

# SIDEXIS XG

Operator's Manual / Version 2.5.x

**English**



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# 1 Introduction

## Explanation

This manual provides instructions and information on the use of the SIDEXIS digital radiography and video system. It contains comprehensive instructions on how to use the software, as well as an introduction to the exposure technique and the possibilities of visualization and analysis of digital X-ray and video exposures.

## Important note

### NOTICE

Make sure that all national requirements are observed when using SIDEXIS XG,  
for example, the German X-Ray Ordinance (RöV) (see section "Constancy test" [→ 136]).

## 1.1 Components of the SIDEXIS XG system

### NOTICE

Please refer to the pertinent manuals for a detailed description of the individual hardware components as well as of the entire system.

## General components

- PC with monitor, mouse, keyboard, connection cables, pre-installed operating system software and manuals (when using a kit solution, this type of PC is required)
- SIDEXIS XG software (already pre-installed on the PC or supplied on CD-ROM) with manual
- Warranty passport

## Intraoral X-ray components

- XIOS
- XIOS Plus
- Wall-mounted X-ray box for image acquisition
- PC slide-in module for image acquisition
- USB X-ray box
- Two X-ray sensors: Full Size and Universal, each with disk and hygiene protection sleeves
- Holder set from RINN

## Panoramic and Ceph X-ray components

- ORTHOPHOS Plus DS
- ORTHOPHOS Plus DS Ceph
- ORTHOPHOS 3 DS,
- ORTHOPHOS XG <sup>Plus</sup> DS
- ORTHOPHOS XG <sup>Plus</sup> DS Ceph
- ORTHOPHOS XG 3
- ORTHOPHOS XG 5, including Ceph

**3D X-ray**

- ORTHOPHOS XG 3D ready, including Ceph
- ORTHOPHOS XG 3D, including Ceph
- GALILEOS
- GALILEOS GAX 5

**Video components**

- SIROCAM video camera with foot switch and hygienic protective sleeves
- Optional video camera for extraoral exposures (with full-face camera)
- Video acquisition card / frame grabber including card software (installed in PC)

**Existing systems**

You can also continue using the following components with existing systems:

- X-ray sensor with holders, diskette and hygienic protective sleeves
- XIO intraoral X-ray image acquisition card (installed in PC / **NOTE:** No support for Windows 7.)
- Optional front-end sensor connection
- Optional adapter box with cable for multiroom X-ray operation
- XOP panoramic X-ray image acquisition card (installed in PC / **NOTE:** No support for Windows 7.)

## 1.2 General notes on the use of SIDEXIS XG

**Intended use**

SIDEXIS XG is a software package for the personal computer (PC) which provides the working environment for generating, managing, archiving and analyzing digital X-ray and video exposures and enables the transmission of images via LAN/WAN and by e-mail.

### CAUTION

SIDEXIS XG must not be used for implant planning!

The workspace displayed on the monitor makes use of the user-friendly MS Windows graphical interface. The dialog boxes have been designed according to ergonomic findings.

**Some special ergonomic features of SIDEXIS XG.**

- Information  
SIDEXIS XG always displays the current application status to the user.
- Warning  
Prior to important decisions, the user is advised about the consequences. This applies particularly in case of possible data loss.
- Error tolerance  
Incorrect user input can be easily corrected or undone.
- Suitability  
SIDEXIS has been designed especially for the management, visualization and analysis of digital X-ray and video exposures in the dental field.

- **Operation**  
The program has been designed so that all commands and actions can be initiated both with the keyboard and the mouse. Thus it is possible to develop an individual method of working corresponding to the personal inclinations of the user and practical requirements.

These features enable even inexperienced users to gain easy access to this innovative method of working in the field of dental X-ray and video techniques.

## 1.3 SIDEXIS XG/ What's new?

### **New features of SIDEXIS XG Version 1.0 - Overview**

- Innovative examination concept
- Individually adaptable user interface
- Modern and innovative image description tools
- Expandability through plugins

### **New features of SIDEXIS XG Version 1.2 - Overview**

- Configurable display of patient data
- Optional home page
- Selectable large/small buttons for toolbars
- Display of chevrons for hidden buttons
- Optimized examination navigation
- Optimized handling for image positioning
- Convenient rotation of images
- Improved image zoom, display detail is retained
- Movable text boxes for length and angle measurements
- Performance optimizations
- Enhanced plugin integration
- Automated assignment of access authorizations via Setup
- SiAccess tool for manual setup of access authorizations

### **New features of SIDEXIS XG Version 1.3 - Overview**

- The list of X-ray units supported has been extended to include the ORTHOPHOS XG Plus.
- The background is black in the Full Frame mode.
- Images can be zoomed with a wheel mouse.
- A new, improved print preview for both single images and examinations enables new possibilities for preparing printouts.

### **New features of SIDEXIS XG Version 1.4 - Overview**

- **Restriction to access rights:**  
The functionality can be restricted in SIDEXIS XG by using users and roles. See the menu View / Customize... / Access rights.

- Support for video cards with WDM driver:  
The program NGVidCap for configuring and testing WDM and VfW videos is featured in the application directory. Refer to the Online Help function in NGVidCap for the further procedure.

### **New features of SIDEXIS XG Version 1.5 - Overview**

- Implant visualization plugin
- Free-hand drawings
- The color, transparency and line width of all vector objects are individually adjustable
- Generation and storage of X-ray images with an optional depth of 8 or 16 bits
- All functions of SIDEXIS XG are also available for grayscale images with a depth of 16 bits
- Transfer function for selecting grayscales for display via windowing and gamma value
- Examinations exportable as individual archives (\*.nge)
- Examinations (\*.nge, \*.svg) easy to import via drag&drop, double-click on file or menu/toolbar
- Online selection of user interface language (SIDEXIS XG)
- Subsequently selectable odontogram
- Practice name subsequently editable

### **New features of SIDEXIS XG Version 1.6 - Overview**

- A central installation speeds up the SIDEXIS update for the customer. A "master installation" must only be set up once. The clients then retrieve the required information from the "master". For more information please refer to the Installation Manual.
- An automated update via the internet is now possible.
- New standard database: SQL Server 2005 Express replaces the previous Access DB. Data are imported from the previous database.

### **New features of SIDEXIS XG Version 2.0 - Overview**

- Preparation for GALILEOS systems and GALILEOS/GALAXIS software
- SiDICOM Removable Media extends the import/export functions of SIDEXIS XG
- SIDEXIS Manager for comfortable administration of the SIDEXIS installation
- Central info on master station in the program info dialog box
- Station Manager for comfortable administration of the SIDEXIS stations. It is thus also possible to change the master station.
- Service Pack 1 of SQL Server 2005 is used for new installations
- The administration of templates has been extended
- The positions of docked toolbars can be fixed

### **New features of SIDEXIS XG Version 2.2 - Overview**

- Preparation for XIOS Intraoral System
- SIDEXIS plugin *"DICOM Export Wrap&Go"* for easy transfer and viewing of image data (2D and 3D image acquisition)
- SiDICOM Removable Media with enhanced comfort and automatic installation
- Extended relocation to removable storage media and stationary drives
- Extended image selection dialog box for display of 3D data
- "3D Data Reduction" tool for clean-up of 3D raw data, invoked via SIDEXIS Manager
- "NGSQLConnect" connects SIDEXIS to another SQL database. Invoked via SIDEXIS Manager

### **New features of SIDEXIS XG Version 2.3 - Overview**

- Supports Windows Vista
- Extended options for relocating data
- More comfortable deletion of corrected 3D raw data
- Compression of 3D data in the database
- Tool for collecting support information (NGLogCollect)
- Easy-to-use tool for configuring SQL Server backups (NGSQLBackup)

### **New features of SIDEXIS XG Version 2.4 - Overview**

- XGNetDeploy for automated distribution of software
- Support for XIOS Plus
- Revised demo image database
- Now SQL Server databases and examinations can also be repaired with NGDBRepair
- Revised configuration of X-ray components in the network
- Extension of NGLogCollect with customer feedback


### **New features of SIDEXIS XG Version 2.5 - Overview**


- SIDEXIS XG can now administer and use address data for several practices.
- Images can be transferred from one patient to another.
- Examinations are exportable as single files.
- Examinations can be e-mailed as compressed ZIP files.
- The configuration of the user interface of a station can now be transferred to other stations.
- You have the option of displaying a ruler for X-ray images.


## 1.4 Structure of the document

### 1.4.1 Identification of danger levels

To prevent personal injury and material damage, please observe the warning and safety information provided in this document. Such information is highlighted as follows:

 <b>DANGER</b>
An imminent danger that could result in serious bodily injury or death.

 <b>WARNING</b>
A possibly dangerous situation that could result in serious bodily injury or death.

 <b>CAUTION</b>
A possibly dangerous situation that could result in slight bodily injury.

<b>NOTICE</b>
A possibly harmful situation which could lead to damage of the product or an object in its environment.

<b>IMPORTANT</b>
Application instructions and other important information.

**Tip:** Information on making work easier.

### 1.4.2 Formats and symbols used

The symbols and character formats used in this manual have the following meaning:

<ul style="list-style-type: none"> <li>✓ Prerequisite</li> <li>1. First action step</li> <li>2. Second action step</li> <li>or</li> <li>➤ Alternative action</li> <li>↪ Result</li> </ul>	Requests you to do something.
See "Formats and symbols used [→ 14]"	Identifies a reference to another text passage and specifies its page number.
• List	Identifies a list.
"Command/menu item"	Identifies commands, menu items or quotations.

## 2 General notes for operation

### 2.1 Checking the system time before starting

**Why is it necessary to check the system time?**

#### CAUTION

If the system clock is improperly set, the time of creation saved for new images will also be incorrect. This would then result in incorrect documentation and make it difficult to retrieve these images.

SIDEXIS saves the creation time for each image. For this reason, the date and time setting of the system clock integrated in the PC must occasionally be checked and, if necessary, corrected.

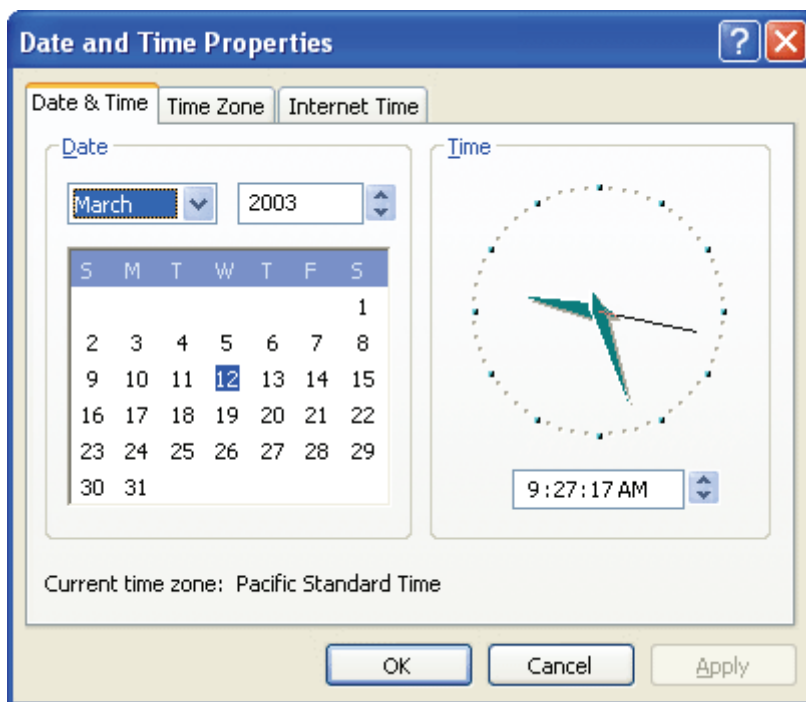
**Where do I find the system time?**

On the Windows desktop, the system time is displayed in the systray, which is usually located at the bottom right corner of the screen. The date is displayed when pointing with the mouse cursor to the time.

**How can I change the system time?**

The current time setting can be changed in a dialog box which opens when you double-click the time display. The date is set on the left half of the "Date and Time" tab.

- The month and year settings are selected using drop-down lists, which unfold when you click the arrows next to them.
- The day of the month can be selected by clicking the corresponding day on the calendar sheet.
- The time setting is changed by clicking the value to be modified and then using the corresponding arrow keys.  
Alternatively the desired value can also be entered directly using the keyboard.
- The dialog box is then closed by clicking "OK".



## 2.2 Installing other SIDEXIS software components

### Explanation

It sometimes becomes necessary to install additional or extended software components on the PC.

### NOTICE

Later installation of the X-ray control book or SIMOCON etc. from the **CD-ROM**.

### Example

For instance, this is the case when installing a new X-ray sensor or a service disk. In such cases, you must insert the **disk** included in delivery in the floppy disk drive. Then start the installation of the software by clicking the "Start" button on the task bar.

## 2.3 Completing work on the system

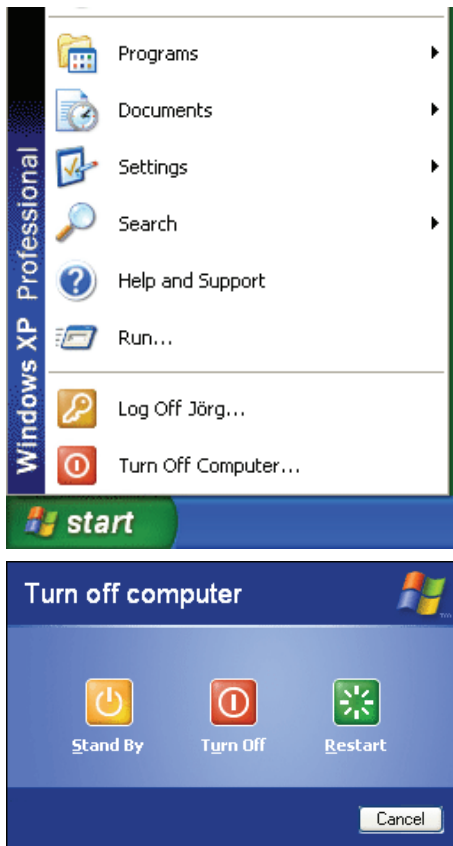
### Explanation

### ⚠ CAUTION

The operating system must always be shut down properly to prevent data loss.



### Example – Windows XP



1. Open the start menu using the "start" button.
2. Select the function "Turn Off Computer..."
3. Select the option "Turn Off" in the corresponding dialog box.
  - ↳ Unsaved data is automatically saved.
  - ↳ Depending on the type of computer, either a message is displayed after some time prompting you to turn off your PC (i.e., you can turn off the PC then) or the computer shuts down automatically.

## 2.4 Creating backup copies

### Why make backup copies?

To prevent a possible loss of data following a system failure, image and patient data should occasionally be backed up from the integrated PC hard disk to removable storage media. This procedure thus provides users with a backup copy that they can recur to in case the original data is lost.

### What is a backup?

Such a copy is generally referred to as backup copy.

Please refer to Section "Backup copies" [ → 172] for further information on making backups.

## 3 Operation

### 3.1 General

#### 3.1.1 Start SIDEXIS XG.

##### Activating the function



SIDEXIS



SIDEXIS

##### After the start

- Double-click the program icon on the desktop.

or

- Activation via the "Start" button and the program icon. This icon is typically located in the lower left corner of the screen. The display may vary depending on the operating system and the settings.

A splash screen appears after program start. This screen disappears automatically after a couple of seconds.

#### 3.1.2 Logging on (option)

##### Explanation

If the access rights have been restricted, the *"Login"* dialog box appears after the welcome screen. The user must enter his or her user name and password here.

##### Configuration

The configuration is described in Section "Access rights" [ → 183].

##### Password input

1. Enter your user name in the *"User"* field.
2. Enter your password in the *"Password"* field.
3. Confirm your entry with the *"OK"* button.

##### NOTICE

When you create a new user and activate the password request function for him or her, this user does not have a password yet. When the new user logs on the next time and enters his or her user name and confirms with *"OK"*, another dialog box for assigning a new password appears once.

## Switching users

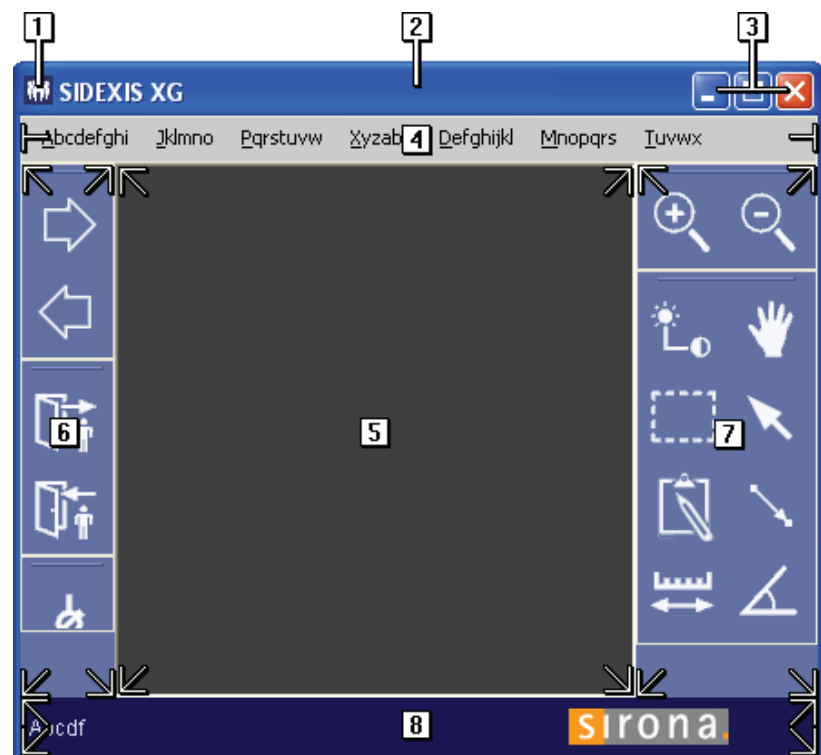
While SIDEXIS XG is running, you can switch between users by pressing the [Ctrl] + [Shift] + [U] key combination.

The "Login" window opens.

- Simultaneously all images and exams are closed and the registered patient is deregistered.

### 3.1.3 Screen layout

After SIDEXIS XG is started, the program window with the specific program components appears:



1	System menu of the program window (see documentation of the operating system)
2	Title bar with selected patient data (See section "Options" [ → 180].)
3	Buttons for controlling the window size (see documentation of the operating system)
4	Menu bar
5	Workspace
6	Area for management toolbars
7	Area for image processing toolbars
8	Status bar

## Workspace

The working and diagnosing processes of all exams are displayed together in the exam workspace.

It is called "Exam" and can be opened, saved and managed in SIDEXIS XG.

<b>Area for management toolbars</b>	The area on the left margin of the program window shows various sorted toolbars with management tools
<b>Area for image processing toolbars</b>	The area on the right margin of the program window shows various sorted toolbars with image processing tools
<b>Toolbars</b>	<p>The toolbars consist of buttons which contain graphical symbols (icons). These icons are comparable to the keys on the multimer control of the X-ray system. A system function can be launched by clicking one of these buttons.</p> <p>Logically related functions are always grouped in one toolbar.</p>
<b>Status bar</b>	<p>The status bar displays information about the currently active function. For example, the angle during an angle measurement.</p>

### 3.1.4 Functional description and workflows

<b>Explanation</b>	The functions and workflows of "SIDEXIS XG" are described in several chapters of the manual.
<b>Subdivision</b>	<p><b>The functional description is divided into the following sections:</b></p> <ul style="list-style-type: none"><li>• Patient management</li><li>• Image management</li><li>• Measurement tools<ul style="list-style-type: none"><li>- Measurement tools</li><li>- Display tools</li><li>- Image filters</li></ul></li><li>• Special functions<ul style="list-style-type: none"><li>- System setup</li></ul></li></ul>
<b>Workflows</b>	<p>The following workflows are briefly explained here:</p> <ul style="list-style-type: none"><li>• Taking a new exposure</li><li>• Opening a saved exposure</li><li>• Opening a saved exam</li></ul>
<b>Taking a new exposure</b>	<ol style="list-style-type: none"><li>1. Register the desired patient.</li><li>2. Select the desired type of exposure.</li><li>3. Release an exposure.</li><li>4. Interpret the exposure.</li></ol>
<b>Opening a saved exposure</b>	<ol style="list-style-type: none"><li>1. Register the desired patient.</li><li>2. In the "Exam" window, select the option "Existing".</li></ol> <p>There are two ways to open exposures.</p> <ul style="list-style-type: none"><li>• New All images assigned to the patient can be opened via the image selection dialog box.</li></ul>
<b>Opening a saved exam</b>	<ol style="list-style-type: none"><li>1. Register the desired patient.</li><li>2. In the "Exam" window, select the option "Existing".</li></ol> <p>All saved exams are displayed.</p> <p>➤ Select the desired exam.</p>

### 3.1.5 Working with exams

#### Explanation

- Users of conventional, film-based X-ray systems mostly use self-adhesive labels or felt tip pens to highlight certain areas on X-ray images or to take down notes.
- The images are manually positioned on the X-ray viewing box. Then, they are compared with other images, measured, superimposed with photos (orthodontics!) or put in an envelope and sent to a specialist.
- The working procedures applying to conventional film exposures were transferred to the SIDEXIS XG user interface.
- The working and diagnosing processes of exams are displayed together in the workspace.  
This is called "Exam" and can be opened, saved and managed in SIDEXIS XG.
- The SIDEXIS XG software is used in the context of an "Exam".
- Each image processing session **can** be saved as an "Exam".  
Processing also describes the act of merely opening exposures which are saved in the image database.  
Newly generated exposures are automatically included in the image database.
- Diagnostic findings are linked to the exposures in the image database and are also saved there.
- When an "Exam" is saved, only the objects and/or their references (exposures) which are displayed on the workspace are saved.
- Such an "Exam" can also be printed out and exported.
- The first step in starting an "Exam" is to register a patient.
- The lower half of the patient selection window already provides a number of selection options for opening an "Exam".
- If a patient is already registered, a specific dialog box for selecting an "Exam" is displayed.

#### Function

See also Section "Exam concept [→ 28]".

### 3.1.6 Workflow assistance

#### Explanation

Predefined linear workflows are provided as exam templates in the SIDEXIS XG.

These workflows are divided into logical steps.

SIDEXIS XG provides navigating functions for this purpose within those workflows.

#### One step forward



#### Activation

- Click the button.
- or
- Hotkey: Press the [Enter] key.
- or

- From the menu bar "*E[x]am*" "*[S]teps*", select the menu item "*[N]ext*".

### Example

When SIDEXIS XG is started, the [Enter]Register patient "*Register patient*" key. After selection of the patient and pressing the [Enter] key again, the "*Select image*" function is started.

### One step back



### Activation

- Click the button.
- or
- Hotkey: Press the [Esc] key
- or
- From the menu bar "*E[x]am*" "*[S]teps*", select the menu item "*[B]ack*".

### Example

Pressing the [Esc] key repeatedly first closes any images available one after the other and then finally checks out the registered patient. Another activation of the key exits the SIDEXIS XG program altogether.

### Continuing an interrupted workflow with the next step



### Activation

- Click the button.
- or
- From the menu bar "*E[x]am*" "*[S]teps*" select the menu item "*[C]ontinue*".

### Repeating a step



### Activation

- Click the button.
- or
- From the menu bar "*E[x]am*" "*[S]teps*", select the menu item "*[R]epeat*".

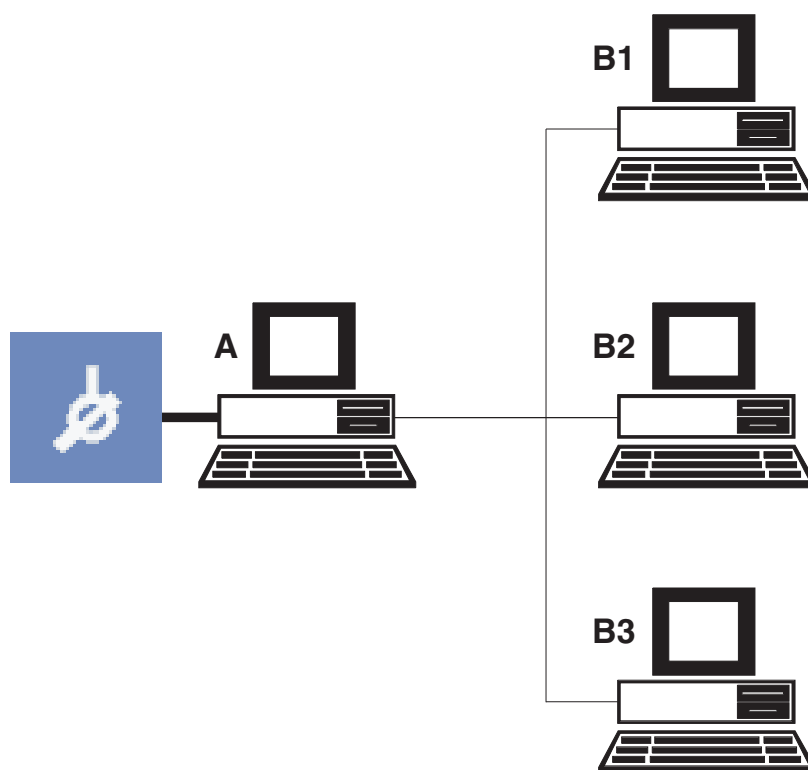
## 3.1.7 Multi-workstation support for exams

### Explanation

The following services are intended especially for use in a multi-workstation installation. The SIDEXIS system can be operated in a multi-workstation environment, but can also be used in a stand-alone installation without restrictions.

A multi-workstation installation combines several units with a cable. Such a combination of several workstations is also referred to as a network. All connected units can then access the same database (i.e., patient and image data).

## Example



<b>A</b>	X-ray room
<b>B</b>	Treatment room 1
<b>C</b>	Treatment room 2
<b>D</b>	Treatment room 3

An example of a SIDEXIS multi-workstation installation is a network of several dental treatment rooms, each with a SIDEXIS workstation, and a central X-ray room with an X-ray PC.

Each workstation can issue X-ray orders, which are accepted and executed by the SIDEXIS station in the X-ray room. The exposures are available at every X-ray PC as well as every workstation for subsequent diagnostics. The SIDEXIS workstations in the treatment rooms do not support X-ray image acquisition and are therefore also referred to as viewing stations.

### 3.1.7.1 Generating an order in a multi-workstation environment

#### Explanation

In a SIDEXIS multi-workstation installation, each workstation may produce X-ray orders, which are then accepted and executed by the stations having the required equipment (X-ray unit or SIROCAM).

#### NOTICE

To enable processing of the new order at another station, the respective patient must be checked out at the station that has produced the order.

#### Scope

This function can be used for X-ray and video images.

The relevant patient must be registered.

If several orders are to be generated for a single patient, this function can be used repeatedly until all orders are generated.

After the orders have been accepted and the X-rays have been taken in the X-ray room, these are then available at every SIDEXIS workstation.

### Activating the function



➤ Activate the icon.

or

➤ In the menu bar "*E[x]am*" / "*[S]teps*", select the menu item "".

### Order specifications

After activating the function, you can enter the information required for the order in a dialog box:

#### Specifying the patient's gender

The patient's gender is specified in the "*Sex:*" dialog box area

Click the desired option button to do so.

- The option button "*Male*" represents a male person.
- The option button "*Female*" represents a female person.

Enter possible pregnancy (only relevant for X-ray) in the "*Existing pregnancy*" check box.

#### Reason for image acquisition and/or notes

The reasons for image acquisition and/or further remarks are specified in the "*Reason/notes*" text box.

#### NOTICE

When entering the reason for the exposure or additional remarks, you may select prefabricated phrases via a context menu, which opens after right-clicking or pressing the [Alt]+[T] key combination, similar to the procedure used in image description / findings. You can combine several of these texts by repeating this step.

The [Esc] key closes the context menu without further actions. Section "Processing standard findings [→ 148]" describes how the texts can be configured individually.

#### Specifying the image type

The patient's sex is specified in the dialog box "*Order to be produced*".

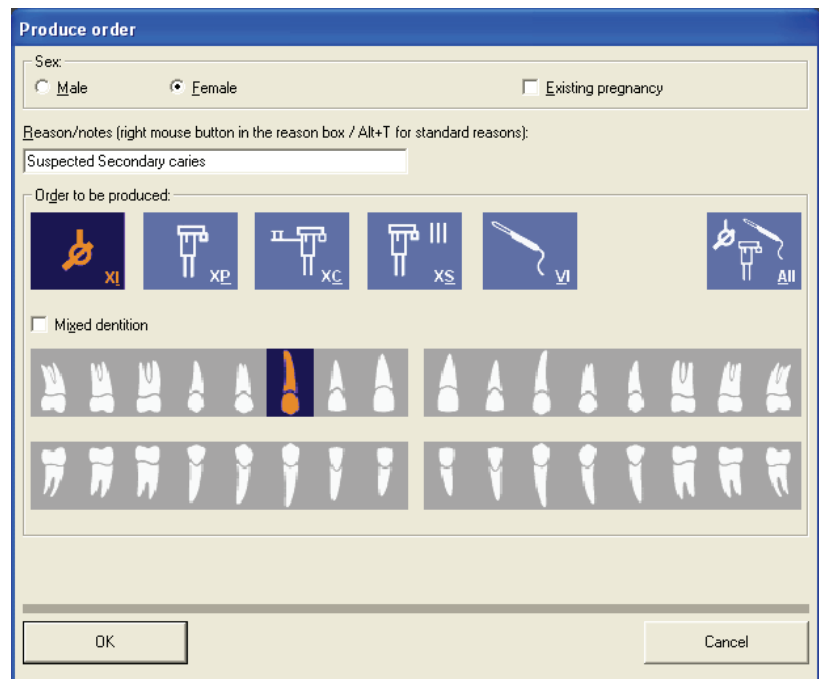
The following image types are available:

- Intraoral X-ray exposures
- Panoramic X-ray exposures
- Cephalometric X-ray exposures
- Transversal slices
- Video exposures
- 3D data

You specify the desired image type as usual by clicking the corresponding buttons in the lower half of the dialog box.



## Example screenshot



### 3.1.7.2 Accepting an order in a multi-workstation environment

#### Explanation

The program automatically jumps to the "Register patient" dialog box if this has not yet occurred during activation. If possible, the patient for whom orders are pending is already pre-selected in the patient registration dialog box.

#### Scope

This function can be used for X-ray and video images.

#### NOTICE

The SIDEXIS station with the required equipment cannot accept and execute existing X-ray and video orders for a certain patient until the patient concerned has been registered there, as usual.

#### Activating the function



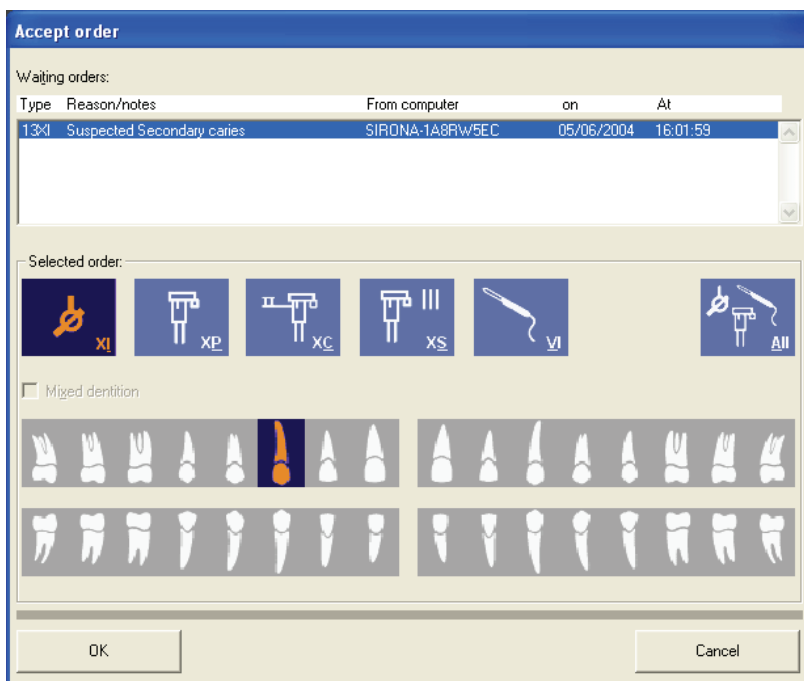
- Click the button.

or

- In the menu bar "E[x]am" / "S]teps", select the menu item "[A]ccept order".

#### Operation

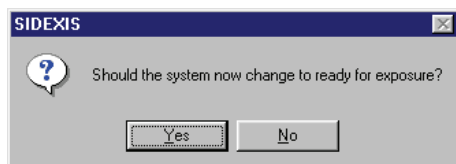
A list of pending orders for the registered patient then appears in the following dialog box:



In addition to the image type, reason or notes, date and time of creation, the name of the workstation that has produced the order is also displayed. This simplifies possible queries. The buttons for selecting the image type and tooth are unavailable here – they only indicate the desired image type.

After the dialog box is confirmed, the marked order is removed from the list of orders. With intraoral X-rays, it is then possible to automatically switch to readiness for exposure and to take the exposure.

Video exposures are started in the usual way by removing the camera from its holder. To make the system ready for panoramic and Ceph X-rays, proceed as usual.



### CAUTION

An order is also removed from the list of orders if no exposure is taken after the dialog box has been confirmed.

Orders which are not processed are considered obsolete after some time and automatically removed from the list.

The data entered on producing the order are taken over as far as possible in its execution and used as a basis for the image description of new exposures.

## 3.1.8 Changing the program

### Explanation

If desired, the service engineer who installs and configures the system can configure an automatic program switchover. This can be used e.g. for quickly switching from SIDEXIS to a practice management program or any other software installed on the same PC.

## Activating the function



### Function

- Click the button.
- or
- Use the "*E[x]am*" menu bar to select the "*Change [p]rogram*" menu item.
- If only a single program change is configured, then the desired program appears on the screen immediately after you launch the command.
- If several programs are interfaced to SIDEXIS in this way, then you make the required choice in a dialog box.

#### NOTICE

If an error occurs when you try to start the selected program, a message appears. You must then check that the target program is correctly installed and access to it has been correctly configured.

## 3.1.9 Information regarding SIDEXIS, Internet connection

## Activating the function



### Function

- Click the button.
- or
- Use the "*[H]elp*" menu bar to select the "*[A]bout...*" menu item.

The dialog box which opens displays information about the version number and the disk space available for images.

#### NOTICE

You should check the available disk space occasionally and relocate older images in due course. Detailed information on relocation is provided in Section "Relocation of the image stock" [→ 130].

You can make an email connection to the SIRONA hotline using the "*Mail to...*" button on the left side.

The button on the right side starts the Internet browser installed on your system and connects you to the Homepage of SIRONA.

The "*Info*" button in the center creates a text file with system data for service purposes.

This text file is displayed in the standard text editor.

This can be saved, printed or processed further.

#### "Info" button

The text file contains the following information:

- Operating system used
- Name of the computer
- User who is currently logged on

- Name of the database
- Database path with information on the available disk space
- Information about the SLIDA interface
- Information about the connected digital X-ray components

### 3.1.10 Exiting SIDEXIS XG

#### Explanation

When you quit SIDEXIS, all open image windows as well as the patient file are automatically closed.

#### Activating the function



➤ Click the button.

or

➤ Click the button on the title bar.

or

➤ Hotkey: Activate the key combination [Alt]+[F4]

or

➤ Use the "*E[x]am*" menu bar to select the "*[E]xit*" menu item.

#### NOTICE

A confirmation prompt appears before the program is terminated.

## 3.2 Exam concept

### 3.2.1 Generating a new exam

#### Explanation

This function is used to generate a new "*Exam*".

If no patient is registered yet, the patient selection dialog box opens. See also Section "How do I use the patient selection dialog box? [ → 43]" .

#### Activating the function



➤ Click the button.

or

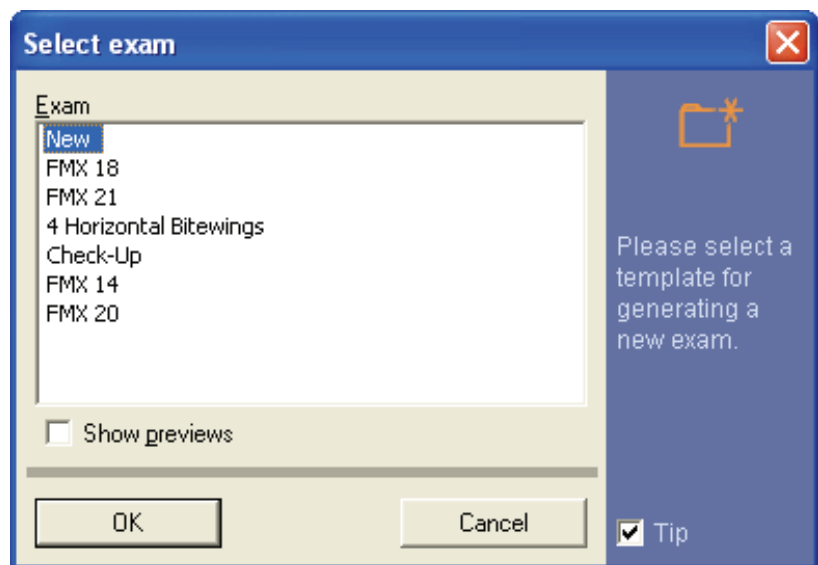
➤ Hotkey: Activate the key combination [Ctrl]+[N].

or

➤ Use the "*E[x]am*" menu bar to select the "*[N]ew...*" menu item.

☞ A selection dialog box appears.

## Selection dialog box



All templates saved for an "Exam" are displayed in the selection dialog box.

### NOTICE

The use of this drawing function is explained in Section "Templates [→ 41]".

## Function

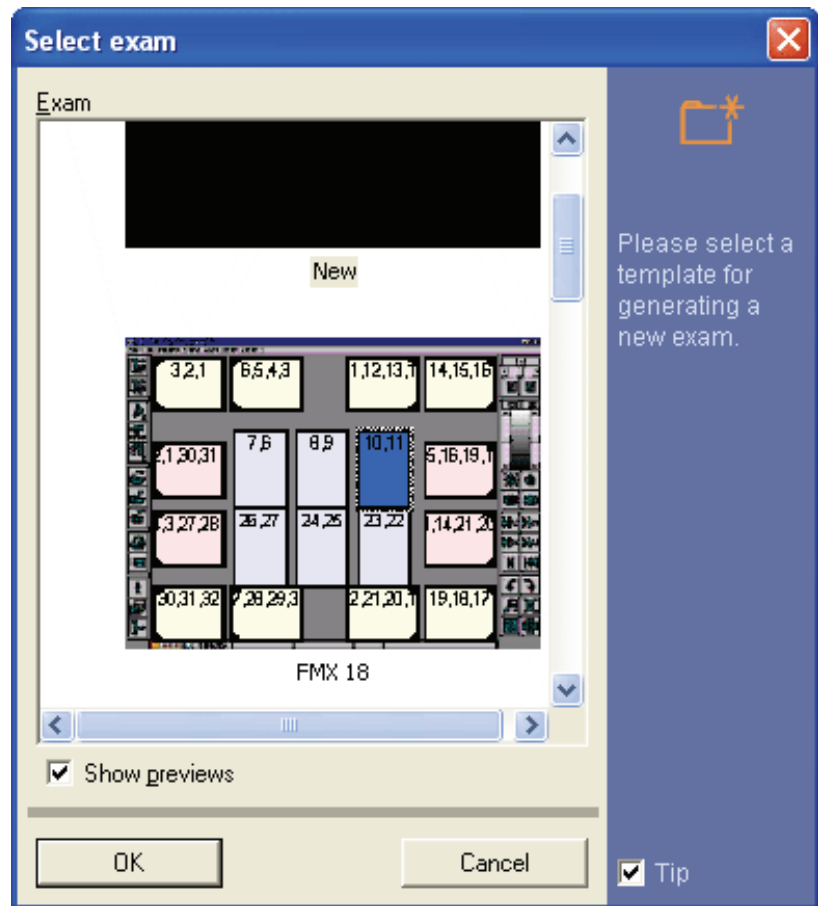
The "New" template appears in the first line. This template consists of an empty workspace.

### NOTICE

It is recommended to select this template for daily routine operation if you do not want to use a saved template.

The "Show previews" check box can be used to display the templates graphically.

### "Show previews" check box



### 3.2.2 Opening a saved exam

#### Explanation

This function is used to open a saved "Exam".

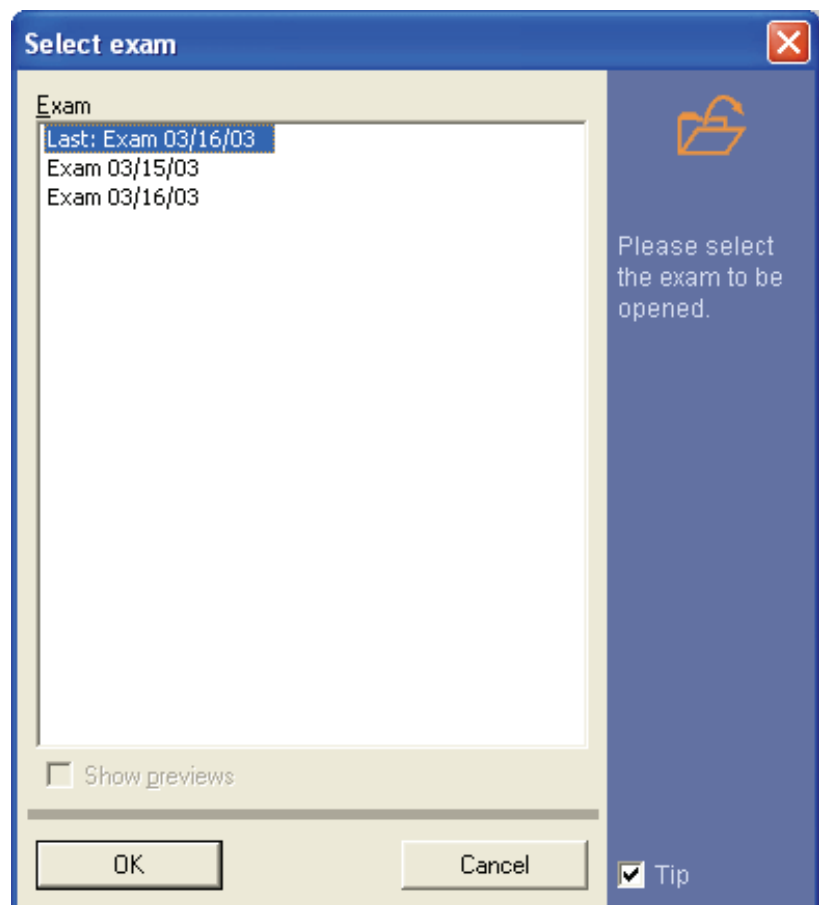
If no patient is registered yet, the patient selection dialog box opens. See also Section "How do I use the patient selection dialog box? [ → 43]."

#### Activating the function



- Click the button.
- or
- Hotkey: Activate the key combination [Ctrl]+[O].
- or
- Use the "E[x]am" menu bar to select the "Se[le]ct..." menu item.
- ↳ A selection dialog box appears.

## Selection dialog box



## Function

The selection dialog box contains all saved exams of the corresponding patient.

The exams are sorted chronologically in the order in which they were created.

In addition, the last saved exam is displayed in the first line.

### 3.2.3 Saving an exam

## Explanation

All objects of the examination window can be saved as an "Exam".

### NOTICE

Use the "Save [a]s..." function if you want to save a current "Exam" loaded before from the exam database without overwriting the original data.

## Activating the function



- Click the button.
- or
- Hotkey: Activate the key combination [Shift]+[F12].
- or
- Use the "E[x]am" menu bar to select the "[S]ave" menu item.

### Saving an exam under a new name



✎ The Save dialog box appears.

Use the "Save [a]s..." function if you want to save a current "Exam" loaded before from the exam database without overwriting the original data.

#### Activating the function

➤ Click the button.

or

➤ Hotkey: Press the [F12] key

or

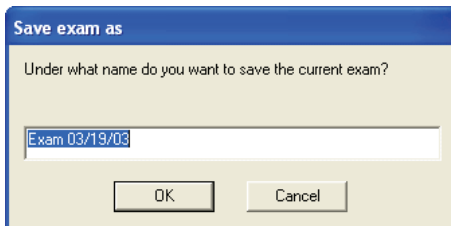
➤ Use the "E[x]am" menu bar to select the "Save [a]s..." menu item.

✎ The Save dialog box appears.

#### Save dialog box

SIDEXIS XG suggests a name for the "Exam". This suggestion can be modified.

Use the "OK" button to save the "Exam".



### 3.2.4 Printing an exam

#### Explanation

When the "Exam" is printed, all of the objects in the workspace are printed on one page.

There are two ways to print an exam.

- Printout via the function described below.
- Printout via the print preview (see section "Print Preview" [ → 71]).

#### NOTICE

Select the printer and the page view prior to the printout. (See "Setting up the printer").

#### Activating the function



➤ Click the button.

or

➤ In the menu bar "E[x]am" / "Print", select the menu item "Pr[i]nt..."

✎ The print dialog box of the operating system appears.

#### Function

The print dialog box of the operating system is used to print out the "Exam".

#### Setting up the printer



➤ Click the button.

or

➤ Use the "E[x]am" menu bar to select the "Print Set[u]p..." menu item.



✎ The print dialog box of the operating system appears.

#### NOTICE

It is advisable to set the page orientation to the landscape format when printing an exam.

This ensures that the paper size will be optimally utilized.

### 3.2.5 Exporting an exam

#### Explanation

#### NOTICE

Please note that this function exports 2D information only. The "SiDICOM Removable Media" plug-in can be used for importing and exporting GALILEOS data sets.

You can export the current exam using the *"Export exam"* function.

Exporting an *"Exam"* means that all objects in the exam workspace are exported.

- The patient's first name, last name and date of birth are also exported.

Exports can be performed in two different formats:

- **NGE format**  
The NGE format [ → 33] can be exported from and imported to SIDEXIS XG in version 1.5 and higher.
- **SVG format**  
The SVG format [ → 34] can be displayed with an SVG viewer.  
**Extended functionality:** Compressed SVG as ZIP for sending via email. See section "Send examination via email" [ → 40] for more information.

#### Activating the function



- Click the button.

or

- In the menu bar *"E[x]am" "Export"*, select the menu item *"E[x]port..."*.

#### 3.2.5.1 NGE format

#### Explanation

The NGE format is an separate SIDEXIS XG format starting with version 1.5.

#### Exporting in NGE format

Exporting an *"Exam"* in NGE format means that all objects in the exam workspace are saved to a file.

### 3.2.5.2 SVG format

#### Explanation

SVG format (Scalable Vector Graphics) is a file format which enables the use of vector graphics on the Internet. SVG is a language used for describing graphics in XML (Extensible Markup Language).

#### Exporting in SVG format

During an *"Exam"* export in SVG format, all objects in the workspace are exported to the specified folder.

In addition to the SVG file as such, the images from the *"Exam"* are saved as JPG files to the directory.

#### NOTICE

An *"Exam"* should always be exported to an empty folder. **Reason:** Any existing JPG files are overwritten without reconfirmation prompt.

#### NOTICE

For viewing, you should use the newest version of the Adobe SVG Viewer.

This viewer is integrated as plug-in into the installed Internet browser.

Opening an SVG file starts the default Internet browser.

See also the section "Working with an exported exam in the Adobe® SVG Viewer [ → 34]".

### 3.2.5.3 Working with an exported exam in the Adobe® SVG Viewer

#### Operation

More information on how to use the Adobe® SVG Viewer can be obtained in the related context menu under the *"Help"* item.

#### Hints for use

The Viewer is controlled by a context menu. (Activation by right-clicking).

#### NOTICE

The setting *"Higher Quality"* in the context menu results in enhanced representation of geometric forms (smoothing of jagged edges, anti-aliasing). On texts and images, however, it may produce a somewhat blurred impression. In this case you should deactivate the setting.

#### NOTICE

The browser print function should not be used because of distortions!

- The window title contains configurable patient data (See appendix "Options" [ → 180]).
- When you click on an image, it opens directly in the Internet browser window.  
To return to the *"Exam"* view, press the "Back" button in the Internet browser.

- The file name of an image is displayed on the status bar when the mouse pointer is above the corresponding image.

### 3.2.6 Importing an exam

#### Explanation

Using versions 1.5 and higher of SIDEXIS XG, it is possible to import an exam with the *"Import exam"* function.

#### NOTICE

The import function can be used only if the exam to be imported was exported from version 1.5 or higher of SIDEXIS XG.

There are three different file formats which can be imported:

- **NGE format**  
For further information, please refer to Section "NGE format [ → 33]".
- **SVG format**  
For further information, please refer to Section "SVG format [ → 34]".
- **Zip format**  
Examinations exported using the *"Send exam by e-mail"* function are compressed and sent as a Zip file. These Zip files can be imported directly.  
See Section "Send examination via e-mail" [ → 40] for more information.

#### Activating the function



- Click the button.
- or
- In the menu bar *"E[x]am"* *"Import"*, select the menu item *"Imp[o]rt..."*.
- or
- via drag & drop.
- or
- **NGE format only:** Via a double-click in the Explorer

#### Import

- For registered patients, SIDEXIS XG compares the patient data of the registered patient with that of the imported exam.  
If the patient data is not identical, a confirmation query then asks whether the exam to be imported should be imported to the registered patient.
- If no patient is registered, the patient with the matching patient data (first name, last name, date of birth) is automatically opened.
- If the patient is not known to the database, a new patient will automatically be generated when the exam is saved. In this case, it may be necessary to enter additional new patient data. See also Section "How can I modify patient data? [ → 47]".

#### NOTICE

The exam is then displayed in SIDEXIS XG after the function is executed. The exam is stored in the database along with all of the images it contains only after the "Save exam" function is executed (see section "Saving an exam [ → 31]").

### 3.2.7 Deleting an exam

#### Explanation

SIDEXIS XG offers the option to delete saved exams from the exam database.

#### NOTICE

The images contained in the deleted exam will **not** be deleted from the SIDEXIS database!

#### Scope

The function refers to the exam which is currently open.

#### Activating the function



➤ Click the button.

or

➤ Use the "*E[x]am*" menu bar to select the "*[D]elete...*" menu item.

### 3.2.8 Closing the exam

#### Explanation

The Close exam function is used to close the current exam.

#### Activating the function



➤ Click the button.

or

➤ Use the "*E[x]am*" menu bar to select the "*[C]lose*" menu item.

🔗 The "*Exam*" is closed.<sup>1</sup>

#### Configuration possibility

The following option can be configured:

- If there are any objects in the workspace, the software asks whether the current view should be saved as "*Exam*" (see Section "Saving an exam [ → 31]").  
This option can also be configured so that this query appears only if at least two images are located in the workspace.

#### Configuration

➤ In the menu bar "*[U]tilities*" / "*Configure [s]ystem...*", select the menu item "*Reminders...*".

🔗 The "*Reminders...*" window appears.

See Section "Configuring the reminder function [ → 154]".

1. If a processing plugin is still active in the examination, then a message appears as to whether processing can now be closed. This is required to close the examination.

### 3.2.9 Changing the form and the size of objects

#### Explanation

Depending on the object type used, the form and also the size of the object can be modified.

Objects can be classified according to their modifiability:

- Closed-area objects
- Line-shaped objects
- Objects with invariable size

#### Closed-area objects

##### This includes:

- Image objects
  - X-ray images
  - Video exposures
- Vector objects
  - Rectangle (see Section "Rectangle [ → 128]").
  - Ellipse (see Section "Ellipse [ → 129]").

#### Explanation

Vector objects can be resized and reshaped like a window object in Windows.

However, image objects can only be reduced in size. This means that they are not really reduced in size, but only clipped.

The "Viewport" [ → 102] function is designed for viewing them.

With image objects, you can only zoom in or out the image as a whole using the zoom function.

#### Line-shaped objects

##### This includes:

- Vector objects
  - Connecting arrows (see Section "Connecting arrows [ → 127]").
  - Lines (see Section "Lines [ → 127]").
- Measurement tools
  - Length measurement (see Section "Length measurement [ → 92]").
  - Angle measurement (see Section "Angle measurement [ → 96]").
  - Bone density measurement (see Section "Bone density measurement [ → 97]").

#### Explanation

These objects consist of individual node points that are connected by lines.

In most cases these objects are located completely within an image object and are adjusted when the zoom function is applied to an image object.

The node points can be moved when the object is selected.

- First place the mouse pointer above a node point.  
A small navigation crosshair appears.
- With the left mouse button pressed, you can drag the selected node point to a new position.

### Objects with invariable size

The nature of these objects does not allow resizing.

#### This includes:

- Vector objects
  - Drawing tool "Cross" for orthodontics (see Section "Special drawing tool for orthodontics [ → 128]").
  - Text fields (see Section "Text fields [ → 128]").
- Findings (see Section "Image description and findings [ → 59]").

## 3.2.10 Displaying and changing object properties

### Explanation

The properties or attributes of specific objects can be displayed and changed via the "*Attributes*" dialog box in the workspace.

### Validity

- The individually selected object.
- This function is only applicable to vector and measurement objects.

### Activating the function



- Click the button.
- or
- Hotkey: Activate the key combination [Alt]+[Enter]
- or
- Select "*Attributes*" from the pop-up menu.
- or
- From the menu bar "[A]nalysis", select the menu item "[P]roperties...".

### 3.2.10.1 Changing object properties

### Explanation

The possibilities for change depend on the type of object involved. **Not all types are always possible!**

### Change possibilities

- Stroke width
- Stroke color
- Fill color
- Stroke width

### Function

1. Select the desired object.
2. Activate the "*Attributes*" function.
3. Change the properties as required.
4. Confirm with "*OK*".

### Applying settings as default values

If the selected settings are to be used again, they first must be accepted in the "*Attributes*" dialog box with "*OK*", and by clicking the control box "*Apply as default values*".

### 3.2.11 Removing objects from the workspace

#### Explanation

All selectable objects can be removed from the workspace with the help of the Remove function.

#### NOTICE

This function should not be confused with the deletion of images.  
The images are not deleted, but only removed from the workspace.

If images are removed from the workspace, all objects linked to the image are removed as well.

All selected objects in the workspace.

#### Scope

#### Activating the function



- Click the button.
- or
- Hotkey: Press the [Del] key
- or
- Select Remove from the pop-up menu.
- or
- Use the "[Edit]" menu bar to select the "[Remove]" menu item.

### 3.2.12 Copying the active image to the Windows clipboard

#### Explanation

SIDEXIS XG offers the option to copy the active image to the Windows clipboard.

#### CAUTION

If the copied image is edited with another software (e.g. PaintBrush), it is no longer suitable for diagnostics.

#### Scope

#### Activating the function



The currently active image in the workspace.

- Click the button.
- or
- Hotkey: Activate the key combination [Ctrl]+[C]
- or
- Select "Copy" from the pop-up menu.
- or
- Use the "[Edit]" menu bar to select the "[Copy]" menu item.

### 3.2.13 Pasting images from the Windows clipboard

#### Explanation

SIDEXIS XG offers the option of copying images from the Windows clipboard to the workspace.

#### NOTICE

The representation and resolution of images which have been imported into the program via the Windows clipboard depends on the imported images.

#### Scope

All pixel images.

#### Activating the function



➤ Click the button.

or

➤ Hotkey: Activate the key combination [Ctrl]+[V]

or

➤ Use the "[Edit]" menu bar to select the [P]aste menu item.

### 3.2.14 Working with several open examinations

#### Explanation

It is possible to set up SIDEXIS XG so that several examinations can be opened at the same time.

Then you can switch between the examinations without having to reopen the respective examination in each case.

#### Setting

See the "Options [→ 180]" section.

#### Display

If more than one examination is open, then a tab will be displayed above the status line for each open examination.

The name of the corresponding examination is displayed on each tab.

#### Operation

You can switch by clicking on the tabs.

### 3.2.15 Sending an examination via email

#### Explanation

It is possible to send an examination packaged as a Zip file.

The contents are generated in SVG format (see the "Exporting an examination [→ 33]" section).

#### Operation

➤ In the menu bar "*E[x]am*" "*Export*", select the menu item "*Send exam by e-mail*".

✎ The email standard application is opened with the compressed Zip file in the attachment.

✎ The examination is sent by entering the recipient and activating the send function in the standard email application.



## 3.3 Templates

### 3.3.1 Ready-to-use templates

The following ready-to-use templates are available:

- **FMX xx Exams** (Intraoral)
- **xx** = number of exposures
- **4 Horizontal Bitewings** (Intraoral)
- **Check-Up** (Intraoral)
- **Ortho template**  
This template is used for combination exposures featuring one panoramic view, one ceph view and one carpus view. This combination is intended only for the ORTHOPHOS XG<sup>Plus</sup> DS Ceph. These exposures are generated in a predetermined order (P1-C3-C4) with reduced cooling periods in between. A description of the individual exposures can be obtained from the Operating Instructions for the ORTHOPHOS XG<sup>Plus</sup> DS Ceph. A longer cooling period is required after the entire exposure combination has been taken.

#### Example screen



### 3.3.2 Self-created templates

#### Overview

There are two types of self-created templates.

- Templates for intraoral radiography which can be edited with a special editor (see Section "Editing an exposure template [ → 144]").
- Templates which use the screen layout of the workspace and the order of exposure as a template.

- All image types (Intraoral, Panoramic, Ceph, TSA, Video and 3D) can thus be saved in the available templates.

### 3.3.2.1 Saving a template

#### Activating the function



- Click the button.
- or
- Use the *"Exam"* menu bar to select the *"Save template"* menu item.

### 3.3.3 Managing templates

#### Explanation

The *"Manage templates"* function is provided for managing templates.

#### Activating the function



- Click the button.
- or
- Use the *"Exam"* menu bar to select the *"Manage templates"* menu item.

#### Renaming a template

1. Press the *"Rename"* button.
  - ↳ A dialog with a text box then opens.
2. Enter the desired name of the template in this text box.
3. Confirm your entry with the *"OK"* button.

#### Deleting a template

1. Press the *"Delete"* button.
  - ↳ A confirmation dialog box appears.
2. Confirm the delete operation by clicking the *"Yes"* button.

## 3.4 Patient management

#### Explanation

Patients for whom a digital exposure is to be saved are managed in a powerful patient database in SIDEXIS.

To avoid any confusion, all saved images are always clearly assigned to the respective patient.

#### Overview

- Which dialog box is used to register a patient? [ → 43]
- How do I use the patient selection dialog box? [ → 43]
- How can I create new patient data? [ → 46]
- How can I modify patient data? [ → 47]
- How can I delete patient data? [ → 48]
- How can I check out a patient? [ → 50]

#### Getting started

Patient registration must always be the first step taken to be able to assign the image to the patient and then display a saved image on the screen.

#### Data security

Since a newly taken X-ray is saved automatically to the patient database immediately after the exposure for reasons of data security, the patient must be registered before the exposure is taken in this case, too.

### CAUTION

Whenever an X-ray is to be taken with SIDEXIS, a patient must be registered previously.

#### Data security / exception "video images"

When working with the video camera, it is not always necessary or desirable to save the video images. For this reason, you can make video exposures in SIDEXIS without having to register the patient first. If you later wish to save your video exposure and the patient has not yet been registered, you can register him or her afterwards.

### NOTICE

A patient does not need to be registered prior to taking video exposures. The patient can be registered later if you wish to save the video exposures.

If you attempt to take an X-ray without registering the patient first, the *"Register patient"* dialog box opens.

The commands for patient management are in the *"Exam"* menu in the *"Patient"* submenu.

#### 3.4.1 Which dialog box is used to register a patient?

##### Answer

##### Activating the function



Patients are registered in the *"Register patient"* dialog box.

- Click the button.
- or
- Hotkey: Press the [Pos1] key.
- or
- In the menu bar *"E[x]am"/"P[atient]"*, select the menu item *"[R]egister..."*.

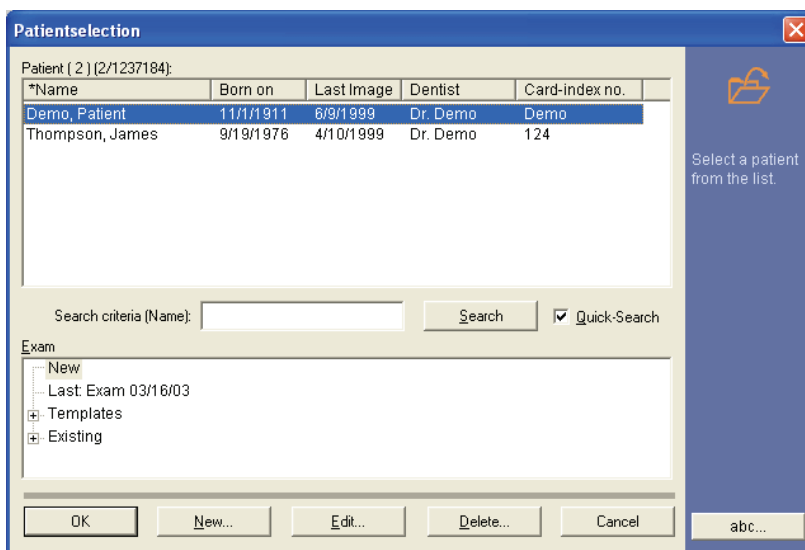
#### 3.4.2 How do I use the patient selection dialog box?

##### Layout

The *"Register patient"* dialog box is divided into the following areas:

- "Patient" selection list box [ → 44]
- "Exam" selection list box [ → 45]
- Buttons [ → 46]

## Example screen



### 3.4.2.1 "Patient" selection list box

#### Explanation

The *"Patient"* selection list box is used to select the desired patient.

#### Configuration

The patient list is displayed here.

The data of the individual patients is displayed line-by-line.

The patient data is displayed in columns corresponding to the column headings.

#### Sorting

The patient list can be sorted by the column headings.

- Click the desired column heading.  
If the patient list should be sorted in reverse order, click the desired column heading again.

#### Patient search

There are two ways to search for patients.

- Searching with the scrollbar
- Searching with the search box *"Search criteria"*.
- Scroll the section using the scrollbar in the *"Patient"* selection list box until you can see the required patient.

#### Searching with the scrollbar

#### Searching with the search box

#### NOTICE

This search method is only possible with the patient data *"Name"*, *"Dentist"* and *"Card-index no."*.

The search is performed according to the selected sorting method in the search box.

It is displayed in brackets behind the term *"Search criteria"*.

There are two different search methods here.

- Patient search without *"Quick-search"*
- Patient search with *"Quick-search"*

### Patient search without "Quick-search"

1. Deactivate the "Quick-search" check box.
2. Select the desired search criterion.
3. Type the personal data into the search box according to the search criteria.
4. Click on the "Search" button.
  - ↳ The desired patient selection then appears.

#### NOTICE

When you press the "Search" button without having entered any letter(s) or number(s) in the search box, all patients included in the database are displayed.

### Patient search with "Quick-search"

1. Activate the "Quick-search" check box.
2. Select the desired search criterion.
3. Type the personal data into the search box according to the search criteria.
  - ↳ Following each entry, the program searches the database for the data entered and displays the appropriate section in the "Patient" selection window.

#### Select a patient

Demo, Patient	01.11.1977	Dr. Demo	11.12.2002	1032
Musterfrau, Eleonore	12.02.1984	Dr. Demo	11.12.2002	1425
Mustermann, Klaus	13.12.1980	Dr. Demo	12.12.2002	1152

- Click on the required patient name in the "Patient" selection window.
  - ↳ Selected items appear highlighted on the screen.
- ↳ The patient is now selected.

#### 3.4.2.2 "Exam" selection window

##### Explanation

In the "Exam" selection window, a new exam can be saved or saved exams can be called up.

The "Exam" box includes a tree structure representing a selection.

##### Navigation



##### Navigating in the tree structure:

- The tree structure expands when you click the plus icon.
- The tree structure collapses when you click the minus icon.

##### Configuration

The "Exam" window has the following structure (from top to bottom):

- First, the "New" field is displayed.  
When activated, an empty workspace for a new exam is opened for the selected patient.  
The "New" field is preselected by default.
- In a second step, the name of the last saved exam is displayed.  
When selected, the last exam saved for the selected patient is opened.

- Thirdly, the *"Templates"* folder is displayed.  
It contains ready-to-use templates of special exam types and self-generated templates.  
See Section *"Templates [ → 41]"*.
- Fourthly, the *"Existing"* folder is displayed.  
All previously saved exams are displayed.  
They can be opened for viewing or diagnosis and as a supplement to X-ray and video exposures.

## Selection

1. Exam types can be selected by mouse-click.  
↳ Selected items appear highlighted on the screen.
2. The *"OK"* button activates the selected exam type.

### 3.4.2.3 Buttons

## Functional description of the button functions

Command button	Meaning
<i>"OK"</i>	This button activates the selected patient and the selected exam.
<i>"New..."</i>	This button opens the <i>"New patient"</i> window, which is used to include a new patient in the SIDEXIS database.  See section <i>"How can I create new patient data? [ → 46]"</i>
<i>"Edit..."</i>	This button opens the <i>"Edit patient data"</i> dialog box, which is used to modify the data of the currently active patient.  See also Section <i>"How can I modify patient data? [ → 47]"</i> .
<i>"Delete..."</i>	This button opens the <i>"Delete patient"</i> dialog box, in which an existing patient can be deleted from the SIDEXIS database.  See also Section <i>"How can I delete patient data? [ → 48]"</i> .
<i>"Cancel"</i>	This button closes the <i>"Register patient"</i> dialog box.  See Section <i>"How can I check out a patient? [ → 50]"</i>

### 3.4.3 How can I create new patient data?

## Background

If the patient is not known to the system (i.e., he or she does not appear in the list on the patient registration dialog box), then a new registration must be made. For this purpose, the patient data are entered in the text boxes of the relevant dialog box.

## Activating the function



- Click the button.
- or
- In the menu bar *"E[x]am" / "P[atient]"*, select the menu item *"N[ew]..."*.

→ The New patient window is displayed.

#### Example screen

#### Entering patient data

- Enter the patient data in the individual text boxes of the relevant dialog box.

#### NOTICE

The system recognizes if last name, first name and date of birth are identical to those of another patient and issues a corresponding warning. On the other hand, card index numbers can be used several times. A date of birth in the future is not accepted.

#### Text boxes

- The last name must be entered in the first field "*Name*".
- Enter the "*First name*" in the second box.
- The date of birth must be entered in the "*Date of birth*" field. When entering the date of birth, you do not need to separate day, month and year as this is done automatically. For example, the numbers "030395" are sufficient for March 3, 1995.

#### Optional text boxes

- It is recommended to enter the patient's card index number in the "*Card-index no.*" box.
- The name or the abbreviation of the responsible dentist should be entered in the "*Permanent dentist*".

#### Navigation

- To jump to the next text box, press the [Enter] or [[Tab] key.
- To return to the previous box, press [Shift] + [Tab].
- To directly select a box, position the mouse pointer in it and click.

#### Completion

Once all boxes are filled in completely, confirmation with "OK" creates the patient in the database and registers him or her in the system. An already registered patient will be replaced by the new patient. The new patient is now set up in the system.

### 3.4.4 How can I modify patient data?

#### Explanation

The data of the currently registered patient can be modified at any time. For this purpose, enter the new data in the desired text boxes of the dialog

box. When you confirm the dialog box, the new patient data are automatically saved to the database.

#### NOTICE

When the function for editing patient data is launched from the patient selection dialog box, the changes refer to the patient selected in the list. In this case the program returns to the activating dialog box after the data have been changed. This enables users to conveniently change the data of several patients without having to go via the menu and previous registration of the patients.

#### Activating the function



➤ Click the button.

or

➤ In the menu bar "*E[x]am*" "*[P]atient*", select the menu item "*[E]dit data...*".

↪ The "*Edit patient data*" window is displayed.

#### Example screen

**Edit patient data**

Name	:	Demo
First name	:	Patient
Date of birth	:	11/01/1911
Card-index no	:	Demo
Permanent dentist	:	Dr. Demo

OK Cancel

### 3.4.5 How can I delete patient data?

#### Explanation

This function deletes the currently registered patient from the patient database. As is logical, the patient is first checked out by the system during this operation.

#### NOTICE

To prevent inadvertent deletion, a message prompting you to reconfirm the command is displayed.



## NOTICE

When the function for deleting a patient is launched from the patient selection dialog box, then the delete operation refers to the patient selected in the list.

In this case the system returns to the activating dialog box after the delete operation.

This enables users to conveniently delete several patients from the database without having to go via the menu and previous registration of the patients.

### Activating the function



➤ Click the button.

or

➤ In the menu bar "*E[x]am*" / "*P**atient*", select the menu item "*Dele[t]e*".

↳ The "*Delete patient*" window is displayed.

### Example screen

**Delete patient**

Name : Thompson

First name : James

Date of birth : 09/19/1976

Card-index no : 124

Permanent dentist : Dr. Demo

OK Cancel

### Legal retention periods

To guarantee the legal retention periods for X-rays, it is not possible to delete patients for whom X-rays have already been stored in the image database.

In this case the following message appears:



### 3.4.6 How can I check out a patient?

#### Activating the function



➤ Click the button.

or

➤ In the menu bar "*E[x]am*" "*[P]atient*", select the menu item "*[C]heck out*".

↪ The patient is checked out.

#### Control

- If you have processed existing images or taken new video exposures of the patient you are about to check out, a message asking you whether you want to save the changes is displayed.
- New X-ray exposures have already been saved automatically by the system.

#### Further information

Section "Patient management [ → 42]" provides further information about saving and closing images.

After the patient has been checked out successfully, the title bar of the program window informs you that no patient is currently registered.

## 3.5 Image management

### 3.5.1 Saving original images

#### Explanation

It is not necessary for the user to save the X-ray images as they are automatically saved directly to the patient database after image collection is complete.

These automatically saved images are called original images or original views.

The new video exposures saved for the first time by the user are also initially saved in the database in the form of original images.

### 3.5.2 Save image views

#### Explanation

In addition, the user may wish to store individual views after image processing and optimization. These edited views can then be saved as well.

The original image will at no time be overwritten by a new view.

#### NOTICE

Views can therefore only ever be saved in addition to the original images and are based on these original versions.

In this way it is possible to generate different views from one image which then can also be displayed simultaneously. The name of each new view is assigned in a dialog box.

#### What does a view contain?

The following image processing and image optimizing procedures are saved as a view:

- Measurements  
See Section "Measurement tools [ → 92]".
- Filters  
See Section "Image filters [ → 108]".
- Screen position
- Zoom  
See Section "Zooming the image [ → 100]".
- Image detail  
See Section "Moving the image segment [ → 102]".
- Rotation  
See Section "Rotating [ → 107]".

## Scope

This function can be used for X-ray and video images (but not for live and still images).

This function applies only to the active image.

## Activating the function



➤ Click the button.

or

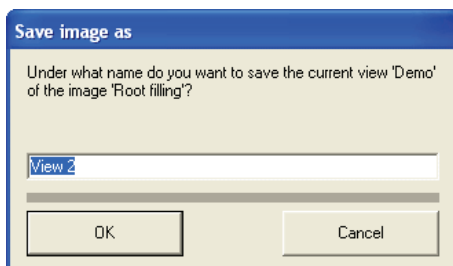
➤ Hotkey: Activate the key combination [Ctrl]+[S].

or

➤ Use the *"[/]Image"* menu bar to select the *"Save [a/s]..."* menu item.

☞ The Save dialog box appears.

## Example screen



## Additional information

### NOTICE

The system automatically generates unique view names, however, these may be overwritten by the user with other, more meaningful names. This makes it easy to retrieve the views later.

### NOTICE

Loading saved views that have been subjected to complex image processing procedures takes somewhat longer than loading original images.

If you have opened several images and want to save all views, it is recommended to save them as exam.

All images can be saved if desired in compressed form. In that way, considerably less storage space in the database is occupied. For further details, please see Section "System settings [ → 140]".

### 3.5.3 Opening images from the SIDEXIS database

#### Explanation

Images in the SIDEXIS database can be opened using the dialog box *"Select image"*.

All available images of registered patients are displayed here.

#### Scope

This function can be used for X-ray and video images (but not for live and still images).

This function applies only to the active image.

#### Activating the function



➤ Click the button.

or

➤ Hotkey: Press the [Enter] key.

or

➤ Use the *"[/]image"* menu bar to select the *"Se/le/ct..."* menu item.

#### Function

After the list of available X-rays has been narrowed down sufficiently, the desired images can be selected using the mouse or the cursor keys. You can make either a single or a multiple selection.

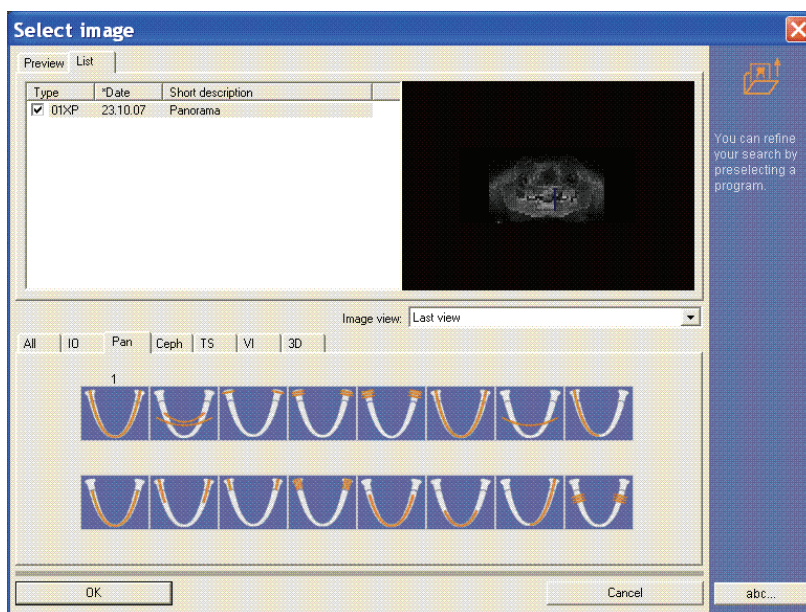
#### Overview

**More details can be found in the following sections:**

- Structure of the dialog box [ → 52]
- Single selection [ → 56]
- Multiple selection [ → 57]
- Patient data discrepancies [ → 58]
- Procedure for relocated images [ → 58]

#### 3.5.3.1 Structure of the dialog box

#### Dialog box



#### View tabs

You can switch between two different views by means of two tabs.

They show all existing images of the registered patient by default, sorted by date and time.

- Tab *"Preview"*  
The images are displayed as preview images, with the related image type.
- Tab *"List"*  
The images are displayed as a list.  
The list includes the image type, date and a short description of each exposure.

#### NOTICE

Images which have been marked in the image description as not diagnosable are identified by "~~" in the list of acquired images.

They are displayed only when all image types are displayed by clicking the *"All"* button.

#### List field *"View"*

By using the *"View"* list field, you can select from the various image views available (i.e. from views that have been previously generated by the user). The individual views are listed by name.

*"Last view"* means those previously listed images that have been most recently reviewed.



The selected view is loaded and displayed as it was last saved in a window in the workspace.

Saving image views is described in more detail in the *"Saving image views"* [ → 50] section.

#### NOTICE

The *"View"* list field can be configured in the *"Options"* tab.

#### Image type selection tabs

The images appearing in the list can be preselected according to their image type using the tabs in the lower half of the dialog box. For X-rays taken with SIDEXIS, the image type is assigned automatically by the system in the findings.

This enables images to be retrieved more easily if there is a large number of images. However, this preselection works only if the user has assigned the image accordingly at an earlier point in time (usually immediately after the exposure or during the findings). This allocation process is described in Section *"Image description and findings"*.

Tab	Image type selected
"A//"	Shows all types jointly <b>Note:</b> Image filters are not displayed in the preview
IO	Shows only type XI intraoral X-rays (see "Odontogram")
PAN	Shows only type XP panoramic X-rays (see "Panoramic image types (XP)")
CEPH	Shows only type XC ceph X-rays (see "Ceph image types (XC)")
TS	Shows only type XS transversal slice images (see "Odontogram")
VI	Shows only video exposures (see "Odontogram")
3D	Shows only 3D images

The number of images available for each tab is indicated, provided there are any images of this type available. The code of the selected image type is then displayed above the list box (XI, XP, XC, VI, XS, or ?? for exposures of an unknown or arbitrary type)

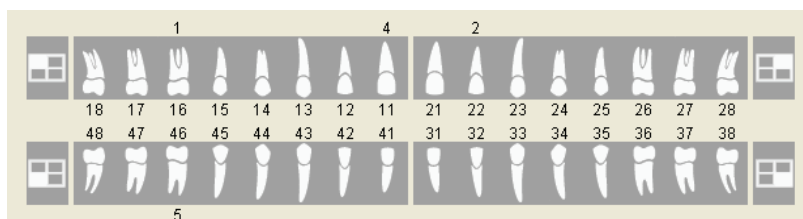
### Odontogram

An odontogram is displayed in addition to the tab for the intraoral X-ray (XI), transversal slice (XS) and intraoral video (VI) image types. This odontogram allows you to specify further search criteria for retrieving acquired images.

When you click a tooth symbol, only images that correspond to the selected tooth are shown in the list of available X-ray images.

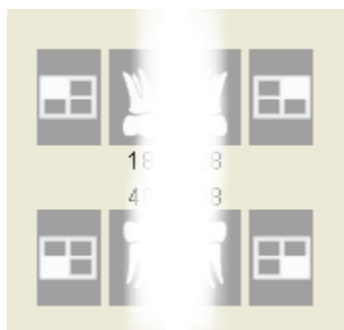
The image type code above the list box is then detailed further according to the international odontogram (e.g. 16XI).

The number of available images is shown below or above each tooth button.



Each of the symbols located next to the tooth symbols can be clicked to display one quarter of the teeth in the odontogram.

The odontogram can be changed to mixed dentition by means of a check box.

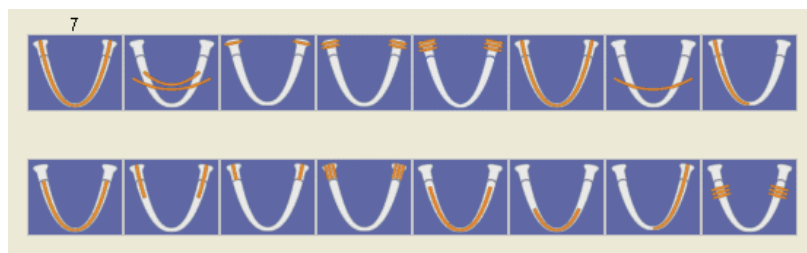


## Panoramic image type (XP)

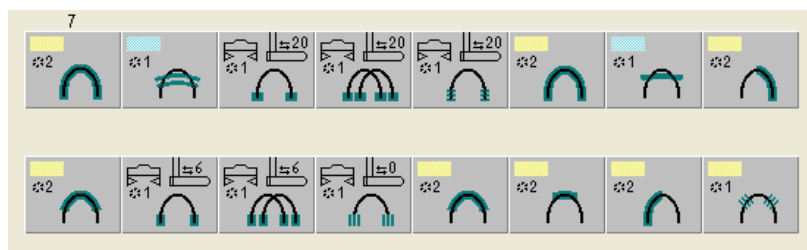
For the panoramic image type (XP), an overview of the OP programs appears instead of the odontogram. The procedure is identical to that for intraoral images. The image type code above the list box is then detailed further according to the selected program number (e.g. 03XP).

During the launch of ORTHOPHOS XG, the overview layout was adapted to match the design of ORTHOPHOS XG. This new layout can be replaced by the SIDEXIS Classic layout (See section "Options [ → 180]").

### ORTHOPHOS XG layout



### SIDEXIS Classic layout

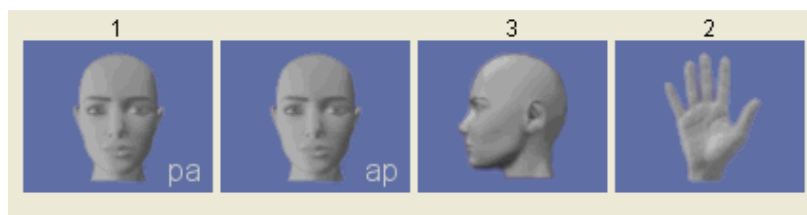


## Ceph image type (XC)

For the Ceph image type (XC), a breakdown into PA, AP, lateral and carpus exposures is offered. The procedure is identical to that for intraoral images. The image type code above the list box is then detailed further according to the selected type (e.g. 01XC).

During the launch of ORTHOPHOS XG, the overview layout was adapted to match the design of ORTHOPHOS XG. This new layout can be replaced by the SIDEXIS Classic layout (See section "Options [ → 180]").

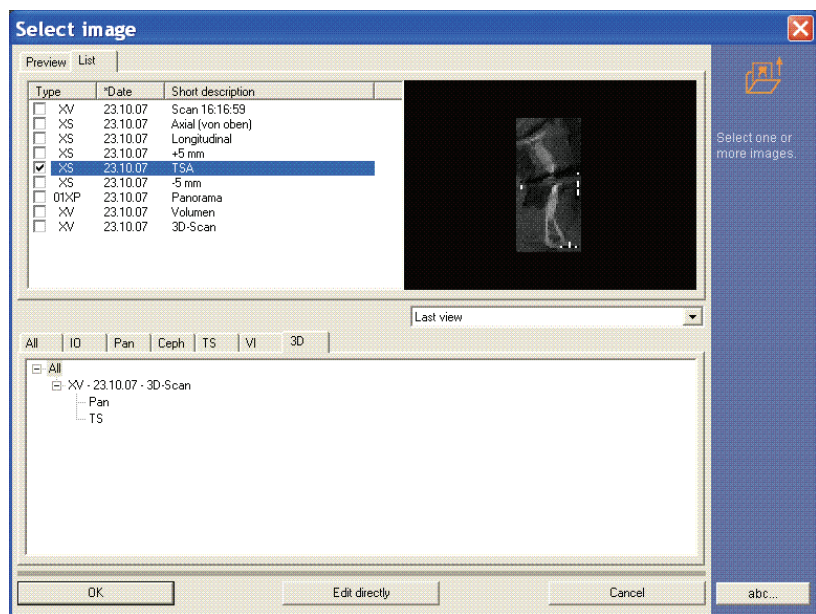
### ORTHOPHOS XG layout



### SIDEXIS Classic layout



## GALILEOS layout



To provide a clearer overview, the list of displayed images can be limited using the structural tree (Pan, Ceph, TSA etc).

This limits you to the selected view in 2D image selection. Upon opening the 3D processing software (GALAXIS), this has no effect on the selected GALILEOS scan.

### 3.5.3.2 Single selection

#### Explanation

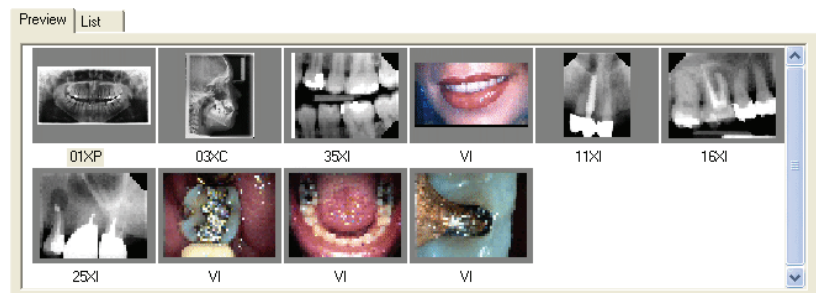
Single selection means that only one image is selected. The selected list item is highlighted by a border.

#### Example screens

Example image of the "List" tab



Example image of the "Preview" tab



#### Open

The last active view of the image is opened as follows:



### Selection

- Select the desired image by left-clicking it with the mouse.
- ✚ **For "List" tab only:** A preview of the selected image is displayed in a window on the right.

### Loading the image

You can load the image in three different ways:

- By double-clicking the selected image with the left mouse button  
or
  - By pressing the "OK" button.  
or
  - **For "List" tab only:** By double-clicking with the left mouse button on the preview window
- ✚ The image is loaded to the workspace.

#### 3.5.3.3 Multiple selection

### Explanation

With multiple selection, several images are selected from the list.

- This method allows, for example, to easily make and retrieve image comparisons using images generated over an extended period of time.

With multiple selection either just the "Last view" or the "Original view" can be selected.

- Selected items appear highlighted in the "View" list box.
- The configuration is explained in Section "Options [ → 180]".

### NOTICE

Selection of the list field "View" is not possible using multiple selection (grey).

### Selection

#### Area selection

1. Select the first desired image by left-clicking it with the mouse.
  2. Press and hold the "[Shift]" key.
  3. Select the last required image by left-clicking it with the mouse.
- ✚ All images between the first and the last selected image are selected.

#### Individual selection

1. Select the first desired image by left-clicking it with the mouse.
  2. Press and hold the "[Ctrl]" key.
  3. Select further desired images by left-clicking with the mouse on each one.
- ✚ Only the explicitly selected images are selected.

## NOTICE

To deselect images that you have selected inadvertently, press the "[Ctrl]" key and then click the unwanted image.

Once you have deselected the last selection, you return to the single selection mode and select other views.

### Loading the image

You can load the selected images in one of three ways:

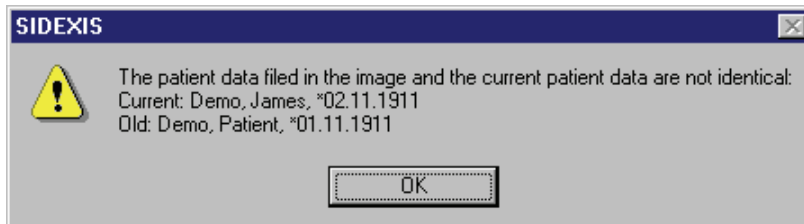
- By double-clicking the selected image with the left mouse button
  - or
  - By pressing the "OK" button.
  - or
  - **For "List" tab only:** By double-clicking with the left mouse button on the preview window
- ↳ The images are loaded to the workspace.

#### 3.5.3.4 Patient data discrepancies

##### Explanation

If the patient data saved for the image you have selected are not identical to the current patient data, a warning appears to prevent incorrect assignment of data. You should always check the reason for this discrepancy (e.g. name change due to marriage, etc.).

##### Example screen



#### 3.5.3.5 Procedure for relocated images

##### Explanation

If the images you require have already been relocated, you may be prompted to insert a storage medium when you try to select them.

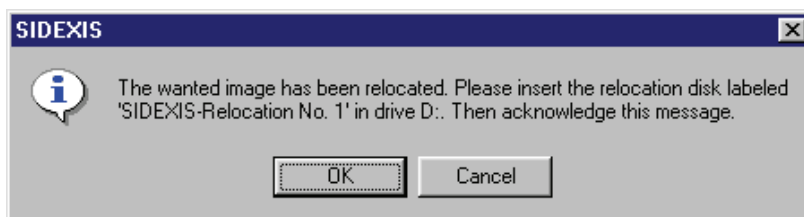
##### Function

Once you have inserted the storage medium and acknowledged the message, the image can be displayed in the usual way.

Relocated images are identified by ">" in the list for enhanced clarity.

For further information on this topic, please refer to Section "Configuring relocation [ → 156]"

##### Example screen



### 3.5.4 Image description and findings

#### Explanation

When an image is open and active, its description can be displayed or edited at any time.

This image description helps you to easily retrieve a specific image of a patient. Furthermore, a finding can be entered to the image description.

**Tip:** It is possible to have the image description displayed as a tooltip (see Section "Options [ → 180]").

#### Scope

This function can be used for X-ray and video images (but not for live and still images).

This function applies only to the active image.

#### Activating the function



- Click the button.
- or
- Use the "[A]nalysis" menu bar to select the "Findin[g]s" menu item.

#### Activating the function



- Click the button.
- or
- Hotkey: Activate the key combination [Alt]+[Enter]
- or
- Select "Attributes" from the pop-up menu.
- or
- Use the "[A]nalysis" menu bar to select the "[P]roperties..." menu item.

#### Display in the workspace



A symbol for an existing diagnostic finding is displayed in the image.

This symbol can be freely moved within the image or in the workspace.

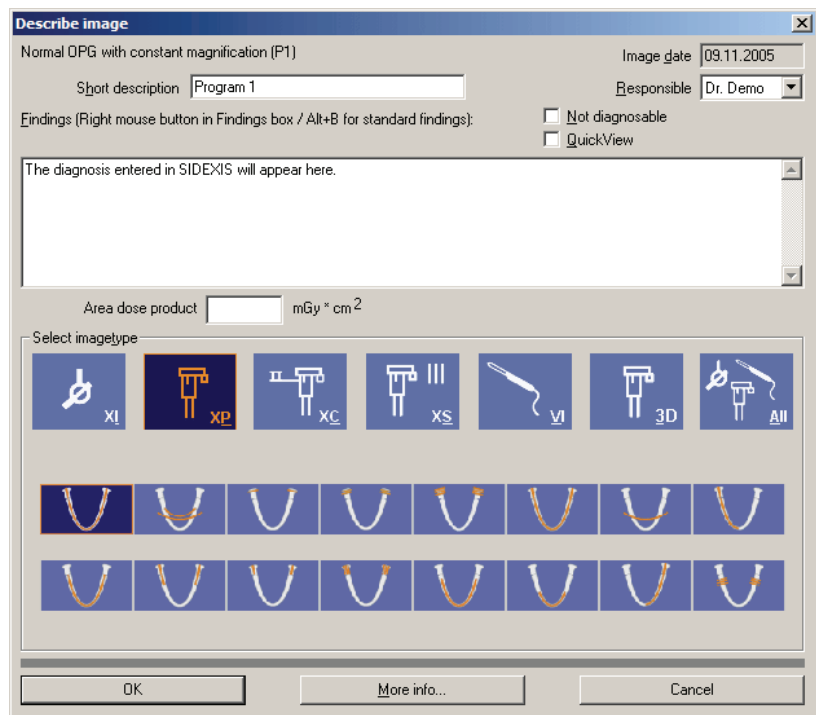
If the exam symbol is placed outside the image, it is always linked to the relevant image by a dotted line.

- The dialog box opens after a double-click.

#### Example screen



## Dialog box



## Image information

The displayed dialog box shows the available image information for the currently active X-ray.

- "Image type"**  
The image type is displayed here.  
For intraoral, TVS and video exposures, the image type is determined by the tooth selected in the displayed odontogram.  
For panoramic and ceph exposures, the image type is determined by the program selected in the OR program survey. The program number of the ORTHOPHOS is also displayed in the image type.  
This image information appears later on in the list box of the dialog box for selecting available images.
- "Image date"**  
This image information appears later on in the list box of the dialog box for selecting available images.  
The image creation date is read-only and cannot be edited.
- "Short description"**  
This image information appears later on in the list box of the dialog box for selecting available images.  
You can enter any text in this field.  
A maximum of 128 characters is permitted.
- "Person responsible"**  
Here, the name of the patient's permanent dentist is entered automatically by the system. If another dentist was responsible for the image, the data can be edited.
- "Findings"**  
You can enter any text in this field.  
A maximum of 5000 characters is permitted.
- "Not diagnosable"**  
If an exposure cannot be diagnosed, this can be noted by activating

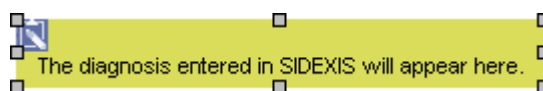
the associated check box. Images marked as not diagnosable are identified by “~~” in the image type.

They are displayed only when all image types are displayed by clicking the “All” button.

- *“Quick View”*

If this check box is activated, the findings text is displayed in a text window in the workspace.

- **Example screen:**



- *“Area dose product”*

You can enter “Area dose product” in this field.

Certain digital Sirona X-ray systems can also automatically fill in this field during an exposure.

## NOTICE

The accurate specification of image type and short description is helpful for later retrieval of the exposure and should therefore always be made.

## NOTICE

When entering the findings text, you can open a context menu with precompiled standard findings by pressing the right mouse button or the [Alt] + [B] key combination. Several of these findings can be combined by repeating this action. The [Esc] key closes the context menu without further actions. Section “Processing standard findings [ → 148]” describes how these standard findings can be configured individually.

By confirming the dialog box, all entries are saved automatically. By canceling the dialog box, all changes made are discarded.

### Automatic activation

## NOTICE

SIDEXIS can be configured in such a way that the type of image or finding to be loaded can be automatically confirmed either before or after carrying out an X-ray. For further details, please refer to Section “Exposure settings [ → 140]”.

It is not possible to determine whether an X-ray image is an original or a copy. Neither is it possible to recognize whether an image is compressed (for further details, see Section “System settings [ → 140]”) or to determine the level of compression. This information is mostly required for expert appraisals. More precise image details such as these are also sometimes required for the provision of services or for handling complaints.

### Additional information

For this reason, for all exposures taken with SIDEXIS, an information window with further information on the displayed image can be opened by pressing the “More info...” button. The origin of an exposure and further information are displayed behind the “Software” label. An explanation of

the abbreviations can be found in Section "Identification of images [ → 64]".

Additional information regarding radiation time, tube current, tube voltage, stand height, temple support width and the forehead support are displayed for **panoramic**, **ceph** and **transversal exposures** created using SIDEXIS XG. For all other exposures, these entries appear in gray.

### 3.5.5 Removing objects from an exam

#### Scope

This function can be used for X-ray and video images (but not for live and still images).

This function applies to selected objects.

#### Activating the function



➤ Click the button.

or

➤ Hotkey: Press the [Del] key

or

➤ Select Remove from the pop-up menu.

or

➤ Use the "[Edit]" menu bar to select the "[Remove]" menu item.

#### Function

If any properties (image processing, window position, etc.) of one or of the several images have been changed, then several messages prompting you to save are issued before the images are removed from the workspace.

#### NOTICE

Configuration of the behavior for positioning the window is described in Section "Configuring the reminder function [ → 154]".

With live video images, or if no changes have been made to an image that was already saved in the past, the associated image window is closed without this message dialog box.

#### NOTICE

When a patient is checked out or SIDEXIS is terminated, all views are closed automatically.

### 3.5.6 Close image

#### Scope

This function can be used for X-ray and video images (but not for live and still images).

This function applies only to the active image.

## Activating the function



## Function

- Click the button.
- or
- Hotkey: Press the [Esc] key.
- or
- If the *"Extended image title"* function is activated: Click on the button in the image title (see the "Options [ → 180]" section).
- or
- Use the *"[/]Image"* menu bar to select the *"[/]lose"* menu item.

If any property (image processing, window position, etc.) of an image has been changed, then several messages prompting you to save are issued before the image is removed from the workspace.

With live video images, or if no changes have been made to an image that was already saved in the past, the associated image window is closed without this message dialog box.

### NOTICE

When a patient is checked out or SIDEXIS is terminated, all views are closed automatically.

## 3.5.7 Deleting images from the image database

### Explanation

This function can be used to delete previously stored images from the image database.

A distinction is made regarding the image type:

- **X-ray images**  
In the case of X-ray images, only the stored image views can be deleted.  
It is not possible to delete the original views.



### CAUTION

To guarantee the legal retention period for X-rays, it is not possible to delete original images of this type.

- **Video images**  
In the case of video images, both the stored image views and the original views can be deleted.  
The original views of video images can be deleted only after reconfirming the command.  
Please note that in addition to the original view, all associated views of the image are deleted as well.

### Scope

This function can be used for X-ray and video images (but not for live and still images).

This function applies only to the active image view.

## Activating the function



### Function

➤ Click the button.

or

➤ Use the "[I]mage" menu bar to select the "[D]elete" menu item.

After activating the function, you must close the associated image window first for this purpose.

For safety reasons, a message prompting you to reconfirm the command is displayed before permanent deletion.

## 3.5.8 Identification of images

### Explanation

X-ray images are provided with a code to enable clear identification of copies and originals.

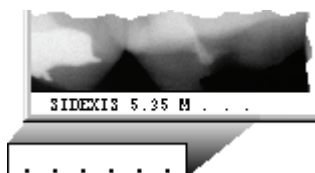
The images used in SIDEXIS are labeled with a code during printing, exporting, copying to the clipboard ([Ctrl] + [C]) and sending by image messaging or by e-mail. This code (black lettering on a white background) appears in the bottom left corner of the image when it is exported, e-mailed or copied to the clipboard.

When an image previously exported by SIDEXIS XG is imported again, the identification becomes visible.

### Re-importing images

When an image is re-imported, all filter, contrast and brightness adjustments become visible again. An image compressed on export is not compressed again on importing.

### Coding



The individual elements are separated by blanks. They are always of the maximum length and for this reason, blanks are added at the end.

Empty fields are marked by a period.

### 3.5.8.1 Structure

#### Position 1



SIDEXIS image

#### Position 2



Version number with which the image has been acquired or imported.  
SIDEXIS XG version numbers are displayed as 6.x.

#### Position 3



Original image



Copy



Modified image



#### Position 4



Image created with the present SIDEXIS system



Imported file



Scanner (TWAIN)



Imported from clipboard



Imported via SLIDA

#### Position 5



No compression



Compression type - JPEG

#### Position 6



JPEG compression parameter:



Quality factor



Files with multiple compression (compressed export of an already compressed image) are preceded by '<'. The smallest compression factor used is displayed.



No compression

#### NOTICE

The encoding described above is also displayed in the window *"More info"*. See Section "Image description and findings [→ 59]".

### 3.5.8.2 Examples

#### Example 1

XI 10.12.02: 16:16:29, Original



SIDEXIS 5.35 M . . .

- A new image, saved without compression and modified (brightness, contrast), then exported:

Coding: "SIDEXIS 5.35 M . . ."

## Example 2

XI 10.12.02: 16:16:29, Original



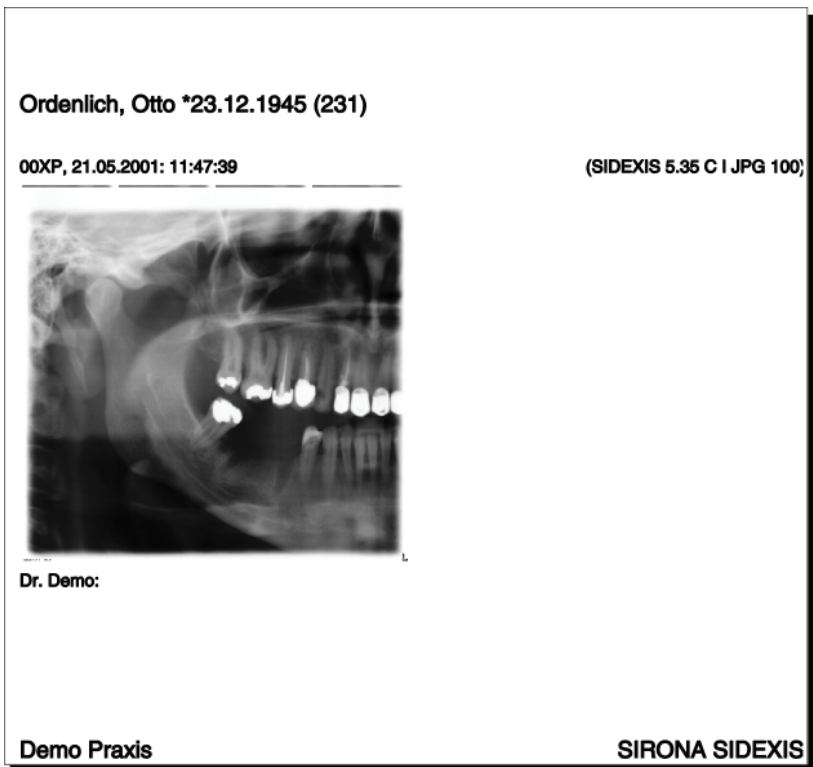
SIDEXIS 5.45 M I JPG 100

- A new image was saved with compression in dental practice A and a modified version of it was exported as a compressed file. This exported image was then imported in dental practice B (and saved without compression):

Coding: "SIDEXIS 5.45 M I JPG 100"

## Example 3 (printing)

Printout of a re-imported copy, compression level JPEG 100.



The code is printed as text outside the image, but only for single image printouts.

Position: Right-aligned in brackets in the same line as the image title

### 3.5.9 Exporting image views

#### Explanation

Exchanging image data produced with SIDEXIS XG with other systems (for example, in the case of a referral) is facilitated with the "Export..." function.

An image is copied to another storage medium (e.g. USB stick, CDR, DVD-R, conventional diskette or network drive) and can then be imported via the *"Import"* function at another location.

### CAUTION

If the exported image is edited with another software (e.g. PaintBrush), it is no longer suitable for diagnostics.

#### Scope

This function can be used for X-ray and video images (but not for live and still images).

This function applies only to the active image.

#### Activating the function



➤ Click the button.

or

➤ In the menu bar *"[I]mage"* *"Export"*, select the menu item *"Exp[or]t..."*.

#### Function

The WYSIWYG principle applies here.

The images are always exported in the state in which they are at the time the command is selected. This means that all processing steps (rotating, filtering, brightness and contrast adjustment) are also exported.

#### Exceptions:

- Magnified image details are not exported. Only entire images are exported.
- The filters *"Invert"* and *"Color"* are not included in the image to be exported.
- Changes in the region of interest must be applied prior to export (See section *"Brightness/contrast adjustment in the region of interest [→ 112]"*).

The target of the export, i.e. path and file name, is defined in the dialog box.

Long file names can be used.

When using TIFF compression, always ensure that the system which has to import the data is capable of reading this compression format. This is always the case if the same or a newer SIDEXIS version than the exporting SIDEXIS version is being used.

The version is shown in the window *"More info"* (see Section *"Image description and findings [→ 59]"*).

## NOTICE

Compression, which significantly reduces the amount of storage space required on the disk, can also be selected for X-rays to be exported in the "Save as type" field. For example, a panoramic X-ray compressed with parameter 100 can be exported to a normal 3.5" disk.

Further details on compression can be found in Section System settings [→ 140]".

If you wish to export an image in TIFF format in uncompressed form, select file type "TIFF (\*.tif)". If the image is to be exported in compressed form, select "TIFF komprimiert" (\*.tif)".

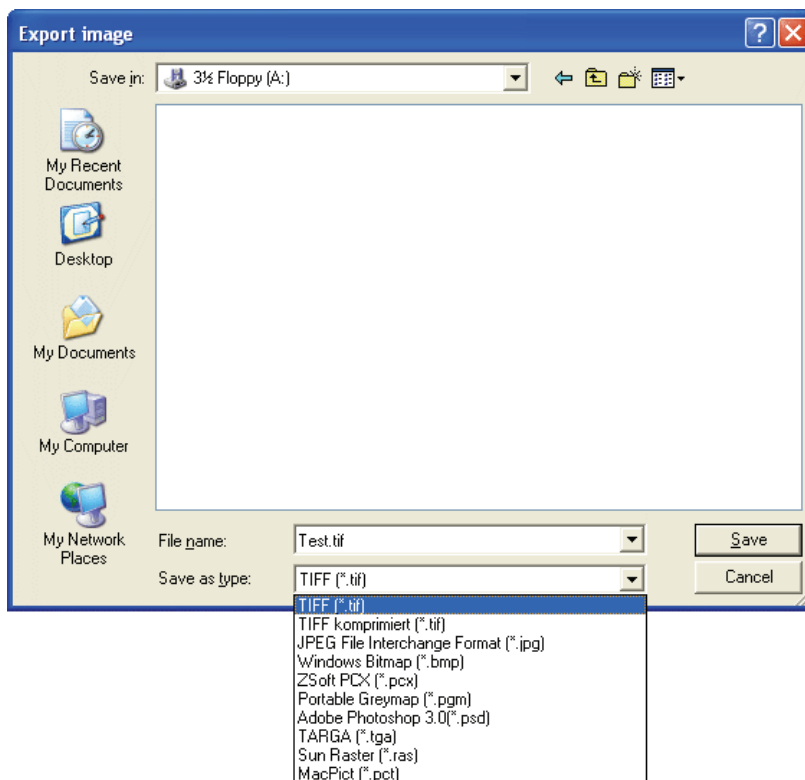
### Example

Exporting the active image to a disk in drive A: under the image name "Exchange.tif"

1. Insert formatted disk into the (A:) drive
2. In the "File name:" text box, enter "Exchange.tif"
3. Select the file format if necessary
4. Confirm by selecting "Save"

Remove disk from drive after the save operation is completed.

### Example dialog box



## 3.5.10 Importing an image

### Explanation

The "Import" function enables image data exchange between different systems, i.e., it is possible to load images that have been produced by a system other than SIDEXIS as well as images that have been produced and exported by another SIDEXIS system before.

For images that have already been exported using SIDEXIS, all available image information such as exposure date and findings are also exported with the image.

The images integrated into the system in this way can be processed like normal exposures. Clear assignment of the image to one patient is also required here.

#### CAUTION

Before importing an image, the user should be absolutely sure that the correct patient is registered.

#### NOTICE

The representation and resolution of imported images depends on the imported images.

### Scope

This function can be used for X-ray and video images.

The system automatically detects whether a compressed format was used for export.

#### NOTICE

Exports from non-SIDEXIS programs may not be imported.

### Activating the function



### Function

### Example

➤ Click the button.

or

➤ In the menu bar "*[Image]*" "*Import*", select the menu item "*Imp[o]rt...*".

The path and name of the file to be loaded must be specified in the dialog box.

Long file names can be used.

Importing the previously exported image named "*Exchange.tif*" from a disk in the (A:) drive

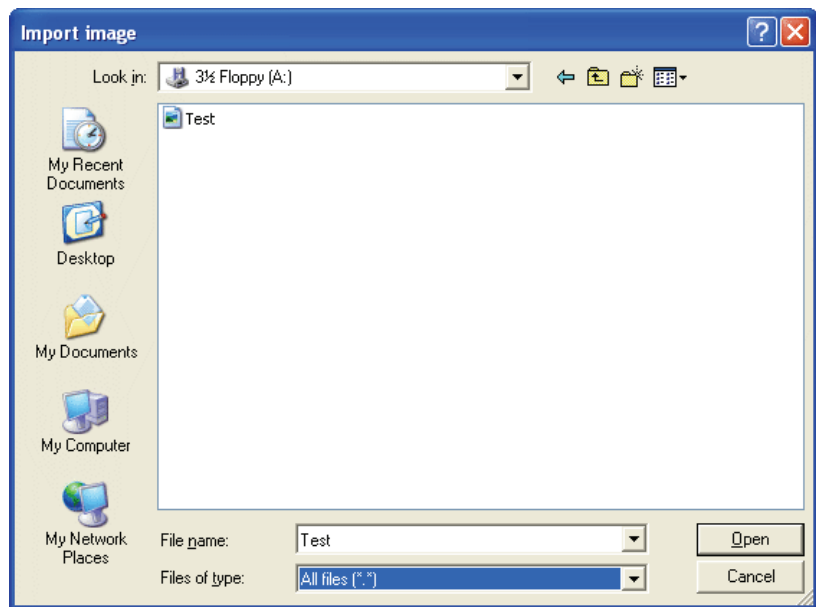
Insert disk containing the image to be imported into the (A:) drive.

In the "*File name:*" text box, enter "*Exchange.tif*"

Confirm by selecting "*Open*"

The disk may be removed from the drive once the image is displayed.

### Example dialog box



## 3.5.11 Printing images and diagnostic findings

### Scope

#### ! CAUTION

Printed images are **not** suitable for diagnostics.

**Exception:** Special printers that furnish outputs that are explicitly suitable for diagnostics, e.g. DICOM film imagers.

This function can be used for X-ray and video images (but not for live and still images).

This function applies only to the active image.

### Activating the function



- Click the button.
  - ↳ The image is printed on the installed default printer

or

- Hotkey: Activate the key combination [Ctrl]+[P].
  - ↳ The image is printed on the installed default printer

or

- In the menu bar "*[I]mage*" "*Print*", select the menu item "*Print...*".
  - ↳ The "*Print*" system dialog is displayed immediately.

### System dialog box

Here you can select and configure one of the Windows printers installed in the system.

In most cases, it offers sufficient space for the image and the associated description, so that, when the active image is printed, both are printed on one page.

- The printout can be checked using the *"Print preview"* function (See Section "Print preview [ → 71]"). A printout can also be started from this function.

The portrait or landscape format must be selected manually.

### 3.5.12 Print preview

#### Explanation

SIDEXIS XG features a print preview option.

- This function can be used to obtain a preview of how the printout will look.
- The position and size of the contents of the printout are displayed on the screen.
- The printout can be started and the printer setup can be invoked directly from the print preview.
- It is also possible to adjust the position and the size of the page to be printed in print preview (not during an *"Exam"*!).

#### Activating the function

##### Print preview of an *"Exam"*



- Click the button.
- or
- Use the *"E[x]am"* menu bar to select the *"Print pre[v]iew..."* menu item.

##### Print preview of an image



- Click the button.
- or
- Use the *"[I]mage"* menu bar to select the *"Print pre[v]iew..."* menu item.

#### Configuration

With only one exception, the print preview uses the symbols from the SIDEXIS XG buttons.

**The page is output to the default printer.**

**The print setup dialog box of the operating system appears.**

**The window *"Set up page"* is displayed.**

- The size and position of an image can be changed there.
- See Section "Page setup for printing [ → 72]"



## NOTICE

Not active during print preview of an *"Exam"*



Print preview, zoom in.



Print preview, zoom out.



Closes print preview.

### 3.5.12.1 Page setup for printing

#### Explanation

The page to be printed can be configured in the *"Set up page"* dialog box.

#### Configuration

- **Pane *"Size"***
- The size of the image to be printed is preset in the *"Size"* pane.
- The width-to-height ratio is not and cannot be changed.
- **Pane *"Position"***
- The position of the image to be printed is preset in the *"Position"* pane.
- **Check box *"Apply as default values"***
- The entered size and position of further print-outs are saved when the control box *"Apply as default values"* is activated.
- If the check box is deactivated, only a single printout in the print preview will be printed.

#### Field *"Size"*

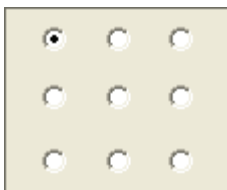
- ***"100%"* option field**  
The image is printed out in the original size of the exposure.
- The size depends on the size information contained in the image.
- If the size information is missing in the image, the image will be printed with a width of 60 mm.
- X-ray images which have been obtained directly from a SIDEXIS exposure or imported to the SIDEXIS database via *"TIF"* export are printed in the size of the sensor area.
- **Option button *"Page-filling"***  
The size of the printout is adjusted so that the maximum printable area is fully utilized.



- **Option button "Variable"**  
The size can be adjusted.
- **Check box "Limit to printable size"**  
When the "Limit to printable size" check box is activated, the size of the printout is limited to the maximum printable area.

#### Contents of the "Position" field

- **Check box "Edge of hole"**  
When the "Edge of hole" check box is activated, a space is left in the left margin of the printable area for punching holes.  
The image size is reduced accordingly.
- **Positioning box**  
The image position can be determined via the option buttons in the positioning box.



### 3.5.13 Scanning images

#### Explanation

The SIDEXIS XG system can read image data from any TWAIN-compatible device (scanner, digital camera, etc.) into the database.

If several TWAIN devices are installed on the system, the appropriate device can be selected using the "Select scanner" function.

#### NOTICE

The representation and resolution of scanned images depends on the performance and the settings of the scanner as well as the quality of the original.

#### Scope

All TWAIN-compatible devices are permitted.

The main purpose of this function is to allow you to include conventional X-rays in the SIDEXIS database.

#### Activating the function



➤ Click the button.

or

➤ Use the "[I]mage" menu bar to select the "[S]can..." menu item.

#### Tips for X-ray exposures

When scanning X-ray images, the following must be observed:

- In order to make full use of the SIDEXIS software functions, images must be scanned in grayscale mode (with 256 levels of gray).
- The scanner must be equipped with a transparency unit in order to ensure maximum contrast of the scanned images.
- We recommend scanning intraoral X-ray images at a resolution of 600 dpi.
- Panoramic, Ceph or TSA X-ray images should be scanned at a resolution of 300 dpi.

- If length measurements must be performed, the length must be calibrated by means of a reference measure on the X-ray image.

#### "Select scanner" function



➤ Click the button.

or

➤ Use the "[I]mage" menu bar to select the "[S]elect scanner..." menu item.

### 3.5.14 Sending images via Internet as e-mail

#### Explanation

If an Internet email connection has been configured on your SIDEXIS workstation, you can send images via email.

A description of the configuration can be found in chapter in Section "System setup [ → 140]"

#### CAUTION

The procedure described here presumes that "SMTP" or "MAPI" are activated in the SIDEXIS software.

If "MAPI + dialog" is activated, the preinstalled Windows email program starts. Operation of the e-mail program that comes with Windows, however, is similar.

#### Scope

This function can be used for X-ray and video images (but not for live and still images).

This function applies only to the active image.

#### Activating the function

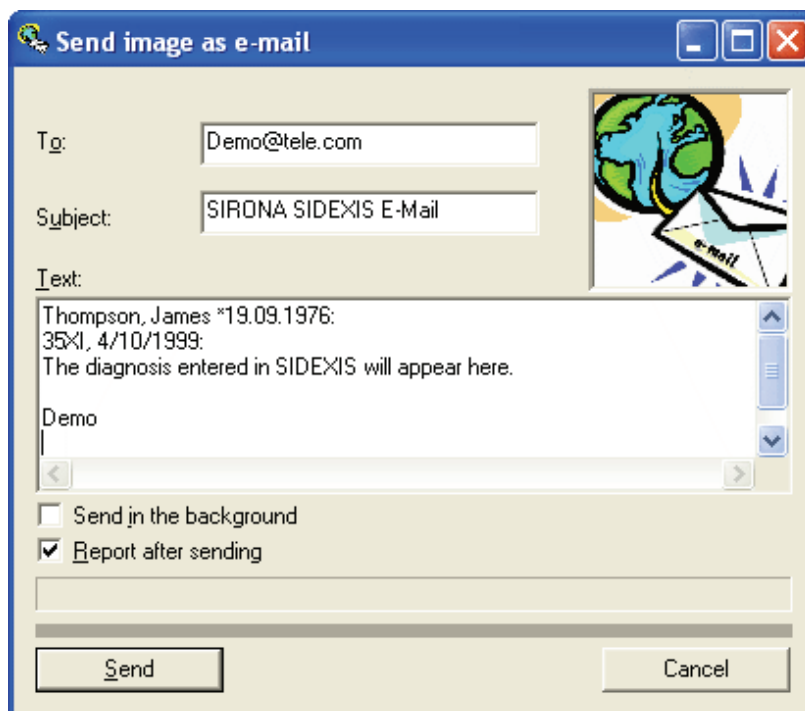


➤ Click the button.

or

➤ Use the "[I]mage" menu bar to select the "[E]-[m]ail" menu item.

## Dialog box



### Structure of the dialog box

- **Text field "To:"**  
Enter the e-mail address of the recipient in this field.
- **Text field "Subject:"**  
Here you can **optionally** enter the subject of the e-mail.
- **Text field "Text:"**  
The header data of the active image and the name of the practice automatically appear in this text box.  
Here you can enter further explanations and data for the exposure to be sent.
- **Check box "Send in the background"**  
You can continue to work with SIDEXIS XG while the image is transmitted.
- **Check box "Report after sending"**  
After the e-mail has been successfully sent, a confirmation message appears on screen.
- **Command button "Send"**  
Is used to send the e-mail to the addressee.  
While the e-mail is being sent, a progress indicator informs you about the status of the operation.

## 3.5.15 Send image

### Explanation

During installation and configuration of the system, the service engineer may interface further programs so that these can receive images from SIDEXIS. For example, you can use this option to forward images for further processing to measuring programs for implants or for remote X-ray analysis.

The desired image is transmitted with this command and remains available for when the target application is next opened.

## Validity

This function can be used for X-ray and video images (but not for live and still images).

This function applies only to the active image.

The WYSIWYG principle applies here. The images are always exported in the condition at the time the command is selected. That is, all processing steps (rotating, filtering, brightness and contrast adjustment) are also exported. However, this applies only to entire images. Magnified image details are not exported.

## Activating the function



## Function

➤ Click the button.

or

➤ From the menu bar "[/i]Image", select the menu item "Send ima[g]e".

If only a single addressee has been configured, then the image is sent without further queries immediately after giving the command, and the corresponding program opens simultaneously.

If several programs are interfaced to SIDEXIS in this way, then you select the desired target application in a dialog box.

## 3.5.16 Move image

## Explanation

This command makes it possible to move images that were created for the wrong patient to another patient.

- Image movements are recorded and can be undone by moving the images once again.
- Saved views are also moved in this process.
- If an image is moved that is part of one or more examinations, the link to the moved image remains intact in the examinations. However, the image will **no longer** be displayed in the affected examinations. If the image is moved back to the original location, then it will be displayed once again in the affected examinations.
- If the image of a 3D volume exposure is moved, then the entire 3D volume will be moved with all of the 2D images generated for it.

### NOTICE

Entries in the optional X-ray control book are not moved!  
These are to be corrected subsequently using comments.

### NOTICE

If an image is moved, then the procedure is logged in the PDATA/-sibdel.log file.

## Scope

This function can be applied to all saved images.

This function applies only to the active image.

## Activating the function



## Selecting the (target) patients

- Click the button.
- or
- Use the "[I]Image" menu bar to select the "Move" menu item.
- ↳ The "Register patient" window opens.
- 1. Select the (target) patient.
- 2. Press the "OK" button.
  - ↳ A security dialog box is displayed.
- 3. Press the "OK" button.
- ↳ The active image has been moved.

## 3.6 Image acquisition

### 3.6.1 General

#### Explanation

When a digital X-ray image is acquired with SIDEXIS, the PC and the SIDEXIS software must be prepared for the exposure in addition to the usual operation of the X-ray tube assembly or panoramic unit. The PC must therefore be made ready for exposure.

As soon as the PC is ready for exposure and SIDEXIS is ready to take an X-ray, a dialog box appears on the monitor as control.

In an X-ray exposure, the dose area product can be entered immediately following image creation. This value is then saved with the image.

### 3.6.2 Safety instructions

#### ⚠ CAUTION

Before releasing radiation, the user should always ensure that the PC and software are ready for exposure and that the correct patient is registered in the system.

#### ⚠ CAUTION

Since programs running simultaneously under Windows can interfere with each other, it is recommended not to switch to another program as long as exposures are being taken. Otherwise the consistency and reliability of such exposures cannot be fully guaranteed.

#### ⚠ CAUTION

Immediately after the X-ray is taken, the acquired image is automatically saved to the patient database. This ensures a high level of data security.

Once the new X-ray has been saved, it is displayed in a window on the screen.

In contrast to X-rays, exposures with the video camera are possible even when the patient is not registered. The information *"Unknown patient"* appears in the title bar. If you later wish to save your video exposure and the patient has not yet been registered, you can register him or her afterwards. However, in order to avoid errors when saving video exposures and to ensure a uniform workflow, we recommend registering the patient in advance even when working with the video camera.

### ⚠ CAUTION

Before saving the video exposures, the user should make sure that the correct patient is registered in the system!

SIDEXIS creates a description of every X-ray or video exposure taken. This description is automatically filled with certain information following an exposure. The data can be changed or updated (diagnostic findings) either immediately after the exposure has been taken or at a later moment. For details please refer to section Image description and findings [ → 59].

### NOTICE

Please note that the number of images which can be opened simultaneously is limited and a large number of open images reduces the overall system performance. Images which are no longer required should therefore always be closed.

## 3.6.3 Intraoral X-rays

### 3.6.3.1 Single intraoral X-ray exposures

#### Explanation

The first alternative serves for producing a single intraoral image. In this case readiness for exposure for one single image is activated. After the ready dialog box is displayed and radiation is subsequently released, the new image appears on the screen. The process is completed. With this option, it is possible to jump to image description or diagnostics automatically before or after each exposure if the system has been configured correspondingly. For further details, please refer to Section "Exposure settings [ → 140]."

#### Activating the function



- Click the button.
- or
- Hotkey: Activate the key combination [Ctrl]+[Shift] +[I].
- or
- In the menu bar *"[I]Image" "[I]Intraoral X-ray"*, select the menu item *"S[ingle exposure]"*.

### 3.6.3.2 Multiple exposure

#### Explanation

The *"Multiple exposure"* command can be used to take several intraoral X-ray exposures of the same patient, without having to again make the system ready and select the X-ray acquisition unit on the PC. After an intraoral X-ray is taken, readiness for exposure is restored automatically without any user interaction. This is of great advantage especially if the PC and X-ray sensor are located at different places. Once all X-rays are taken, the process is completed by canceling the ready dialog box.

#### Activating the function



- Click the button.
- or
- Hotkey: Activate the key combination [Ctrl]+[Shift] +[M].
- or
- In the menu bar *"[I]mage"/"[I]ntraoral X-ray"*, select the menu item *"[M]ultiple exposure"*.

### 3.6.3.3 Templates for intraoral exposures

#### Explanation

You can select a template for intraoral exposure series from a template list.

This feature is part of the exam concept of SIDEXIS XG.

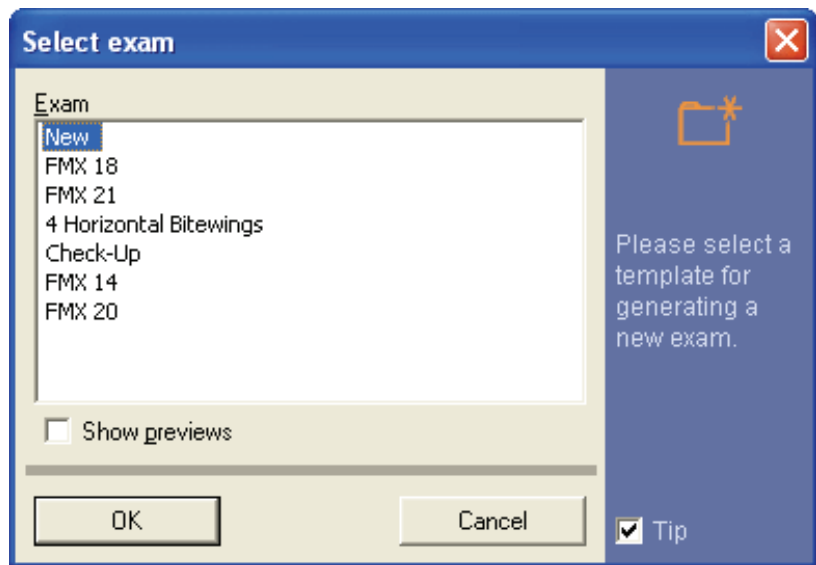
You can create your own X-ray image series within the *"Templates"* function. More information can be found in Section System setup [ → 140].

#### Activating the function



- Click the button.
- or
- Hotkey: Activate the key combination [Ctrl]+[N].
- or
- Use the *"E[x]am"* menu bar to select the *"[N]ew..."* menu item.
- or
- In the menu bar *"[I]mage"/"[I]ntraoral X-ray"*, select the menu item *"[N]ew..."*.

### Selection dialog box

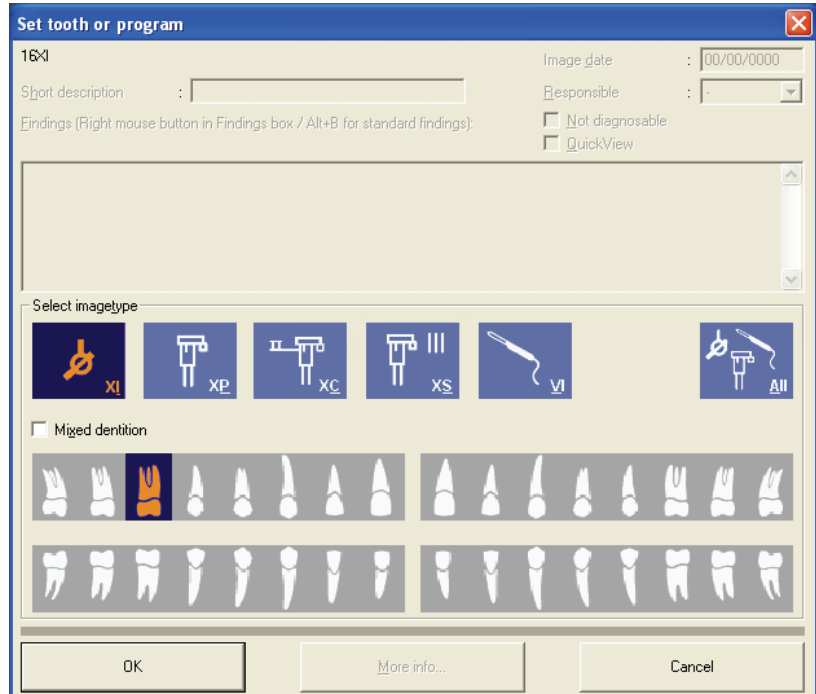


#### 3.6.3.4 Tooth selection

### Explanation

To enable the user to enter the number of the affected tooth, the findings dialog box explained in detail in the chapter on image description is displayed. Click the desired tooth in the lower part of the dialog box and confirm with "OK". The rest of the box is not yet relevant at this moment and is therefore unavailable for selection.

### Selection dialog box



Here as well the process is terminated by canceling the ready dialog box or specifying the tooth.

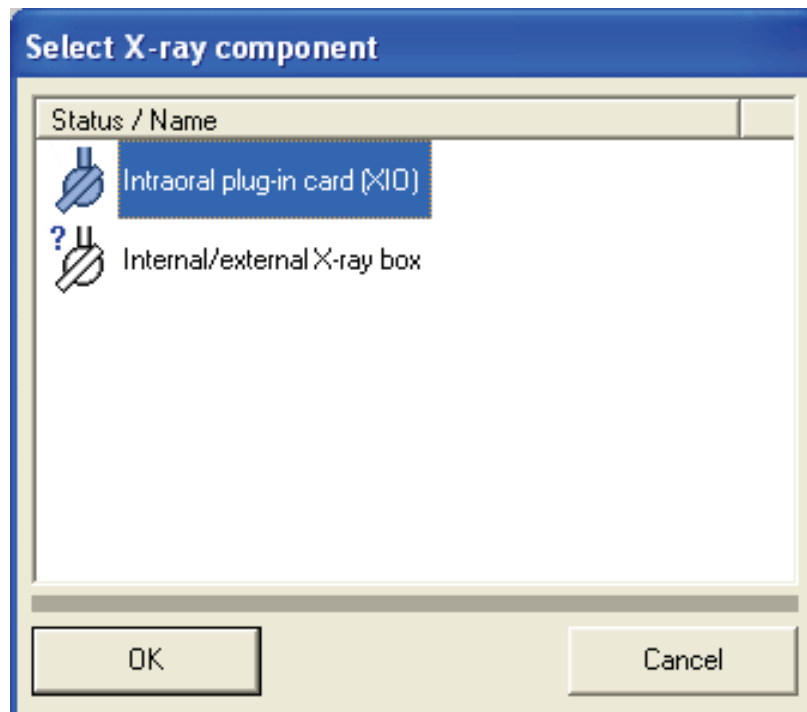
A corresponding message appears on the status bar during multiple exposures.



### 3.6.3.5 Operation with several intraoral X-ray units

If several X-ray units are installed and networked in a practice, then an X-ray acquisition unit must be selected before taking an intraoral X-ray exposure. The selection is made by clicking the desired unit in the "Status / Name" column and it is highlighted by a blue bar.

Selection dialog box



Acquisition units marked with a question mark are possibly not switched on.

Acquisition units which are crossed out are possibly busy.

After the X-ray acquisition unit has been selected, further dialog boxes show how the connection between the acquisition unit and the calling computer is established. These dialog boxes can provide important information in case of connection errors.

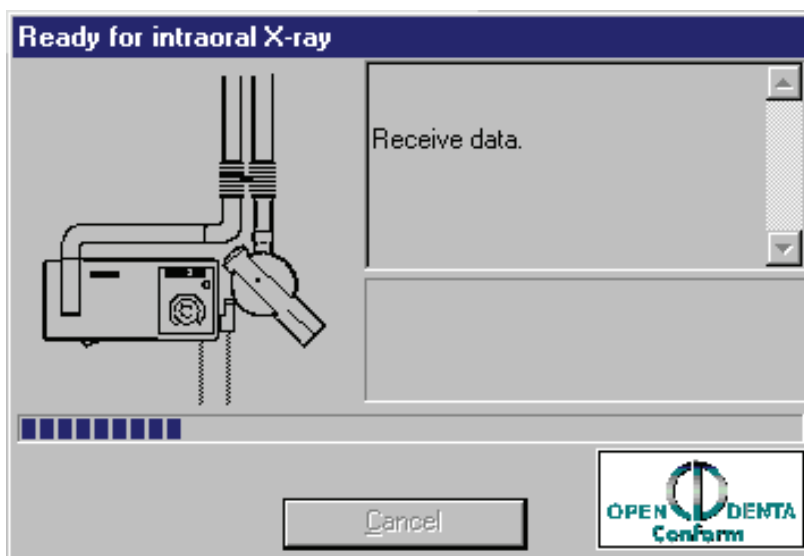
### 3.6.3.6 Image acquisition

#### Explanation

As soon as the message "Waiting for X-ray" appears, the X-ray unit is enabled by the computer. You can now release the exposure at the unit.

After further messages the following dialog box which informs you about the progress of the data transfer operation finally appears. Note that the "Quit" button is now unavailable for safety reasons.

## Acquisition dialog box



## Function

As long as SIDEXIS is busy with taking an intraoral X-ray exposure, a green indicator flashes as a warning below the intraoral acquisition unit symbol in the dialog box.

If the system is equipped with an X-ray box, readiness for exposure is also signaled by a permanently lit green LED on this X-ray box.

As long as this message is displayed on the screen and the indicator in the dialog box flashes or the green LED on the X-ray box lights up, the exposure can be taken as in conventional radiography. The X-ray sensor is then put into a ready status. Signal transmission starts as soon as the X-rays hit the sensor.

### CAUTION

If no such ready dialog box appears, or the indicator in the dialog box does not flash, or the X-ray box LED does not light up, do not take any X-rays of the patient until the problem has been rectified.

Readiness for exposure ends before detection of radiation when you press the "Quit" or the [Esc] key.

### NOTICE

#### Information on the USB box

More information can be found in the documentation: SIDEXIS - Intraoral USB Box - Operating and Installation Instructions REF 59 15 702

## 3.6.4 Panoramic, Ceph and TSA X-ray exposures

### Activating the function



- Click the button.
- or
- Hotkey: Activate the key combination [Ctrl]+[Shift] +[P].

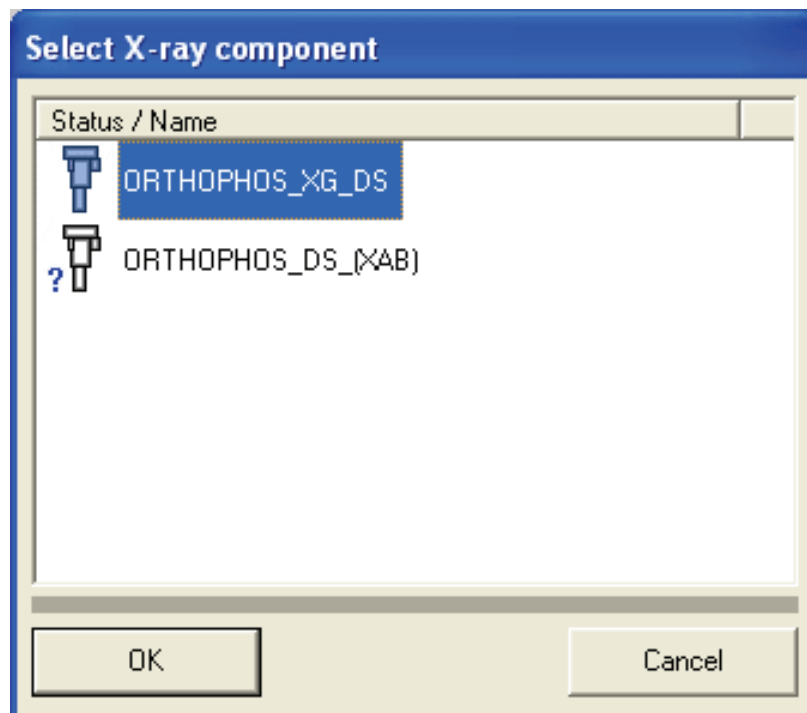
or

- Use the "[I]mage" menu bar to select the "[P]anoramic X-ray" menu item.

### Operation with several panoramic X-ray units

If several X-ray units are installed and networked in a practice, then an X-ray acquisition unit must be selected before taking a panoramic, Ceph or TSA X-ray exposure. The selection is made by clicking the desired unit in the "Status / Name" column and it is highlighted by a blue bar.

### Selection dialog box



Acquisition units marked with a question mark are possibly not switched on.

Acquisition units which are crossed out are possibly busy.

After the X-ray acquisition unit has been selected, further dialog boxes show how the connection between the acquisition unit and the calling computer is established. These dialog boxes can provide important information in case of connection errors.

### Image acquisition

As soon as the message "Waiting for X-ray" appears, the X-ray unit is enabled by the computer. You can now release the exposure at the unit.

After further messages the following dialog box which informs you about the progress of the data transfer operation finally appears. Note that the "Quit" button is now unavailable for safety reasons.

Different X-ray exposures are automatically recognized and differentiated by the system.

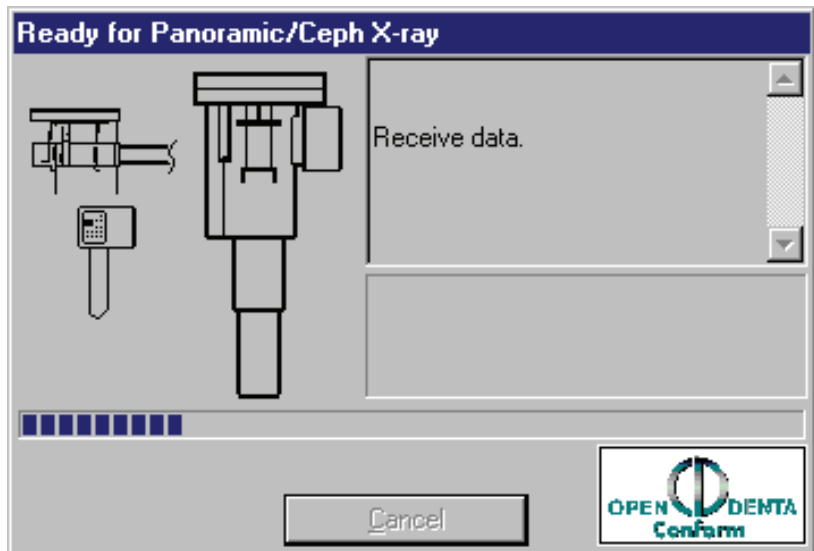
As long as SIDEXIS is busy taking an X-ray exposure, a green indicator flashes as a warning in the exposure dialog box.

### ⚠ CAUTION

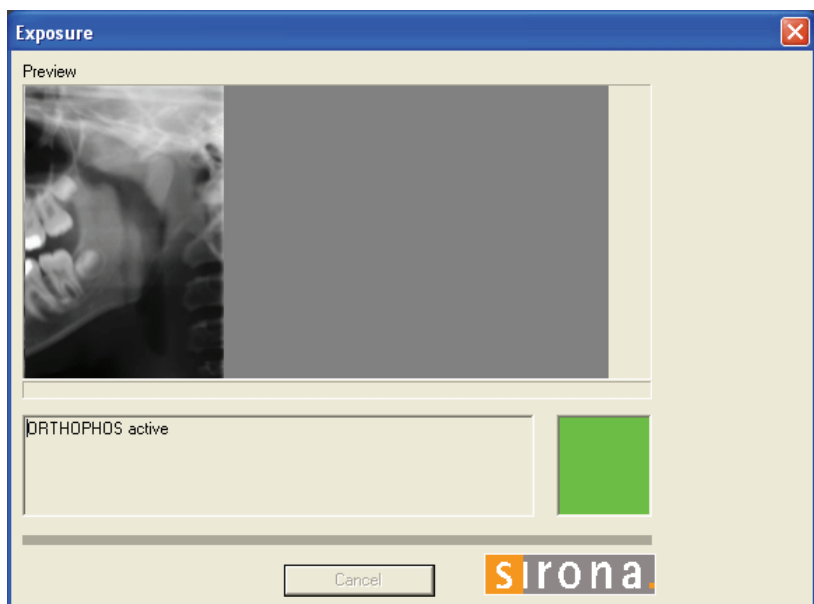
If no such ready dialog box appears, or the indicator in the dialog box does not flash, it is not possible to release radiation on the ORTHOPHOS until the problem has been rectified.

Readiness for exposure ends when you press the "Quit" or the [Esc] key. Once the exposure has been started, it can only be stopped via the ORTHOPHOS.

Acquisition dialog box for ORTHOPHOS DS units



Acquisition dialog box for ORTHOPHOS XG DS units



While the X-ray data is being transferred for ORTHOPHOS XG DS units, a preview image of the X-ray exposure is formed in the acquisition dialog box.

### 3.6.5 3D X-ray exposure

#### Activating the function

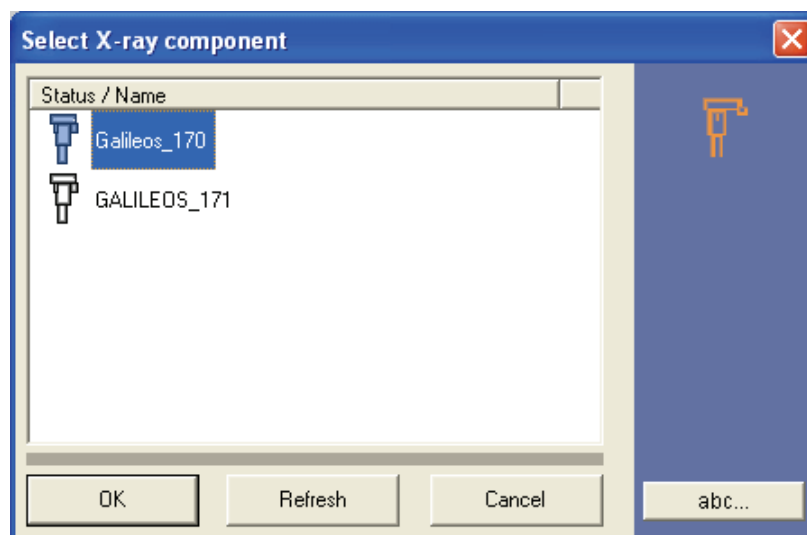


- Click the button.
- or
- Hotkey: Activate the key combination [Ctrl]+[Shift] +[3].
- or
- Use the "[Image]" menu bar to select the "[3D-Scan]" menu item.

#### Operation with several 3D X-ray units

If several X-ray units are installed and networked in a practice, then an X-ray acquisition unit must be selected before taking a 3D X-ray exposure. The selection is made by clicking the desired unit in the "Status / Name" column and it is highlighted by a blue bar.

#### Selection dialog box



Acquisition units marked with a question mark are possibly not switched on.

Acquisition units which are crossed out are possibly busy.

After the X-ray acquisition unit has been selected, further dialog boxes show how the connection between the acquisition unit and the calling computer is established. These dialog boxes can provide important information in case of connection errors.

#### Image acquisition

As soon as the message "Waiting for X-ray" appears, the X-ray unit is enabled by the computer. You can now release the exposure at the unit.

After further messages the following dialog box which informs you about the progress of the data transfer operation finally appears. Note that the "Quit" button is now unavailable for safety reasons.

Different X-ray exposures are automatically recognized and differentiated by the system.

As long as SIDEXIS is busy with taking an X-ray exposure, a green indicator flashes as a warning in the acquisition dialog box.

### ⚠ CAUTION

If no such ready dialog box appears, or the indicator in the dialog box does not flash, it is not possible to release radiation on the GALILEOS until the problem has been rectified.

Readiness for exposure ends when you press the "Quit" or the [Esc] key. Once the exposure has been started, it can only be stopped via the GALILEOS.

## 3.6.6 Panoramic X-ray acquisition with GALILEOS

### Explanation

With a GALILEOS system, panoramic views can be generated without GALAXIS visualization software.

### Command

Please refer to the GALILEOS documentation.

## 3.6.7 Video exposure

### Explanation

The integration of video exposures in a SIDEXIS XG "Exam" is described in this section.

### Function

As a rule, the live video image of the SIROCAM is activated by removing the camera from its holder. Then you can freeze (still image) the displayed live image or take the actual video exposure with the help of the foot switch. If an extraoral full-face video camera is connected in addition, then actuating the foot switch while the SIROCAM is in its holder activates an extraoral live image.

In systems equipped with both a SIROCAM and an extraoral video camera, all relevant commands refer to the SIROCAM as long as it is removed from its holder. When the SIROCAM is in its holder, then the extraoral camera has priority. However, you can also switch between the two cameras in the context menu of an active video image.

In addition to this method of taking exposures by foot switch control, there is also a number of control options available in the software user interface which are described below:

### 3.6.7.1 Live video image (SIROCAM)

#### Direct activation of the function

- Remove the SIROCAM from its holder.
- ☞ The live video image starts

### NOTICE

If necessary, switch to the SIROCAM in the pop-up menu of the video image.

#### Indirect activation of the function



It is also possible to start open an empty video window first.

- Click the button.
- or
- Hotkey: Activate the key combination [Ctrl]+[Shift] +[V].

or

- Use the "[I]mage" menu bar to select the "[V]ideo" menu item.
- ↳ An empty white window appears.
- Now remove the SIROCAM from its holder.
- ↳ The live video image starts

### 3.6.7.2 Starting a live video image (extraoral full-face camera)

#### Activating the function

- When the SIROCAM is in the holder, use the menu bar "[I]mage" to select the menu item "[V]ideo".
- ↳ The live video image starts

#### NOTICE

If necessary switch to the full-face camera in the context menu of the video image.

### 3.6.7.3 Video start/stop

#### Video Stop (live image > still image)

- In the context menu for the image, select the menu item "Video Start/Stop".

or

- Hotkey: Press the "[Enter]" key.

or

- Briefly press the foot switch (freezing takes place when you release the switch).

#### Video start (still image > live image)

- In the context menu for the image, select the menu item "Video Start/Stop".

or

- Hotkey: Press the "[Enter]" key.

or

- Briefly actuate the foot switch of the hardware.

### 3.6.7.4 Taking an exposure (Video still image > Save)

#### Explanation

There are several possibilities depending on the type of system or the treatment center in which the SIROCAM is integrated.

#### Activating the function

- Hotkey: Activate the key combination [Ctrl]+[S].
- ↳ The current still image is digitized and a new live image is produced.

#### NOTICE

The digitized video image is not saved automatically.

#### Addendum 1

Only for:

- SIROCAM 2

- **SIVISION 1**
  - **SIROCAM Box**
  - **IVISION 3 Compact**
  - **SIVISION 3** on C6, C8 or ProFeel
  - **SIVISION 3** with camera in the assistant element
- Press the foot switch for a longer time (approx. 2 seconds).
- ↩ In this case the current still image is saved automatically after digitization.
- ↩ A new live image is produced after saving.

## Addendum 2

### Only for:

- **SIVISION 2**
  - **SIVISION 3** with SIROCAM in the dentist element
- Actuate the corresponding function at the treatment system. (Usually, this is the S key with the “C+” foot switch, or the “C” foot switch to the left).

### NOTICE

More details can be found in the operating instructions of your treatment center.

#### 3.6.7.5 Canceling the exposure and closing the video image

### Activating the function

- ✓ In the live image mode **only** with **SIROCAM**
  - Hang up the SIROCAM.
- or
- ✓ Video live and still image
  - Hotkey: Press the [Del] key.

### NOTICE

Unlike X-rays and video exposures, live video images cannot be scaled. Please note that on low resolution monitors (800x600 pixels and below) the live video image will be clipped at the screen margins.

#### 3.6.7.6 Overview

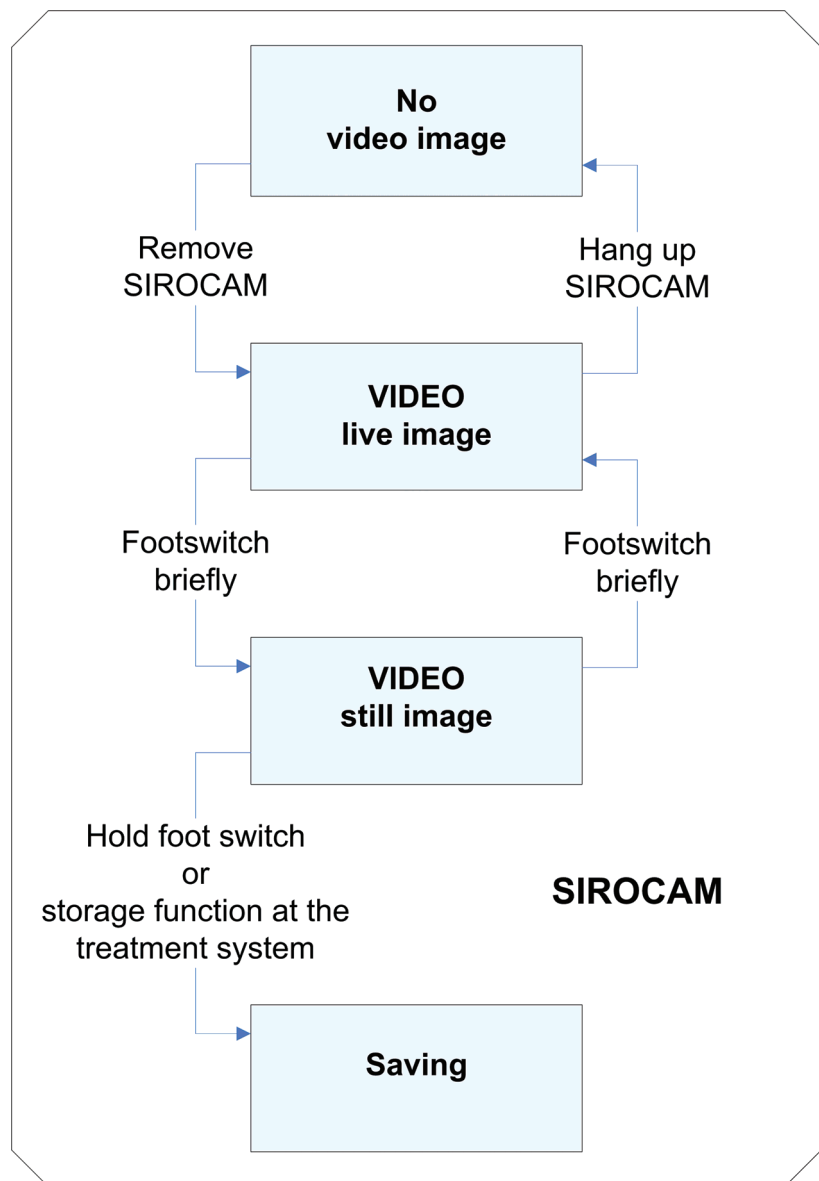
### SIROCAM

The following illustrations provide a further overview of the relationships:

After the SIROCAM has been removed from its holder, it has priority over an additionally connected extraoral full-face camera.

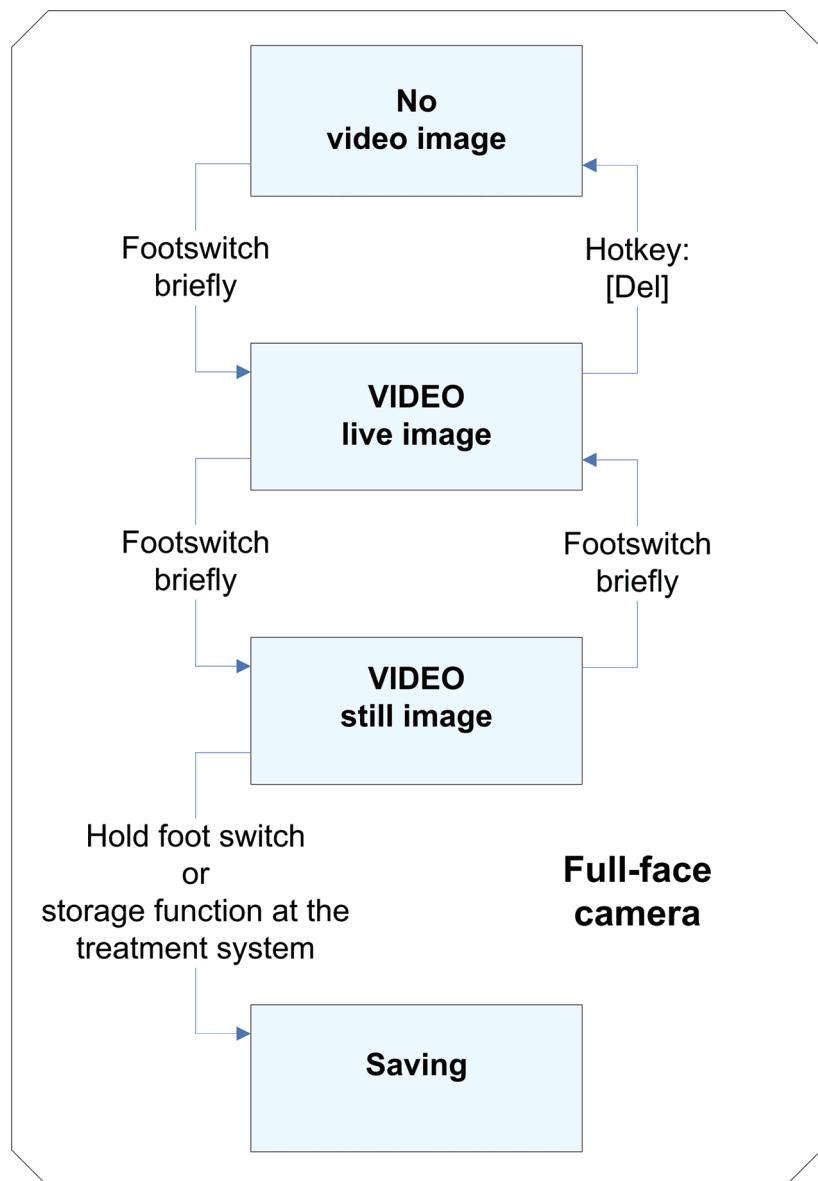
However, you can switch to the extraoral camera in the pop-up menu of the active live video image (right-click to open context menu).





#### Full-face camera

After the SIROCAM has been removed from its holder, it has priority over an additionally connected extraoral full-face camera. However, you can switch to the extraoral camera in the pop-up menu of the active live video image (right-click to open context menu).



## 3.7 Analysis tools

### Explanation

Analysis tools help to make the interpretation of X-ray and video exposures easier.

### 3.7.1 Selecting objects in the workspace

### Explanation

The standard mouse pointer is used for selecting objects in the workspace.

It has the shape of an arrow.

### Scope

All objects in the workspace

### Activating the function



#### Function

- Click the button.
  - or
  - Use the "[A]nalysis" menu bar to select the "[S]elect" menu item.
- There are several ways to select objects in the workspace.

#### Single selection:

1. Place the standard mouse pointer above the desired object.
2. Select the object with the left mouse button.

#### Multiple selection:

1. Press and hold the [Shift] and [Ctrl] key.
2. Place the standard mouse pointer above the desired objects and select them by left-clicking.
3. Let go of the control elements [Shift] and [Ctrl].

#### Area selection:

1. While pressing and holding down the left mouse button, draw a selection frame around the desired objects.
2. Release the left mouse button.

## 3.7.2 Restore original image

#### Explanation

The "*Starting image*" function allows you to discard all previously made changes and to return to the original view in any stage of editing. This command refers to all image manipulations including the image filters as well as to the position of the images within the workspace.

#### NOTICE

Any objects placed in the image will be discarded.

#### Scope

This function can be used for X-ray and video images (but not for live and still images).

As this function recurs to saved original images, it cannot be used for images that have not been saved yet.

### Activating the function



- Click the button.
- or
- Hotkey: Activate the key combination [Ctrl]+[Y].
- or
- Select "*Starting image*" from the pop-up menu.
- or
- Use the "[A]nalysis" menu bar to select the "[S]tarting image" menu item.

## NOTICE

For safety reasons, a message prompting you to reconfirm the command is displayed before the changes are undone.

### 3.7.3 Measurement tools

#### 3.7.3.1 Measuring lengths

##### Explanation

The purpose of this function is to determine dimensions, distances or size ratios of the objects in the X-ray image. It is also possible to measure curved lines by setting interpolation points.

## CAUTION

Always use a reference object as a reference for length measurements, intraoral exposures and ORTHOPHOS exposures! See Section "Correcting the results of a length measurement [ → 94]"

## NOTICE

The indicated lengths are relative values.

They depend on the dimensions of the sensors used for acquiring the images.

This also applies to imported images.

## NOTICE

Measurement results on imported images may, and on video exposures will, only appear as pixel values if the imported data does not contain the necessary information for the exact determination of the length.

This may be the case, for instance, with exposures which were not taken with SIDEXIS.

The display can, however, be switched to millimeters via the "*Adapt measurement*" function (see section "Correcting the results of a length measurement [ → 94]").

#### 3.7.3.1.1 Validity

##### Explanation

This function can be used for X-ray and video images (but not for live and still images).

Special case for TSA exposures with an ORTHOPHOS XG Plus:

## CAUTION

**There are different magnification factors for TSA exposures with an ORTHOPHOS XG Plus!**

Please note that the magnifications of the partial images vary according to the technique concerned.

### Configuration

- On the left are three transverse partial images (TSA) with slightly different magnifications depending on the linear position (magnification as with normal TSA thin layer).
- On the right is the lateral partial image with a magnification of approximately 1:1.24 (magnification similar to that with panoramic exposures).

### Nominal magnifications for TSA exposures with an ORTHOPHOS XG Plus:

Exposure Area	Magnification factor TSA Exposures (3x)	Magnification Factor Lateral (1x)	Linear positions
Anterior tooth	1:1,38	1:1,24	0-5
Canine tooth	1:1,38	1:1,24	6-14
Pre-molar	1:1.34	1:1,24	15-35
Molar	1:1.40	1:1,24	36-65

**Note:** All magnifications are approximate values in terms of the positioning precision in relation to objects in the center of the layer

#### 3.7.3.1.2 Measurement

##### Activating the measurement tool



➤ Click the button.

or

➤ In the menu bar "[A]nalysis", select the "Measure [l]ength" function.

##### Simple linear measurement

1. Determine the starting point with the mouse pointer.
2. Confirm the starting point by clicking the left mouse button.
3. Drag the mouse pointer to the desired end point.  
↳ Both points are connected by a line.
4. Confirm the measured length by double-clicking the left mouse button.

##### Measuring the length across several interpolation points

1. Determine the starting point with the mouse pointer.
2. Confirm the starting point by clicking the left mouse button.
3. Drag the mouse pointer to the desired first interpolation point.
4. Confirm this interpolation point by clicking the left mouse button.
5. Repeat steps 3 and 4 until you have reached the desired end point.  
↳ The length that has just been measured is then extended segment by segment.
6. Confirm the measured length by double-clicking the left mouse button.

##### Indication of the measured value

- The length between starting point and end point is displayed next to the connection line as well as on the status bar at the bottom of the program window.

- The total length is displayed on the status bar and next to the last line segment.
- The display next to the last line segment is highlighted with a colored bar and can be moved freely within the workspace.  
At the same time, the measuring section remains connected to the measured value by a dashed line.

#### NOTICE

If several length measurements are displayed simultaneously, the status bar always shows the result of the individually selected length measurement.

- By switching between the active length measurements, you can compare the values.

XI 10.12.02: 16:16:29, Original



#### Saving a measurement

#### Example screen

Length measurements can be saved either within a view or within an exam.

#### 3.7.3.2 Correcting the results of a length measurement

#### Explanation

If the image sensor is not aligned exactly orthogonal to the tube assembly during an intraoral exposure, but is slightly inclined, then the measured distances are too large. A projection correction is provided for this case.

#### NOTICE

A correction entered by the user remains active as long as the respective image is open.

Correction values are not saved; they are therefore lost as soon as the image is closed.

#### NOTICE

If several images are displayed, then the correction refers only to the active image in which the correction was made.

## Scope

This function can only be selected if at least one length measurement is already available.

### NOTICE

The correction values are sufficiently accurate only in the vicinity of the reference value, because the angle of the sensor in relation to the tooth may be different in other image areas.

## Activating the measurement tool



➤ Click the button.

or

➤ In the menu bar "*[A]nalysis*", select the "*Adapt [m]easurement*" function.

## Adapting the length measurement

1. First measure a known reference length (e.g. a root canal file with defined length) on the image.
2. Open the "*Adapt measurement*" dialog box.
  - ↳ The previously measured value appears as "*Length*" in the dialog box.
3. Enter the actual value as correction value in the "*Calculated length*" input box. You can adjust this value in 0.1 mm steps using the two arrow keys.
  - ↳ SIDEXIS XG displays the calculated correction factor.
4. Close the dialog box by clicking the "*OK*" button.
  - ↳ For all subsequent length measurements in this image the calculated correction factor is used.
  - ↳ To make the user aware of the activated correction factor, all measured values receive the label "*ref.*" on the status bar and in the image.

## Deactivating the correction

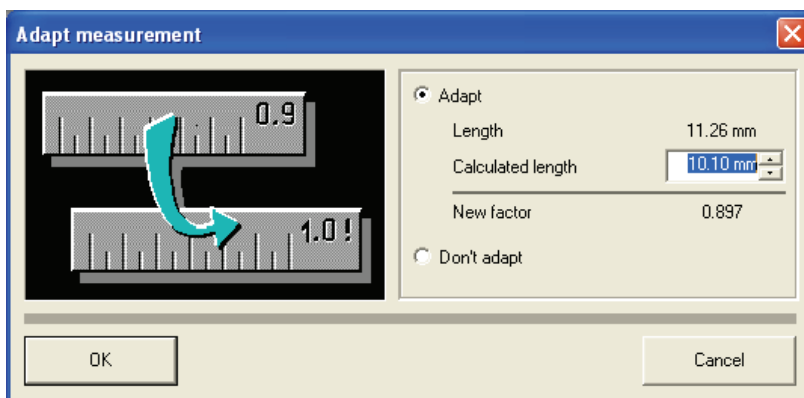
1. If further measurements are to be made without length correction, open the "*Adapt measurement*" dialog box once again and activate the "*Don't adapt*" option button.
2. Then close the dialog box by clicking the "*OK*" button.

## Example

- "*Length*" = 11.26 mm
- "*Calculated length*" = 10,10 mm
- "*New factor*" = 0,897

All subsequent measurements in the same image are multiplied by 0.897.

## Example screen



### 3.7.3.3 Measuring angles

#### Explanation

SIDEXIS XG also provides a function for easily determining angles.

#### NOTICE

**The indicated angles are relative values.**

They depend on the dimensions of the sensors used for acquiring the images.

This also applies to imported images.

#### Scope

This function can be used for X-ray and video images (but not for live and still images).

For imported images square pixels are assumed for determining angles if the corresponding information could not be detected during import.

#### Activating the measurement tool



#### Handling

➤ Click the button.

or

➤ In the menu bar "[A]nalysis", select the "Measure [a]ngle" function.

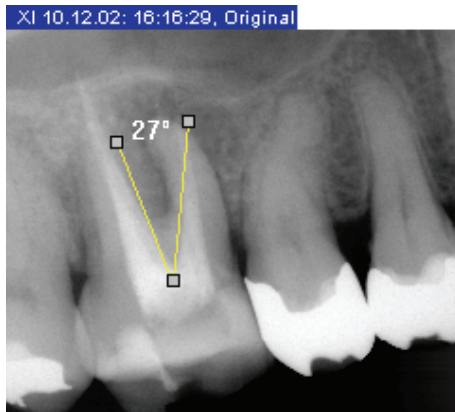
Angle measurements are handled similarly to length measurements.

1. Position the mouse pointer on the spot where you want to place the apex of the angle.
  2. Confirm this position by clicking the left mouse button.
  3. Draw the first leg of the angle to be measured using the mouse pointer.
  4. Confirm this position by clicking the left mouse button.
  5. Draw the second leg of the angle by dragging the mouse pointer. Here it is possible to measure to the left or to the right.
  6. Confirm this position by clicking the left mouse button.
- Angles of up to 180° can be measured. The angle is displayed between the two legs as well as on the status bar at the bottom of the window.
  - The angle measurement in the image is highlighted with a colored bar and can be moved freely within the workspace.



- At the same time, the angle measurement remains connected to the legs of the angle by a broken line.

### Example screen



### Explanation

### Measuring bone density

This function enables a relative measurement of the bone density. An absolute measurement is not possible because of the lack of calibration. However, bone density measurements can be used to confirm or reject findings more easily by quantitative statements.

### NOTICE

The indicated angles are relative values. They depend on the dimensions of the sensors used for acquiring the images.

This also applies to imported images.

### Application examples

- Decision on the existence of caries/periodontosis on the side of the teeth
- Decision on the progress of caries/periodontosis
- Apex detection in root treatment
- Localization of inflammations
- Decision whether the inflammation is clearing up or getting worse
- Decision on bone mass build-up/reduction on implants

This measurement tool works only with X-ray exposures.

### Scope

### Activating the measurement tool



- Click the button.

or

- In the menu bar "[A]nalysis", select the "Measure de[n]sity profile" function.

### Operation

1. Determine the starting point with the mouse pointer.
2. Confirm the starting point by clicking the left mouse button.
3. Drag the mouse pointer to the desired end point.
  - ↪ The current density is displayed as a percentage value next to the cursor.

4. Confirm the end point by double-clicking the left mouse button.  
↳ The *"Display density profile"* window is displayed.

### 3.7.3.5 Displaying the density profile

#### Explanation

After determining a measuring section with the help of the *"Measure density profile"* function in the active image, this function can be used to display the density along this measuring section.

#### CAUTION

No filters such as *"Relief"* may be used before the measurement.

#### Scope

This display works only for density profile measuring sections.

#### Opening the display dialog box

The dialog box opens via the *"Attributes"* function.

#### CAUTION

The measuring section to be displayed must be selected.

The smoothing filter may be used, provided that it acts on the entire measuring section.

- **Hotkey:** Simultaneously press the [Alt] and [Enter] keys.

or

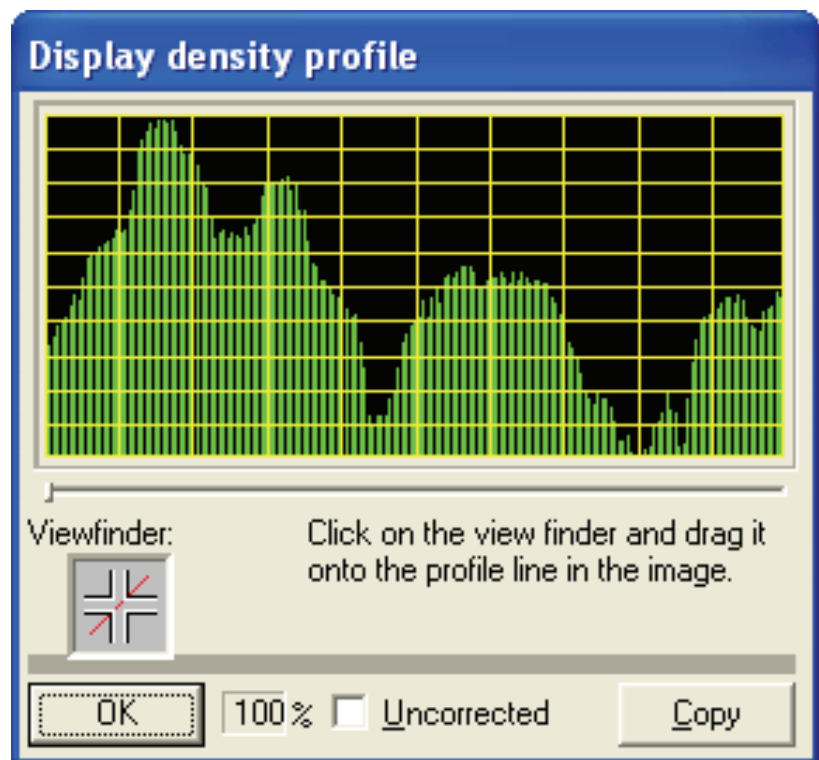
- Click the button.

or

- In the menu bar *"[A]nalysis"*, select the *"[P]roperties..."* function.



## Elements of the display dialog box



- The length of the green bars represents the relative density. Bright image areas generate correspondingly long bars, whereas dark image areas generate short bars.
- The chart is spread out when it is produced by assigning the value 0 to the lowest density and the maximum bar length to the highest density. The spreading can be deactivated by clicking the "Uncorrected" check box.

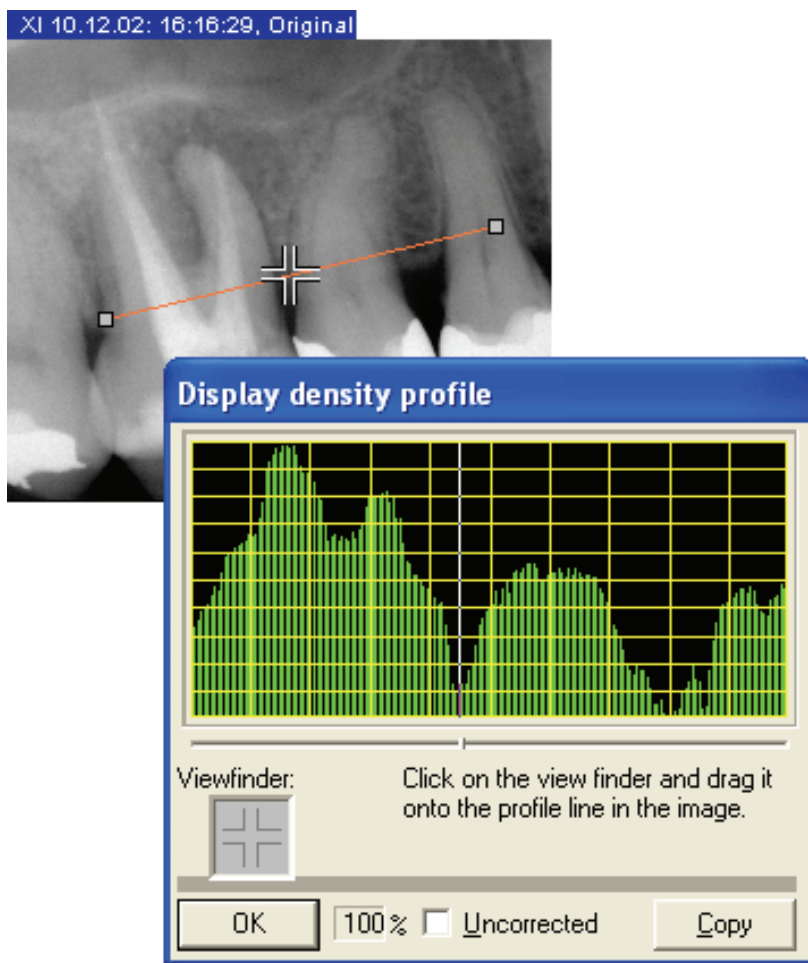
## Copy

The values displayed in the profile can be copied as uncorrected numerical values (0 to 255) to the Windows clipboard with the "Copy" button.

This feature enables the user to perform an evaluation in other programs.

## Allocation between measuring location and diagram

The viewfinder in the "Display density profile" dialog box offers the possibility of establishing a clear relationship between the measuring position and the diagram.



1. Move the mouse pointer over the viewfinder.
  2. Drag the viewfinder icon – while pressing and holding down the right mouse button – from the profile display to the measuring section.
- ↳ The current position within the measuring section is indicated by a white line in the profile chart and a small slider below the profile chart.
  - ↳ The relative value of the bone density at this position appears in the field next to the "OK" button.

### 3.7.4 Display tools

#### 3.7.4.1 Zooming the image

##### Explanation

The zoom function can be used to change the display scale of the active image.

A distinction must be made here between two different types of zoom.

- Basic zooming where the entire image is magnified or reduced in size.
- In this case, the display size of the image changes.
- Zooming in which only the detail view changes.
- The display size of the image remains intact here.

## Scope

This function can be used for X-ray and video images (but not for live and still images).

## Activating the function



### Enlarging

- Click the button.
- or
- Hotkey: Press the [+] key.
- or
- Select *"Enlarge"* from the pop-up menu.
- or
- In the menu bar "[V]iew" "[I]mage" "[Z]oom", select the menu item *"[E]nlarge"*.



### Reducing

- Click the button.
- or
- Hotkey: Press the [-] key.
- or
- Select *"Reduce"* from the pop-up menu.
- or
- In the menu bar "[V]iew" "[I]mage" "[Z]oom", select the menu item *"Re[d]uce"*.



### More details

- Click the button.
- or
- Hotkey: Activate the key combination [Ctrl]+[+].
- or
- Roll the mouse scroll wheel forward (up).
- or
- In the menu bar "[V]iew" "[I]mage" "[Z]oom", select the menu item *"More details"*.



### Less details

- Click the button.
- or
- Hotkey: Activate the key combination [Ctrl]+[-].
- or
- Roll the mouse scroll wheel back.
- or

- In the menu bar "[V]iew"/"[I]mage"/"[Z]oom", select the menu item "*Less details*".

#### Function

Each time you activate a zoom function, the display scale is increased or decreased by one step.

When combined with the "*Viewport*" function, the selected zoom factor is indicated (see section "*Viewport*" [→ 102]).

### 3.7.4.2 Panning

#### Explanation

If the image to be displayed is larger than the available window (e.g. at a zoom factor larger than 1:1), then you can pan around the image (thus displaying another image detail) either in horizontal or vertical direction using the scroll bars.

The so-called "*Hand*" mode is a simple and intuitive method for panning around the image simultaneously in horizontal and vertical direction.

#### Scope

#### NOTICE

If the image to be displayed is larger than the available window in the Full Frame mode, the Hand mode is automatically activated.

This function can be used for X-ray and video images (but not for live and still images) if only a partial image is visible.

#### Activating the function



- Click the button.
- or
- Hotkey: Activate the [Ctrl] key + double-click with the left mouse key
- or
- Use the "[A]nalysis" menu bar to select the "[H]and" menu item.

#### Indication of the active status



As long as this function is active, the mouse pointer has another shape.

#### Operation

After left-clicking into the image window, you can pan around the image by dragging the mouse in the desired direction.

### 3.7.4.3 Viewport

#### Explanation

A further tool is available for viewing images which cannot be displayed on the workspace in their entirety due to their size or the selected zoom factor.

- This tool is referred to as "*Viewport*".
- With the help of the "*Viewport*" tool, different image areas can be positioned and displayed easily and quickly.
- The "*Viewport*" tool clarifies, on the one hand, which section of the image is currently on display and on the other hand, permits intuitive two-dimensional movement of this section.
- The zoom factor of the image detail is indicated.

It thus represents an alternative to positioning using scroll bars, keyboard and the Shift visible image portion [ → 102] function.

## Scope

This function can be used for X-ray and video images (but not for live and still images).

## Activating the function

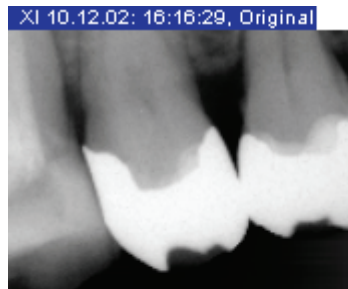


➤ Click the button.

or

➤ Use the "[V]iew" menu bar to select the "[E]nlarge" menu item.

## Display



An additional window is displayed in the workspace for this function. This so-called "Viewport" displays a smaller copy of the complete active image.

If you switch to another image or change the image dimensions (e.g. by rotation), the "Viewport" also changes accordingly.

Within the "Viewport", a red frame indicates the area displayed in the image window.

The zoom factor of the image detail is indicated in the lower right corner of the "Viewport" window.

## Operation via the Viewport window

1. Place the mouse pointer within the red frame.
2. Press the left mouse button.
3. Move the mouse.  
↳ The red frame follows the mouse pointer movement.
4. Release the left mouse button when you have reached the desired area.

The new image detail is now displayed in the related image window.

## Operation via the Hand mode

The image detail can be moved in the Hand mode (See section "Shift visible image portion" [ → 102]).

## Additional context menu

A context menu is available as an additional aid in the "Viewport". It can be used to position the displayed image area in the four image quadrants or in the center of the image.

Depending on the zoom factor and size of the image window, this creates partial images which overlap to varying degrees. Furthermore, you can use the pop-up menu to jump back and forth between the current and last position (e.g. to compare sides).

#### 3.7.4.4 Tiling

##### Explanation

If several image windows are open simultaneously in the SIDEXIS workspace, some image information may be hidden due to mutual overlapping.

The *"Tile"* function arranges all open windows in the available workspace so that there is no overlap. Under certain circumstances this may lead to a reduction of the window sizes.

##### Scope

This function can be used for X-ray and video images (but not for live and still images).

##### Activating the function



➤ Click the button.

or

➤ In the menu bar *"[V]iew" "[I]mage" "[A]rrange"*, select the menu item *"[T]ile"*.

#### 3.7.4.5 Overview

##### Explanation

Function like *"Tile"*.

Additionally, the zoom is adapted in such a way that no scroll bars are displayed, if possible. The scroll bars are displayed only if the minimum zoom factor has been reached. This will fully show all loaded images in the form of an overview.

##### Scope

This function can be used for X-ray and video images (but not for live and still images).

##### Activating the function



➤ Click the button.

or

➤ In the menu bar *"[V]iew" "[I]mage" "[A]rrange"*, select the menu item *"[O]verview"*.

#### 3.7.4.6 Status overview

##### Explanation

In contrast to the *"Tile"* function, this command arranges open image windows corresponding to their anatomical position. In the arrangement, account is taken both of intraoral X-rays and of video exposures in which the number of the displayed tooth has been stated. Intraoral exposures without a clear assignment and all other image types are displayed in the center of the workspace. The zoom of all windows is adapted so that the complete exposure is visible.

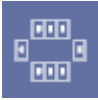
If several windows appear at the same position when arranging the intraoral X-rays, then these are cascaded with an offset of one frame width. You can bring an image window hidden in the background to the foreground by clicking its frame.



## Scope

This function can be used for X-ray and video images (but not for live and still images).

## Activating the function



➤ Click the button.

or

➤ In the menu bar "[V]iew" "[I]mage" "[A]rrange", select the menu item "[S]tatus arrangement".

## Example screen



### 3.7.4.7 Cascading

## Explanation

This window function is the opposite of the "Tile" function.

The open windows are arranged so that they overlap in the form of a cascade.

- All window titles are visible in this case.
- Here, too, the window size can be adjusted accordingly.
- Simply click into a window to activate it and bring it into the foreground.

## Scope

This function can be used for X-ray and video images (but not for live and still images).

## Activating the function



➤ Click the button.

or

➤ In the menu bar "[V]iew" "[I]mage" "[A]rrange", select the menu item "[C]ascade".

#### 3.7.4.8 Full Frame mode

##### Explanation

The active image window is enlarged so as to fill the entire available workspace.

##### Scope

This function can be used for X-ray and video images (but not for live and still images).

##### Activating the function



- Double-click the image.

or

- Click the button.

or

- In the menu bar "[V]iew"/[I]mage", select the menu item "[M]aximize".

or

- If the "Extended image title" function is activated: Click on the button in the image title (see the "Options [ → 180]" section).



##### Terminating the function

- Double-click the image.

or

- Hotkey: Press the [Esc] key.

or

- Click the button.

or

- In the menu bar "[V]iew"/[I]mage", select the menu item "[R]estore".

or

- If the "Extended image title" function is activated: Click on the button in the image title (see the "Options [ → 180]" section).



##### Additional information

- The image cannot be moved in the Full Frame mode.
- If only one image detail is displayed, the Hand mode is automatically activated (See section "Shift visible image portion" [ → 102]).
- If the image is rotated in the Full Frame mode, this will be accepted following switch-over to the Normal mode.

#### 3.7.4.9 Magnifier

##### Explanation

Individual image details can be magnified with this function.

##### Scope

This function can be used for X-ray and video images (but not for live and still images).

##### Activating the function



- Click the button.

or

- Use the "[V]iew" menu bar to select the "[M]agnifier" menu item.

- ✎ The magnifier window appears in the right upper corner of the exam workspace.

##### Operation

1. Place the mouse pointer within the magnifier window.

2. Drag the mouse pointer outside the magnifier window while pressing and holding down the left mouse button.
  - ↳ A selection frame appears. The corresponding image detail is displayed in the magnifier window with the selected zoom factor.
3. Once you have found the desired image detail, release the left mouse button.
  - ↳ The selection frame disappears.
  - ↳ The last contents of the selection frame are now displayed in the magnifier window.

As long as the magnifier window is active, you can repeat the magnifier function from step 1 onwards as often as desired.

#### Moving the magnifier window

The magnifier window can be moved to any position within the image by clicking into the title bar and dragging it while holding down the left mouse button.

#### Changing the zoom factor

The zoom factor can be set between 1:1 and 8:1 by means of the slider at the bottom. The zoom factor is displayed in the title bar of the magnifier window, e.g. "*Magnifier 3:1*".

#### Deactivating the magnifier

The magnifier is automatically deactivated as soon as another function is activated.

The magnifier function can be deactivated manually by left-clicking outside the magnifier window or by pressing any key on the keyboard.

### 3.7.4.10 Rotate

#### Explanation

With this function, the image is turned in the selected direction. The image can be turned step by step or restored to its original position by selecting the function several times.

#### Turn by 90 degrees to the right



- Click the button.
- or
- Hotkey: Activate the key combination [Ctrl]+[R].
- or
- In the menu bar "[V]iew"/[I]mage"/[R]otate", select the menu item "Turn to [r]ight".

#### Turning by 90 degrees to the left



- Click the button.
- or
- Hotkey: Activate the key combination [Ctrl]+[L].
- or
- In the menu bar "[V]iew"/[I]mage"/[R]otate", select the menu item "Turn to [l]eft".

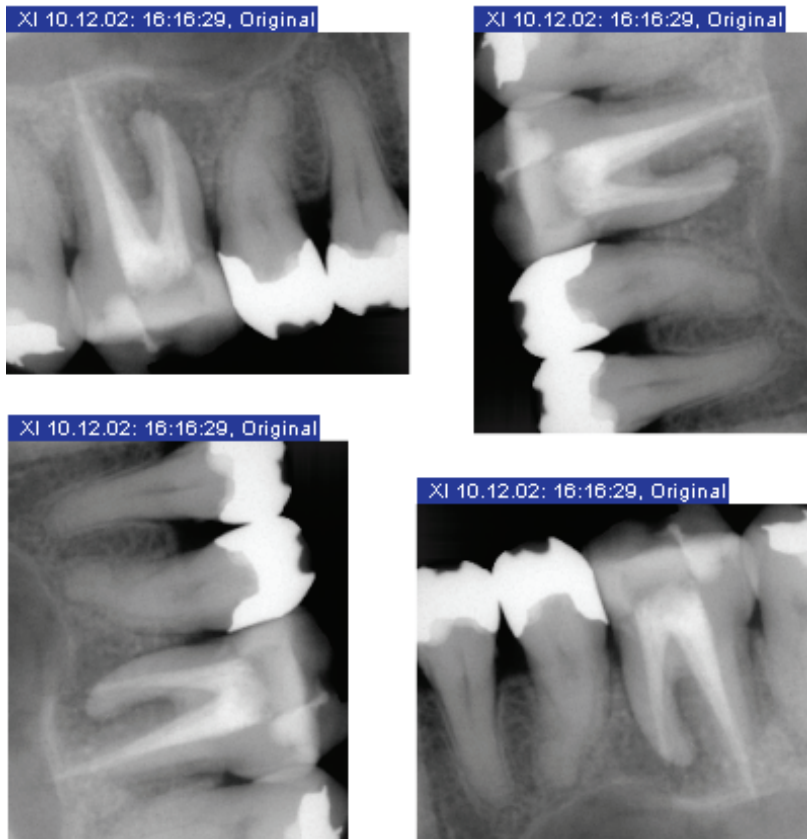
#### Turning by 180 degrees



- Click the button.
- or

- In the menu bar "[V]iew"/"[I]mage"/"R[ot]ate", select the menu item "Turn by 180°".

#### Example screens



#### 3.7.4.11 Using hotkeys to jump between images

##### Explanation

If an exam with multiple images is open, you can activate the next image with [Ctrl] + [Tab].

Enhances operating comfort, especially in the Full Frame mode.

##### Activating the function

- Hotkey: Activate the key combination [Ctrl]+[Tab]

#### 3.7.4.12 Displaying the ruler

##### Explanation

You have the option of displaying a ruler for X-ray images.

This ruler is divided into millimeters.

##### Activation and deactivation

- In the menu bar "[V]iew"/"[I]mage", select the menu item "Ruler".

### 3.7.5 Image filters

##### Explanation

SIDEXIS XG offers a powerful and extensive collection of image processing functions for preparing, interpreting and analyzing image information. The processing functions discussed below always refer to the active image.

##### Basics

A few principles and associated terminology must be explained here to help you to understand the possibilities of image information processing.

The digital data of the X-ray sensor and video camera are processed in the computer into displayable image information. The smallest information element is the so-called pixel, derived from the term "picture element". The captured image is broken down into individual scanning points or pixels which are stored in the memory of the computer as numerical code. Each scanning point (pixel) is assigned a value which corresponds to the gray or color value of the small image area captured.

Since the image is now available in the computer as a series of clearly defined numerical values, the image information can be processed by selectively changing the values. The image processing results are displayed on the screen as screen pixels or on the print-out as print pixels.

Since a large number of single pixels must be defined individually as numerical values in each image, image files are very large. Computers with large RAM (for processing) and large mass memory (for storage) are necessary to manage these data volumes.

Depending on the nature of the pixel changes and the quantity of pixels to be changed, image data processing can take a certain amount of time.

#### CAUTION

For the above reasons, the number of simultaneously open images should be limited. A large number of open images reduces the overall system performance and increases the processing times. Large images have a stronger impact than small ones. Images which are no longer required should therefore be closed.

### 3.7.5.1 Brightness and contrast adjustment

#### Explanation

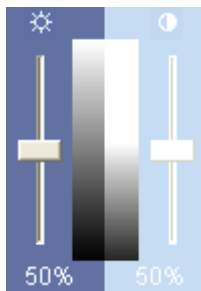
To better accentuate or delineate image details or to enhance the image quality it is possible to adjust the brightness and contrast of the display.

#### Scope

This function can be used for X-ray and video images (but not for live and still images).

The adjustment function refers to the selected image and can be activated at any time.

#### Adjusting brightness



- Adjust the brightness level with the left slider.

or

- Hotkey: Press the [Up arrow] key.

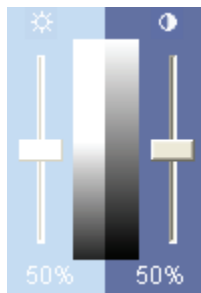
☞ The image turns brighter.

or

- Hotkey: Press the [Down arrow] key.

☞ The image turns darker

## Adjusting contrast



### Display

- Adjust the contrast with the right slider.

or

- Hotkey: Press the [Right arrow] key.

↳ The contrast decreases.

or

- Hotkey: Press the [Left arrow] key.

↳ The contrast increases.

The intensity of the adjustment is reflected in the grayscale area between the two sliders.

The respective brightness or contrast changes are indicated below the sliders, proceeding from the basic value of 50%.

### Operation

1. Place the mouse pointer on the control button of the desired slider.
2. Press and hold down the left mouse button.
3. Move the control button upward or downward by dragging it with the mouse.
  - ↳ The selected image changes simultaneously with the slider settings.
4. Release the left mouse button when the display settings correspond to your wishes.

### Reset values



- Click on the icons above the sliders.

↳ The values are reset to 50% (=50%)

## 3.7.5.2 Mouse adjuster for setting brightness and contrast

### Explanation

The so-called mouse adjuster offers a simple and elegant way of adjusting brightness and contrast. It enables you to adjust brightness and contrast simultaneously.

### Scope

This function can be used for X-ray and video images (but not for live and still images).

The adjustment refers to the selected image.

### Activating the function



- Click the button.

or

- Hotkey: Activate the key combination [Ctrl]+[Shift] +[M].

or

- Use the "[Analysis]" menu bar to select the "[Mouse adjuster]" menu item.

### Display of the function



As long as this function is active, the mouse pointer in the exam workspace has another shape.

## Operation

1. In the exam workspace, press and hold down the left mouse button.
2. Move the mouse as desired.
  - ↳ Move it vertically to change the brightness.
  - ↳ Move it horizontally to change the contrast.
  - ↳ The changed values can be observed immediately in the related read-only boxes, the grayscale area and the sliders.
3. Release the left mouse button when the display settings correspond to your wishes.

You can repeat the adjustment as often as you like from step 1 onwards as long as the mouse adjuster is active.

### 3.7.5.3 Determining the region of interest for image filters

## Explanation

The image processing functions and commands usually affect the entire image. However, it is possible to apply them (especially the group of filter functions and the brightness and contrast settings) selectively to certain regions of the image.

By limiting the image region to be manipulated, the filter operation can be processed more quickly and different details can be processed in a different way.

## Scope

This function can be used for X-ray and video images (but not for live and still images).

When you select a so-called region of interest, the subsequent filter operations refer exclusively to this defined image region. The filter acts only in the selected region of interest.

A region of interest remains active until it is either removed or replaced by a new region.

## Activating the function



- Click the button.
- or
- Use the "[Analysis]" menu bar to select the "[Define ROI]" menu item.

## Display of the function

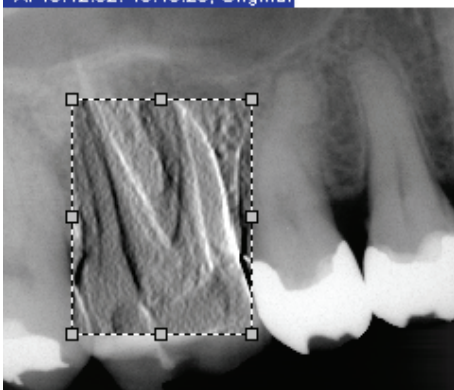


## Defining the region of interest

1. Place the mouse pointer at a corner of the desired region of interest.
2. While pressing and holding down the left mouse button, draw a frame around the desired region of interest.
  - ↳ While you are drawing the rectangle, its size is indicated within the selection and on the status bar at the bottom of the window.
3. Release the left mouse button.

The selected region of interest is displayed within a dashed frame.

XI 10.12.02: 16:16:29, Original



#### Shifting the region of interest

#### Removing a region of interest

#### Example screen

With the mouse pointer placed inside the region of interest, press and hold down the left mouse button and drag the region to the desired position.

1. Place the mouse pointer in the region of interest.
  2. Press the right mouse button.
  3. Click on the *"Remove"* function.
- ✎ The region of interest is removed from the image.

### 3.7.5.4 Brightness/contrast adjustment in the region of interest

#### Explanation

The brightness and contrast adjustment for regions of interest works differently from that for filters.

- Only if the function *"Only in the region of interest"* is selected can the brightness and contrast setting be adjusted for an individual analysis area.
- The brightness and contrast settings are permanently applied to a region of interest only after selecting the *"Apply"* function (See section *"Applying the brightness/contrast settings [→ 113]"*).

#### Scope

X-ray and video images (not live and still images) in the region of interest.

#### Activating the filter



- Click the button.

or

- In the menu bar *"[A]nalysis" / "Brightness/[c]ontrast control"*, select the menu item *"[O]nly in the region of interest"*.

#### NOTICE

If the *"Only in the region of interest"* function is not used, selected brightness and contrast control values are applied to the entire image.

#### Example

1. Use the menu *"[A]nalysis"* to activate the *"[D]efine ROI"* function.
2. Use the menu *"[A]nalysis"* in the menu item *"Brightness/[c]ontrast control"* to activate the *"Only in the region of interest"* function.



3. Define a region of interest in the desired X-ray image with the help of the mouse; note the different mouse pointer shape.

Now the region of interest can be modified using the brightness and contrast controls.

After adjusting the brightness and contrast, the chosen settings are applied with the *"Apply"* command.

#### 3.7.5.5 Applying the brightness/contrast settings

##### Explanation

The *"Apply"* function is used to permanently apply the chosen brightness and contrast settings in the region of interest.

##### Scope

X-ray and video images (not live and still images)

##### Activating the function



- Click the button.

or

- In the menu bar *"[A]nalysis" "Brightness/[c]ontrast control"*, select the menu item *"[A]pply"*.

#### 3.7.5.6 Invert

##### Explanation

The *"Invert"* function inverts the brightness values of the image pixels. The brightness and contrast values are adjusted accordingly during this process. A positive or negative view of the X-ray is obtained in this way.

##### NOTICE

The action can be undone by re-activating the function.

##### Scope

This filter works only with X-ray exposures.

##### Activating the filter



- Click the button.

or

- Hotkey: Activate the key combination [Ctrl]+[I].

or

- Select *"[I]nvert"* from the pop-up menu *"[F]ilter"*.

or

- In the menu bar *"[A]nalysis" "[F]ilter"*, select the menu item *"[I]nvert"*.



### Example screen

#### 3.7.5.7 Color

##### Explanation

To enable better distinction of image details, the image can be displayed in a so-called pseudo-color mode. The grayscale values of the image are replaced by colors which the human eye can distinguish better from one another than the corresponding gray levels.

##### Impact of brightness and contrast adjustment

The color display can be influenced by adjusting brightness and contrast. The image processing functions can also be used in pseudo-color mode.

##### Scope

This filter works only with X-ray exposures.

##### Activating the filter



➤ Click the button.

or

➤ Hotkey: Activate the key combination [Ctrl]+[F].

or

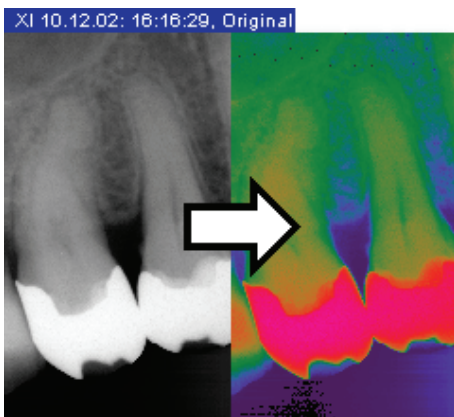
➤ Select "[C]olor" from the pop-up menu "[F]ilter".

or

➤ In the menu bar "[A]nalysis" "[F]ilter", select the menu item "[C]olor".

### NOTICE

The action can be undone by re-activating the function.



### Example screen

#### 3.7.5.8 Contrast optimization

##### Explanation

This image filter analyses the current grayscale distribution of an image and optimizes them using a non-linear statistical method.

##### Recommended use

Use of this function is particularly recommended for images whose contrast distribution does not make full use of the available grayscale value range.

#### CAUTION

The contrast optimization filter may furnish different grayscales in the filtered image for identical brightness values in the original image, because the relevant local environment is evaluated for optimization.

##### Scope

This filter works only with X-ray exposures.

##### Activating the filter



➤ Click the button.

or

➤ Select "[O]ptimize contrast" from the pop-up menu "[F]ilter".

or

➤ In the menu bar "[A]nalysis" "[F]ilter", select the menu item "[O]ptimize contrast".

##### Example

In this way, for instance, details within a very low-contrast, "faint" image can be made visible.



### Example screen

#### 3.7.5.9 Smoothing

##### Explanation

The "*Smooth down*" filter serves for softening very high-contrast or noisy images.

This is done by reducing or averaging the contrast of adjacent pixels. Contrary to the "*Sharpen*" filter described later, sharp edges are softened here. A smoother image impression is created. The overall definition of the image is reduced.

#### NOTICE

The effects of the "*Smooth down*" and "*Sharpen*" filter operations do not cancel one another out.

##### Scope

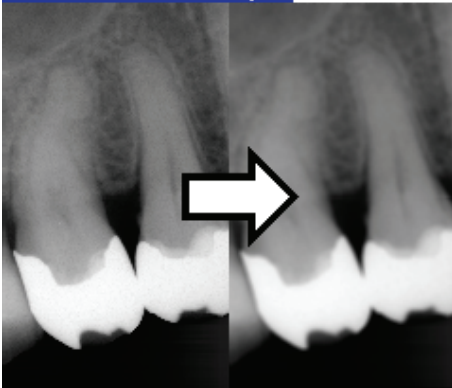
##### Activating the filter



This filter works only with X-ray exposures.

- Click the button.
- or
- Select "*Smooth [d]own*" from the pop-up menu "*[F]ilter*".
- or
- In the menu bar "*[A]nalysis*" "*[F]ilter*", select the menu item "*Smooth [d]own*".

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### Example screen

#### 3.7.5.10 Sharpen Plus

##### Explanation

In contrast to the *"Smooth down"* filter, the contrast of adjacent pixels is increased here.

This function helps to accentuate edges or contours. The impression of a sharper image is created.

##### NOTICE

This can have a negative influence on image quality in very noisy images.

##### NOTICE

The effects of the *"Smooth down"* and *"Sharpen"* filter operations do not cancel one another out.

##### Scope

##### Activating the filter



- Click the button.
- or
- Select *"[S]harpen"* from the pop-up menu *"[F]ilter"*.
- or
- In the menu bar *"[A]nalysis"/"[F]ilter"*, select the menu item *"[S]harpen"*.



### Example screen

#### 3.7.5.11 Sharpen Plus variable

##### Explanation

- The *"Sharpen Plus variable..."* filter offers the possibility of configuring the *"Sharpen"* filter individually.

#### NOTICE

The effects of the *"Smooth down"* and *"Sharpen"* filter operations do not cancel one another out.

##### Scope

##### Activating the filter



- Click the button.

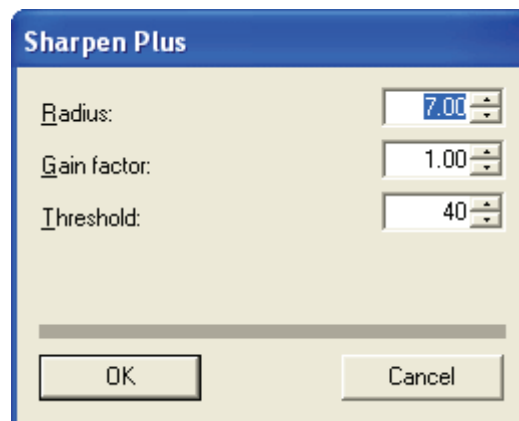
or

- Select *"Sharpen Plus [v]ariable..."* from the pop-up menu *"[F]ilter"*.

or

- In the menu bar *"[A]nalysis1 "[F]ilter"*, select the menu item *"Sharpen Plus [v]ariable..."*.

##### The configuration dialog box



##### Operation

1. Set the desired parameters.
2. Confirm your settings with *"OK"*.

✎ The settings are then applied to the image.

### 3.7.5.12 Filtering black dots

#### Explanation

Single pixel errors may occur when taking digital X-rays. These pixel errors appear as individual black dots when the optimum resolution (100%) is selected.

SIDEXIS XG is capable of removing these black dots by evaluating the surrounding pixels.

#### Scope

This filter works only with X-ray exposures.

#### Activating the filter



➤ Click the button.

or

➤ Select "[F]ilter black dots" from the pop-up menu "[F]ilter".

or

➤ In the menu bar "[A]nalysis" "[F]ilter", select the menu item "[F]ilter black dots".



#### Example screen

### 3.7.5.13 Noise reduction (Median)

#### Explanation

Single scattered pixels and minor disturbing information which lead to a noisy image can be removed with this filter without reducing the overall definition of the image.

This filter has little impact in less noisy images or images with low or "soft" contrast.

#### Scope

This filter works only with X-ray exposures.

#### Activating the filter



➤ Click the button.

or

➤ Select "Reduce [n]oise (median)" from the pop-up menu "[F]ilter".

or

- In the menu bar "[A]nalysis" "[F]ilter", select the menu item "Reduce [n]oise (median)".



### Example screen

#### 3.7.5.14 Relief display

#### Explanation

During this filter operation, the borders between high-contrast image details are analyzed and displayed lighter or darker. Thus edges or contours within the image are clearly accentuated. The result is a relief-like image distortion.

#### Scope

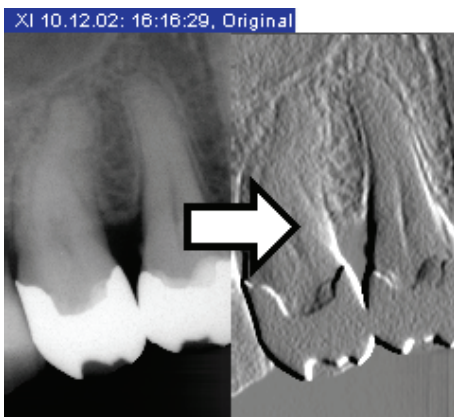
This filter works only with X-ray exposures.

#### Activating the filter



- Click the button.
- or
- Select "Display in R[e]lief" from the pop-up menu "[F]ilter".
- or
- In the menu bar "[A]nalysis" "[F]ilter", select the menu item "Display in R[e]lief".





### Example screen

#### 3.7.5.15 Undo last filter operation

##### Explanation

The effect of the last filter operation can be undone by selecting the *"Undo"* function.

If no filter operations have been performed yet or if this function has already been applied, the command is not available.

With views that have already been heavily manipulated, this action may take some time.

##### Scope

This function works only with X-ray exposures.

##### Activating the function



> Click the button.

or

> Hotkey: Activate the key combination [Ctrl]+[Z].

or

> Select *"[U]ndo filter"* from the pop-up menu.

or

> Use the *"[E]dit"* menu bar to select the *"[U]ndo filter"* menu item.

#### 3.7.5.16 Torch functions

##### Explanation

These functions enable you to use image filters and display tools within a movable region of interest. This region of interest can be moved over the image being analyzed with the mouse like the beam of a pocket torch or flashlight.

##### Scope

This function works only with X-ray exposures.

##### Display of the function



##### Function

As long as this function is active, the mouse pointer in the exam workspace has another shape.

For more information on the effects of these functions, please refer to the respective function descriptions:

## ROI settings

### Setting the size

- In the menu bar "[A]nalysis" "[M]ouse [t]ools", select the required menu item.
  - "[S]mall"
  - "[M]edium"
  - "[L]arge"
  - "[V]ery large"

### Setting the shape

- In the menu bar "[A]nalysis" "[M]ouse [t]ools", select the required menu item.
  - "[C]ross"
  - "[R]ectangle"

#### 3.7.5.16.1 Optimize contrast

##### Explanation

##### Activating the function



The configuration is described in Section "Contrast optimization" [ → 115].

- Click the button.
- or
- In the menu bar "[A]nalysis" "[M]ouse [t]ools", select the menu item "[O]ptimize contrast".

#### 3.7.5.16.2 Invert

##### Explanation

##### Activating the function



The configuration is described in Section "Invert" [ → 113].

- Click the button.
- or
- In the menu bar "[A]nalysis" "[M]ouse [t]ools", select the menu item "[I]nvert".

#### 3.7.5.16.3 Zoom in

##### Explanation

##### Activating the function



The configuration is described in Section "Image zooming" [ → 100].

- Click the button.
- or
- In the menu bar "[A]nalysis" "[M]ouse [t]ools", select the menu item "[E]nlarge".

### 3.7.5.17 Transfer function

#### Explanation

SIDEXIS XG Version 1.5 and higher can acquire and process X-ray images with a 16-bit gray scale depth.

In order to enable their display on screen, these 16-bit X-ray images are automatically converted to 8-bit gray-scale images.

This is done with a *"Transfer"* function.

This conversion is performed uniformly over the existing gray scale range of the 16-bit X-ray image.

Using the *"Transfer"* function described here, the conversion of each 16-bit X-ray image to an 8-bit gray scale image can be influenced individually.

#### Possibilities

The following possibilities exist:

During windowing, a so-called "window" is selected within the gray scale spectrum of the X-ray image.

The gray tones contained in the window are then distributed evenly over the 8-bit gray levels (256 gray tones). All values below the window appear black. All values above the window appear white.

#### NOTICE

Decreasing the size of the window increases the contrast for certain structures, thus making it possible to selectively display them in sharp relief.

#### Windowing

#### Gamma correction

The display of the medium tones can be altered via an adjustable gamma function.

#### Scope

This function works only with X-ray exposures.

#### Activating the function

- Click the button.
- or
- Use the *"View"* menu bar to select the *"Transfer"* menu item.

The function is explained via an example for operation.



#### Function

#### NOTICE

The display of X-ray images with an 8-bit gray scale depth can also be usefully influenced with the *"Transfer"* function.

#### 3.7.5.17.1 Operating example

##### Condition

The display of an X-ray image is to be improved.

##### Call

1. Activate the X-ray image concerned.
  2. Activate the *"Transfer"* function.
- ⇒ The *"Transfer"* window appears.

##### Preparation

To better explain the functionality, the window *"Transfer"* has to be switched from *"Gamma"* to *"Linear"* display.

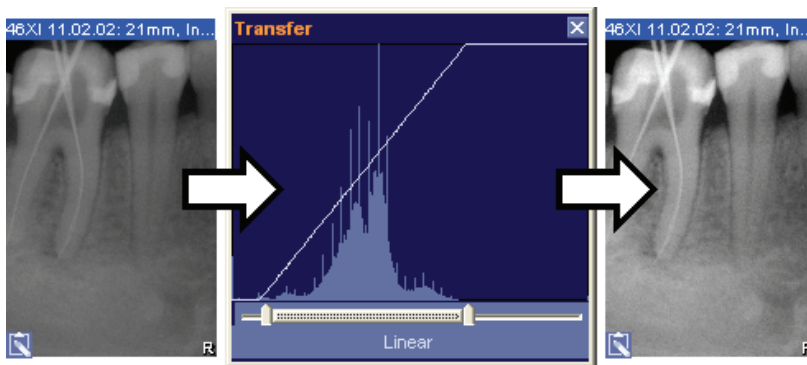
1. Click the *"Gamma"* field with the left mouse button.  
⇒ A pop-up menu opens.
  2. Select the *"Linear"* function.
- ⇒ The *"Transfer"* window switches from the *"Gamma"* to the *"Linear"* display.

##### Configuration

- *"Transfer"* function  
The *"Transfer"* function is displayed here as a line above the histogram.  
This line has a linear form in its basic setting.
- Histogram  
The histogram shows a statistical distribution of all points of the active X-ray image above a linear scale from black to white.
- The height of the bar above a given position on the scale indicates the number of pixels having the corresponding gray level in the image.
- *"Linear"* function  
The *"Linear"* function ensures that the gray tones contained in the window are evenly distributed over the 8-bit gray levels (256 gray tones) during windowing of the *"Transfer"* function.

Windowing (for the *"Linear"* function)

##### Example screen



The basis for achieving enhanced display of an X-ray image is to ensure that the color profile actually available in the histogram is evenly distributed over the 256 gray levels of the screen display. Furthermore, an area inside the histogram of the X-ray image must be selected via windowing.

The histogram used in the example shows no color values at the beginning of the dark area (on the left) and at the end of the bright area (on the right).

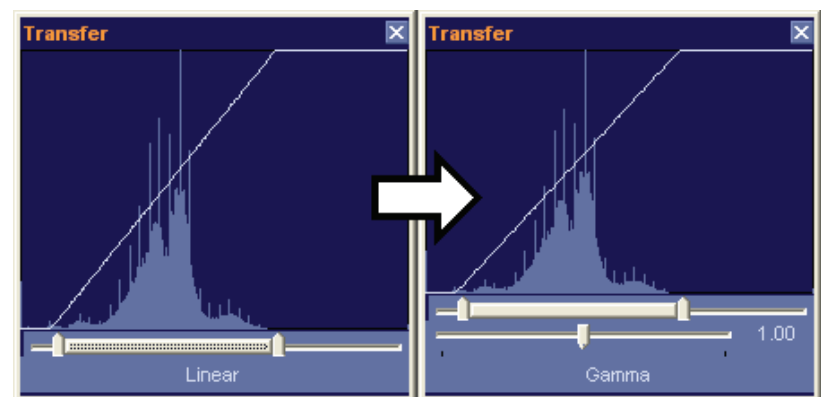
1. Use the slider in the *"Transfer"* window below the histogram to limit the color space to be used.
  2. Push the slider to the location where the available histogram begins and ends.
  3. The *"Transfer"* function is now linear only in the delimited area. Gray levels located outside of the delimited area are displayed as either black or white.
- ✎ The display of the X-ray image (sample image on the left) has been clearly improved (sample image/right).

### Changing medium tones (gamma function)

Sometimes it is desirable to display the medium tones brighter or darker. This can be achieved with the gamma function.

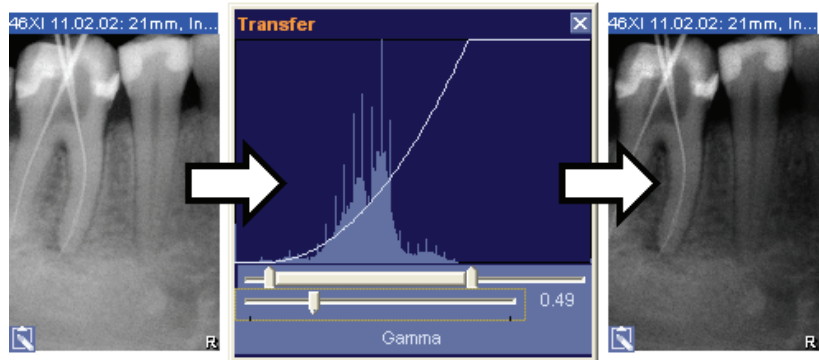
1. Click the *"Linear"* field with the left mouse button.  
✎ A pop-up menu opens.
2. Select the *"Gamma"* function.  
✎ An additional slider with a display value of 1.00 appears in the *"Transfer"* window.
- ✎ No changes have occurred in the display of the X-ray image.

### Example screen



### Medium tones darker

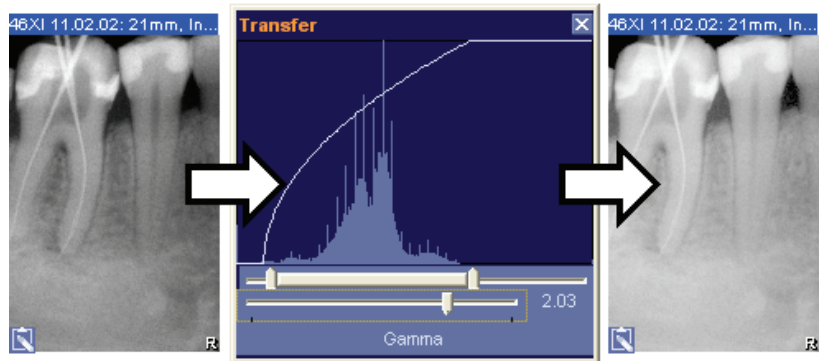
#### Example screen



- Push the slider to the left.
  - ↳ The line of the "Transfer" function bends downward.
  - ↳ The display value decreases (sample image 0.49).
- ↳ Lower values lead to darker medium tones.

### Medium tones brighter

#### Example screen



- Push the slider to the right.
  - ↳ The line of the "Transfer" function bends downward.
  - ↳ The display value increases (example screen 2.03).
- ↳ Higher values lead to brighter medium tones.

### Reset

1. Click the "Gamma" field with the left mouse button.
  - ↳ A pop-up menu opens.
2. Select the "Reset" function.
  - ↳ The X-ray image and the "Transfer" function are returned to their original state.

## 3.7.6 Drawing tools

### Explanation

Vector objects such as drawings, notes and hints can also be inserted in images now, as known from conventional X-rays. Different tools are available for that purpose.

## Scope

All drawing tools can be used freely in the workspace.

### 3.7.6.1 Connecting arrows

## Explanation

Connecting arrows can be used to refer from a diagnostic finding to a position in an exposure. Even if the diagnostic finding or exposure is moved, the connection is preserved.

## Scope

Can be used freely in the workspace.

## Activating the function



➤ Click the button.

or

➤ In the menu bar "[A]nalysis" "[D]rawing tools", select the menu item "Connecting arrow".

## Functioning

The use of this drawing function is explained in the following sections:

- Section "Changing the form and the size of objects [ → 37]"
- Section "Displaying and changing object properties [ → 38]"
- Section "Removing objects from the workspace [ → 39]"

### 3.7.6.2 Freehand lines

## Explanation

This function can be used to draw freehand lines in the workspace.

## Scope

Can be freely used in the workspace.

## Activating the function



➤ Click the button.

or

➤ In the menu bar "[A]nalysis" "[D]rawing tools", select the menu item "[F]reehand line".

## Functioning

The use of this drawing function is explained in the following sections:

- Section "Changing the form and the size of objects [ → 37]"
- Section "Displaying and changing object properties [ → 38]"
- Section "Removing objects from the workspace [ → 39]"

### 3.7.6.3 Lines

## Explanation

This function enables you to draw lines with any number of node points in the workspace.

## Scope

Can be freely used in the workspace.

## Activating the function



➤ Click the button.

or

➤ In the menu bar "[A]nalysis" "[D]rawing tools", select the menu item "Connecting arrow".

## Functioning

The use of this drawing function is explained in the following sections:

- Section "Changing the form and the size of objects [ → 37]"

- Section "Displaying and changing object properties [ → 38]"
- Section "Removing objects from the workspace [ → 39]"

#### 3.7.6.4 Text fields

##### Explanation

This function can be used to generate single-line text fields in the workspace.

##### Scope

Can be freely used in the workspace.

##### Activating the function



➤ Click the button.

or

➤ In the menu bar "[A]nalysis" "[D]rawing tools", select the menu item "[T]ext".

##### Functioning

The use of this drawing function is explained in the following sections:

- Section "Changing the form and the size of objects [ → 37]"
- Section "Displaying and changing object properties [ → 38]"
- Section "Removing objects from the workspace [ → 39]"

#### 3.7.6.5 Special drawing tool for orthodontics

##### Explanation

This drawing tool serves for generating reference points for measurements on (ceph) X-rays.

You place a cross with a text box at its right side as object in the (ceph) X-ray in which you want to measure something.

You can define as many reference points as you wish within a (ceph) X-ray. By default, the related text boxes are numbered consecutively.

##### Scope

Can be freely used in the workspace.

##### Activating the function



➤ Click the button.

or

➤ In the menu bar "[A]nalysis" "[D]rawing tools", select the menu item "[C]ross".

##### Functioning

The use of this drawing function is explained in the following sections:

- Section "Changing the form and the size of objects [ → 37]"
- Section "Displaying and changing object properties [ → 38]"
- Section "Removing objects from the workspace [ → 39]"

#### 3.7.6.6 Rectangle

##### Explanation

SIDEXIS XG also allows for drawing rectangles.

##### Scope

Can be freely used in the workspace.



### Activating the function



➤ Click the button.

or

➤ In the menu bar "[A]nalysis" "[D]rawing tools", select the menu item "[R]ectangle".

### Functioning

The use of this drawing function is explained in the following sections:

- Section "Changing the form and the size of objects [ → 37]"
- Section "Displaying and changing object properties [ → 38]"
- Section "Removing objects from the workspace [ → 39]"

#### 3.7.6.7 Ellipse

### Explanation

SIDEXIS XG also allows for drawing ellipses.

### Scope

Can be freely used in the workspace.

### Activating the function



➤ Click the button.

or

➤ In the menu bar "[A]nalysis" "[D]rawing tools", select the menu item "[E]llipse".

### Functioning

The use of this drawing function is explained in the following sections:

- Section "Changing the form and the size of objects [ → 37]"
- Section "Displaying and changing object properties [ → 38]"
- Section "Removing objects from the workspace [ → 39]"

## 4 Special functions

### 4.1 Explanation

In addition to patient data and image management functions, imaging and image processing functions are provided in separate SIDEXIS XG functions for certain specialized tasks.

### 4.2 Specialized function - Always on top

#### Explanation

With SIDEXIS XG it is possible to keep a SIDEXIS image window always on top, regardless which program is currently active. This enables you to enter your diagnosis conveniently e.g. in a Word-document or in your practice management program, while having the SIDEXIS image as a reference before your eyes.

#### Scope

The currently active image.

#### Activating the function



- Click the button.

or

- In the menu bar "[V]iew"/"[I]mage", select the menu item "Always on [t]op".

### 4.3 Relocating the image stock

#### Explanation

Because of the large data volumes which result from the generation of digital X-ray and video images, the patient and image database may increase considerably in size. This substantially reduces the available memory on the storage medium (hard disk) permanently installed in the PC. In extreme cases, no further exposures can be saved on this storage medium. It is then no longer possible to take new exposures.

For this reason, created recordings that are not currently needed can be stored elsewhere.

The hard disk space previously occupied by these images is then freed up and is available once again for new exposures.

#### CAUTION

Moving of data for relocation should not be confused with creating a backup copy. In contrast to relocation, during backup, a copy of the data is created on another storage medium for safety reasons.

#### NOTICE

The available disk space on the permanently installed storage medium can be seen in the information dialog box (see section "Information regarding SIDEXIS, Internet connection [→ 27]).

#### Relocation type

There are two types of relocation.

These have to be configured in the Service menu [ → 158].

- Storing on an additional hard drive).
- Additional hard drives can include:
  - Additional hard drive on the computer
  - External hard drive on the computer (connection via USB or Firewire for example)
  - A hard drive integrated in a network (pay attention to rights assignment!)
- Relocation to removable external storage media.
- This means that the images saved on the hard disk are relocated to the removable storage medium.

#### NOTICE

The system capacity can be extended at will by using several removable storage media.

#### Scope

This function can be used for all X-ray and video images of the image database.

#### Functioning

During relocation, SIDEXIS remembers the external storage medium to which the images are relocated.

#### When using an additional hard drive:

If the user requests that an exported image be displayed, then SIDEXIS independently loads the required image from the additional hard drive.

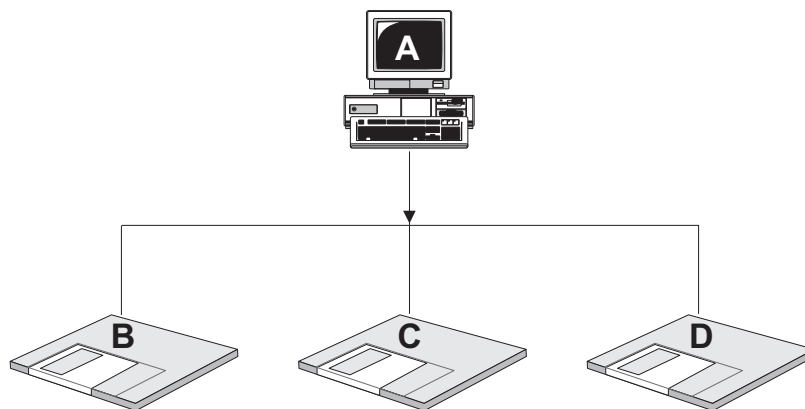
#### When using exchangeable external media:

If the user wants to display a relocated image, then SIDEXIS prompts him or her to insert the corresponding storage medium.

With this method, all relocated images can be displayed again without the user having to make records of relocations.

It is sufficient to label the storage medium used according to the instructions given by SIDEXIS.

Relocation example:



<b>A</b>	Remaining here: <ul style="list-style-type: none"> <li>• all patient data</li> <li>• all preview images</li> <li>• all images starting from 4th quarter 2007</li> </ul>
<b>B</b>	SIDEXIS relocation 1: <ul style="list-style-type: none"> <li>• 1. quarter 2007</li> <li>• first part of 2nd quarter 2007</li> </ul>
<b>C</b>	SIDEXIS relocation 2: <ul style="list-style-type: none"> <li>• remaining part of 2nd quarter 2007</li> <li>• first part of 3rd quarter 2007</li> </ul>
<b>D</b>	SIDEXIS relocation 3: <ul style="list-style-type: none"> <li>• remaining part of 3rd quarter 2007</li> </ul>

#### 4.3.1 Procedure when using an additional hard drive

##### Before starting the function

All patients must be registered in the system before beginning data relocation. In a multi-workstation installation this prerequisite applies to all SIDEXIS stations in the entire system.

Only then is it possible to launch the relocation procedure and to determine its extent.

##### Activating the function



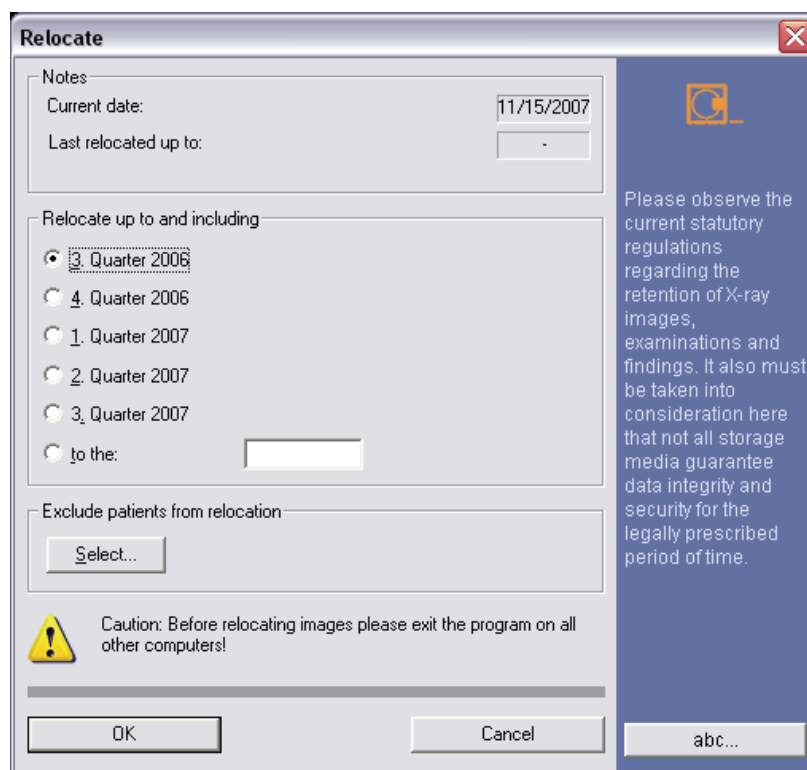
➤ Click the button.

or

➤ Use the "[U]tilities" menu bar to select the "[R]elocate..." menu item.

##### 1. Selecting the time period

You can select between quarterly intervals or a precise date up to which images should be relocated. Which selection is more favorable depends on the volume of exposures in the individual case.



#### Optional: "Exclude patients from relocation"

Click the "Choose patient" button to close the "Select..." dialog box.

All patients, the images of whom should be relocated, are selected with active check boxes.

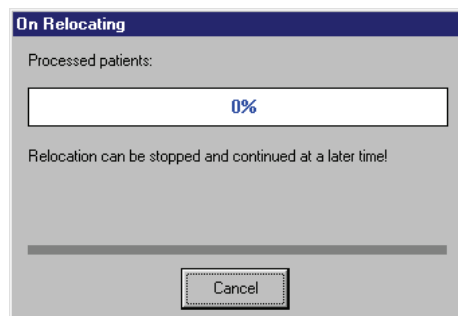
If patients are to be excluded from relocation, then deactivate the check box for the required patient.

- This makes sense if patients are currently in treatment.

Relocation is carried out upon confirming the dialog.

## 2. Confirming the dialog

## 3. The relocation procedure



Relocation of data can take some time. Its progress may be monitored in a dialog box. Relocation can be ended at any time by clicking the "Cancel" button. There may be a short delay until the function is terminated as it must first finish processing the current image. If you stop a relocation in progress, you can continue it at a later time by specifying the same date(s).

### CAUTION

Do not remove the storage medium from the drive during relocation. Otherwise data loss may occur.

### 4.3.2 Procedure when using exchangeable external media

#### Before starting the function

All patients must be registered in the system before beginning data relocation. In a multi-workstation installation this prerequisite applies to all SIDEXIS stations in the entire system.

Only then is it possible to launch the relocation procedure and to determine its extent.

You should prepare a sufficient number of formatted storage media for relocation.

If you have too few storage media prepared, it may interrupt the relocation procedure. In this case, relocation can be continued at a later point in time.

#### Recommendations for storage media

- Mark the data media with an unambiguous color (green)
- Order the data media from a dental dealer for data security reasons. Correct functioning of data media purchased via a computer dealer cannot be guaranteed by Sirona Dental Systems GmbH.

#### Activating the function



➤ Click the button.

or

➤ Use the "[Utilities]" menu bar to select the "[Relocate...]" menu item.

#### 1. Selecting the time period

You can select between quarterly intervals or a precise date up to which images should be relocated. Which selection is more favorable depends on the volume of exposures in the individual case.

### Optional: *"Exclude patients from relocation"*

Click the *"Choose patient"* button to close the *"Select..."* dialog box.

All patients, the images of whom should be relocated, are selected with active check boxes.

If patients are to be excluded from relocation, then deactivate the check box for the required patient.

- This makes sense if patients are currently in treatment.

After you have confirmed the dialog box, you are guided through the relocation procedure step by step with a number of messages.

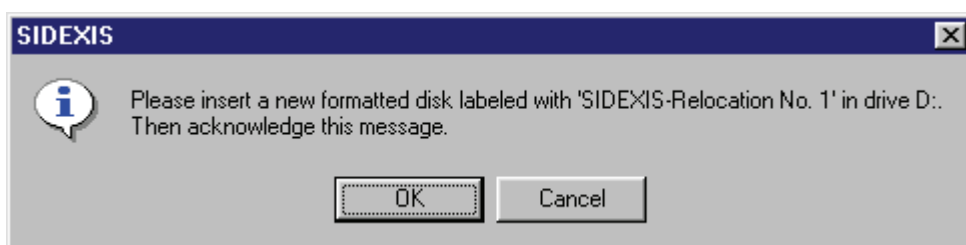
After you have confirmed the dialog box, you are guided through the relocation procedure step by step with a number of messages.

## 2. Confirming the dialog

## 2. Labeling the storage medium

### CAUTION

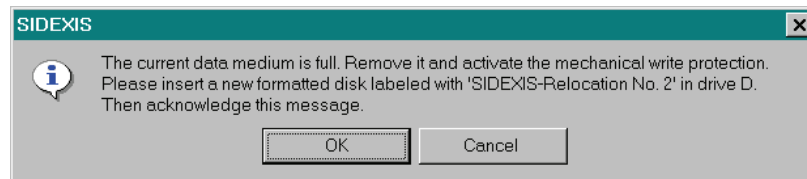
To be able to retrieve the relocated images at any time, you must always label the removable storage media immediately when prompted to do so by the program.



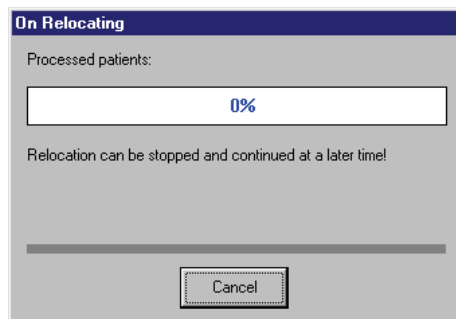
### What do I do when the storage medium is full?

### CAUTION

Storage media which are full should be mechanically secured with the write protection to prevent inadvertent deletion or overwriting.



### 3. The relocation procedure



Relocation of data can take some time. Its progress may be monitored in a dialog box. Relocation can be ended at any time by clicking the "Cancel" button. There may be a short delay until the function is terminated as it must first finish processing the current image. If you stop a relocation in progress, you can continue it at a later time by specifying the same date(s).

#### ⚠ CAUTION

Do not remove the storage medium from the drive during relocation. Otherwise data loss may occur.

### 4.3.3 Opening relocated images

#### General

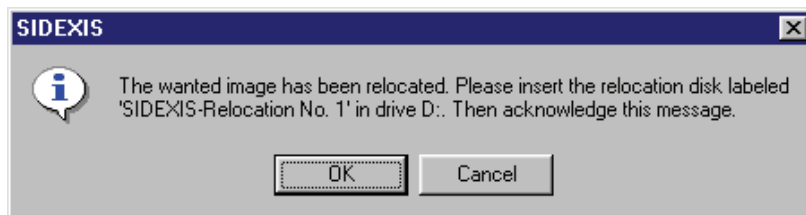
Since all information relevant for image selection (image type, image date, short description and preview) remain on the hard disk and only the (space intensive) images as such are relocated, the later selection of relocated images does not differ from the selection of those not yet relocated.

#### ⚠ CAUTION

For clarity, the relocated image is identified with a "»" in the dialog box list "Select image".  
See Section "Opening images from the SIDEXIS database [ → 52]."

#### Supplement: Exchangeable external data media

When using exchangeable external data media, then you are requested to insert the respective data media.



After the storage medium is inserted and this message is confirmed, the image can be displayed as usual. Retrieval and display of the desired image are automatic.

## 4.4 Constancy test

#### Explanation

According to German legal regulations, the exposure quality of an X-ray system must be checked for constancy at certain time intervals.

During the installation of SIDEXIS and at every modification to the existing X-ray equipment, the service engineer stores information on the current X-ray system in SIDEXIS.

#### Scope

This function applies only to digital X-ray technology.



### Activating the function



- Click the button.
- or
- Use the "[Utilities]" menu bar to select the "[Constancy test]" menu item.

### Operation

These constancy tests are carried out in conjunction with the X-ray logbook supplied with the system.

Only authorized technical personnel may create, modify and delete equipment data with the aid of a service password.

After the acceptance test, which is also performed by the service engineer, the regular constancy tests can be performed by the user.

### Configuration

See Section "System setup [ → 140]."

## 4.5 Reducing 3D data volumes

As 3D databases require a very large storage volume, it is wise to occasionally reduce the amount of raw 3D data.

This data reduction can be carried out via the following functions:

- Deleting raw data manually
- Deleting raw data automatically

### 4.5.1 Deleting raw data manually

#### Explanation

It is possible to delete raw data from the SIXELIS database manually.

- This is especially recommended for 3D GALILEOS exposures to save space.
- This is not the case for intraoral and panoramic exposures if the IT systems used are modern high-performance systems.  
For this reason it is possible to limit the "Delete corrected raw data..." function only to 3D GALILEOS exposures.
- You can manually remove individual patients from the deletion of raw data. This makes sense if patients are currently in treatment.

#### Activating the function

- Use the "[Utilities]" menu bar to select the "Delete corrected raw data..." menu item.
- The "Reduce quantity of 3D-data" dialog box then opens.

The further steps are explained in the "Deletion process [ → 138]" section.

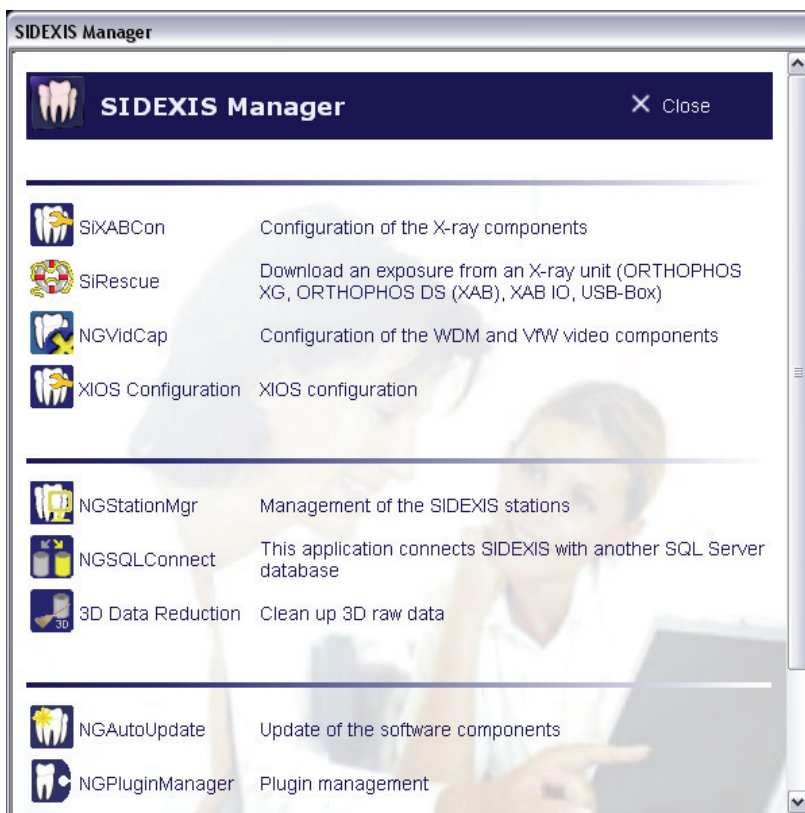
### 4.5.2 Deleting raw data automatically

#### NOTICE

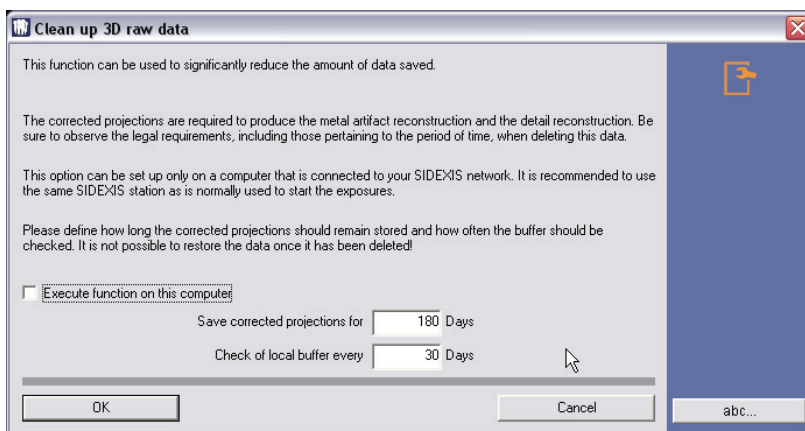
It is recommended to carry out this function in the SIXELIS station receiving the data.

#### Activating the function

Open the SIXELIS Manager with start/programs/SIXELIS and SIXELIS Manager.



The function is activated by clicking the 3D Data Reduction button.



You can define for how long the unprocessed data should remain saved as well as the check intervals.

#### Starting the function

Upon activating the function, the *"Reduce quantity of 3D-data"* dialog is displayed after the set time.

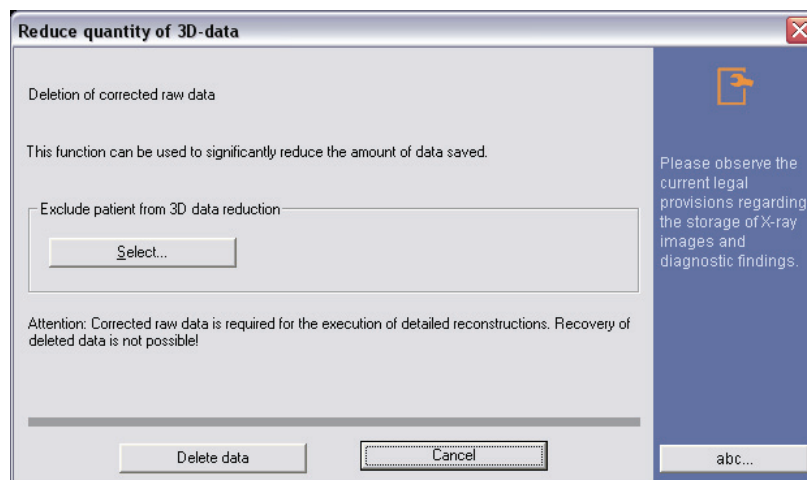
Further steps are explained in the "Deletion process" section.

### 4.5.3 Deletion process

#### Requirement

The *"Reduce quantity of 3D-data"* dialog box opens.

## Example screen



### Optional: Excluding patients from 3D data reduction

Click the *"Select..."* button to close the *"Choose patient"* dialog box.

All patients, the raw data of whom should be deleted, are selected with active check boxes.

If patients are to be excluded from deletion, then deactivate the check box for the required patient.

- This makes sense if patients are currently in treatment.

### NOTICE

All patients in the database are displayed regardless of the 3D data which is actually available.

### Operation

- Press the *"Delete data"* button.
- ☞ The raw data will be deleted.

## 4.6 Internet connection to SIDEXIS XG

### Explanation

In the menu bar *"Help"*, the menu item *"Go to SIDEXIS XG Website"* can be used to select the SIDEXIS XG internet page.

In addition to this, the menu item *"Go to SIDEXIS XG user area"* can be used to directly display the SIDEXIS XG user area.

## 5 System setup

### Explanation

This "*System setup*" function allows for adapting the system to your individual mode of working and to the existing system environment.

#### NOTICE

Before you start to configure the system, any registered patients are automatically checked out.

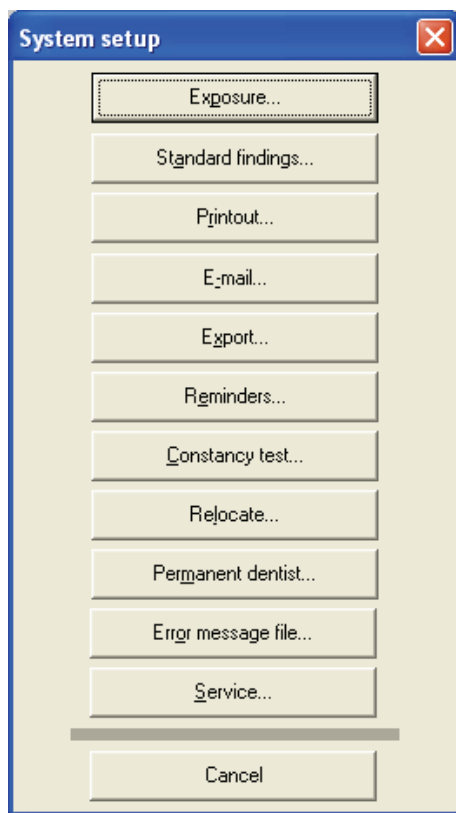
### Activating the function



➤ Click the button.

or

➤ From the menu bar "*[Utilities]*", select the menu item "*Configure [s]ystem...*".



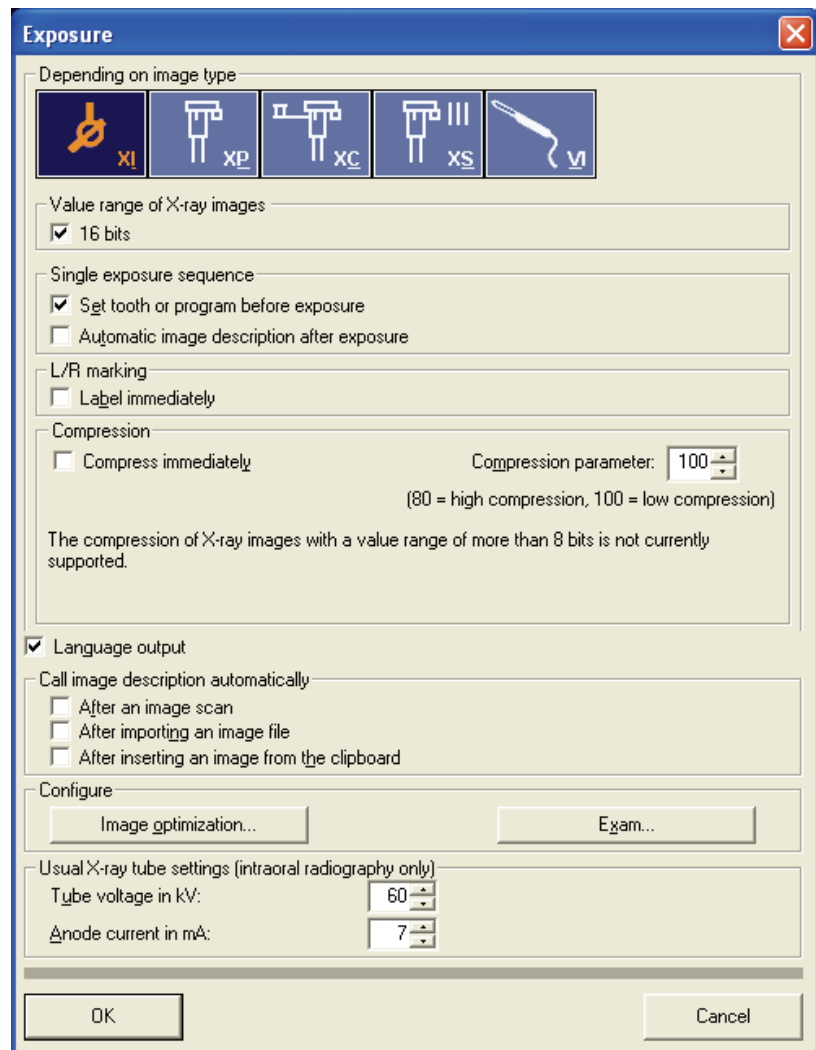
### Example screen

## 5.1 Exposure settings

### Activating the function

1. Use the "*[Utilities]*" menu bar to select the "*Configure [s]ystem...*" menu item.
  2. Press the "*Exposure...*" button.
- ☞ The "*Exposure*" dialog box appears.

## Dialog box



## Dialog structure

### *"Depending on image type"*

This option permits configuration of the exposure sequence.

By clicking the different buttons (individually or in combination), you can determine the image type(s) for which the selected settings are active.

### *"Depending on image type" Value range of X-ray exposures*

Newly acquired X-ray images with 16-bit depth are processed and managed with the "16 bit" check box.

## NOTICE

The compression of X-ray images with a bit depth of more than 8 bits is not currently supported.

### ***"Depending on image type" "Single exposure sequence"***

- The option *"Set tooth or program before exposure"* activates / deactivates the automatic request for details on the area to be exposed (tooth type, area, program). When it is active, the user is asked to specify the target area immediately before taking the exposure, provided that it is not known yet (e.g. from an incoming X-ray order). The findings dialog box is displayed for this purpose and must be confirmed before the system is ready for exposure. SIDEXIS can use this information to display the image in the anatomically correct orientation and position.
- The *"Automatic image description after exposure"* option activates / deactivates the automatic findings function. When it is active, the user is prompted to enter the findings in the dialog box which is displayed immediately after taking the exposure.

### ***"Depending on image type" "L/R marking"***

This function determines whether a tooth position marker is to be inserted into the image.

#### **! CAUTION**

##### **L/R markers on images of the 01XC and 02XC type**

If the optional marking of the image with the letters **R** and **L** is activated in SIDEXIS, an **R** will always be inserted in the lower right corner of the image when taking cephalometric images. This may lead to confusion. This marking is not comparable to the well-known **R/L** markers of conventional images.

On all cephalometric images, the **R** marker does not refer to the X-ray beam direction, but ensures that the image is viewed in its original orientation and **not** flipped.

##### **• Example screens**



### ***"Depending on image type" "Compression"***

- If the option *"Compress immediately"* is activated, the image is compressed immediately after exposure. As X-ray and video exposures take up quite a large amount of storage space when they are saved to hard disk or removable storage media, SIDEXIS offers the option of compressed storage. The amount of disk space required by the exposures can be greatly reduced in this way.

## NOTICE

The compression of X-ray images with a bit depth of more than 8 bits is not currently supported.

- The compression factor is set in the *"Compression parameter"* box. With the JPEG compression used by SIDEXIS, a varying degree of **image information** is lost, depending on the compression factor selected.

In order to limit the loss of image information, the following limit values apply for setting the compression factor:

Image type	Permissible setting range for compression factor	Recommended compression factor
IO	90 – 100	100
XP	80 – 100	90
XC	80 – 100	90

The following table shows the compression ratio to be expected with different compression factors.

Compression factor	Intraoral X-rays	Panoramic X-ray
100	approx. 1.5 to 2	approx. 2 to 3
90	approx. 5 to 8	approx. 10 to 18
80	approx. 9 to 13	approx. 22 to 33

The time required for compression and decompression procedures depends on the system performance and therefore plays a less significant role on fast PCs.

### *"Language output"*

Activates audio output.

### *"Call image description automatically"*

Determines when the image description dialog box opens automatically (see section "Image description and findings [→ 59]").

### *"Configure" "Image optimization"*



## CAUTION

This configuration window is used only to optimize the screen display of X-ray and video exposures.

The image data in the SIDEXIS XG database are not changed.

### Explanation

Depending on the image type involved, there are certain settings that are useful for diagnostic image display.

The possibility of having these settings performed automatically by SIDEXIS XG in the screen display of the corresponding image type has been created here.

### Configuration

The following screen displays can be set depending on the image type:

- *"Filter"*
- Up to three filters can be specified for the screen display here.
- Three list boxes are available for this purpose.
- The list boxes are processed from top to bottom.
- Example:
- After an image view has been optimized with the *"Sharpen"* filters, the *"Reduce noise (median)"* filter is used to reduce the increased noise level of the image view.
- *"Settings"*
- - *"Brightness"* / The brightness is set here.
- - *"Contrast"* / The contrast is set here.
- - *"Zoom"* / The display size is set here. For setting *"Zoom"*: 1:1, the zoom is adjusted to match the selected resolution.
- *"Yes"* check box
- The settings are activated for the corresponding image type by selecting the *"Yes"* check box.

### ***"Configure" / "Template..."***

Starts the configuration workspace for exposure templates that can be used for exams. See Section "Editing an exposure template [→ 144]".

### ***"Usual X-ray tube settings (intraoral radiography only)"***

The customary settings for the tube assembly used for the intraoral X-rays are entered in the *"Tube voltage in kV"* and *"Anode current in mA"* boxes. These values are required exclusively for documentation in the image database.

### CAUTION

The values entered as tube assembly settings do not affect the actual device settings in any way.

## 5.2 Editing an exposure template


### Explanation

A special configuration workspace is used to edit existing exposure templates and to create new ones.

### Activating the function

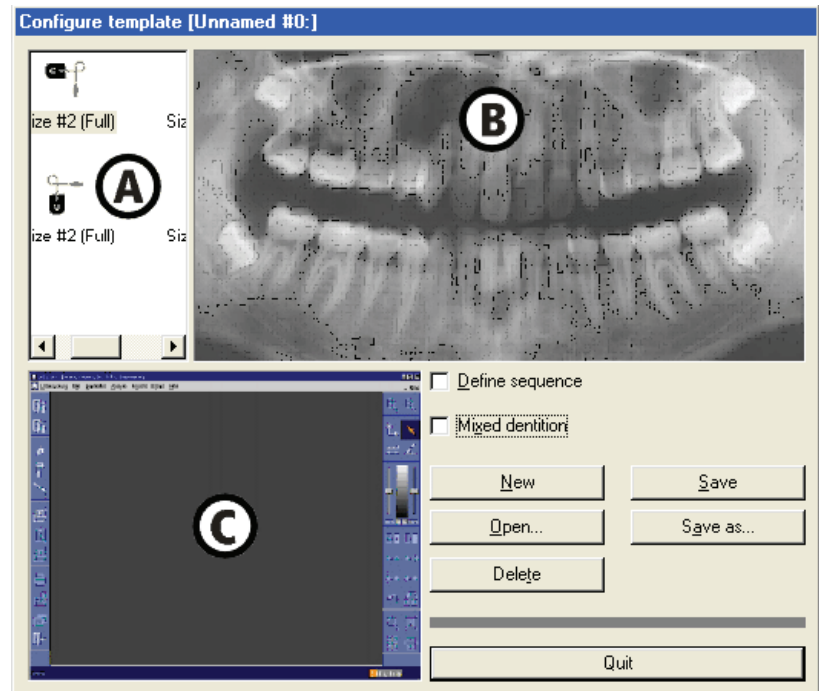
1. From the menu bar *"[U]tilities"*, select the menu item *"Configure [s]ystem..."*.
2. Press the *"Exposure..."* button.
  - ↳ The *"Exposure"* dialog box appears.



3. In the "Configure" field, click the "Template..." button.  
 The configuration workspace appears.

## 5.2.1 The configuration workspace

### Configuration workspace



A	Sensor selection
B	Teeth window
C	Exposure template window

### Functions of the buttons

- "New"
- Creates a new empty exposure template.
- "Open"
- Opens an existing exposure template.
- "Save"
- Saves the exposure template.
- "Save as..."
- Saves the exposure template under a new name.
- "Delete"
- Deletes the active exposure template.
- "Quit"
- Closes the configuration workspace.

## 5.2.2 Creating a new exposure template

### Sensor selection criteria



### Activating the function

Using the mouse, select a sensor in the sensor selection area **A** according to the following criteria:

- **Type of sensor** (Full-size or Universal)
- **Position in the mouth** / vertical or horizontal.

Example screen

1. Click on the *"New"* button.
2. If the exposure is for a mixed dentition, select the *"Mixed dentition"* check box.
3. Using the mouse, select a sensor in the sensor selection area **A** according to the following criteria:
4. Press and hold down the left mouse button and drag your selection into the teeth window **B**.
  - ↳ The selected sensor and the position of the sensor cable are displayed as an outline.
5. Position the sensor as desired and release the left mouse button.
  - ↳ The exposure position of the sensor now appears in the exposure template window **C** in the lower left corner.

### Automatic selection of the sensor holder

SIDEXIS sets the exposure position in accordance with the selected tooth area in the exposure template. The sensor holder to be used is preselected automatically (this preselection should be checked by the user).

The sensor holder type is identified by special colors.

- **Blue**
- for anterior tooth
- **Yellow**
- for molar tooth
- **Red**
- for bite wing

You can now determine further exposure positions or change the initial exposure position and sensor properties (see subsequent sections).



Example screen

## 5.2.3 Editing an existing exposure template

### Explanation

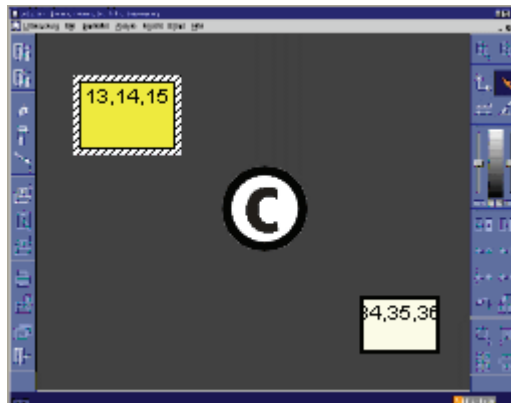
It may be useful to edit an existing template rather than creating a new exposure template from scratch.

## Operation

1. For this purpose, open an existing template that best matches your needs.
  2. Save it under a different name using the "Save as..." button.
- Now you can delete unnecessary positions or add new positions as described in "Creating a new exposure template [ → 146]".

### 5.2.4 Changing the exposure position in the exposure template window

#### Example screen



#### Function

- Using the mouse, select the exposure position you want to change (identifiable by its "dark" color; inactive exposure positions are represented in a "light" color) and leave the mouse pointer there.
- When you press and hold down the left mouse button, you can drag the exposure to any desired position on the screen.
- Right-clicking displays a context menu with further functions.

#### Functions in the context menu

- "Zoom+"  
Gradually enlarges the exposure position
- "Zoom-"  
Gradually reduces the exposure position
- "Rotate"  
Rotates the sensor of the exposure position by 90° to the right and by 90° to the left when it is pressed again.
- "tooth"  
Message: "Please click on the teeth you want to assign to this exposure in the image. Clicking on an assigned tooth again cancels its assignment to the exposure." See "Changing the tooth registration":
- Size #2 (Full)  
Switches the sensor type of the marked exposure position to full-size sensor.
- Size #1 (Universal)  
Switches the sensor type of the marked exposure position to universal sensor.
- "Anterior"  
Switches to the sensor holder for anterior tooth exposures (blue)

- *"Bitewing"*  
Switches to the sensor holder for bite wing exposures (red)
- *"Posterior"*  
Switches to the sensor holder for molar exposures (yellow)
- *"Delete"*  
Deletes the exposure position in the exposure template

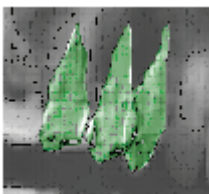
### 5.2.5 Changing the tooth registration

#### Explanation

Teeth registered in the respective active exposure position are **highlighted** in the teeth window **B**.

The teeth listed in the exposure position can be individually deleted and inserted.

#### Example screen



#### Function

1. Activate the corresponding exposure position in the exposure template window **C**.
2. In the teeth window **B**, click the tooth you want to add to or remove from this exposure.
3. Clicking the tooth again cancels this action.

### 5.2.6 Defining the sequence of exposure positions

#### Explanation

By default, the order in which the sensor images are acquired is defined by the order in which the sensors were entered in the exposure template.

This order can be changed.

#### Function

1. Activate the *"Define sequence"* check box.
2. Click the individual exposure positions in the desired order.

#### NOTICE

If you want to change the order once again or if you have made a mistake during this action, you must repeat the whole procedure after deactivating the check box and then reactivating it.

## 5.3 Processing standard findings

#### Explanation

The standard findings offered via context menus in the *"Describe image"* and *"Produce order"* dialog boxes (see example screen) can be individually adapted.

## Example screen

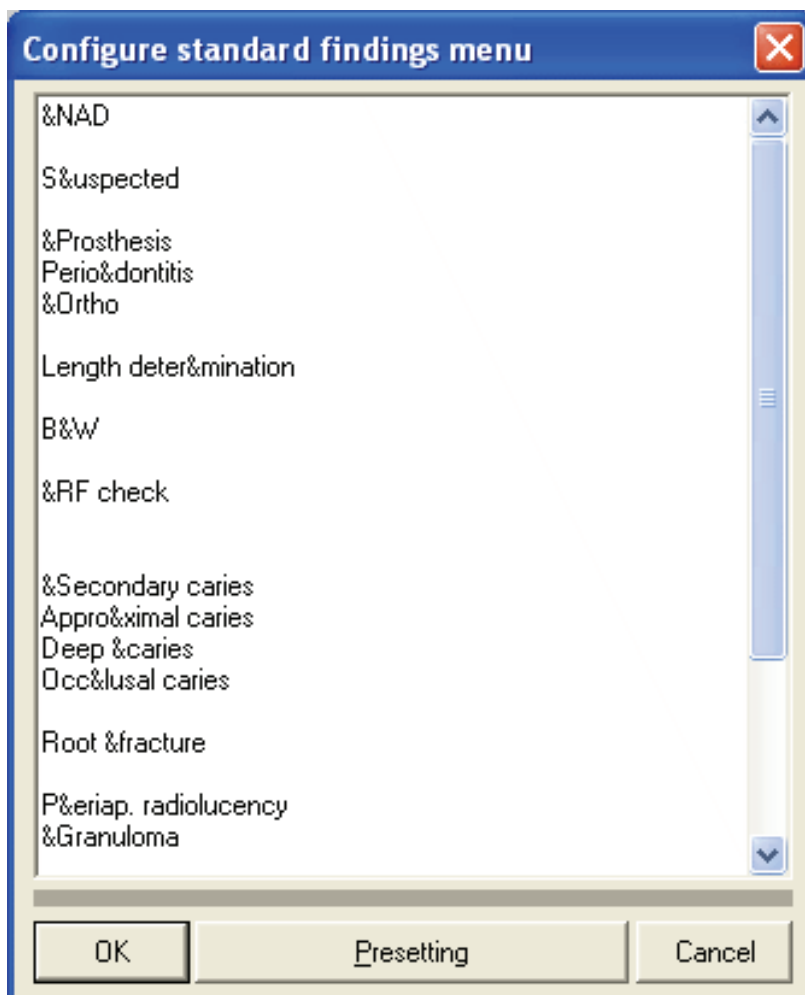
<u>N</u> AD	<u>S</u> econdary caries
<u>S</u> uspected	Approximal caries
<u>P</u> rosthesis	Deep <u>c</u> aries
Periodontitis	Occlusal caries
<u>O</u> rtho	Root fracture
Length determination	Periap. radiolucency
<u>B</u> W	<u>G</u> ranuloma
<u>R</u> F check	<u>V</u> ertical bone loss
	<u>H</u> orizontal bone loss
	present
	absent
	ectopic
	retained

## Activating the function

1. From the menu bar "[U]tilities", select the menu item "Configure [s]ystem...".
  2. Press the "Standard findings..." button.
- ☞ The editing dialog appears.

## Function

To do this, you enter the desired texts directly in a list using the keyboard.



Complete the individual entries with the [Enter] key, keeping the entries as short as possible.

You may use the "&" character to define your own hotkeys. The letter following the "&" becomes the hotkey for this entry. This letter is then displayed underlined, while the "&" is omitted. You must use this character only once within an entry. For optimal work with the hotkeys, it is also recommendable to use unique hotkeys within the entire menu. Assigning the same hotkey twice should be avoided.

A blank line provides optical separation between individual blocks. Two consecutive blank lines lead to a new column.

You can restore the default settings with the "Presetting" button.

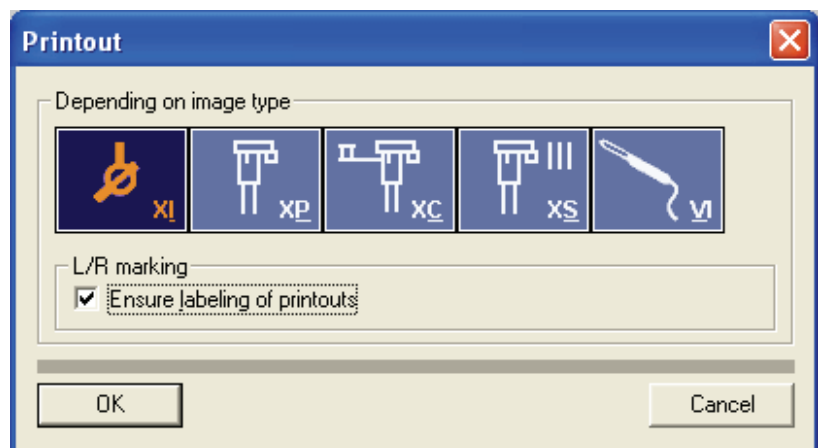
## 5.4 Configuring a printout

### Activating the function

### Activating the function

1. From the menu bar "[Utilities]", select the menu item "Configure [s]ystem...".
  2. Press the "Printout..." button.
- ☞ A dialog box appears.

### Dialog box



This function determines whether a tooth position marker is to be inserted into the printed image if "*L/R marking*" has not yet been selected for this image.

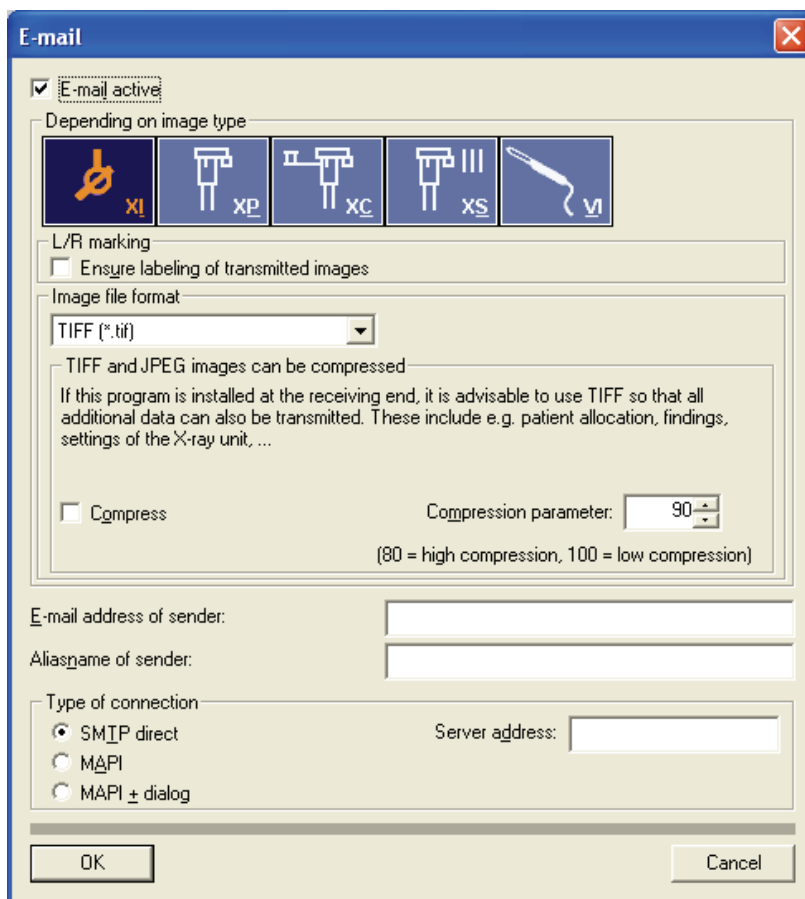
Clicking the various buttons (individually or in combination) determines the image type for which the selected settings are active (see also Section "Exposure settings" [→ 140]).

## 5.5 Configuring E-mail

### Activating the function

1. From the menu bar "*[U]tilities*", select the menu item "*Configure [s]ystem...*".
  2. Press the "*E-mail...*" button.
- ↳ A dialog box appears.

## Dialog box



### ***"E-mail active"***

Activates the e-mail function

## Dialog structure

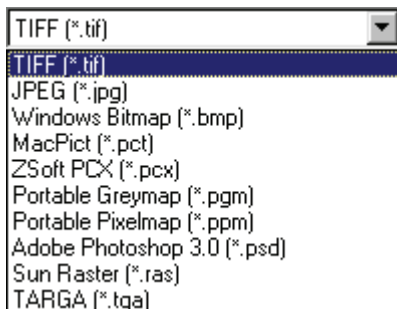
### ***"Depending on image type"***

By clicking the different buttons (individually or in combination), you can determine the image type(s) for which the selected settings are active.

### ***"Depending on image type" / "L/R marking"***

This function determines whether a tooth position marker is to be inserted into the image when sending it by e-mail if *"L/R marking"* has not yet been selected for this image (see also Section *"Exposure settings [ → 140]"*).





### ***"Depending on image type" "Image file format"***

From this drop-down list you can select the file format to be used when sending images by e-mail.

TIFF and JPEG images can be compressed (see also Section "Exposure settings [ → 140]").

#### **NOTICE**

The compression of X-ray images with a bit depth of more than 8 bits is not currently supported.

### ***"E-mail address of sender:"***

The e-mail address of the sender **must** be entered here.

### ***"Aliasname of sender:"***

The alias name of the sender may be entered here.

### ***"Type of connection"***

Selection of the e-mail service:

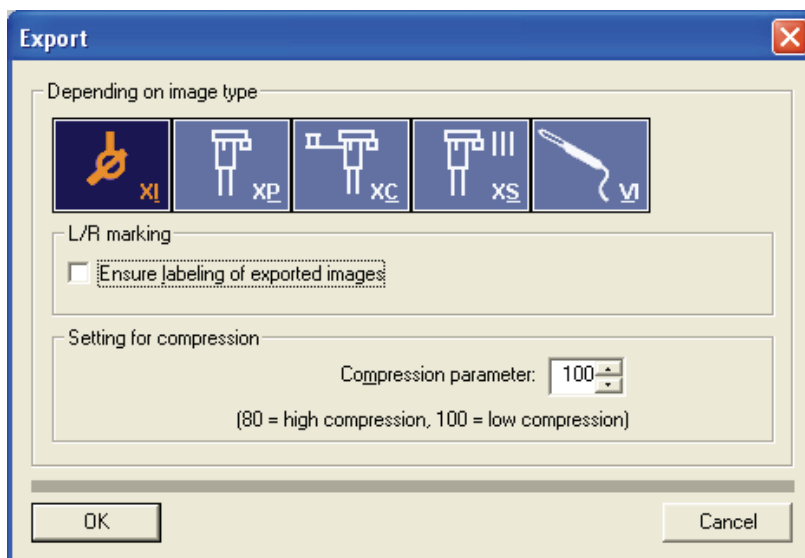
- ***"SMTP direct"***
- Opens the SIDEXIS E-Mail dialog box. The server address must be entered in this case.
- ***"MAPI"***
- Opens the SIDEXIS E-Mail dialog box.
- ***"MAPI + dialog"***
- Opens the E-Mail client of the operating system (e.g., Microsoft® Outlook).

## **5.6 Configuring the export function**

### **Activating the function**

1. From the menu bar "[U]tilities", select the menu item "*Configure [s]ystem...*".
  2. Press the "*Export...*" button.
- ☞ A dialog box appears.

## Dialog box



## Dialog structure

### ***"Depending on image type"***

This function allows for the configuration of X-ray image exports.

By clicking the different buttons (individually or in combination), you can determine the image type(s) for which the selected settings are active.

### ***"Depending on image type" / "L/R marking"***

This function determines whether a tooth position marker is to be inserted on the printed image, if *"L/R marking"* has not yet been selected for this image (see also Section *"Exposure settings [ → 140]"*).

### ***"Depending on image type" / "Setting for compression"***

TIFF and JPEG images can be compressed (see also Section *"Exposure settings [ → 140]"*).

## **NOTICE**

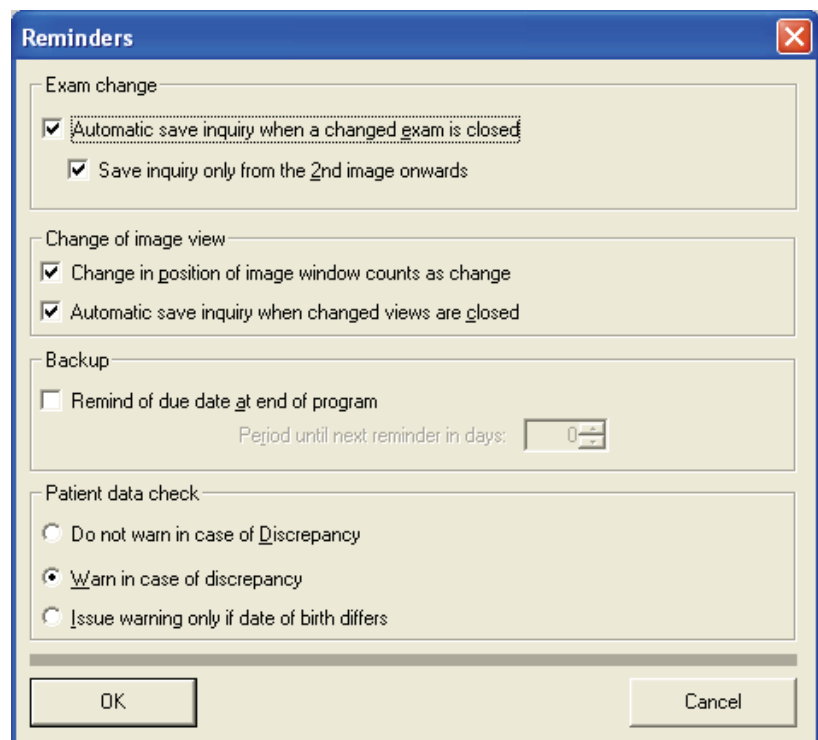
The compression of X-ray images with a bit depth of more than 8 bits is not currently supported.

## 5.7 Configuring the reminder function

### Activating the function

1. From the menu bar *"[U]tilities"*, select the menu item *"Configure [s]ystem..."*.
  2. Press the *"Reminders..."* button.
- ↳ A dialog box appears.

## Dialog box



## Dialog structure

### ***"Exam change"***

Exams are checked for modifications before the exam is closed.  
The program asks whether the changes should be saved.

### ***"Change of image view"***

Image views are checked for modifications before the image is closed.  
The program asks whether the changes should be saved.

### ***"Backup"***

When quitting the SIDEXIS software, the following message is displayed in the specified time intervals (number of days):

### ***"Patient data check"***

This option compares the current patient data with the patient data saved in the images.

## 5.8 Configuring the constancy test option

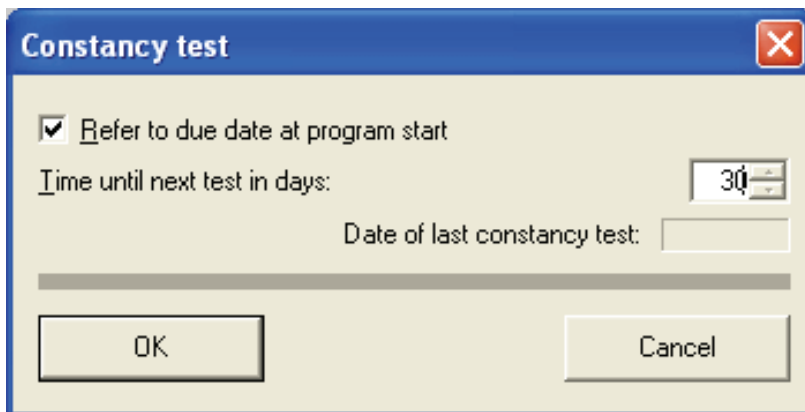
### Activating the function

1. From the menu bar "[U]tilities", select the menu item "Configure [s]ystem...".
  2. Press the "Constancy test..." button.
- ☞ A dialog box appears.

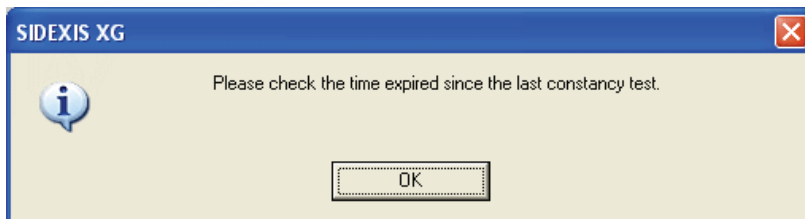
### Constancy test settings

Stations that are subject to X-ray equipment constancy test requirements can be entered in the "Constancy test" area. This requires that the "Refer to due date at program start" option is activated and that the date

by which the next test has to be performed is entered. The date of the last constancy test performed at this station is also provided for your information.



The next test date is displayed when the SIDEXIS XG system starts up.



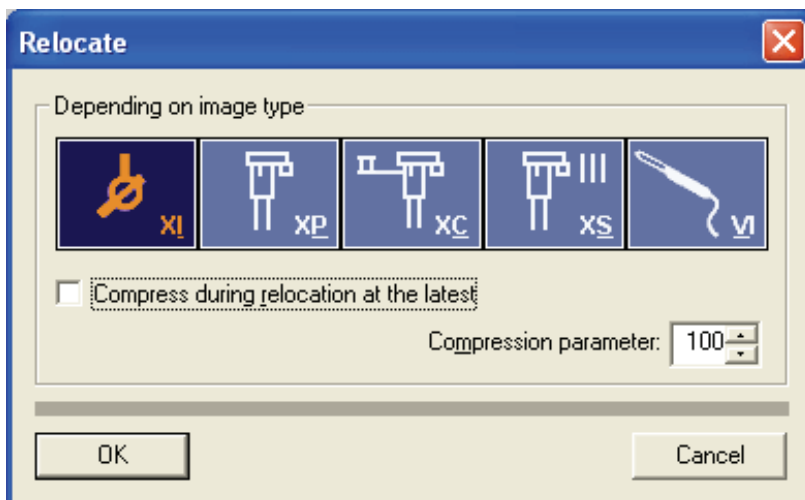
For workstations which do not require a constancy test, you only need to deactivate the option "Refer to due date at program start" to prevent the message from being displayed during program start.

## 5.9 Configuring the relocation function

### Activating the function

1. From the menu bar "[U]tilities", select the menu item "Configure [s]ystem...".
  2. Press the "Relocate..." button.
- A dialog box appears.

### Dialog box



## Dialog structure

### *"Depending on image type"*

By clicking the different buttons (individually or in combination), you can determine the image type(s) for which the selected settings are active.

### *"Depending on image type" "Compress during relocation at the latest"*

When this option is selected, the system checks during relocation whether the images are already compressed. If not, they are compressed using the configured *"Compression parameter"*.

#### NOTICE

The compression of X-ray images with a bit depth of more than 8 bits is not currently supported.

### *"Depending on image type" "Compression parameter"*

See Section "Exposure settings [ → 140]".

## 5.10 Configuring the permanent dentist data

#### NOTICE

Starting from Version 4.2, several permanent dentists can be administered in a single list. A prerequisite for this is an ODBC database structure. This is the case if SIDEXIS 4.2 has been set up as a new installation. If this is not the case, then this menu item is unavailable.

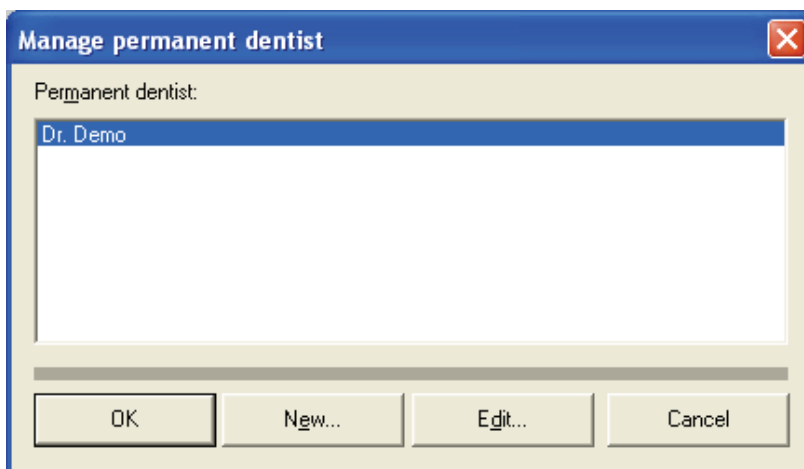
## Activating the function

1. From the menu bar *"[U]tilities"*, select the menu item *"Configure [s]ystem..."*.
  2. Press the *"Permanent dentist..."* button.
- ☞ A dialog box appears.

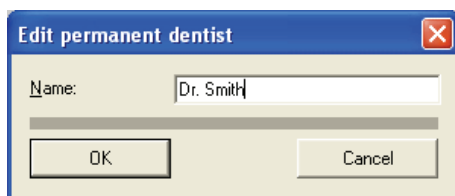
## Explanation

When a patient is newly registered, the corresponding permanent dentist can be selected from a picklist in the *"New patient"* dialog box (see Section "How can I create new patient data? [ → 46]").

The dialog box *"Manage permanent dentist"* helps administer the corresponding data.



Should a new permanent dentist be added, the following dialog appears after you click the "New..." button.



You can enter the name of a permanent dentist and confirm it with "OK".

The same dialog box also appears when you click the "Edit..." button. You can then correct or overwrite a name.

After each change in the "Manage permanent dentist" dialog box and subsequent confirmation with "OK", you will be prompted to restart SIDEXIS in order to apply the new data.

## 5.11 Displaying an error log

### Explanation

For service purposes only!

Displays the "sidexis.log" file (maximum file size 100 KB), in which the most recent error messages are recorded.

### Activating the function

1. From the menu bar "[U]tilities", select the menu item "Configure [s]ystem...".
2. Press the "Error message file" button.

## 5.12 Service

### Explanation

The "Service..." procedure is provided exclusively for the configuration of hardware and software components and for the adjustment of important system parameters. This program area can only be accessed by authorized technical personnel with a service password.

### Activating the function

1. From the menu bar "[U]tilities", select the menu item "Configure [s]ystem...".
2. Press the "Service..." button.

## 6 Buttons and hotkeys

### 6.1 "Exam" toolbar

#### Registering the patient



➤ Hotkey: Press the [Pos1] key.]

See Section "Which dialog box is used to register a patient? [ → 43]"

#### Checking out the patient



See Section "How can I check out a patient? [ → 50]"

#### Register new patient



See section "How can I create new patient data? [ → 46]"

#### Changing patient data



See also Section "How can I modify patient data? [ → 47]"

#### Deleting patient data



See also Section "How can I delete patient data? [ → 48]"

#### One step forward



➤ Hotkey: Press the [Enter] key.

See Section "Workflow assistance [ → 21]"

#### One step back



➤ Hotkey: Press the [Esc] key

See Section "Workflow assistance [ → 21]"

#### Continuing an interrupted workflow with the next step



See Section "Workflow assistance [ → 21]"

#### One step repeated



See Section "Workflow assistance [ → 21]"

### Producing an order



See Section "Generating an order in a multi-workstation environment [ → 23]"

### Accepting an order



See Section "Accepting an order in a multi-workstation environment [ → 25]"

### Opening a new exam



➤ Hotkey: Activate the key combination [Ctrl]+[N].  
See Section "Generating a new exam [ → 28]"

### Opening an existing exam



➤ Hotkey: Activate the key combination [Ctrl]+[O].  
See Section "Opening a saved exam [ → 30]"

### Closing the exam



See Section "Closing an exam [ → 36]"

### Saving an exam



➤ Hotkey: Activate the key combination [Shift]+[F12].  
See Section "Saving an exam [ → 31]"

### Saving an exam under a new name.



➤ Hotkey: Press the [F12] key  
See Section "Saving an exam [ → 31]"

### Saving an exam as a template.



See Section "Self-created templates [ → 41]".

### Managing templates



See Section "Manage templates [ → 42]".

### Delete exam from exam database.



See Section "Deleting an exam [ → 36]"



### Printing an exam



See Section "Printing an exam [ → 32]"

### Exam print preview



See Section "Print preview [ → 71]"

### Configuring the printer for exam print-out



See Section "Printing an exam [ → 32]"

### Importing an exam



See Section "Importing an exam [ → 35]"

### Exporting an exam



See Section "Exporting an exam [ → 33]"

### Changing programs



Exit program

See Section "Changing programs [ → 26]"

See Section "Exiting SIDEXIS XG [ → 28]"

## 6.2 "Image" toolbar

### Activation of an intraoral exposure



➤ Hotkey: Activate the key combination [Ctrl]+[Shift] +[I].

See Section "Intraoral X-ray exposures [ → 78]"

### Activation of a multiple intraoral exposure



See Section "Intraoral X-ray exposures [ → 78]"

### Opening a new exam



➤ Hotkey: Activate the key combination [Ctrl]+[N].

See Section "Generating a new exam [ → 28]"

**Activation of a panoramic, ceph and TSA X-ray**

➤ Hotkey: Activate the key combination [Ctrl]+[Shift] +[P].

See Section "Panoramic, Ceph and TSA X-ray exposures [ → 82]"

**Activation of an intraoral video exposure**

See Section "Video exposure [ → 86]"

**Scanning an image**

See Section "Scanning images [ → 73]"

**Configuring the scanner**

See Section "Scanning images [ → 73]"

**Select image from the image database for viewing**

See Section "Opening images from the SIDEXIS database [ → 52]"

**Close image**

➤ Hotkey: Press the [Esc] key.

See Section "Closing an image [ → 62]"

**Saving the current image view as new image**

See Section "Saving an image view [ → 50]"

**Delete image**

See Section "Deleting images from the image database [ → 63]"

**Print image view**

➤ Hotkey: Activate the key combination [Ctrl]+[P].

↳ The image is printed on the installed default printer

See Section "Printing images and diagnostic findings [ → 70]"

**Image view print preview**

See Section "Print preview [ → 71]"

### Send image



See section "Send image [ → 75]"

### Sending an image via E-Mail.



See Section Sending images via Internet as E-mail [ → 74]"

### Importing an image



See Section "Importing an image [ → 68]"

### Exporting an image



See Section "Exporting an image view [ → 66]"

## 6.3 "Edit" toolbar

### Undo last filter operation



➤ Hotkey: Activate the key combination [Ctrl]+[Z].

See Section "Undoing the last filter operation [ → 121]"

### Copies the active image to the Windows clipboard.



➤ Hotkey: Activate the key combination [Ctrl]+[C]

See Section "Copying the active image to the Windows clipboard [ → 39]"

### Pastes images from the Windows clipboard into the workspace



➤ Hotkey: Activate the key combination [Ctrl]+[V]

See Section "Pasting images from the Windows clipboard [ → 40]"

### Removing objects



➤ Hotkey: Press the [Del] key

See Section "Removing objects from the workspace [ → 39]"

## 6.4 "Analysis" toolbar

### Mouse adjuster for setting brightness and contrast



➤ Hotkey: Activate the key combination [Ctrl]+[Shift] +[M].

See Section "Mouse adjuster for setting brightness and contrast [ → 110]"

### Standard mouse pointer for selecting objects in the workspace



See Section "Selecting objects in the workspace [ → 90]"

### Panning



➤ Hotkey: Activate the [Ctrl] key + double-click with the left mouse key  
See Section ""Moving the image segment [ → 102]"

### Determining the region of interest for image filters



See Section "Determining the region of interest for image filters [ → 111]"

### Optimizing contrast



See Section "Torch functions [ → 121]"

### Invert



See Section "Torch functions [ → 121]"

### Enlarging



See Section "Torch functions [ → 121]"

### Connecting arrows



See section "Connecting arrows" [ → 127]

### Freehand lines



See Section "Freehand lines [ → 127]".

### Lines



See section "Lines [ → 127]".

### Text fields



See Section "Text fields [ → 128]"

### Special drawing tool for orthodontics



See Section "Special drawing tool for orthodontics [ → 128]"

### Rectangle



See section "Rectangle" [ → 128]

### Ellipse



See section "Ellipse" [ → 129]

### Measuring lengths



See section "Length measurement [ → 92]"

### Adjusting length measurement values



See Section "Correcting the results of a length measurement [ → 94]"

### Measuring angles



See section "Angle measurement [ → 96]"

### Measure density



See section "Bone density measurement [ → 97]"

### Restore original image



See Section "Restoring the original image [ → 91]"

### Displaying object properties



See Sections "Displaying and changing object properties [ → 38]"

### Contrast optimization filter



See Section "Contrast optimization [ → 115]"

### Smoothing filter



See Section "Smooth down [ → 116]".

### Sharpen Plus filter



See Section "Sharpen Plus [ → 117]"

### Sharpen Plus Variable filter



See Section "Sharpen Plus variable [ → 118]"

### Noise reduction filter



See Section "Noise reduction (Median) [ → 119]"

### Black dot filter



See Section "Filtering black dots [ → 119]"

### Relief display filter



See Section "Relief display [ → 120]"

### Invert image



➤ Hotkey: Activate the key combination [Ctrl]+[I].  
see Section "Invert [ → 113]"

### Pseudo-color display



➤ Hotkey: Activate the key combination [Ctrl]+[F].  
See Section "Color fill [ → 111]".

### Applying the brightness/contrast settings



See Section "Applying the brightness/contrast settings [ → 113]"

### Contrast/brightness adjustment only active in region of interest



See Section "Brightness/contrast adjustment in the region of  
interest [ → 112]"

## 6.5 "View" toolbar

### Maximize active image to full-screen size



See Section "Full Frame mode [ → 106]"

### Reducing the active image to standard size



➤ Hotkey: Press the [Esc] key.

See Section "Full Frame mode [ → 106]"

### Zoom in



➤ Hotkey: Press the [+] key.

See Section "Zooming the image [ → 100]"

### Zoom out



➤ Hotkey: Press the [-] key.

See Section "Zooming the image [ → 100]"

### More details



➤ Hotkey: Activate the key combination [Ctrl]+[+].

See Section "Zooming the image [ → 100]"

### Less details



➤ Hotkey: Activate the key combination [Ctrl]+[-].

See Section "Zooming the image [ → 100]"

### Tiling images in the workspace



See Section "Tiling [ → 104]"

### Arranging images as overview in the workspace



See Section "Overview [ → 104]"

### Arranging images according to their anatomical positions in the workspace



See Section "Status overview [ → 104]"

### Cascading images in the workspace



See Section "Cascading [ → 105]"

### Turning the active image 90° to the left



➤ Hotkey: Activate the key combination [Ctrl]+[L].

See Section "Rotating [ → 107]"

### Turning the active image 90° to the right



➤ Hotkey: Activate the key combination [Ctrl]+[R].

See Section "Rotating [ → 107]"

### Turning the active image by 180°



See Section "Rotating [ → 107]"

### Specialized function - Always on top



See Section "Specialized function - Always on top [ → 130]"

### Activates the magnifier function



See Section "Zoom [ → 106]"

### Activates the Viewport function



See Section "Viewport [ → 102]"

### Activates the "Transfer" function



See Section "Transfer function [ → 123]"

### Showing or hiding the status bar



See Section "Screen layout [ → 19]"

### Customize user interface



See Section "Customizing the user interface and plugin administration [ → 175]"



## 6.6 "Utilities" toolbar

### Opening the constancy test



See Section "Constancy test [ → 136]"

### Relocating the image stock



See Section "Procedure for relocating the image stock [ → 134]"

### Activating the system configuration



See Section "System setup [ → 140]"

## 6.7 "Help" toolbar

### Open online help



Information about the installed  
system



See Section "Information regarding SIDEXIS, Internet connection [ → 27]"

## 7 Appendices

### 7.1 DICOM Export Wrap&Go

#### Explanation

A complete examination and a viewer can be automatically burned to a CD using this function. This function is used e.g. to exchange patient data between attending doctors.

#### NOTICE

A CD burner is required in the SIDEXIS Station in order to run this function.

#### Preparation

##### Activating the function



Open the examination you wish to export.

➤ Click the button.

or

➤ In the menu bar "[Utilities]" "Plug-ins", select the menu item "DICOM Export Wrap&Go".

##### Export data / burn to CD

The Windows assistant for burning to CD will be opened.



Follow the screen prompts of the Windows wizard to burn the data to CD.

#### Possible errors

An error alert will appear instead of Windows assistant if no CD burner is available in the SIDEXIS station or if the Windows assistant is deactivated.



In this case, confirm the alert by clicking OK.

A dialog box will appear requiring you to select your Save to location.

Select your desired location and confirm in the dialog box.

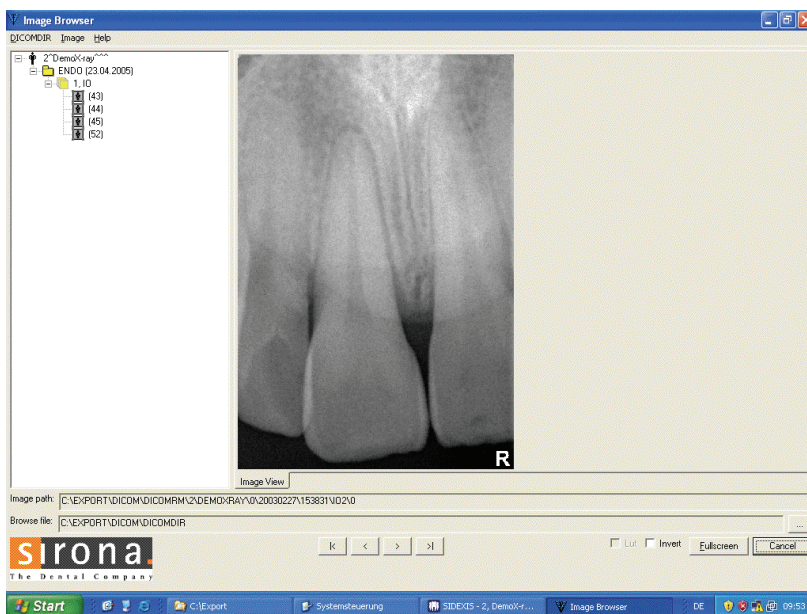
The examination data will be exported to the selected location. From there, you can continue to work with the data as desired e.g. you can burn it to a CD using your preferred burning software.

## Import data

When the CD is inserted in the CD drive, the launch page of the viewer will open.



Open the examination data in the viewer by clicking on the image viewer button.



Select the individual images using the structure tree or the arrow key.

## 7.2 Backup copies

### Basics – backup copies

In order to increase the data security of the system and to prevent data losses in case of fixed component failure (such as hard disks), users have to regularly back up data and the SIDEXIS software.

Such a copy is generally referred to as a backup.

#### NOTICE

In order to minimize the risk of data loss, backups can be created at any time, even several times a day.

#### NOTICE

Note that data access from stations during the backup process may result in reduced performance. It is therefore recommended to backup data during low-activity phases, e.g. during the night.

### Backup

The backups **must** be carried out in two steps:

- Step 1 – Database backup [ → 173]
- Step 2 – File-based backup [ → 173]

### Restoration

Restoration **must** be carried out in two steps:

- Step 1 – Restoration of backed up files. See Section "File-based backup [ → 173]"
- Step 2 – Restoration of the database [ → 174]

## 7.2.1 Database backup

### Explanation

As a rule, data on a database server cannot be backed up on a file basis. Therefore, it is recommended to backup a database into the image data folder \PDATA within a separately created folder\DBBackup.

By doing this, during backup of the image data folder the database will be backed up automatically as well.

#### NOTICE

The backup must be carried out via the database server being used.

### 7.2.1.1 Example: SQL Server 2005

#### Explanation

During the standard installation of SIDEXIS XG version 1.6 or higher, SQL Server 2005 Express will also be installed and the database "PDATA\_SQLEXPRESS" will be created.

This installation is used to illustrate the database backup procedure.

#### Prerequisite

The backup has to be carried out on the computer where the database resides.

In addition to the database "PDATA\_SQLEXPRESS" the "Master" database should be backed up as well.

- The database "Master" contains user and password information.

#### Backup

SIDEXIS XG provides the "NGSQLBackup.exe" application to backup the databases "PDATA\_SQLEXPRESS" and "Master".

- It is found on the SIDEXIS XG installations CD in the directory `\Tools\NGSQLBACKUP`.
- This directory also includes a text file (readme.txt) with a detailed description of the application.

#### Tip

The data backup can be automated by creating a batch file with the commands described here and then having it periodically executed via "Scheduled Tasks" in Windows.

### 7.2.1.2 Other database servers

Consult the manufacturer of your database server for more information about data backups and data restorations.

## 7.2.2 File-based backup

### Prerequisite

The database was backed up before. See Section "File-based backup [ → 173]."

#### NOTICE

##### Important additional information

Creating a backup copy must not be confused with relocation.

## Directories to be backed up

Type of files/directories to be backed up	Path in standard installation (adjust if required)
SIDEXIS program directory	C:\SIDEXIS
Sirona program directory	C:\Program Files\Sirona
Image data folder including database backup	<drive>\PDATA

## Preparation

### CAUTION

Always keep a sufficient number of new storage media at hand.

In principle all backup copies can be saved to a single storage medium (provided the data volume does not exceed its storage capacity).

## Backup frequency

Backup frequency depends on the data volume, i.e. the number of images produced in the system. Please note that lost data can be restored only until the moment when the last backup was performed.

## 7.2.3 Database restoration

As a rule, data on a database server cannot be backed up on a file basis.

Therefore, it is recommended to backup a database into the image data folder \PDATA within a separately created folder\DBBackup.

- By doing this, during backup of the image data folder the database will be backed up as well.

## Prerequisite

In order to restore the backed up database, the backed up image data folder must be restored first.

See Section "File-based backup [ → 173]"

### 7.2.3.1 Example: SQL Server 2005

## Prerequisite

Restoration has to be carried out on the computer where the SQLServer resides.

In addition to the database "PDATA\_SQLEXPRESS" the database "Master" **must** be restored.

- The database "Master" contains user and password information.

## Database restoration

### NOTICE

For more information, refer to the SIDEXIS XG Service Manual.

### NOTICE

The following description assumes that the logged-in Windows user has administrative rights on the SQL server.

### CAUTION

#### Possible loss of data

Upon restoring the databases, the data that has not been backed up will be deleted permanently.

Restoring data should be carried out by an experienced system administrator!

SIDEXIS XG provides the "NGSQLBackup.exe" application to restore the "PDATA\_SQLEXPRESS" and "Master" databases.

- It is found on the SIDEXIS XG installations CD in the directory  
`\Tools\NGSQLBACKUP`.
- This directory also includes a text file (readme.txt) with a detailed description of the application.

#### Tip

Restoring backed up data is more convenient using the tool "SQL Management Studio Express", which can be obtained from Microsoft free of charge ([www.microsoft.com](http://www.microsoft.com)).

#### 7.2.3.2 Other database servers

Consult the manufacturer of your database server for more information about data backups and data restorations.

## 7.3 Customizing the user interface and plug-in administration

#### Explanation

Interface customization allows users to adapt the SIDEXIS XG software to their special requirements and wishes.

#### Activating the function



➤ Click the button.

or

➤ From the menu bar "[View]", select the menu item "[Customize...]".

✎ The Save dialog box appears.

#### Function

After the function has been activated the "Customize" configuration window appears.

The user interface can be configured and the plugins can be managed via four different tabs.

#### Basic function

When the "Customize" configuration window is open, the tools (command buttons) can be moved between toolbars via "drag and drop" and/or deleted.

- The tools can be deleted by dragging them to the workspace and dropping them there with the mouse.



## NOTICE

The same function can also be performed by pressing and holding the [Alt] key on the SIDEXIS XG user interface.

The "*Customize*" configuration window does not have to be open for this purpose.

### Reset

See Section "Toolbars [ → 177]"

### Tabs

The following tabs are available:

- Commands [ → 176]
- Toolbars [ → 177]
- Plugin Manager [ → 178]
- Options
- Access rights [ → 183]
- Personalization [ → 188]

## 7.3.1 Commands

### Explanation

All program tools (command and toolbar buttons) are listed on the "*Commands*" tab.

They can be assigned to the toolbars of the SIDEXISXG XG user interface (desktop).

### Activating the function

1. From the menu bar "*View*", select the menu item "*Customize...*".
2. Select the "*Commands*" tab.

### Structure

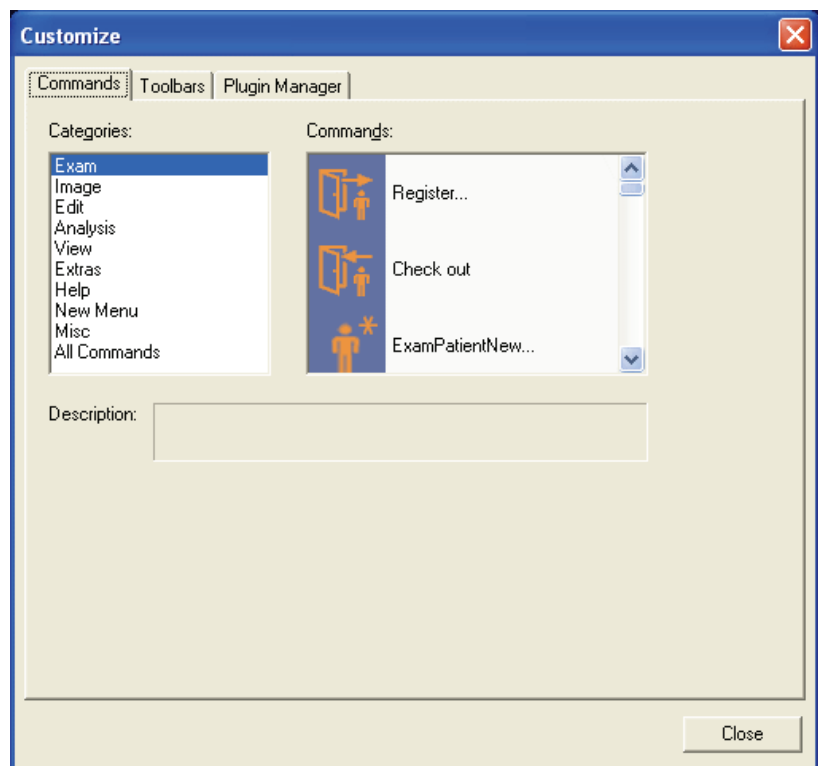
- The menu bar title is located on the left side of the ( "*Categories*" ) tab.
- The tools of the selected menu bar title are located on the right side of the tab ( "*Commands*" )

### Function

The tools can be assigned to the toolbars of the SIDEXIS XG user interface via drag and drop.



## Dialog box



### 7.3.2 Toolbars

#### Explanation

The toolbars of the SIDEXIS XG user interface are managed on the "Toolbars" tab.

#### Activating the function

1. Use the "[V]iew" menu bar to select the "[C]ustomize..." menu item.
2. Select the "Toolbars" tab.

#### Operation

- Selection window "Toolbars"  
The existing toolbars on the SIDEXIS XG user interface can be shown and hidden by clicking the check boxes.

#### NOTICE

One easy way to hide or show the existing toolbars is described in Section "Showing and hiding toolbars [→ 178]".

- "New" button  
A new toolbar can be created by clicking the "New" button.
- "Delete" button  
You can delete a custom-made toolbar by selecting the "Delete" button.
- "Rename" button  
You can rename a custom-made toolbar by selecting the "Rename" button.
- "Reset" button  
You can restore a toolbar to its condition on delivery by selecting the

"Reset" button.

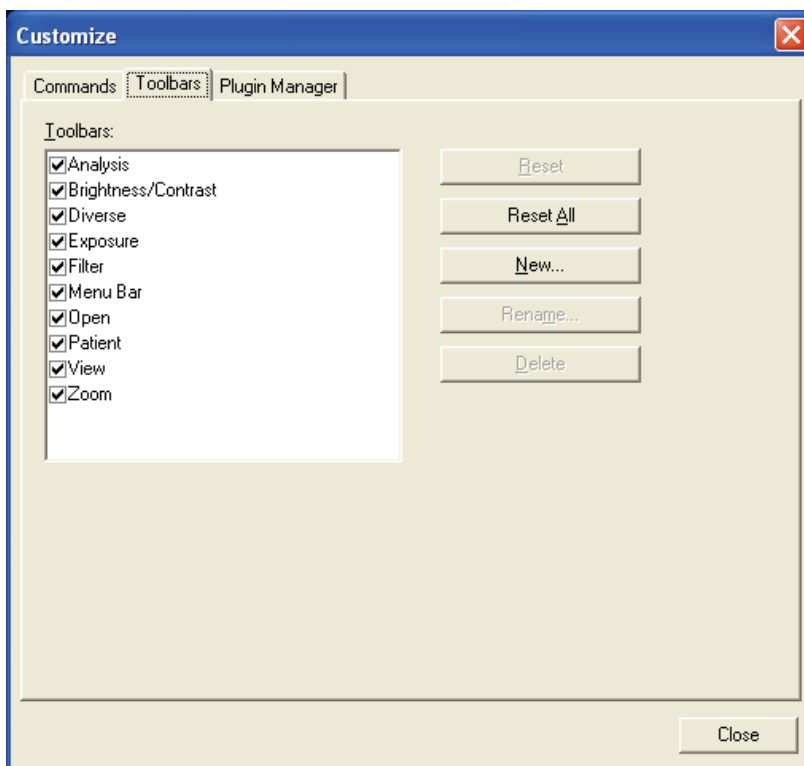
The position of the toolbar remains unchanged.

- "Reset All" button

You can restore all toolbars to their condition on delivery by selecting the "Reset All" button.

The positions of the toolbars remain unchanged.

## Dialog box



### 7.3.2.1 Showing and hiding toolbars

#### Explanation

In addition to the "Toolbars" selection window described above, you can also show and hide the toolbars directly via the menu bar of the SIDEXIS XG user interface.

#### Activating the function

1. Place the mouse pointer above the menu bar.
  2. Press the right mouse button.
- ↳ A popup menu bar with the names of all existing toolbars then appears.

#### Function

- The existing toolbars can be activated and deactivated by clicking the check box.

#### Opening the configuration dialog box

The "Customize" configuration window can be activated via the configuration symbol located below the list of check boxes.

### 7.3.3 Plugin Manager

#### Explanation

A standardized, documented plug-in interface allows for easy integration of additional functions (e.g. databases) and image functions (e.g. image filters) into existing SIDEXIS XG installations.

### CAUTION

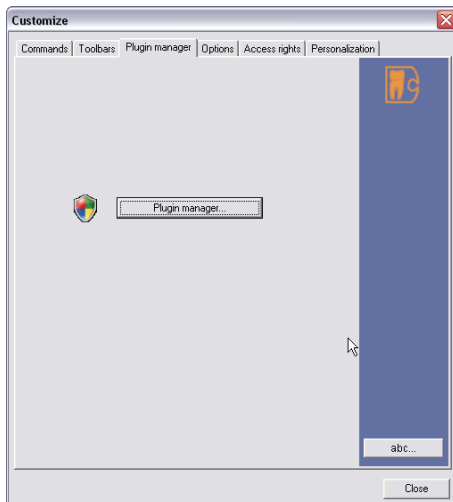
The responsibility for the integration of image processing software via the plug-in interface, the application of such software and the use of the resulting images lies with the user. The resulting images may no longer be suitable for medical evaluation and purposes. For that reason Sirona cannot assume any liability for images produced or manipulated by such software.

## Validity

### CAUTION

Administrator access rights are required to operate the Plugin Manager.

## Activating the function



## Operation

1. From the menu bar "[V]iew", select the menu item "[C]ustomize...".
  2. Select the "Plug-in manager" tab.
  3. Press the "Plug-in manager" button.
- ↳ If you have the required administrator rights, then the "Plug-in manager" dialog is displayed. Otherwise a rights administration dialog will be displayed (please contact your system administrator in this case).

When a plugin is registered, the menu command is automatically created.

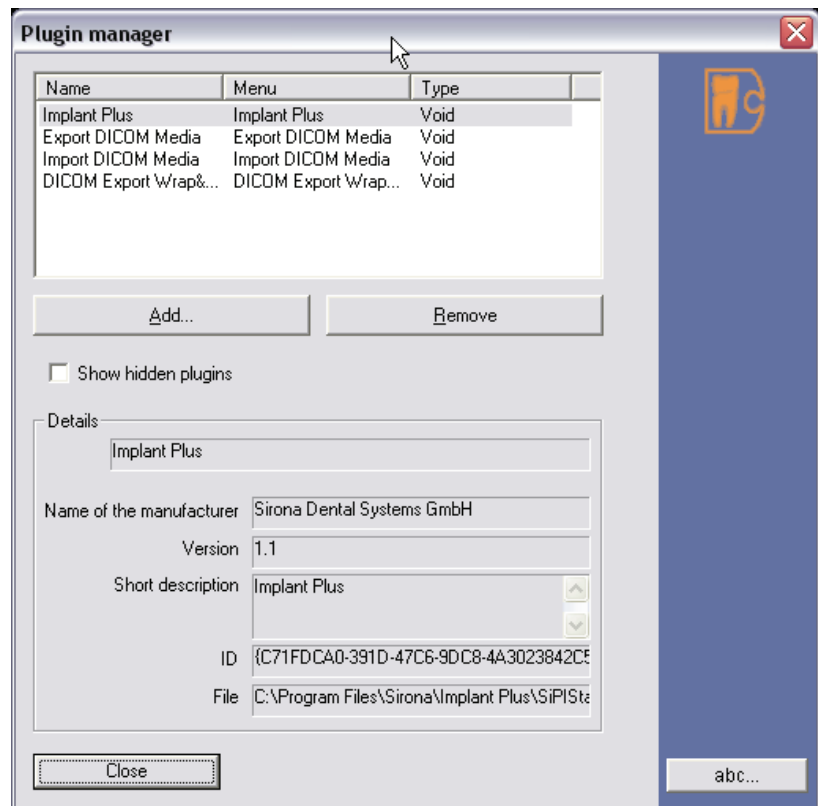
- When the menu command is created, a distinction is made between filter plugins and other types of plugins. Filter plugins are available in the menu bar via **"Analysis" "Filter" "Filter plug-ins"**. All other plugins can be reached via the **"Utilities" "Plug-ins"** menu bar.

An additional toolbar with a corresponding button is also created for the current user who installed the plugin.

### NOTICE

The "Commands" and "Toolbars" tabs are disabled after plugins are registered or deleted. The tabs are reenabled after the "Customize" configuration window is reopened.

## Dialog box



## Registering a new plugin

### NOTICE

First execute the plugin setup or copy the plugin file(s) to a drive that is always available. Do **not** register on CD/floppy disk etc.!

1. Press the "Add" button.  
↳ The "Plug-in selection" dialog box opens.
2. Navigate the selection list box to the location where you have installed the plugin.
3. Select the required plugin file.
4. Press the "Open" button.
5. Close the dialog box.  
↳ The new plugin is registered.

## Removing a plugin from the SIDEXIS XG software

1. Mark the plugin to be deleted.
2. Press the "Remove" button.  
↳ The plugin has been removed from the SIDEXIS XG software.

## Displaying hidden plugins

- Activate the "Show hidden plugins" check box.  
↳ Hidden plugins are displayed in the selection box.

## 7.3.4 Options

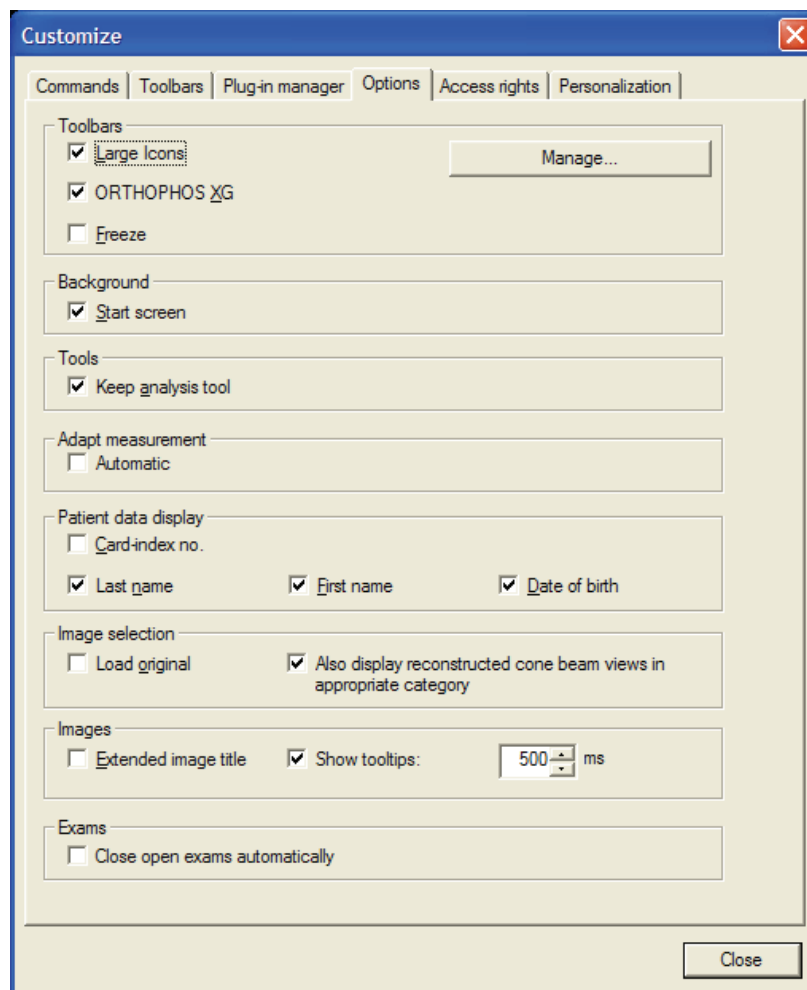
### Explanation

The "Options" tab is used for general configuration of the SIDEXIS XG user interface.

## Activating the function

1. Use the "[V]iew" menu bar to select the "[C]ustomize..." menu item.
2. Select the "Options" tab.

## Dialog box



## Configuration

The "Options" tab is subdivided into the following configuration fields:

### Configuration group box "Toolbars"

- Check box "Large Icons"  
The size of the SIDEXIS XG user interface buttons can be decreased by deactivating the check box.
- Check box "ORTHOPHOS XG"  
If the check box is deactivated, the new image management layout of panoramic and cephalometric exposures in ORTHOPHOS XG Design is replaced by the familiar SIDEXIS Classic layout.  
See Section "Dialog box layout" [ → 52].
- Check box "Freeze"  
Activating the check box fixes the toolbars at the side of the workspace.
- "Manage..." button  
See Section "Manage user interface" [ → 183]

### "Background" configuration group box

- Check box *"Start screen"*  
The background image of the start page can be switched off by deactivating the check box.

#### Configuration group box *"Tools"*

- Check box *"Keep analysis tool"*  
After using an analysis tool, you can switch the mouse pointer back to the standard mode by deactivating the check box.

#### Configuration group box *"Adapt measurement"*

- Check box *"Automatic"*  
Activating this check box causes the suitable adjustment factor to be selected automatically for the image type selected in each case. See Section "Adjusting length measurements [ → 94]"

#### Configuration group box *"Patient data display"*

- Check box *"Card-index no."*  
If the check box is activated, the card index number will be displayed on the title bar of the SIDEXIS\_XG program, printouts and export files.
- Check box *"Name"*  
If the check box is activated, the last name will be displayed on the title bar of the SIDEXIS\_XG program, printouts and export files.
- Check box *"First name"*  
If the check box is activated, the first name will be displayed on the title bar of the SIDEXIS\_XG program, printouts and export files.
- Check box *"Date of birth"*  
If the check box is activated, the date of birth will be displayed on the title bar of the SIDEXIS\_XG program, printouts and export files.

#### Configuration group box *"Image selection"*

- Check box *"Load original"*  
If the check box is activated, the original image will be loaded by default when an image is loaded.
- Check box *"Also display reconstructed cone beam views in appropriate category"*  
Upon activating the check box, the calculated cone beam views will also be displayed in the suitable category.

#### Configuration group box *"Images"*

- Check box *"Extended image title"*  
The image title bar is extended to include function buttons upon activating this check box.  
Functions:  
- Close image [ → 62]  
- Full frame mode [ → 106]  
- 3D application (GALAXIS) or viewer will be started (see GALILEOS documentation).
- Check box *"Show tooltips:"*  
A tooltip containing data from the *"Describe image"* dialog box is displayed upon activating the check box (see Section "Image description and findings" [ → 59]).  
The tooltip appears as soon as the mouse pointer hovers over the

image title bar.

The delay time (ms) for displaying the tooltip can be set in the right-hand input field.

#### Configuration group box "Exams"

- Check box *"Close open exams automatically"*  
If this option is deactivated, it is possible to open several examinations at the same time.  
See Section "Working with several open examinations [ → 40]".

### 7.3.4.1 Managing the user interface

#### Explanation

It is possible to manage toolbar configuration.

The user interface configuration of a station can now be transferred to other stations. The configuration can be employed for the user, the station or the entire practice.

#### Option button "User"

Each user has his or her individually configured user interface

- Check box *"Save user interface when leaving program"*  
If this check box is activated, then the user interface settings will be saved when exiting the program.

#### Option button "Station"

Each PC has a fixed user interface.

#### Option button "Practice"

A single user interface is applicable for the entire SIDEXIS network.

#### Operation

1. Select the required option (*"User"*, *"Station"* or *"Practice"*).
  - ↳ The file path for saving and loading the user interface is displayed in each case for your information.
2. Press the *"OK"* button.
  - ↳ **Only if the selected option has an impact on other users:** a query is displayed. Press the *"Yes"* button.
  - ↳ SIDEXIS XG is terminated and the user interface is saved using the previously displayed path.

The saved user interface is loaded again the next time SIDEXIS XG is started.

- Only for the *"Practice"* option: All SIDEXIS XG stations in the practice start with the same saved user interface.

### 7.3.5 Access rights

#### Explanation

The *"Access rights"* tab is used for configuring optional access rights.

**USA only:** This function supports measures to implement HIPAA guidelines

## NOTICE

The "*Patient data display*" configuration field on the Options [ → 180] tab also supports HIPAA implementation measures.

## CAUTION

It is the responsibility of the user to use and configure this function in accordance with the HIPAA rules.

### Activating the function

1. From the menu bar "[V]iew", select the menu item "[C]ustomize...".
2. Select the "*Access rights*" tab.

### Activation/deactivation

The function is activated and deactivated by means of the "*Restrict access*" check box.

### Configuration

You can create and manage users and user profiles on the "*Access rights*" tab.

## NOTICE

User profiles are implemented in the form of so-called "*Roles*"!

The "*Access rights*" tab is divided into two areas:

- The configuration field "User" [ → 184])
- The configuration field "Assigned roles" [ → 185])

### 7.3.5.1 Configuration field "User"

### Explanation

This area is used for managing the users of SIDEXIS XG.

## NOTICE

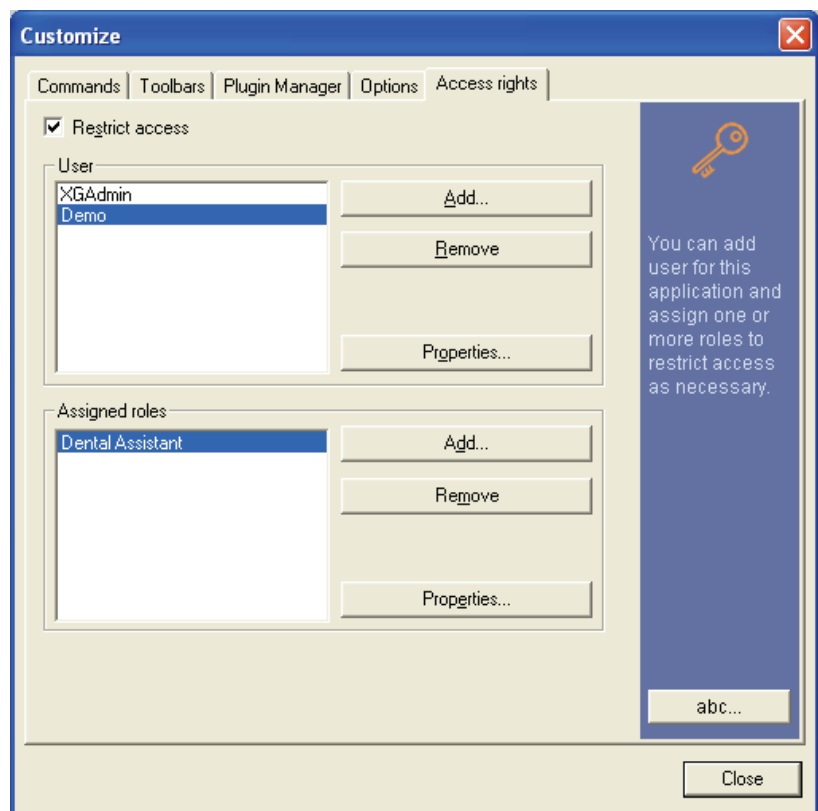
The current user is preselected in the list!

### Configuration

- Left selection field  
Contains a list of all users of the SIDEXIS XG database with selectable names.
- "*Add*" button  
The "*Add*" button opens up the "User" window [ → 186]. There you can create new users.
- "*Remove*" button  
The "*Remove*" button deletes the selected users.
- "*Attributes*" button  
The "*Attributes*" button opens up the "User" window [ → 186] for the selected user.



## Example screen



### 7.3.5.2 Configuration field "Assigned roles"

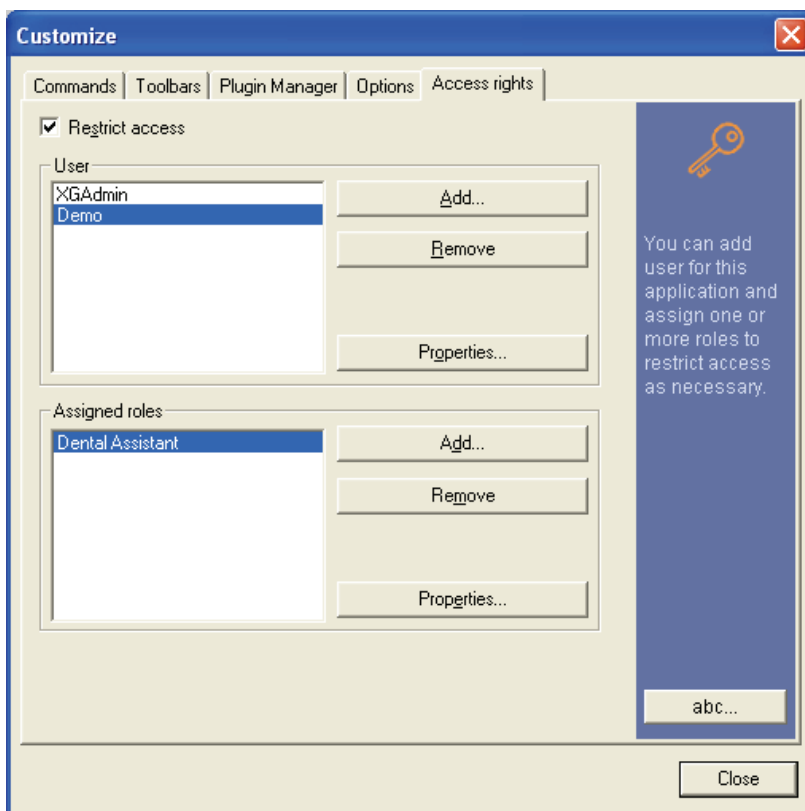
#### Explanation

#### Configuration

In this area the roles for the selected user are displayed and managed.

- **"Add"** button  
The **"Add"** button opens up the **"Roles"** window [ → 187]. There you can assign roles to the selected user.
- **"Remove"** button  
The **"Remove"** button removes the assignment of a selected role to the user selected above.
- **"Attributes"** button  
The **"Attributes"** button opens up the **"Role attributes"** window [ → 188]. There you can configure the roles.

## Example screen



### 7.3.5.3 "User" window

## Configuration

- In the "User" text box, you can specify or edit the user names.
- Check box "Windows login"  
When you start SIDEXIS XG, the Windows login will be used.  
The user does not have to log on a second time.  
**The user name must be identical to the login name used for logging on to Windows!**
- Check box "Request new password at next login"  
The newly created or selected user will be prompted to enter a new password when logging on the next time.

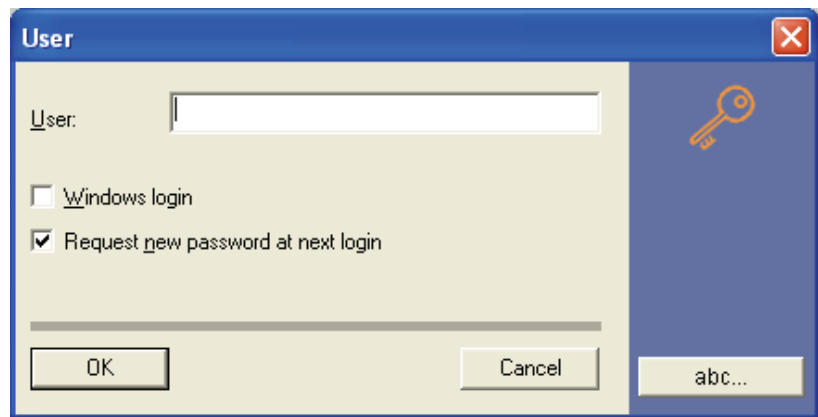
## NOTICE

### Quick switching between users

You can use the key combination [Ctrl] + [Shift] + [U] to switch users while the application is running.

This can be useful to change settings that are locked for the user that has been logged on.

## Example screen



### 7.3.5.4 "Roles" window

## Configuration

### Configuration group box "Roles"

- The text box shows the available roles.
- The "Add" button opens up the "Role attributes" window [ → 188]. In this window you can create and configure a new role.
- The "Remove" button deletes the selected role. If the role has already been assigned to other users, these assignments are deleted as well.
- The "Attributes" button opens up the "Role attributes" window [ → 188]. The scope of actions of the selected role is displayed there.

### Configuration group box "Granted actions"

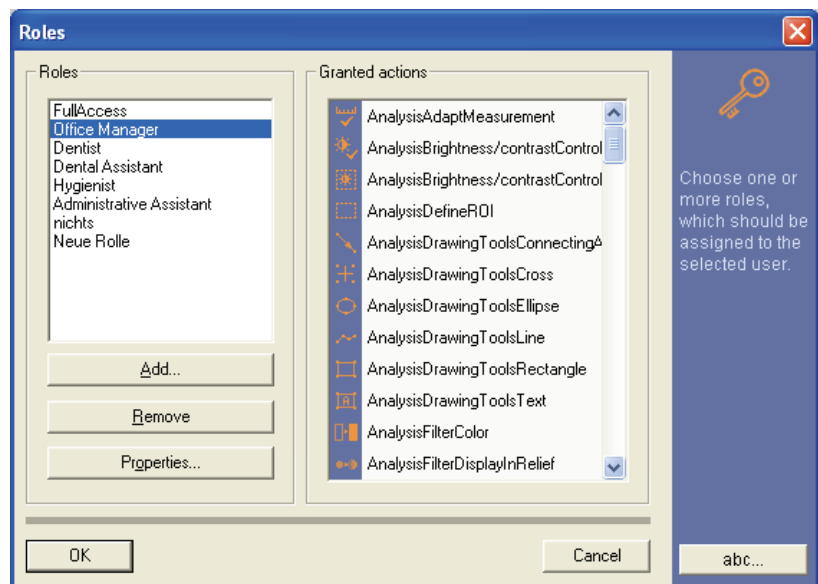
- Shows the actions that are permitted for the selected role.

## Assigning a role

1. Select the desired role.
2. Press the "OK" button.

The selected role is now assigned to the selected user.

## Example screen



### 7.3.5.5 "Role attributes" window

#### Explanation

The scope of actions of the respective role is displayed here. The dialog box is used for configuring the role.

#### Configuration

- The *"Name"* text box contains the name of the role.  
This name can be edited in the text box.
- *"Not granted"* selection field  
Shows all functions that are **not** assigned to the role.
- *"Granted"* selection field  
Shows all functions that are assigned to the role.

#### Configuration

#### Moving an action from one picklist to the other.

1. Select the desired action.
2. Click the appropriate arrow button.

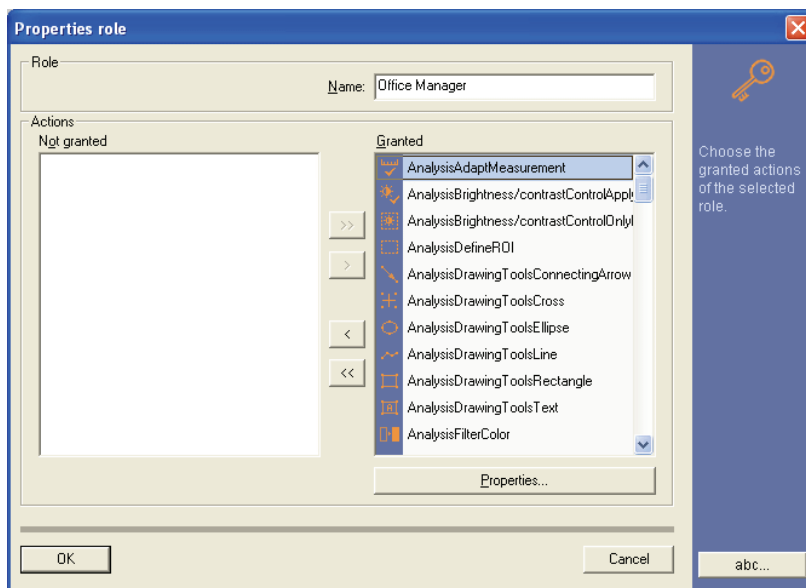
#### Moving all actions from one picklist to the other.

- Click the appropriate double arrow button.

#### Saving the setting

- Press the *"OK"* button.
- The role is now configured.

#### Example screen



### 7.3.6 Personalization

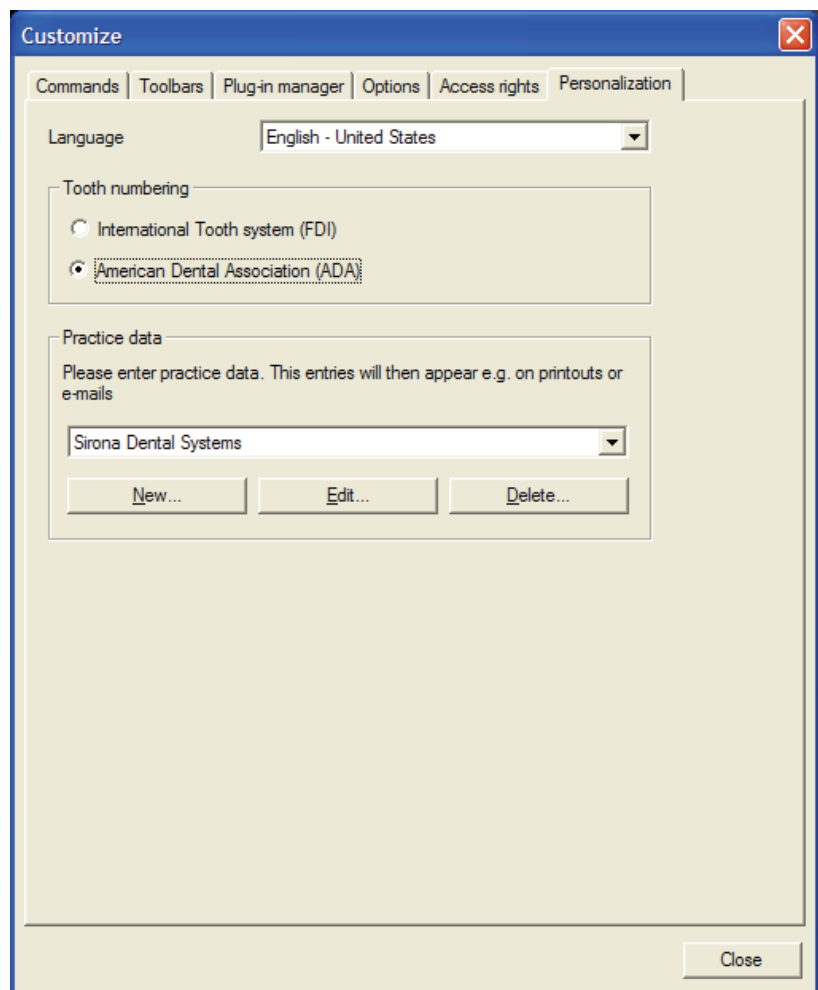
#### Explanation

The dialog language, tooth numbering to be used and practice name can be changed on this tab card.

#### Activating the function

1. Use the *"[V]iew"* menu bar to select the *"[C]ustomize..."* menu item.
2. Select the *"Personalization"* tab.

## Dialog box



## Configuration

The "Personalization" tab is subdivided into the following areas:

- **"Language" selection field**  
The dialog language of the SIDEXIS XG interface can be changed here.
- **"Tooth numbering" configuration group box**  
The tooth numbering can be configured here.
  - Option button *"International Tooth system (FDI)"* (tooth numbering of the *FDI World Dental Federation*)
  - Option button *"American Dental Association (ADA)"* (tooth numbering of the *American Dental Association (ADA)*).
- **Configuration group box "Name of practice"**  
The data for one or several practices can be entered and selected here. This appears on printouts or e-mail messages among other things.  
Switching from one practice to another is performed by selecting the required practice. Any patient that may be logged on has to be logged off for this.  
The changes are only visible for the print functions if the current patient is logged on again.

## 7.4 Error processing

### 7.4.1 Error messages

#### Explanation

The error messages generated by the SIDEXIS software are divided into different classes.

#### Classes

- Notes and instructions [ → 190]
- Questions and warnings [ → 190]
- Error messages [ → 190]

#### Messages and instructions

##### Explanation

This class of messages usually deals with normal software states about which the user should be informed. Information on how to proceed is either contained in the message itself or in this manual.

##### Identification

These messages are normally identified by the following symbol:



#### Questions and warnings

##### Explanation

If there are a number of ways to proceed at a particular point in the program or if an action with more widespread consequences needs to be reconfirmed, the system will issue questions and warnings. Information on how to proceed can be found in this manual.



##### Identification of questions

Questions are in most cases identified by the following symbols:



##### Identification of warnings

Warnings are usually identified by the following symbols:



#### Error messages

##### Explanation

The third and last class of SIDEXIS system messages is used for displaying error states.



## Identification

These messages are usually identified by an error number enclosed in brackets in the title line of the message and the following symbol:

### NOTICE

Depending on the frequency and effects of this message, it may be necessary to call a service engineer.

Below you will find a list of some of the error messages generated by SIDEXIS XG with information for the user how to eliminate the problem.

See Section "List of error messages [ → 191]"

## 7.4.2 List of error messages

### Explanation

The list describes some of the error messages generated by SIDEXIS XG.

Information how the user may eliminate the problem is also provided.

### NOTICE

If this information does not lead to the desired result or the error is not included in the list, call the hotline for assistance.

### Error list

Error number	Description
1500	SIDEXIS can only be started once at each station. Limit yourself to one instance of the software during your work.
1501	Possibly insufficient working memory (RAM) when starting SIDEXIS. Exit other programs, if possible.
1502	Possibly insufficient working memory (RAM) when starting SIDEXIS. Exit other programs, if possible. It should be possible to continue working without the hotkeys, though.
1530	Check the connections, cables and connectors between the PC, SIROCAM and the foot switch. It should be possible to continue working without the camera and foot switch, though.
1599	Reboot the PC. If the error occurs repeatedly, contact the hotline.
1600	Insufficient working memory (RAM). Close any images no longer needed or exit other programs, if possible.
1601	see 1600

1602	<p>This is an internal error; unexpected data has appeared in the software. We cannot recommend any general way to proceed.</p> <p>You should report the error to Sirona Dental Systems with a description of the action that caused the error.</p> <p>Provided that it is possible to reproduce the occurrence of the error, the action that caused the error should be avoided in the future in order to prevent possible damage to the database.</p>
1603	Possibly insufficient working memory (RAM). Close any images no longer needed or exit other programs, if possible.
1604	see 1603
1605	No more disk space left on the database drive. Relocate data to free up disk space.
1607	The selected ROI is too small. Please select a larger region.
1610	You have reached the maximum number of exposures that can be saved for the patient currently registered. To be able to save new images of this patient, you must delete some of the existing images. Alternatively, you can create a new data record for this patient (New Patient). The name of the patient must slightly differ from the existing entry (e.g. by appending a number). This error is unlikely to occur as the number of exposures that can be saved is very large.
1611	The number of images that can be displayed simultaneously is limited. It is sufficient to close any images no longer needed.
1640	A printout could not be started on one of the printers connected. Check the involved hardware first. Is the corresponding printer switched on? Is it connected to the PC with the correct cable in the correct socket? Is paper inserted?
1650	The view you have requested cannot be fully restored. The displayed view may therefore differ from the saved view. You can restore the desired status using the image processing functions. If it is not possible to continue working with the view, then you have to recur to the original view.
1660	A new image could not be saved to the database. However, in order not to lose the image, it can be saved e.g. to floppy disk using the export command. After the problem is eliminated, this exported image should then be reimported and assigned to the corresponding patient.
1700	Database access problems have occurred. If the database is installed on a server or X-ray PC, check whether they are switched on, ready for operation and correctly configured and whether the network connections and cables are OK.



1701	see 1700
1702	see 1700
1703	see 1700
1704	see 1700
1705	see 1700
1706	see 1700
1708	see 1610
1709	No further views of the active image can be saved to the database. The maximum number of views for this exposure has been reached. To be able to save new views of this image, you must delete some of the existing views. This error is unlikely to occur as the number of views that can be saved is very large.
1715	see 1605
1716	The desired patient is already registered in the system. There are two possible reasons for this. In most cases the patient is registered at another station in the network. As the patient can only be processed at one station at a time, you must wait until the patient has been checked out at the other station before being able to register him or her. This is a normal system state. If the patient is not registered at another station on the network (check all stations thoroughly), he or she can be 'enabled' in SIDEXIS for processing with the command Utilities, Multistation functions, Manage network registrations. This error may be the result of an earlier network failure, power failure or PC shutdown while the patient was still registered.
1718	No further patients can be registered in the system. The maximum number of patients that can be registered in the system has been reached. You should log off any patients who are no longer needed. Any 'false' registrations can be deleted (after having checked all stations) with the command Utilities, Multistation functions, Manage network registrations.
1719	The desired patient has been deleted from the system.
1720	see 1719
1721	The desired image view is already open. A list of open images can be found on the Window menu.
1722	see 1611
1723	The desired view has been deleted from the system. Recur to another view or the original image. You can restore the desired status using the image processing functions.
1724	see 1723
1725	see 1700
1726	see 1700
1804	You may need to install/reinstall the sensor being used.

1806	Connect a sensor or check the sensor's cable or connection.
1807	The sensor has been successfully replaced or newly installed. No further action is necessary.
1811	see 1806
1812	It was necessary to initialize the sensor with default values. This can lead to a loss of image quality. Perform an installation for this sensor with the related floppy disk (check the sensor number).
1814	see 1804
1961	A read error has occurred.
1962	Error in TWAIN configuration. If necessary, reinstall your TWAIN components (scanner, camera, etc.).
1963	-
1964	see 1962
1965	see 1962
1966	see 1962
1967	see 1962
1968	see 1962
1969	see 1962
1970	see 1962
1971	Unable to access clipboard.

### 7.4.3 Rescue program (SiRescue.exe)

#### Explanation

In case of unexpected network errors, there may be problems with image transfer from the X-ray component to SIDEXIS.

In this case the system closes the connection after a while (? Time-out settings) and enters the so-called Rescue state. This means that the image is not lost, but is kept in the RAM of the X-ray component by a safety mechanism until it is retrieved by the SiRescue rescue program. A further exposure with this X-ray box is blocked until this moment.

#### CAUTION

The X-ray component must not be switched off during the rescue state (fast alternate flashing of the sensor and ready LED).

If the box is switched off, the image is lost and the X-ray component will be ready for operation after the next power on.

#### CAUTION

##### Not for GALILEOS exposures!

The SiRescue program does not work for GALILEOS exposures.

In the event of difficulties transferring images with GALILEOS exposures, use the SIRONA CONTROL ADMIN Plug-in to resolve the problem. Please refer to the GALILEOS documentation.

## Recommendation

- Create a link to the "SiRescue.exe" program in the start menu or on the desktop.
- Instruct the personnel as to the procedure to be used for a possible rescue state.

## Retrieving the image

The SiRescue program has an "interactive wizard" and is intuitive to use.

1. Start the SiRescue program on any networked SIDEXIS computer. The program is accessed via *"start" - "programs" - "SIDEXIS" - "SIDEXIS Manager"*.
  - ↳ The program opens with a welcome screen.
2. Press the *"Next"* button.
  - ↳ The program tries to establish a connection to the X-ray component which is in Rescue state. If no X-ray component responds, check the network.
  - ↳ If the connection has been established successfully, the name of the X-ray component is displayed.
3. Press the *"Next"* button.
  - ↳ The image is retrieved and processed.
  - ↳ The name of the patient is displayed, and the program proposes a storage location for the retrieved image.

### NOTICE

If necessary change the folder. It is safer to select a local directory.

4. Remember the patient name, image name and location.
5. Press the *"Next"* button. If necessary change the folder.
  - ↳ The message that the image was saved successfully follows.
6. Press the *"Finish"* button.
  - ↳ The image has now been saved to the chosen folder.
  - ↳ The program terminates automatically.

### CAUTION

To make the image visible in SIDEXIS, it must be imported and assigned to the respective patient.

## Importing the image

1. Start SIDEXIS XG.
2. Register the patient concerned.
3. Import the image.
  - ↳ Once it has been successfully imported, the image can be deleted from the import folder, as it is now stored in the SIDEXIS database.

## 7.4.4 Service utility

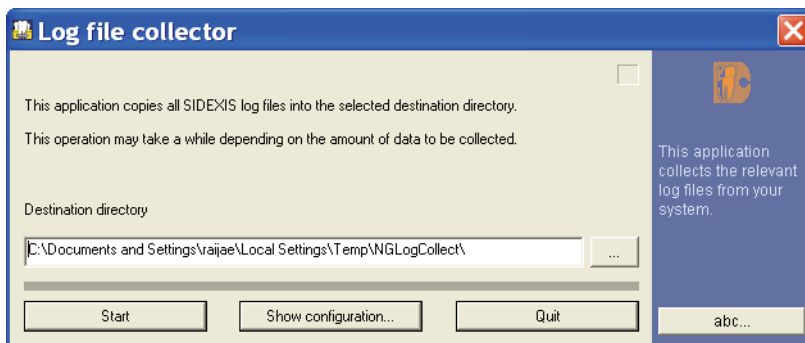
### Explanation

This *"NGLogCollect"* tool creates a file to find errors for the SIRONA customer service center.

- Information pertaining the settings and environment of the SIDEXIS XG system are found in this file.

## Command

1. Follow the path "*start*" "*programs*" "*SIDEXIS*" "*SIDEXIS Manager*" and start the application "*NGLogCollect*".  
↳ The application "*Log file collector*" opens.



2. Change the target path of the file if necessary.
3. Press the "*Start*" button.  
↳ The file "*NGLogCollect.tar.gz*" will be generated.

Send this file to the SIRONA customer service center via E-mail upon request.

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We reserve the right to make any alterations which may be required due to technical improvements.

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