit, all of the 3D X-ray images are to be exported as well, activate the *Export complete volume [Komplettes Volumen exportieren]* option.
› Click *Export*.
The summary of the test is exported as a PDF file together with the image in the selected format.
When conducting checks of a CBCT X-ray unit, an image acquisition of two layers is exported for every test: an MTF layer and a homogeneity layer. The annotations and number of the layers are also outputted. The aperture images are also exported. If the *Export complete volume [Komplettes Volumen exportieren]* option is activated, the 3D X-ray images are also exported as a DICOM dataset.

49.3 Printing out a test

› Click *Acceptance test [Abnahmeprüfung]*, *Partial acceptance test [Teilabnahmeprüfung]* or *Consistency check [Konstanzprüfung]*.
› Select the required test.
› Click *Print [Drucken]*.
The print dialog opens.
› Select the required printer and change any settings as required.
› Click *Print [Drucken]*.
The summary of the test is printed out. The image is not printed out with this.

49.4 Deleting a test

Acceptance tests and partial acceptance tests can be deleted only if they have not been completed yet.
Consistency checks can be deleted at any time.
› Click *Acceptance test [Abnahmeprüfung]*, *Partial acceptance test [Teilabnahmeprüfung]* or *Consistency check [Konstanzprüfung]*.
› Select the required test.
› Click *Delete [Löschen]*.

Acceptance and partial acceptance tests can only be deleted after an access code has been entered.
The access code is made up as follows: current date (day and month) in reverse sequence. For example: 03 May = 03.05. Access code: "5030"

› Enter the access code.
The test is deleted.

50 Managing the tests of the image reproduction system

› Click *Monitor test [Monitorprüfung]*.
› Click *Reports [Berichte]*.
› Select the time period for which you wish to see the reports displayed.
› Under *Monitor [Bildschirm]* select the monitor for which the tests are to be displayed.
The filtered results are displayed in the list.
› Select the required test.

Viewing the test:

› Click *Details*.
Alternatively, you can also double-click on a test to open it.
The summary of the test is opened.

Exporting tests:

› Click *Export to...[Export unter...]*.
The test export dialog opens.
› Select the file path.
› Click *Save*.
The summary of the test is exported as a PDF file.

Printing out a test:

› Click *Details*.
Alternatively, you can also double-click on a test to open it.
The summary of the test is opened.
› Click *Print [Drucken]*.
The print dialog opens.
› Select the required printer and change any settings as required.
› Click *Print [Drucken]*.
The summary of the test is printed out.

51 Perform plate surface quality check

The plate surface quality check checks the image plates for damage and scratches and leads to a recommendation of when the image plate should be replaced.
We recommend to perform the plate surface quality check in regular intervals.

Should damage or wear be visible in areas of the image plate that are relevant for diagnosis, the image plate should be replaced regardless of the result of the plate surface quality check.

The test images can be furnished with the image plate identification. As a result, the condition of the image plate over time is visible in the overview if tests are performed regularly.
The test result is assessed as follows:

A	Image plate is new, no need for further action.
B	Image plate is in good condition, no need for further action.
C	Image plate shows signs of wear. Monitor and check again soon.
D	The plate shows clear signs of use, speedy replacement is recommended.
E	The plate shows heavy wear, replacement is recommended urgently.
X	Unable to perform plate surface quality check. Please note the correct dose.

The following steps are required to perform a plate surface quality check:
– "51.1 Create homogeneous test image"
– "51.2 Scan and check the image plate"
The completed plate surface quality checks can be viewed and deleted, see "51.3 Management of plate surface quality checks".

51.1 Create homogeneous test image

› Place the image plate on a level surface at a distance of approximately 12 cm (equivalent to the diameter of a CD) from the X-ray tube. When doing this, make sure that the active side of the image plate points towards the X-ray tube.

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› Set the exposure time and setting values for a molar x-ray image on the X-ray unit.
› Scan the image plate right away, but no later than after 30 minutes, see "51.2 Scan and check the image plate".

51.2 Scan and check the image plate

You need a VistaScan Mini or VistaScan Nano image plate scanner to scan the image plate.

› On the start page, click *Plate surface quality check*.
› Click *Scan plate*.
› Select the acquisition source.
› Scan the image plate.
The image is displayed in the image inspector and on the light table.
The assessment (A - E) is shown on the bottom right of the preview image and in the toolbox.
The dose indicator shows whether or not the exposure of the image plate for the quality check was correct.
› Click in the preview image to enter the image plate ID. Image plate IDs that have been entered previously can be selected in the selection list.
With VistaScan Nano, the image plate identifier is entered automatically.
› In order to view the image on the light table in more detail, the tools of the toolbox (show, image corrections, histogram) can be used. The changes are not saved.
› Click *Exit from plate surface quality check*.
The overview of the plate surface quality check is displayed.
Repeat the plate surface quality check (assessed as X):
› If the assessment of the image is *X*, it was not possible to perform the plate surface image check due to faulty exposure.
Evenly expose the image plate again. Adjust the exposure according to the dose indicator of the first image.
› Scan the image plate right away, but no later than after 30 minutes.

51.3 Management of plate surface quality checks

› Click *Plate surface quality check*.
The overview lists all checks that have been done, sorted by image plate ID.
View all test images for an image plate ID:
› Mark the corresponding image plate ID in the overview.
All checks done for this image plate ID are displayed including their date and result.
› To open the test images, click *Display image on light table*.
The light table opens. The image inspector shows all preview images for the image plate ID. The images can be displayed individually on the light table.
Export test image:
› Mark the corresponding image plate ID in the overview.
All checks done for this image plate ID are displayed including their date and result.
› To open the test images, click *Display image on light table*.
The light table opens. The image inspector shows all preview images for the image plate ID.
› Click on the preview image to display it on the light table.
› Click .
› Select file path and image format.
› Click *Export*.
The test image is being exported. Changes of the image, e.g. brightness or contrast, are not included.
Delete test image:
› Mark the corresponding image plate ID in the overview.
All checks done for this image plate ID are displayed including their date and result.
› To open the test images, click *Display image on light table*.
The light table opens. The image inspector shows all preview images for the image plate ID.
› Click on the preview image to display it on the light table.
› Click .
The image is deleted immediately.
Delete image plate with image plate ID from plate surface quality check:
› Mark the corresponding image plate ID.
› Click *Delete plate*.

› Confirm the deletion in the dialog window.

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52 VistaSoft Inspect configuration overview

In the configuration the software and connected devices can be configured. The configuration is divided into the following parts:

– "52.1 Application"
– "52.2 Units"
– "52.3 X-ray stations"

Available configuration in VistaSoft that are also valid for VistaSoft Inspect will be applied, e.g. X-ray stations.

If *Password configuration [Passwort Konfiguration]* is activated in VistaSoft then it is also valid for VistaInspect. It is queried when the configuration and the *X-ray stations [Röntgenplätze]* are opened.

The password can only be changed in VistaSoft.

52.1 Application

Under *Application [Anwendung]* you can adjust general settings for the software (e. g. the language used in the software, licensing, duration of validity of the acceptance and consistency checks).

– "Workstation"
– "Logging record"
– "Licensing"
– "Acceptance and consistency check"

Workstation

Workstation	
Workstation name:	A name can be assigned to this workstation.
Port for local services:	Port used within the software; it can be changed in the event of any conflicts with other software. Default port: 3114

Advert	
Display scaling:	If a new scale has been selected, the software will now be displayed entirely according to this scale. In the process, all windows, fonts, icons etc. are made larger or smaller. The change is applied without a restart and remains active after a restart.
UI style	Standard: All font styles are used. Narrow: No bold font styles are used (e. g. default for Japan region).
Display language:	The display language can be selected via the selection list. The software needs to be restarted after the change has been made.
GPU-accelerated image display:	If GPU acceleration is enabled then certain calculations are handled by the graphics processor. In some areas, this can make the image appear more quickly. The software needs to be restarted after the change has been made. Minimum system requirements: – Graphic memory ≥ 512 MB – OpenGL 2.1

VistaSoft settings	
Display last registered patients:	If the option is activated, the list of Last logged in patients is displayed in the patient flyout.

Translation	The interface texts in the software can be individually modified if required.
Language:	The language for translation can be chosen via the selection list.
User-defined translations: exporting	An XLIFF file is exported to the desktop by clicking on "Export". This can be adjusted and imported again according to your individual wishes.
User-defined translations: importing	The adjusted XLIFF file can be selected and imported by clicking on "Import".

Logging record

– "Logging record"
– "User notification"

Logging record

After you have clicked on ***Protocol settings...[Protokollierung...]*** you can change the following settings:

Logging record	
Protocol report level:	Default Simple protocol files are saved.
	Detailed (default setting) Expanded protocol files are saved. These settings must only be enabled by a service technician on demand.
Valid until:	If the protocol level ***Detailed [Detailliert]*** is selected, then this protocol level is maintained until the selected date. Afterwards, the protocol level is automatically reset to the preselected value again.
Maximum file size:	Several protocol files are created automatically. The ***Maximum file size [Maximale Dateigröße]*** determines the maximum size each single protocol file can be.

User notification

Click ***User notifications [Benutzerbenachrichtigungen]*** to display all user notifications. These can be sorted in ascending or descending order according to date or notification content.

Licensing

Without a valid licence key it is possible to use the software in the demo version. Here, 30 patients can be created in the software with full functionality. From the 30th patient a 30-day deadline applies within which further patients can be created. Once this deadline has expired it will no longer be possible to use the software without a valid licence key.
With VistaSoft Inspect, unlimited acceptance tests and partial acceptance tests are possible without a valid licence key in demo mode. A licence key is required for the second consistency check of an X-ray station and for the monitor test.

If you wish to move the server or perform a single workstation installation on a different computer, you will need to request a new licence key (see "7 Licensing").

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Licensing depends on whether or not the licence key is already present:
– If a licence key is already present: "7.1 Licensing with a licence key"
– If a licence key needs to be ordered: "7.2 Licensing without a licence key"

The licence key contains information about the licensed modules. If additional modules are required at a later time, then the licensing process needs to be performed again.
The licensing of a module also includes the licensing of the assigned acquisition types.
The following modules are available:

VistaSoft Basis	Basic software functions
VistaSoft X-ray	Taking an X-ray image (Acquisition types of the Intraoral, Panorama and Cephalometric module classes)
VistaSoft Video	Make a video recording (Acquisition types of the Video and Proof module classes)
VistaSoft MobileConnect	Display images on the Dürr Dental imaging iPad App
VistaSoft Inspect	Configuring and performing the consistency and acceptance checks
VistaSoft 3D	Make, import and display a CBCT recording (Acquisition types of the CBCT module class)
VistaSoft DICOM Starter	Share images with DICOM systems
VistaSoft Implant / Guide	see "7.3 Acquire licence for VistaSoft Implant / Guide"

When working with a multi-station installation, the module VistaSoft 3D is administered as a so-called floating license, so that the licence is only required if a 3D recording has been started, or a 3D recording is opened on the lightbox. Once the patient is logged-out, the licence is released again and can be used on another work station.
In a multi-station installation, the VistaSoft DICOM Starter module is also administered as a floating license, meaning that the licence is only required if the workstation is logged in as a DICOM workstation.

Licence key:	You can enter an existing licence key here.

A new licence key can be ordered via *Purchase new licence key...[Neuen Lizenzschlüssel erwerben...]*.

Acceptance and consistency check

Display warning if no check is available:	A warning is shown if no acceptance test has been performed yet.
Enabling equivalent dose measurements:	This should be enabled if equivalent dose measurements are required for acceptance tests in accordance with national legislation (e.g. in Austria). In the toolbox the group *Equivalent dose [Dosisäquivalent]* is then also displayed.
Workstation is used for diagnosis:	If this function is activated then the monitor test must be performed for this workstation. VistaSoft Inspect checks every time VistaSoft or VistaConnect is started whether or not a monitor test needs to be performed. If VistaSoft or VistaConnect is open for longer than 24 hours then a check is also performed. If a monitor test is due, this is started automatically.

Under *Warning mode...[Warnungsmodus...]* you can adjust the warning mode for acceptance and consistency checks (see "Warning mode").

Warning mode

Period of validity	
Intraoral:	This defines the period of validity for the consistency check for intraoral image reproduction systems and X-ray systems.
Extraoral:	This defines the period of validity for the consistency check for extraoral image reproduction systems and X-ray systems.

52.2 Units

A list of all connected devices is displayed in the *Devices [Geräte]* configuration. It corresponds to the configuration in VistaSoft.

Changes to the device configuration are also directly valid in VistaSoft.

Devices	
Device	This shows a preview image of the connected device (where present).
Name	Name of the device
Connection	Specifies the connection settings
Connected	Specifies whether the device is currently connected and can be used

The configuration of the devices in VistaSoft Inspect does not differ to the configuration of the devices in VistaSoft (see "59 Units").

52.3 X-ray stations

A list of all the created X-ray stations is displayed in the *X-ray stations [Röntgenplätze]* configuration. The list shows the following properties of the X-ray stations:

Designation	Name of the X-ray station, can be changed in *Configure*.
User	User of the X-ray station, can be changed in *Configure*.
Category	X-ray emitter category (e.g. intraoral)
Favourite	This X-ray station is displayed first in the selection list when the X-ray image acquisition is started.
Default adoption workstation:	Workstation that automatically accepts a new job.

The list can be sorted by clicking in the headline of the corresponding column.
The following settings are possible:
- "Configure"
- "Parameters"
- "Image processing"
- "61.4 Task management"
- "Delete"

See also:
- "22.1 Creating an X-ray station"
- "22.2 Configuring an X-ray station"
- "22.3 Entering recommended values for X-ray parameters"
- "22.4 Deleting an X-ray station"

EN

You can create a new X-ray station either manually or using the wizard. If there is a legal requirement for recording X-ray data then the process will depend on the image acquisition device:

- Creating an X-ray-station using the wizard
  - VistaPano S
  - VistaPano S Ceph
  - VistaVox S
  - VistaVox S Ceph
- Creating an X-ray-station manually
  - All VistaScan devices
  - VistaRay
  - Cephalometric/panoramic devices without digital image receiver (e.g. with image plate)
  - TWAIN devices

Changes to the configuration of the X-ray stations in VistaSoft Inspect in are also directly valid in VistaSoft or VistaConnect.

Configure

General information	
Designation:	Name of the X-ray station All X-ray stations must be clearly and uniquely named. A designation must not be used more than once.
Operator:	Name of the owner/operator
Address:	Address of the owner/operator

X-ray emitter	
Selection	Selection list showing the created X-ray emitters. A new X-ray emitter can be created by clicking ***Create X-ray emitter... [Röntgenstrahler anlegen...]***. You can click on ***Configure [Konfigurieren]*** to change the configuration of an X-ray emitter that has already been created. The category (e.g. intraoral) cannot be changed. You can delete an X-ray emitter via ***Delete [Löschen]*** provided it is not being used by an X-ray station.

Image acquisition device	
Device:	Selecting a device from the selection list
Magnification:	Magnification depends on the X-ray emitter and the assigned image type. The value must be between 1.0 and 10.0. When you select an X-ray emitter, a default value is suggested: – Intra: 1.05 – Pano: 1.25 – Ceph: 1.1

Parameters

Depending on the image acquisition device and the X-ray emitter assigned to the X-ray station, different suggested values can be defined for the X-ray parameters for each image acquisition type. It makes the work easier if the X-ray exposures are always taken with the same values. The X-ray parameters are automatically saved with the image information (see "35.1 Importing X-ray images with VistaScan").

They can be adjusted here as required. The proposed values for the X-ray parameters are only entered automatically for the first image. If there are further images from the same image acquisition then the X-ray parameters can be copied from the first image with ***Apply values [Werte übernehmen]*** or they can be manually entered.
When configuring the various acquisition types, you can apply the values from another X-ray station that uses similar or identical values. This saves you the trouble of entering each value separately since you only need to change those values that are different. To do so, go to the area in the lower section labelled ***Apply Parameters from this X-ray Station: [Parameter von diesem Röntgenplatz übernehmen]:***, then select the X-ray station whose values you wish to use and click ***Apply [Übernehmen]***.

Image processing

For every image created with this X-ray station the predefined image processing steps are performed automatically.
The image processing steps can be changed on the light table and saved (see "37.2 Managing default image settings"). The values are only displayed in the configuration.
You can click on ***Restore default settings [Werkseinstellungen wiederherstellen]*** to reset any changes made in the image processing steps.

Filter	
Selected filter:	Predefined filters that support diagnosis (see "Filter")

Windowing	**Settings for image corrections and histogram**
Limit white:	Percentage of greyscales converted to white
Limit black:	Percentage of greyscales converted to black
Brightness:	Brightness of the image
Contrast:	Contrast of the image
Gamma:	< 1: Bright areas become darker > 1: Dark areas become brighter

Display	
Mirroring:	Horizontal or vertical inversion of the image

Annotation	
Edge mask:	Image masking, the area outside the mask is hidden
Greyscale:	Colour of the edge mask; choose between 0 (black) and 255 (white)

Delete

› Select the required X-ray station in the list.
› Click ***Delete [Löschen]***.
› Confirm the deletion in the dialog window.

EN

ServerManager

You can use the ServerManager to generate and restore backups of the imaging software database. An automatic backup can be configured for regular data protection. The last 20 backups are always saved; older backups are deleted.
The backup covers the following data:
– Patient data
– Practice data
– Image information (only for meta data; not the images themselves)

The images themselves are not a part of the ServerManager backup. The must be secured separately.

The backup is saved with hour and date.
With a multi-station installation, the ServerManager can only be accessed on the work station which has been configured as a server.
In addition, the imaging software database can be changed using the ServerManager (for example, when migrating to a new server).
– "53 Starting the ServerManager"
– "54 Creating a manual backup"
– "55 Restoring the backup"
– "56 Configuring the automatic backup"
– "57 Changing the database"

53 Starting the ServerManager

Requirements:
✓ VistaSoft and VistaSoft Inspect have not been started.
› Click on *Start* > *All programs* > *VistaSoft* >*ServerManager*.

54 Creating a manual backup

› Click on *Create new backup*.
During the backup, a dialog window is displayed with a progress bar. A notification in the dialog window is displayed once the backup has been completed.

55 Restoring the backup

Requirements:

✓ VistaSoft and VistaSoft Inspect have been closed on all work stations.

CAUTION

Data loss

All the data generated after the backup is no longer available after the backup has been restored.

› Before restoring the backup, ensure that the new data has been backed up separately.
› Import the new data of the backup restoration separately.

› Click on *Restore the existing backup*.
A dialog window with the list of available backups opens. The backups are marked with date and time.
› Select the backup and click on ***Restore***.
A notification appears once the backup has been restored.

56 Configuring the automatic backup

The automatic backup generates a backup at regular intervals. The interval can be set. VistaSoft and VistaSoft Inspect must be closed on all work stations. We recommend that you select a time for the automatic backup at which you are not working with the software.
The work station on which the backup is generated (server or individual station) must be running at the set time and the Windows service *VistaSoft Service* may not have been closed. (The service starts automatically upon start of the computer).

Set and activate the backup:

› Click on *Configure automatic backup*.
The dialog window opens.
› Click on *Activated*.
› Set the interval and starting time. The figures can be entered via the keyboard or using the arrow keys or the mouse wheel.
The starting time of the next automatic backup is displayed under *Last and next backup*.
› Click on *Activate automatic backup*.
The dialog window is closed.

Deactivating the backup:

› Click on *Configure automatic backup*.
The dialog window opens.
› Click on *Deactivated*.
› Click on *Deactivate automatic backup*.

EN

57 Changing the database

You can use this function to change the database directories. This may be necessary if the database is to be moved to a new server, for example.

Requirements:

✓ VistaSoft and VistaSoft Inspect have been closed on all work stations.

This function is described using the VistaSoft default directories.
The database directory may be different in a user-defined installation.

› Copy the VistaSoftData directory (default: C:\VistaSoftData) from the old server to the new server.
› Click .
› Select or enter the path of the new VistaSoftData directory.
› Click *Next*.
› Check the practice paths and change them as required.
› Click *Apply [Anwenden]*.
The database directories will be changed to the new directory.

Configuration overview

EN

In the configuration the software and connected devices can be configured. The configuration is divided into the following parts:
– "58 Application"
– "59 Units"
– "60 Acquisition types"
– "61 X-ray stations"
– "62 Interfaces"
– "63 Practices"

With a multi-station installation, the software can be configured at any workstation (client). The settings (e.g. X-ray stations, image acquisition types, password) are then available at all workstations.

58 Application

See also:
– "18 Changing the display language"

Under *Application [Anwendung]* you can adjust general settings for the software (e. g. the language used in the software, password protection, dental notation system).
– "58.1 Image cache"
– "58.2 Workstation"
– "58.4 Connection settings"
– "58.5 Logging record"
– "58.6 Safety"
– "58.7 Dental notation"
– "58.8 Licensing"
– "58.9 X-ray stations"

58.1 Image cache

Recorded images that have been lost due to connection problems during the transfer from the workstation to the server can be restored from the image cache. In the image cache settings, the retention period and memory limits can be specified.
The settings for the image caches apply locally to one workstation.

Image cache	
Retention period for X-ray images:	Images that have not been successfully transmitted are always retained in the image cache even if no retention period is defined. If a time is entered under *Retention period for X-ray images*, then all images (successfully and unsuccessfully transmitted) are retained for this additional period in the image cache and then deleted. Examples: – 0 days: The acquired images are immediately deleted once they have been successfully transmitted. – 3 days: After successful transfer, the acquired images are stored for a further 3 days in the image cache and then deleted.

EN

Image cache	
Memory warning limit:	The available memory space is determined each time the imaging software is launched and before any images are imported. If the amount of memory space remaining is below the set memory warning limit, the imaging software will issue a warning in a separate window. Work can continue.
Memory error limit:	The available memory space is determined each time the imaging software is launched and before any images are imported. If the amount of memory space remaining is below the set memory error limit, the imaging software will issue a warning in a separate window. You can carry on working with certain restrictions. You cannot create any images, but you can view existing ones. In addition, you can log in to and out of patient records.

58.2 Workstation

Workstation	
Workstation name:	A name can be assigned to this workstation.
Port for local services:	Port used within the software; it can be changed in the event of any conflicts with other software. Default port: 3114

Advert	
Display scaling:	If a new scale has been selected, the software will now be displayed entirely according to this scale. In the process, all windows, fonts, icons etc. are made larger or smaller. The change is applied without a restart and remains active after a restart.
UI style	Standard: All font styles are used. Narrow: No bold font styles are used (e. g. default for Japan region).
Display language:	The display language can be selected via the selection list. The software needs to be restarted after the change has been made.
GPU-accelerated image display:	If GPU acceleration is enabled then certain calculations are handled by the graphics processor. In some areas, this can make the image appear more quickly. The software needs to be restarted after the change has been made. Minimum system requirements: – Graphic memory ≥ 512 MB – OpenGL 2.1

VistaSoft settings	
Display last registered patients:	If the option is activated, the list of Last logged in patients is displayed in the patient flyout.

EN

Translation	The interface texts in the software can be individually modified if required.
Language:	The language for translation can be chosen via the selection list.
User-defined translations: exporting	An XLIFF file is exported to the desktop by clicking on "Export". This can be adjusted and imported again according to your individual wishes.
User-defined translations: importing	The adjusted XLIFF file can be selected and imported by clicking on "Import".

58.3 Implants

Only implant packages with the file extension ".ddi" can be imported.
In the Download Centre at www.duerrdental.com Dürr Dental offers implant packages from different manufacturers.

Importing implant package...	Implant models can be imported (see "24 Importing implant packages"). They are available in the toolbox *Implants* and can be added to images schematically. The implant models are saved centrally and are available on all the work stations in the practice.

58.4 Connection settings

These settings vary depending on whether the workstation is configured as a client or a server.
Work station configured as **server**:

Server service settings	
Server service port:	Port for communications with the server service. This port is used in single workstation and multi-station installations. Default port: 3114

Work station configured as **Client**:

Server:	IP address of the server
Change server	Opens a dialog window for setting the server connection. Server: IP address of the server Port: server service on which the server is set.

58.5 Logging record

– "Logging record"
– "User notification"

Logging record

After you have clicked on *Protocol settings...[Protokollierung...]* you can change the following settings:

Logging record	
Protocol report level:	Default Simple protocol files are saved.
	Detailed (default setting) Expanded protocol files are saved. These settings must only be enabled by a service technician on demand.

EN

Logging record	
Valid until:	If the protocol level ***Detailed [Detailliert]*** is selected, then this protocol level is maintained until the selected date. Afterwards, the protocol level is automatically reset to the preselected value again.
Maximum file size:	Several protocol files are created automatically. The ***Maximum file size [Maximale Dateigröße]*** determines the maximum size each single protocol file can be.

User notification

Click ***User notifications [Benutzerbenachrichtigungen]*** to display all user notifications. These can be sorted in ascending or descending order according to date or notification content.

58.6 Safety

The software can be password-protected against unauthorised access. Here, use and configuration of the software can be protected with two separate passwords.

Password login:	If this option is enabled, the system will request the login password when the software is launched.
Password configuration:	If this option is enabled, the system will request the configuration password at the following events: – Opening of the configuration – Licensing via the patient data bar – Management of the default image settings (light table menu)

In the case of multi-workstation installations the passwords apply to all workstations.
– "Password settings"

Password settings

Login password settings	Password query during startup of the software (for use)
Previous password:	If the password is to be changed you will need to enter the previous password.
Password protection:	If this option is enabled, the system will request the password when the software is launched. If it is disabled the software will start without asking for a password.
New password:	Enter a new password.
Repeat password:	Re-enter the new password.

Configuration password settings	Password query during opening of the configuration and management of the default image settings (light table menu)
Previous password:	If the password is to be changed you will need to enter the previous password.
Password protection:	If this option is enabled, the system will request the password when the software is launched. If it is disabled the software will start without asking for a password.
New password:	Enter a new password.
Repeat password:	Re-enter the new password.

Have you forgotten your password?
You can request a new password via the hotline of Dürr Dental.

58.7 Dental notation

Go to the selection list to select which dental notation system is to be used:
– FDI (dental notation system of the Fédération Dentaire Internationale)
– UNS (Universal Numbering System)
– Palmer (Zsigmondy-Palmer System)

58.8 Licensing

Without a valid licence key it is possible to use the software in the demo version. Here, 30 patients can be created in the software with full functionality. From the 30th patient a 30-day deadline applies within which further patients can be created. Once this deadline has expired it will no longer be possible to use the software without a valid licence key.
With VistaSoft Inspect, unlimited acceptance tests and partial acceptance tests are possible without a valid licence key in demo mode. A licence key is required for the second consistency check of an X-ray station and for the monitor test.

If you wish to move the server or perform a single workstation installation on a different computer, you will need to request a new licence key (see "7.2 Licensing without a licence key").

Licensing depends on whether or not the licence key is already present:
– If a licence key is already present: "7.1 Licensing with a licence key"
– If a licence key needs to be ordered: "7.2 Licensing without a licence key"

The licence key contains information about the licensed modules. If additional modules are required at a later time, then the licensing process needs to be performed again.
The licensing of a module also includes the licensing of the assigned acquisition types.
The following modules are available:

VistaSoft Basis	Basic software functions
VistaSoft X-ray	Taking an X-ray image (Acquisition types of the Intraoral, Panorama and Cephalometric module classes)
VistaSoft Video	Make a video recording (Acquisition types of the Video and Proof module classes)
VistaSoft MobileConnect	Display images on the Dürr Dental imaging iPad App
VistaSoft Inspect	Configuring and performing the consistency and acceptance checks
VistaSoft 3D	Make, import and display a CBCT recording (Acquisition types of the CBCT module class)
VistaSoft DICOM Starter	Share images with DICOM systems
VistaSoft Implant / Guide	see "7.3 Acquire licence for VistaSoft Implant / Guide"

When working with a multi-station installation, the module VistaSoft 3D is administered as a so-called floating license, so that the licence is only required if a 3D recording has been started, or a 3D recording is opened on the lightbox. Once the patient is logged-out, the licence is released again and can be used on another work station.
In a multi-station installation, the VistaSoft DICOM Starter module is also administered as a floating license, meaning that the licence is only required if the workstation is logged in as a DICOM workstation.

EN

Licence key:	You can enter an existing licence key here.

A new licence key can be ordered via *Purchase new licence key...[Neuen Lizenzschlüssel erwerben...]*.

58.9 X-ray stations

If there is a legal requirement to record X-ray data, then the tick must be placed in the check box (this option is pre-selected, depending on the region selected during the first start). As a result, the X-ray stations need to be manually set up and configured (see "61 X-ray stations").
In addition, various information (investigated part of the body, technical adjustment parameters of the X-ray emitter etc.) need to be entered as specified in the German X-ray directive.
If there is no legal requirement to record X-ray data, then the tick can be omitted. As a result, the matching X-ray stations are automatically created in the background for every device. No further configuration is required for these. During the importing of X-ray exposures, the corresponding device can then be selected.
For example, three X-ray stations are created for the VistaScan Combi View as the device supports three different modes:

- Intra
- Pano
- Ceph

EN

59 Units

See also:
– "21 Adding devices"

A list of all connected devices is displayed in the ***Devices [Geräte]*** configuration.

Devices	
Device	This shows a preview image of the connected device (where present).
Name	Name of the device
Connection	Specifies the connection settings
Connected	Specifies whether the device is currently connected and can be used

How a device is configured depends on the device type:
– "59.1 VistaScan"
– "59.2 VistaCam"
– "59.3 VistaRay"
– "59.4 VistaPano"
– "59.5 VistaVox"
– "59.6 TWAIN device"

If a device is selected in the displayed list, a selection of the following options appears below it:
– Configure
– Manage connection settings

The available sub-menus vary according to which device was marked in the list.
With ***Register network device [Netzwerkgerät registrieren]*** you can connect a device with the software via its IP address.
If the configuration of the device is opened via ***Configure [Konfigurieren]*** then a display of the device and the name of the device are shown.
If the firmware is out of date and needs to be updated a corresponding message is displayed.
Depending on the device type, various submenus for the configuration are displayed underneath this.

59.1 VistaScan

– "Configure"
– "Manage connection settings"

Configure

WARNING

All settings made can have a direct influence on the image quality and the functions of the devices.

› Changes must only be carried out by Dürr Dental or by a company authorised by Dürr Dental.
› Check and, if necessary, correct the changed image quality by importing a test X-ray image.

Depending on the device, some functions may not be available.

– "Acquisition modes"
– "Firmware"
– "Device settings"
– "Oscilloscope"
– "Report"
– "Maintenance"

EN

Acquisition modes

All acquisition modes that are available on the selected device are listed under ***acquisition mode: [Aufnahmemodus:]***. Once you have selected an acquisition mode from the list, you can implement various settings in the tree directory. They vary depending on the connected device and can depend on the installed firmware version.

Duplicate [Duplizieren] is used to create a copy of the image acquisition mode.

You can delete the image acquisition mode by clicking on ***Delete [Löschen]***.

At least one acquisition mode must always be defined. If only the acquisition mode for this device exists then it must not be deleted.

All acquisition modes for a device can be imported or exported (> ***Import Acquisition Modes [Aufnahmemodi importieren]*** or > ***Export Acquisition Modes [Aufnahmemodi exportieren]***).

During the import, any existing acquisition modes are overwritten, new acquisition modes are created additionally.

A folder is created on the desktop during the export.

All acquisition modes of a device can be reset to the default settings (> ***Reset all acquisition modes to default settings [Alle Aufnahmemodi auf Werkseinstellungen zurücksetzen]***).

Firmware

Current firmware files for the device can be found at www.duerrdental.net.

Firmware	
Current version:	The firmware installed on the device is displayed.
New version:	If a new firmware version is selected via ***Select firmware file***, the data for this version is displayed.
Note:	Information concerning the installation and the selected firmware file is displayed (e.g. selected firmware file is older than the one installed on the device; selected firmware file is not compatible with the version installed on the device).
Expected duration:	The expected duration of the update is displayed.

Device settings

All device settings that are available on the selected device are listed under ***Device settings [Geräteeinstellungen]***. In the tree directory, various settings can be adjusted. They vary depending on the connected device and can depend on the installed firmware version.

Device settings	
Standby settings	If this function is activated then the device will switch to standby mode after the selected time.

Oscilloscope

The current ambient brightness or the incidence of extraneous light into the connected device is displayed under ***Oscilloscope [Oszilloskop]***.

Report

The saved report file on the device is displayed under ***Report***. Via ***Export***, the report file is saved under ***C:\ProgramData\Duerr\VistaSoft\Data\DiagnosticLogs*** with the name ***device_reports.log***. This can be forwarded to the support/service technician for diagnosis.

In addition, after the report file has been created, a support file can be created (see "42 Creating a support file"). This then also contains the report file in addition to the log files.

Maintenance

Various device parameters are displayed (depending on the connected device) under ***Maintenance [Wartung]***. They have an actual value display and a target value display. Defective components or malfunctions can be identified with their help. Similarly, various maintenance functions are displayed that can be used to check the function of components.

Manage connection settings

For a connected VistaScan, general connection settings can be queried and changed in the structure tree, e.g. IP address, subnet mask, gateway.

The IP address 2 can be queried and changed under ***Advanced [Erweitert]*** (does not apply to VistaScan Nano). Where possible, this should not be changed as it acts as an "Emergency IP address" if the IP address 1 is lost. The IP address 2 must only be adjusted if there is a conflict with another IP address available in the network. The changed IP address should then be noted and stored by the device. If the IP address 2 is also lost, the device must be reset to the factory settings – this causes all settings to be lost.

59.2 VistaCam

– "Configure"

Configure

– "Firmware"
– "Device settings"
– "Report"
– "Maintenance"

Firmware

NOTICE

Equipment damage from an incorrect firmware update

› Only trained specialists or personnel trained by Dürr Dental may perform a firmware update.

Current firmware files for the device can be found at www.duerrdental.net.

Firmware	
Current version:	The firmware installed on the device is displayed.
New version:	If a new firmware version is selected via ***Select firmware file***, the data for this version is displayed.
Note:	Information concerning the installation and the selected firmware file is displayed (e.g. selected firmware file is older than the one installed on the device; selected firmware file is not compatible with the version installed on the device).
Expected duration:	The expected duration of the update is displayed.

Device settings

All device settings that are available on the selected device are listed under ***Device settings [Geräteeinstellungen]***. In the tree directory, various settings can be adjusted. They vary depending on the connected device and can depend on the installed firmware version.

EN

Acquisition settings	
Camera triggering	Time when the still image is created if the trigger button is pressed: – Upon pressing (preset) – On releasing

Standby settings	
Standby time	Time until automatic switch-off if the camera is not moved. Preset: 2 minutes
Automatic wake-up	The camera switches on as soon as the image acquisition window is opened in the software.

Report

The saved report file on the device is displayed under ***Report***. Via ***Export***, the report file is saved under ***C:\ProgramData\Duerr\VistaSoft\Data\DiagnosticLogs*** with the name ***device_reports.log***. This can be forwarded to the support/service technician for diagnosis.
In addition, after the report file has been created, a support file can be created (see "42 Creating a support file"). This then also contains the report file in addition to the log files.

Maintenance

Various signals can be checked with the aid of a status display under ***Maintenance [Wartung]*** (depending on the connected device).

59.3 VistaRay

– "Configure"

Every VistaRay sensor requires individual calibration data. This data is enclosed with the sensor on a calibration CD and needs to be installed for each sensor.

Configure

WARNING

All settings made can have a direct influence on the image quality and the functions of the devices.

› Changes must only be carried out by Dürr Dental or by a company authorised by Dürr Dental.

› Check and, if necessary, correct the changed image quality by importing a test X-ray image.

Depending on the device, some functions may not be available.

– "Acquisition modes"
– "Report"

Acquisition modes

All acquisition modes that are available on the selected device are listed under ***acquisition mode: [Aufnahmemodus:]***. Once you have selected an acquisition mode from the list, you can implement various settings in the tree directory. These vary depending on the connected device.
Duplicate [Duplizieren] is used to create a copy of the image acquisition mode.
You can delete the image acquisition mode by clicking on ***Delete [Löschen]***.
At least one acquisition mode must always be defined. If only the acquisition mode for this device exists then it must not be deleted.
All acquisition modes for a device can be imported or exported (> ***Import Acquisition Modes [Aufnahmemodi importieren]*** or > ***Export Acquisition Modes [Aufnahmemodi exportieren]***).

EN

During the import, any existing acquisition modes are overwritten, new acquisition modes are created additionally.
A folder is created on the desktop during the export.
All acquisition modes of a device can be reset to the default settings (> *Reset all acquisition modes to default settings [Alle Aufnahmemodi auf Werkseinstellungen zurücksetzen]*).

Report

The saved report file on the device is displayed under ***Report***. Via ***Export***, the report file is saved under ***C:\ProgramData\Duerr\VistaSoft\Data\DiagnosticLogs*** with the name ***device_reports.log***. This can be forwarded to the support/service technician for diagnosis.
In addition, after the report file has been created, a support file can be created (see "42 Creating a support file"). This then also contains the report file in addition to the log files.

59.4 VistaPano

– "Configure"
– "Manage connection settings"

Configure

WARNING

All settings made can have a direct influence on the image quality and the functions of the devices.

› Changes must only be carried out by Dürr Dental or by a company authorised by Dürr Dental.
› Check and, if necessary, correct the changed image quality by importing a test X-ray image.

Depending on the device, some functions may not be available.

– "Device settings"
– "Report"
– "Maintenance"

Device settings

All device settings that are available on the selected device are listed under ***Device settings [Geräteeinstellungen]***. In the tree directory, various settings can be adjusted. They vary depending on the connected device and can depend on the installed firmware version.

Panoramic settings	
Accept S-PAN image automatically	If this function is enabled then only the S-PAN image is transmitted to VistaSoft. If this function is disabled then the S-PAN image and the standard image are transmitted to VistaSoft. During import you will then need to decide which image is to be saved in VistaSoft. The other image is then discarded.
Use patient type 'Child' until the age of	The age up to which the patient type 'Child' can be used during image acquisition can be adjusted.

Report

The saved report file on the device is displayed under ***Report***. Via ***Export***, the report file is saved under ***C:\ProgramData\Duerr\VistaSoft\Data\DiagnosticLogs*** with the name ***device_reports.log***. This can be forwarded to the support/service technician for diagnosis.
In addition, after the report file has been created, a support file can be created (see "42 Creating a support file"). This then also contains the report file in addition to the log files.

EN

Maintenance

You can launch the configuration programs AISU and DDIPS by going to ***Maintenance [Wartung]*** and then ***Calibration [Kalibirierung]*** in the structure tree. These programs are described in detail in the installation instructions for the device.

Manage connection settings

With a VistaPano connected, general connection settings for the connected device can be queried and changed in the structure tree, e.g. operating mode.

59.5 VistaVox

– "Configure"

Configure

WARNING

All settings made can have a direct influence on the image quality and the functions of the devices.

› Changes must only be carried out by Dürr Dental or by a company authorised by Dürr Dental.

› Check and, if necessary, correct the changed image quality by importing a test X-ray image.

Depending on the device, some functions may not be available.

– "Report"

Report

The saved report file on the device is displayed under ***Report***. Via ***Export***, the report file is saved under ***C:\ProgramData\Duerr\VistaSoft\Data\DiagnosticLogs*** with the name ***device_reports.log***. This can be forwarded to the support/service technician for diagnosis.

In addition, after the report file has been created, a support file can be created (see "42 Creating a support file"). This then also contains the report file in addition to the log files.

59.6 TWAIN device

– "Configure"

Configure

WARNING

All settings made can have a direct influence on the image quality and the functions of the devices.

› Changes must only be carried out by Dürr Dental or by a company authorised by Dürr Dental.

› Check and, if necessary, correct the changed image quality by importing a test X-ray image.

Depending on the device, some functions may not be available.

– "Device settings"

– "Report"

Device settings

Under ***Device settings [Geräteeinstellungen]*** you will see a listing of all of the device settings. In the tree directory, various settings can be adjusted.

TWAIN settings	
Intraoral:	If the TWAIN source supplies an "intra" image, then a tick needs to be checked next to *Intraoral:*. Multiple selection is possible.
Panorama:	If the TWAIN source supplies a "pano" image, then a tick needs to be checked next to *Panorama:*. Multiple selection is possible.
Cephalometric:	If the TWAIN source supplies a cephalometric image, then a tick needs to be checked next to *Ceph: [Cephalometrie:]*. Multiple selection is possible.
Serial number	The serial number of the TWAIN source must be entered.
Item number:	The item number of the TWAIN source must be entered.

Report

Under *Report* you will see the report file of the TWAIN source. Via *Export*, the report file is saved under *C:\ProgramData\Duerr\VistaSoft\Data\DiagnosticLogs* with the name *device_reports.log*. This can be forwarded to the support/service technician for diagnosis.
In addition, after the report file has been created, a support file can be created (see "42 Creating a support file"). This then also contains the report file in addition to the log files.

EN

60 Acquisition types

See also:
– "23.1 Configuring image acquisition types"

In the upper area, the last used image acquisition types for X-rays and video are displayed.
All available image acquisition types in the current configuration are displayed under ***Image acquisition types [Aufnahmetypen]***. Only the image types for the licensed modules (X-ray and video) are displayed (see "7 Licensing").
Click on an image acquisition type to select it and then click ***Configure [Konfigurieren]***. The configuration of the acquisition type can be adjusted to the individual requirements here (see "60.1 Configure").

60.1 Configure

Mode class:	Each image acquisition type is assigned to a mode class. The mode classes group the image acquisition types e.g. into in intraoral images (*Intra*) or panoramic images (*Pano*).
Acquisition source:	*Last acquisition source used* The last used X-ray station is entered automatically when using the image acquisition type.
	Manually selected acquisition source The X-ray station to be used must be manually selected when using the image acquisition type.
	All created X-ray stations are displayed in the list. The X-ray stations marked as favourites appear first in the list. If an X-ray station is selected, this X-ray station is automatically entered when the image acquisition type is used.
Acquisition mode:	*Last mode used* The last used mode is entered automatically when using the image acquisition type.
	Default mode The default mode for the image acquisition type is entered automatically when using the image acquisition type.
Favourite:	If an image acquisition type is marked as a favourite, then it appears as a button in the menu bar, from where it can be used directly.

EN

61 X-ray stations

If there is a legal requirement for recording X-ray data then the process will depend on the image acquisition device:

– "Creating an X-ray-station using the wizard"
  – VistaPano S
  – VistaPano S Ceph
  – VistaVox S
  – VistaVox S Ceph
– "Creating an X-ray-station manually"
  – All VistaScan devices
  – VistaRay
  – Cephalometric/panoramic devices without digital image receiver (e.g. with image plate)
  – TWAIN devices

If there is no legal requirement for the recording of X-ray data, the option ***Create X-ray stations manually [Röntgenplätze manuell anlegen]*** can be deactivated in ***Configuration [Konfiguration]*** > ***Application [Anwendung]***. As a result, the X-ray station will be automatically created in the background when a device is created, and no further configuration is required (see "Automatic creation of X-ray stations").
See also:

– "22.1 Creating an X-ray station"
– "22.2 Configuring an X-ray station"
– "22.4 Deleting an X-ray station"

A list of all the created X-ray stations is displayed in the ***X-ray stations [Röntgenplätze]*** configuration.
The list shows the following properties of the X-ray stations:

Designation	Name of the X-ray station, can be changed in ***Configure***.
User	User of the X-ray station, can be changed in ***Configure***.
Category	X-ray emitter category (e.g. intraoral)
Favourite	This X-ray station is displayed first in the selection list when the X-ray image acquisition is started.
Default adoption workstation:	Workstation that automatically accepts a new job.

The list can be sorted by clicking in the headline of the corresponding column.
The following settings are possible:

– "61.1 Configure"
– "61.2 Parameters"
– "61.3 Image processing"
– "61.4 Task management"
– "61.5 Delete"

61.1 Configure

General information	
Designation:	Name of the X-ray station All X-ray stations must be clearly and uniquely named. A designation must not be used more than once.
Operator:	Name of the owner/operator
Address:	Address of the owner/operator

EN

X-ray emitter	
Selection	Selection list showing the created X-ray emitters. A new X-ray emitter can be created by clicking ***Create X-ray emitter... [Röntgenstrahler anlegen...]***. You can click on ***Configure [Konfigurieren]*** to change the configuration of an X-ray emitter that has already been created. The category (e.g. intraoral) cannot be changed. You can delete an X-ray emitter via ***Delete [Löschen]*** provided it is not being used by an X-ray station.

Image acquisition device	
Device:	Selecting a device from the selection list
Magnification:	Magnification depends on the X-ray emitter and the assigned image type. The value must be between 1.0 and 10.0. When you select an X-ray emitter, a default value is suggested: – Intra: 1.05 – Pano: 1.25 – Ceph: 1.1

61.2 Parameters

Depending on the image acquisition device and the X-ray emitter assigned to the X-ray station, different suggested values can be defined for the X-ray parameters for each image acquisition type. It makes the work easier if the X-ray exposures are always taken with the same values. The X-ray parameters are automatically saved with the image information (see "35.1 Importing X-ray images with VistaScan"). They can be adjusted here as required. The proposed values for the X-ray parameters are only entered automatically for the first image. If there are further images from the same image acquisition then the X-ray parameters can be copied from the first image with ***Apply values [Werte übernehmen]*** or they can be manually entered.

When configuring the various acquisition types, you can apply the values from another X-ray station that uses similar or identical values. This saves you the trouble of entering each value separately since you only need to change those values that are different. To do so, go to the area in the lower section labelled ***Apply Parameters from this X-ray Station: [Parameter von diesem Röntgenplatz übernehmen]:***, then select the X-ray station whose values you wish to use and click ***Apply [Übernehmen]***.

61.3 Image processing

For every image created with this X-ray station the predefined image processing steps are performed automatically.

The image processing steps can be changed on the light table and saved (see "37.2 Managing default image settings"). The values are only displayed in the configuration.

You can click on ***Restore default settings [Werkseinstellungen wiederherstellen]*** to reset any changes made in the image processing steps.

Filter	
Selected filter:	Predefined filters that support diagnosis (see "Filter")

Windowing	Settings for image corrections and histogram
Limit white:	Percentage of greyscales converted to white
Limit black:	Percentage of greyscales converted to black
Brightness:	Brightness of the image

Windowing	Settings for image corrections and histogram
Contrast:	Contrast of the image
Gamma:	< 1: Bright areas become darker > 1: Dark areas become brighter

Display	
Mirroring:	Horizontal or vertical inversion of the image

Annotation	
Edge mask:	Image masking, the area outside the mask is hidden
Greyscale:	Colour of the edge mask; choose between 0 (black) and 255 (white)

61.4 Task management

Default adoption workstation:	If a work station has been selected from the selection list, the work station automatically accepts the job. With jobs for images with VistaPano or VistaVox, the unit goes directly into recording readiness.

61.5 Delete

› Select the required X-ray station in the list.
› Click *Delete [Löschen]*.
› Confirm the deletion in the dialog window.

EN

62 Interfaces

Under *Interfaces* you can activate and configure the interfaces e.g. to the practice management system.

It is recommended that the practice management system is configured first.

VDDS media	**Data exchange with practice management system via VDDS media interface**
Use VDDS:	If this option is enabled, patient data can be transmitted from a practice management system and images can be transferred back to the practice management system.
Referenced practice management system:	Select this via the selection list of the practice management system used.
Support level 6 (call of the import module):	If this option is enabled then changes made to an image will be automatically transferred to the practice management system.

Patient import	**Direct copying of patient data from the practice management system**
Import path:	Import directory for patient data in the patimport.txt format. This path must be specified as an export path in the practice management system.

Image export	**Exports the images into directories and sends them to the practice management system**
Auto export X-ray:	If this option has been activated, the X-ray images that have been imported, along with the relevant patient data, will automatically be saved to a defined directory.
Auto export video:	If this option has been activated, the video images that have been created, along with the relevant patient data, will automatically be saved to a defined directory.
Image export modes...	Opens the configuration for the image export modes [Bildexport-Modi] (see "Image export modes...").

DICOM	**Data exchange via the DICOM interface**
DICOM workstation:	Defines the workstation as a DICOM workstation. This allows the DICOM functionality to be used on this workstation (see "27.1 Defining workstation as a DICOM workstation").
DICOM partners...	Opens the configuration of the DICOM partners (see "27.2 Configuring the RIS connection" and "27.3 Configuring the PACS connection").
RIS query...	Opens the configuration of the RIS query (see "Configuring the RIS query").
Assignment of acquisition types...	DICOM attributes can be assigned to certain acquisition types in the imaging software (see "27.4 Assigning DICOM attributes to certain acquisition types").
Show job list...	Specifies which attributes are to be displayed in the job list (see "27.5 Customising the job list").

EN

Task management	Job management settings
Finish job:	Specifies what happens to a job in progress if the patient is logged out or if another job is started. – Always ask – Finish automatically – Pause automatically – Finish if image acquired
Retention period for data of a finished job:	Specifies for how many days the job data (not the image or patient data) of a finished job will be retained.

62.1 Image export

Image export modes...

A number of different image export modes can be set, defining the image status, file format and export path. Some image export modes are set by default and can be modified.
The image export modes are saved practice-specifically for all workstations.
The image export mode can be selected during image export in the light table menu and in the image inspector under *Multiple selection [Mehrfachauswahl]*. In addition to the configured image export modes, images can also be individually exported with the user-defined export.
Auto export [Autoexport] defines which image files are to be exported when logging out of a patient record or when exporting images manually. To do this, the image export interface must be configured accordingly (see "62 Interfaces"). If the *Diagnosis [Diagnose]* image status has been set, auto exporting will only be performed if a diagnosis has been saved and the image view that goes with it is present.
When you click on an image export mode in the list displayed, the following options will appear below it:
– *Configure [Konfigurieren]*: Allows you to display and change settings for the highlighted mode (see "Configure").
– *Duplicate [Duplizieren]*: Duplicates the mode.
The details for the duplicated mode can then be modified.
– *Delete [Löschen]*: Deletes the highlighted image export mode.

Configure

The settings for the highlighted export mode can be displayed and changed under *Configure [Konfigurieren]*.

Configuration	
Name:	A name can be assigned to this export mode.
Destination type:	Go to the selection list to choose whether the software is to export an image file or a DICOMDIR file.
File path:	The software exports the selected image to this path. Go to the *Placeholder [Platzhalter]* selection list to add predefined placeholders (e. g. patient name) to the file path. The software then adds the corresponding values to the file path. As the export modes are applied to all workstations, we recommend also using the placeholders in the file path. This ensures that the stated file paths work on all workstations. Go to *Preview [Vorschau]* to see an example of how the file path and file name will look when you export images. The placeholder *%DiscWriter%* is used to save the data to a burning directory for a CD/DVD. The actual burning process then needs to be started using separate disc burning software.

EN

Configuration	
File name:	Go to the *Placeholder [Platzhalter]* selection list to add predefined placeholders (e. g. patient name) to the file name. The software then adds the corresponding values to the file name. We recommend separating the placeholders with underscores. This makes the file name easier to read.
Preview:	A preview is shown as an example of how the file path and file name will look with the settings you have chosen.
Image state:	Go to the selection list to set how the image is to be exported. – Current [Aktuell]: The image will be exported in its current status. – Original image [Erstansicht]: The image will be exported as it was originally recorded, irrespective of how it has been edited since being recorded. – Last change [Letzte Änderung]: The image will be exported as it is after the most recent change. – Diagnosis: The image will be exported in the image view for which an indication has been entered.
2D X-ray format:	The export format for the 2D X-ray images can be set via the selection list.
3D X-ray format:	The export format for the 3D X-ray images can be set via the selection list. DICOM: DICOM data record DICOM series: individual layer images of the DICOM data record DICOM 2D view: screenshot of the panoramic view
Video format:	Go to the selection list to set the export format for the video recordings.
Anonymization of the data:	Removes all personal data during export, making it impossible to match the image to a patient.
Auto export:	If the checkbox is ticked then this image export mode is made available as the automatic export option. Auto exporting for videos or X-rays also needs to be enabled under *Interfaces [Schnittstellen]* for this.
Expand existing DICOMDIR:	An existing DICOMDIR directory is expanded with the new data instead of deleting the directory and re-creating it.
Embed viewer	DICOM viewing software is also exported into the DICOMDIR directory.

62.2 DICOM

DICOM partners...

See also:
– "27 Configuring the DICOM interface"

A list of all the created DICOM partners is displayed in the *DICOM Partners... [DICOM-Partner...]* configuration.

Name:	Display name for the RIS/PACS connection.
Role:	Shows whether the connection is an RIS or a PACS connection
Partner AE Title:	AE Title of the DICOM partner

EN

Own AE Title:	AE Title of workstation Either the automatically generated name or a user-defined name may be selected.
Host:	IP address or host name of DICOM partner
Port:	Port of DICOM partner

If a DICOM partner is marked in the displayed list, options for selection will appear underneath that may include the following:
– "Configure"
– Delete (see "Deleting RIS partners" or "Deleting PACS partners")

Configure
The settings for the highlighted DICOM partner can be displayed and changed under *Configure [Konfigurieren]*.

General settings	
Name:	Display name for the RIS/PACS connection.
Role:	You can use the selection list to choose whether an RIS or a PACS connection is to be established to the DICOM partner.
Partner AE Title:	DICOM Application Entity Title (AE Title) set for the DICOM partner.
Own AE Title	DICOM Application Entity Title (AE Title) of this workstation.
Host:	IP address or host name of DICOM partner.
Port:	Port of DICOM partner.
Connection test (C-ECHO):	Starts a connection test to the DICOM partner.

Transfer settings (only for PACS)	
Image state:	The selected image state will be exported. For explanations of the image states, see "Image export modes...".
2D X-ray format:	2D X-ray images are always exported in the DICOM format. The format cannot be changed.
3D X-ray format:	The export format for the 3D X-ray images can be set via the selection list. For explanations of the image states, see "62.1 Image export".
Video format:	Go to the selection list to set the export format for the video recordings.
Anonymization of the data:	Removes all personal data during export, making it impossible to match the image to a patient.
Send automatically:	The imaging software will transfer the recorded images automatically to the PACS as soon as the job is finished. Otherwise the images must be transferred manually to the PACS (see "32.5 Transferring an image to PACS".

RIS query...
The settings for the highlighted DICOM partner can be displayed and changed under *Configure [Konfigurieren]*.

EN

RIS query	
RIS partner:	The selection list can be used to select an RIS partner. The job list is queried from this RIS partner. If no RIS partner has yet been created, see "Configuring the RIS query".
AE Title:	DICOM Application Entity Title (AE Title) for which the job has been planned. *Any [Beliebig]* means: All jobs
Type of device:	The selection list can be used to select a device type for which jobs have been created. The following device types are available for selection: – Any – IO (Intra-Oral Radiography) – CR (Computed Radiography) – PX (Panoramic X-Ray) – CT (Computed Tomography) – DX (Digital Radiography) – XC (External Camera Photography) – User-defined *Any [Beliebig]* means: All jobs *User-defined [Benutzerdefiniert]* means: At least one user-defined device type must be entered into the text field.
Attending doctor:	Name of person scheduled to perform job.
Start date:	Narrows the search to jobs planned for a certain date or date interval.
Maximum number of elements:	Maximum number of jobs displayed.
Automatic update:	If the function is set to *At Regular Intervals [In regelmäßigen Abständen]*, then you must set an interval (in minutes). This will cause the selection list to be updated at the defined interval.

Assignment of acquisition types...

See also:
– "27.4 Assigning DICOM attributes to certain acquisition types"

The imaging software allows you to assign certain DICOM attributes to an acquisition type (for instance DICOM attribute *IO* to the acquisition type *Intra*). Depending on the configuration of the imaging software, this will cause acquisition to begin directly using the appropriate acquisition type.
If no appropriate assignment is found, or if no assignment has been made, the standard assignment will be used:

DICOM attribute	Meaning	Acquisition type
No DICOM attribute present		Undefined
OT	Other type	
CR	Computed Radiography	
DX	Digital Radiography	
DICOM attribute is not one of the attributes below		
IO	Intra-Oral X-ray	Intraoral

DICOM attribute	Meaning	Acquisition type
XC	External Camera Photography	Video
ES	Endoscopy	Video
PX	Panoramic X-ray	Panoramic Standard
CT	Computed Tomography	CBCT

Show job list...

See also:

– "27.5 Customising the job list"

When working with DICOM jobs, you can configure which DICOM attributes are to be displayed in the job list.

List	The attribute is shown as a column in the job list
Details	The attribute is shown in the *DICOM* area when a job is selected
Hidden	The attribute will not be displayed

62.3 Task management

Automatic finishing of job:	Specifies what happens to the jobs when they are closed. – *Ask [Nachfragen]*: The imaging software asks whether the job should be paused or finished. – *Finish automatically [Automatisch abschließen]*: The job will be automatically finished when it is closed (due to patient change, program termination or start of another DICOM job, for example). – *Mark as paused [Als pausiert markieren]*: The job will be automatically paused when it is closed (due to patient change, program termination or start of another DICOM job, for example). – *Finish when images have been acquired*: The job will be automatically finished when images are present.
Delete finished or cancelled jobs after:	Specifies how many days the system will wait before deleting finished or cancelled jobs.
Standard selection list:	Specifies which selection list will be opened by default (when launching the imaging software, for example). – *Patients [Patienten]*: The *Select patient [Patient auswählen]* flyout will be opened by default. – *Jobs*: The *Jobs [Aufträge]* flyout will be opened by default (practical when using DICOM).

62.4 External application settings

External application settings	
Name:	Any name you desire for the external application
Path:	Path to EXE file of the external application

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External application settings	
Parameters:	Parameters that are to be passed on to the external application along with the image. – Patient ID – Patient surname – Patient first name – Date of birth (system based) – Date of birth (yyyymmdd) – Path to image – Path to folder Multiple parameters can be selected here. Clicking on a further parameter will automatically add it to the existing parameters. As a minimum, the parameters "*%PathToFile%*" or "*%PathTo-Folder%*" must be selected.
Image state:	Go to the selection list to set how the image is to be exported. – Current [Aktuell]: The image will be exported in its current status. – Original image [Erstansicht]: The image will be exported as it was originally recorded, irrespective of how it has been edited since being recorded. – Last change [Letzte Änderung]: The image will be exported as it is after the most recent change. – Diagnosis: The image will be exported in the image view for which an indication has been entered.
2D X-ray format:	The export format for the 2D X-ray images can be set via the selection list.
3D X-ray format:	The export format for the 3D X-ray images can be set via the selection list. DICOM: DICOM data record DICOM series: individual layer images of the DICOM data record DICOM 2D view: screenshot of the panoramic view
Video format:	Go to the selection list to set the export format for the video recordings.
Anonymization of the data:	Removes all personal data during export, making it impossible to match the image to a patient.

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63 Practices

See also:
- "20.1 Create practice"
- "20.2 Configuring the practice"
- "20.3 Deleting a practice"

A list of all the created practices will be displayed in the ***Practices [Praxen]*** configuration. The settings for a practice can be changed via "63.1 Configure".

63.1 Configure

General information	
Name:	Name of the practice Every practice must be clearly and uniquely named. A designation must not be used more than once.
Address:	Address of the owner/user

Settings	
Use retention period for X-rays:	If the retention period for X-ray images has been activated, the X-ray images cannot be deleted until the retention period entered has expired.
Retention period for X-ray images:	Period during which the acquired X-ray images cannot be deleted. The X-ray images cannot be deleted until the retention period has expired. The retention starts when the patient reaches his or her 18th year. X-ray images cannot be deleted before this. Some countries have a legally defined retention period for X-ray images. Example: In Germany a retention period of 10 years applies. The X-ray image for a 16-year old patient cannot be deleted until a period of 12 years has elapsed.
Mandatory fields:	Via the selection list you can choose whether the ***Patient number [Patientennummer]*** or ***Name and date of birth [Name und Geburtsdatum]*** are mandatory fields. When a new patient record is created, the mandatory fields must always be completed. If this is not done, the patient record cannot be created.
Allow changes to image acquisition date:	If this check box is ticked the image acquisition date can be changed retrospectively.
X-ray parameters are mandatory entries:	If this checkbox is enabled, then the X-ray parameters must be entered during the X-ray exposure.
Import warning for images from external sources:	If the check box is ticked, then when an imported image is opened on the light table a warning is displayed to show that the image was created with an external device.

Database	
Storage format:	Newly acquired or imported images can be saved without compression or with lossless compression. When creating a new practice the default setting is ***No compression [Keine Komprimierung]***. This makes the saving and loading of images noticeably faster.

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Database	
Warning limit for memory space:	The available memory space for the database is determined every time the software is launched. If the amount of memory space remaining has fallen below the set warning threshold, the software will issue a warning in the form of a pop-up. Work can continue. The value is determined according to the additional device components that are installed and is preset.
Error limit for memory space:	The available memory space for the database is determined every time the software is launched. If the amount of memory space remaining has fallen below the set error threshold, the software will issue a warning in the form of a separate window. You can carry on working with certain restrictions. You cannot create any images, but you can view existing ones. In addition, you can log in to and out of patient records. The value is determined according to the additional device components that are installed and is preset.
Database path:	This shows the path under which the database has been installed.
Image path:	This shows the path under which the images are saved.
DBSWIN X-ray path:	This is only visible if data has been imported from a DBSWIN installation. This shows the path in which the DBSData X-ray images from DBSWIN are located. If the *DBSData* folder is moved, the path can be adjusted here.
DBSWIN video path:	This is only visible if data has been imported from a DBSWIN installation. This shows the path in which the DBSData X-ray images from DBSWIN are located. If the *DBSData* folder is moved, the path can be adjusted here.

Patient search	
Search mode:	Immediately: The search results are displayed immediately after the input is made Upon confirmation: The search results are displayed only after the enter key is pressed or after clicking 🔍.

Patient data	
Patient details form:	For Japan, special fields of patient data are stored and can be activated here, e.g. prefecture, Japanese date of birth format. In addition, depending on the text field, the imaging software switches the input method of Windows automatically to alphanumerical, Hiragana or Katakana.
Patient birth date format:	Date (short): displays short date, e. g. 08.04.1975 Date (long): Long date will be shown, e.g. Tuesday, 08 April 1975, or for the region of Japan

63.2 Cloud settings

Cloud settings	
E-mail:	Email address to be used for accessing the cloud.
Password:	Password for cloud access.

Cloud settings	
Reset password:	A cloud web page will open with instructions on how to reset your password.
Link:	Once an email address and a password have been entered, the practice will be able to connect to the cloud (see "28.2 Linking a practice with an existing cloud account").
Unlink:	The link between the practice and the cloud will be removed (see "28.4 Unlinking the cloud account").

63.3 Delete

It is generally possible to delete practices once they have been created.
A practice can only be deleted if the following requirements are met:

– No patient data present
– No user logged into this practice
– At least one other practice remains in the system after deleting

› Select the practice you wish to delete.
› Click ***Delete [Löschen]***.
› Click ***Delete [Löschen]*** to confirm that you want to delete the practice.

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Troubleshooting

– "64 Tips for operators and service technicians"

64 Tips for operators and service technicians

Error	Possible cause	Remedy
Practice cannot be deleted	User is logged in at this practice	› Log out all users from the practice.
	Patient data available for the practice	› Delete all patient data for the practice, save if necessary.
	Only this practice has been set up in the software. At least one practice must be set up.	› Create a new practice. Then the practice can be deleted.
The device is not displayed in the list of devices	Device is not connected to the network/workstation	› Check the connection, if necessary reconnect.
	Unit not switched on	› Switch on the device.
	An additional component for the corresponding device is not installed.	› Install the additional component, see "21.2 Installing additional components".
Transmission of an image from VistaVox to the software was unsuccessful	Reconstruction failed or software crashed.	› Restart the imaging software. › Start image recovery.

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Appendix

65 Tips for service technicians

The following descriptions are intended solely for service technicians.

65.1 Moving the DBSData directory

In order to simplify the data backup process, the DBSData directory of DBSWIN can be moved with the aid of the Server Manager to the VistaSoftData directory of VistaSoft. The DBSData directory was not changed during the migration of data to VistaSoft.
There are generally two options:
– "Moving the DBSData directory to a different server"
– "Moving the DBSData directory to a different location on the same server"

Moving the DBSData directory to a different server

Moving the DBSData directory

The following conditions must be fulfilled in order to successfully move the DBSData directory:
✓ No DBSWIN client started

The process of moving the DBSData directory refers to a standard installation of DBSWIN and VistaSoft. In some cases the individual paths may differ from the actual installation.

› Launch the Server Manager via *Start* > *All programs [Alle Programme]* > *Duerr Dental* > *DBSWIN* > *Server Manager* on the computer acting as the DBSWIN server.
› Click .
› Click .
The database is deactivated.
› Click .
› Click .
› Under *Local path: [Lokaler Pfad:]* enter the local path of the VistaSoftData directory (default: C:\VistaSoftData) or a subfolder you have created yourself and click *OK* to confirm. The local path is copied and the global path is automatically entered.
› Click *OK* to adopt the settings.
› Click .
The database is activated again.

Adjusting paths in VistaSoft

› Launch VistaSoft on the computer acting as the server.
If VistaSoft has been configured for a single workstation, start the single workstation installation.
› Click .
› Click *Practices [Praxen]*.
› Select the required practice.
› Click *Configure [Konfigurieren]*.

The following paths apply to a standard installation of DBSWIN with one practice.

› In the *Database [Datenbank]* area under *DBSWIN X-ray path: [DBSWIN Röntgenpfad:]* enter the new path to the directory within the moved DBSData directory that contains the X-ray images (C:\DBS\DBSData\pr1\XrayImg).
› In the *Database [Datenbank]* area under *DBSWIN video path: [DBSWIN Videopfad:]* enter the new path to the directory within the moved DBSData directory that contains the video images (C:\DBS\DBSData\pr1\VidImg).
› Restart VistaSoft.

Adjusting paths in DBSWIN

Once the DBSData directory has been moved DBSWIN can be uninstalled. If you wish to continue using DBSWIN, the new server needs to be changed in DBSWIN.
› Launch DBSWIN on the computer acting as the server.
› Display the configuration via *Options [Optionen]* > *Display configuration [Konfiguration anzeigen]*.
› Open the connection settings via *Configuration [Konfiguration]* > *Change server [Server wechseln]*.
› Enter the IP address and the port of the new server.

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› Click *Connect [Verbinden]*.
DBSWIN searches for the DBSData directory on the new server. When the directory is found, a green dot appears under *Connect [Verbinden]*. The connection has been established.
› Click *OK* to save the settings.
› Launch DBSWIN on all clients.
DBSWIN shows that no connection to the server can be established.
› Enter the IP address and the port of the new server.
› Click *Connect [Verbinden]*.
DBSWIN searches for the new server. When the directory is found, a green dot appears under *Connect [Verbinden]*. The connection has been established.
› Click *OK* to save the settings.

Moving the DBSData directory to a different location on the same server

Moving the DBSData directory

The following conditions must be fulfilled in order to successfully move the DBSData directory:
✓ No DBSWIN client started

The process of moving the DBSData directory refers to a standard installation of DBSWIN and VistaSoft. In some cases the individual paths may differ from the actual installation.

› Launch the Server Manager via *Start* > *All programs [Alle Programme]* > *Duerr Dental* > *DBSWIN* > *Server Manager* on the computer acting as the DBSWIN server.
› Click .
› Click .
The database is deactivated.
› Click .
› Click .
› Under *Local path: [Lokaler Pfad:]* enter the local path of the VistaSoftData directory (default: C:\VistaSoftData) or a subfolder you have created yourself and click *OK* to confirm. The local path is copied and the global path is automatically entered.
› Click *OK* to adopt the settings.
› Click .
The database is activated again.

Adjusting paths in VistaSoft

› Launch VistaSoft on the computer acting as the server.
If VistaSoft has been configured for a single workstation, start the single workstation installation.
› Click .
› Click *Practices [Praxen]*.
› Select the required practice.
› Click *Configure [Konfigurieren]*.

The following paths apply to a standard installation of DBSWIN with one practice.

› In the *Database [Datenbank]* area under *DBSWIN X-ray path: [DBSWIN Röntgenpfad:]* enter the new path to the directory within the moved DBSData directory that contains the X-ray images (C:\DBS\DBSData\pr1\XrayImg).
› In the *Database [Datenbank]* area under *DBSWIN video path: [DBSWIN Videopfad:]* enter the new path to the directory within the moved DBSData directory that contains the video images (C:\DBS\DBSData\pr1\VidImg).
› Restart VistaSoft.

66 Abbreviations used

Abbreviation	Explanation
AE	Application Entity The Application Entity is a functional component within a system that is a user and/or provider (SCU/SCP) of one or more DICOM services. Every AE uses a unique AE Title for identification.
DICOM	Digital Information and Communications in Medicine Open standard governing the storage and exchange of information in medical image data management
RIS	Radiology Information System Electronic data processing system for the documentation and management of medical and administrative data in the field of radiology
PACS	Picture Archiving and Communication System Picture archiving and communication system built on computers and networks
SCP	Service Class Provider Defines the DICOM services and their role as server
SCU	Service Class User Defines the DICOM services and their role as client

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