

DIGISTAT® Image Bank

DIGISTAT® Version 4.3



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1. Image Bank

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For general and detailed information about the DIGISTAT[®] environment and the instruction for use of the Control Bar software see the document "DIG UD CBR IU 0005 ENG V01 - Digistat Control Bar User Manual".

The DIGISTAT[®] "Image Bank" module is a powerful and flexible solution for image and video acquisition. It has been developed for departments whose main working tool is photo and video documentation.

Image and video acquired from any standard video source can be easily archived and retrieved. Patient reports are widely configurable. An integrated word processor makes it possible to associate text notes to the images.

Image and video acquisition can be performed using either the mouse device or a remote control (a footswitch, for example).

DIGISTAT[®] "Image Bank" can work in background: image and video acquisition by remote control is active when the module is not selected.

1.1. Module selection

To select the "Image Bank" module:

click the corresponding icon on the lateral bar (Fig 1).





The main screen of the module will appear. The data displayed on screen refer to the patient currently selected. If no patient is selected no value is displayed.

1.2. Patient search and selection

To select a patient, if you are using for this purpose a DIGISTAT[®] software,

click the **Patient** button on the Control Bar (Fig 2 A)

The DIGISTAT[®] Patient Explorer module, if installed, will open; otherwise the patient search and selection functions are accomplished by Control Bar. See the related technical documentation to know the specific search and selection procedures.

If the patient search and selection software in use is not a DIGISTAT[®] software see the related documentation.



If your Healthcare Structure doesn't use a DIGISTAT[®] software for the patient search and selection procedures, please refer to the specific related documentation.

1.3. Main screen description

When a patient is selected the main screen displays information about the previous examinations of the selected patient.



Fig 2 - Patient selected

In the example shown in Fig 2 the patient name is Angelo Rossi (Fig 2 A); his examinations are represented by the boxes indicated in Fig 2 B. Each box refers to an examination. The examination date and type are displayed within the box. Each box is a button. Click the button to access a screen containing all the information (text, images and videos) of the specified examination. To display the data of a previous examination

click the corresponding button.

Button number 2, for instance, displays the data referring to the colonoscopy recorded on the $10^{\text{th}}/06/2004$.

1.4. "Examination details" screen

The "Examination details" screen makes it possible to display all the data referring to a selected examination (images, videos and textual data).



Fig 3 - Examination detail: colonscopy

The screen is formed by three main areas:

- 1) the area containing the images and videos thumbnails (Fig 3 A);
- 2) the images and videos display area (Fig 3 **B**);
- 3) the command bar (Fig 3 $\hat{\mathbf{C}}$).

1.4.1. Images and videos thumbnails

On the left a small preview (thumbnail) of each image and video is displayed (Fig 4). For the videos the first frame is displayed as preview.



Fig 4 - Preview, thumbnails

To display the full picture or video

click the thumbnail referring to the chosen image or video.

The thumbnail will be highlighted yellow (Fig 5 A). The image or video will appear, in full size, on the right (Fig 5 B).



Fig 5 - Image selection

Thumbnails referring to images are characterized by the is symbol (Fig 6)



Thumbnails referring to videos are characterized by the 10 symbol (Fig 7).



Fig 7 - Video

After the selection of a thumbnail referring to a video the corresponding video is immediately played on the display area.

1.4.2. Display area

The central part of the screen displays in full size the selected images and videos (Fig 3 B, Fig 8).



Six buttons on the bottom-left corner make it possible to operate on the images and change their display mode (Fig 8 A).

The selected button is highlighted in sky-blu. In Fig 8, for instance, the selected button is

WARNING!

The procedures described in this paragraph can be performed with the fingers only when using a "touch-screen". It is otherwise necessary to use the mouse device, moving the mouse pointer while keeping the left button clicked.



The button makes it possible to rotate the image. To rotate the image



select the button. The button is this way highlighted.

Touch the image and move the finger horizontally on the touch-screen. The image rotates by 90° clockwise.

1.4.3.4. Brightness - the 💷 button

When the button is selected it is possible to adjust the brightness of an image. To do that

> select the is button. The button is this way highlighted.

> Touch the image and move the finger horizontally on the touch-screen.

Brightness is increased when movement goes left to right. Brightness is reduced when movement goes right to left.

1.4.3.5. Contrast - the 🖭 button

To adjust the contrast of an image

- select the button. The button is this way highlighted.
- > Touch the image and move the finger horizontally on the touch-screen.

Contrast is increased when movement goes left to right. Contrast is reduced when movement goes right to left.

1.4.3.6. Magnifier - the 📖 button

When the button is selected an image magnifier makes it possible to enlarge selected portions of the image. To use the "Magnifier"

- > select the button. The button is this way highlighted.
- > Touch the image. The image portion located near the finger is this way magnified.
- > Move the finger to the area that must be magnified.

1.4.3.7. Grab - the 💹 button

When the **button** is selected it is possible to "grab" the image and move it around the display area. This function can be used to display the image portions that are not currently displayed when the image is too large to be fully displayed within the area. To do that

- ➢ select the www button. The button is this way highlighted.
- > Touch the image with a finger.
- > Move the finger around. The image moves together with the finger.

1.4.4. Videos

Four further buttons, making it possible to operate on the video reproduction, are present when playing a video (Fig 9 A). Their presence depends on the video format.



- The **button** (Play) plays the video.
- The button (Pause) pauses the video.
- The **button** (Stop) stops the video.

The button makes it possible to watch the video frame by frame. To do that

- \succ select the video.
- Select the button on the display area. The button is this way highlighted.
- > Touch the image and move the finger horizontally.

When the finger moves left to right the video goes forward. When the finger moves right to left the video goes backwards.

Righ- click the image displayed to open a menu containing additional display options.

The possible options are:

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- dither;
- anti alias;
- smooth;
- *image info.*

1.4.5. The command bar

The command bar (Fig 11) contains the function-buttons making it possible to perform different actions.

The different functions are briefly described in this paragraph. The detailed procedures will be described later in the paragraphs indicated here.

GRAB	ADD	REPORT	PRINT	DELETE	ANNOT.	STORE	SAVE	VISITS	
Fig 11 - Command bar									

Use the **Grab** button to acquire an image or a video (see paragraph 1.6).

Use the Add button to acquire an image/video from an external source (see paragraph 1.7).

Use the **Report** button to display the examination clinical report (see paragraph 1.8).

Use the **Print** button to print the examination documentation (see paragraph 1.9).

Use the **Delete** button to permanently delete one of the images/videos (see paragraph 1.10).

Use the Annotation button to add a note to the image/video (see paragraph 1.11).

Use the **Store** button to store the currently selected image for comparison with other stored images (see paragraph 1.12).

The **Store** button is present on the command bar when no image is stored already. In case there is at least another image stored the button changes and becomes **Compare**.

Use the **Compare** button to access a specific screen making it possible to compare the image currently displayed with the ones previously stored. This screen is described in paragraph 1.12, Fig 50.

The command bar changes when a video (instead of an image) is selected. When a video is selected the **Trim** button is displayed instead of the **Store** and **Compare** buttons (Fig 12 A).

GRAB	ADD	REPORT	PRINT	DELETE	ANNA	TRIM	VISITS
				Fio	12		

The **Trim** button gives access to a set of tools making it possible to perform various actions on the video (as, for instance, cut and save specific video portions, extract frames etc...). These tools are described in paragraph 1.13.

Use the **Save** button to manually save in a user-specified folder the image currently selcted. Click this button to open the usual "save" window of the operating system in use.

Use the **Visits** button to go back to the patient examinations list (Fig 2).

When no image or film is selected the command bar looks like in Fig 13.

GRAB	ADD	REPORT	PRINA	MULTI	\mathbf{b}		VISIT S

The **Multi** button (Fig 13 **A**) is enabled, making it possible multiple selection of videos and images for quick deletion (see paragraph 1.10.1 for the procedure).

1.5. Creating a new examination

To create a new examination

▶ select the patient. See paragraph 1.2 for the patient selection procedure.

The Image Bank main screen opens. The patient's previous examination (if existing) are displayed on the left.

Click the New Visit button (Fig 14 A).

The "Examination details" opens. The screen is empty (Fig 15). A new visit is created independently from image and video acquisition.

Fig 15 - New visit

Six buttons are on the command bar.

Use the **Grab** button to acquire an image or a video (see paragraph 1.6).

Use the Add button to acquire an image from an external source (see paragraph 1.7).

Use the **Report** button to display the examination clinical report (see paragraph 1.8).

Use the **Print** button to print the examination documentation (see paragraph 1.9).

Use the **Visits** button to go back to the patient examinations list (Fig 2).

Use the **Multi** button for multiple selection (see paragraph 1.10.1).

The new examination is recorded independently from any image/video acquisition and any report specification. A new visit-button has already been created on the examinations list screen (Fig 16 A).

1.6. How to grab images and videos

WARNING!

This paragraph describes the images and videos acquisition procedure to be used when no specific acquisition device is installed.

Images and videos can be grabbed by remote controls as pedals or manual swithces, radio-controls etc... If this is the case see paragraph 1.6.3 and the specific hardware documentation.

When a remote acquisition device is in use the DIGISTAT[®] Image Bank module can be activated in background as well. That is: module selection is not necessary to images acquisition.

It is necessary to select, on the module, the relevant patient and visit.

To grab an image/video

Select the patient (See paragraph 1.2 for the patient selection procedure).

Select the examination under which you want to record the new videos/images; otherwise create a new visit, if this is the case (the examination selection procedure is described in paragraph 1.3, the new examination creation procedure is described in paragraph 1.5).

Click the **Grab** button. The images/videos acquisition screen opens (Fig 17).

Fig 17 - Grab images and videos

The central part of the screen displays the images coming from the acquisition devices. On the left there are three large buttons.

Click the button (Fig 17 A) to acquire the image currently displayed and create a picture.

The image is this way saved and becomes visible on the "Examination detail" screen (see Fig 3 for an example) referring to the selected patient and visit.

button (Fig 17 **B**) to start video acquisition.

When the acquisition is in progress the screen changes in the way displayed in Fig 18: the **Begin** button is selected and the **Stop** button is enabled.

Video acquisition goes on until the "stop" button **1** is clicked.

Click the button to stop the video acquisition (Fig 18 A).

The video will be saved an will become visibile on the "Examination details" screen referring to the selected patient and visit (Fig 3 shows an example).

1.6.1. Acquisition screen command bar

The command bar of the "Acquisition screen" (Fig 19) contains three buttons.

DEVICE	SETUP							CLOSE
Fig 19 - Acquisition screen command bar								

- Use the **Close** button to close the "Acquisition screen" and display again the "Examination details" screen (Fig 3).
- Use the **Device** button to select the acquisition device from an existing list. To do that
- click the **Device** button. The list of all the available devices is displayed on the left (Fig 20 A).

Fig 20 - Device selection screen

In the example shown in the figure only one device is available.

- > Click the name of the wanted device. The name is this way highlighted.
- Click the **Ok** button on the command bar (Fig 20 **B**).

The system will go back to the "acquisition screen" (Fig 17). The wanted device will be selected.

• The **Setup** button makes it possible to access the acquisition devices configuration functions.

Click the button to display the specific device configuration window. The kind and the functions of the configuration window depend on the specific device selected. Fig 21 shows an example.

DISPOSITIVI D'ACQUISIZIONE
NOME ISORGENTE
ENDOSCOPIO (320X240 - DivX) Logitech QuickCam Pro USB
ENDOSCOPIO - Lossless JPEG Pinnacle DCxx MJPEG Capture Filter
ENDOSCOPIO - DivX Pinnacle DCxx MJPEG Capture Filter
CONFIGURA DISPOSITIVO D'ACQUISIZIONE
NOME ENDOSCOPIO - DivX Annulia
SORGENTE Prinacle DCxx MJPEG Capture Filter
Risoluzione 768 by 576 🔽 Color Format Unknown 💌
Channel 🔽 Input 🔽
Compression: DivX 5.0.3 Codec Configure
ANTEPRIMA
DivX codec properties
Bitrate Control General Parameters Manage Settings Profiles
Bitrate
Variable bitrate mode : Typess 💌 Max bitrate : [4000 kbps
Encoding bitrate: 4 Mbps 780 kbps
Fighthetion Constant quality Iovendion
Multipass encoding files
Read log file CAdwallog Select
With MY fie: channing beleat.
Do not prompt with errors and warrings Home Theater Proble
Quick Config CU
[±v1 780 pp1 4 key 300 p ac 50 pq 5 -vbv 4000000,135506,1376256 profile 3

Fig 21 - Acquisition devices configuration

1.6.2. Alternative grabbing procedure

A configuration parameter makes it possible to set a different images and videos acquisition procedure.

When this procedure is activated the click on the **Grab** button on the command bar does not bring to the page shown in Fig 17. The page referring to the selected visit remains displayed instead (Fig 22).

The command bar changes. The two buttons on the left - **Device** and **Setup** - are described in paragraph 1.6.1. The three buttons indicated in Fig 22 **A** have the following purposes:

The **Shoot** button grabs the image currently displayed on the page and creates a photograph. The image remains on screen for a certain (configurable) period.

The **Rec** button starts video recording. During recording the button appears as selected. The **Stop** button stops the video acquisition.

1.6.3. Remote acquisition devices

Remote acquisition devices can be used to facilitate and speed-up the DIGISTAT[®] "Image bank" procedures. The presence of these devices depends on the clinical procedures in use. This paragraph briefly describes two of the devices most commonly used. Refer to the hardware's specific documentation for a detailed description of the devices.

1.6.3.1. Footswitch

This device is a pedal board containing two footswitches.

This device can be used independently from the page currently displayed on screen. If you are on the "Visit" page (Fig 3 shows an example) and the footswitch is pressed, the "Grab" page is automatically displayed (either Fig 18 or Fig 22, depending on the configuration chosen), otherwise the acquisition is performed in background. Background grabbing is also enabled when the "Image Bank" module is not currently selected.

Use the left footswitch to grab an image (analogous to the **Shoot** button).

Use the footswitch on the right to record a video. There are two possible video recording modes, decided by configuration:

- 1) press the footswitch once to start recording; press the footswitch twice to stop recording;
- 2) press the footswitch and keep it pressed while recording; release it to stop recording.

1.6.3.2. Manual device

This device is a roller that can be activated either clockwise or anticlockwise. The roller can also be pressed as a switch.

Use this device to grab images (in background as well) and to manage the way the items on the "Visit" page are displayed (Fig 3, for instance). This device can be used in three ways:

- 1) press the device to grab an image (analogous to the **Shoot** button);
- 2) roll the device to scroll and select one after the other the images and videos of the same visit;
- 3) press and roll at the same time the device to watch a selected video frame-by-frame either forward or backward.

1.7. Adding an image/video

The **Add** button on the command bar (Fig 23 **A**) makes it possibile to add an image/video taken from an external source.

To do that

click the Add button.

A specific folder opens (the folder pathname is specified by configuration). In Fig 24 it is the "Sample pictures" folder. To access a different folder use the standard Windows[®] navigation functions.

- ➤ Use the field indicated in Fig 24 to specify the file extension.
- Click the name of the wanted file. The name is this way highlighted (Fig 25 A).

Open						? ×
Look in:	Sample Pictur	es		•	🖻 💣 🖪	Ⅲ •
My Rectan Documents Desktop	Bure mission Sunset ipg Water missipg Winter ipg					
My Computer		C				B
My Network Places	File name: Files of type:	JPEG File Inte	rchange Format	(*.jpg)	<u> </u>	Cancel
			ig 25			///

Click the **Open** button (Fig 25 **B**).

The selected image/video is this way added to those already existing for the specific examination.

1.8. Examination report

To create or edit the current examination report

click the **Report** button on the command bar (Fig 26).

GRAB	ADD (REPORT	PRINT	DELETE	ANNOT.	STORE	SAVE	VISITS	
Fig 26 - Command bar									

The following screen opens (Fig 27).

	DIAGNOSYS
B	ADD REMOVE
RESET SAVE PRINT	CLOSE
Fig 27 Poport (ompty sereen)	

Fig 27 - Report (empty screen)

The screen shown in Fig 27 is empty, i.e. no information is specified on the report. When information already exists, this screen makes it possible to read it and edit it. See Fig 30 for an example of an actual examination report.

The "Report" screen is a word preessor. Any text can be inserted here using the workstation keyboard. The buttons on the top left corner of the screen (Fig 27 A) are text formatting tools. Their functions are:

- Cancel latest operation
- 📕 Save
- 遵 Print
- 🗈 Copy
- Ж - Cut

🚨 - Paste
Tahoma - Font selection
B - Font size selection
B - Bold
I - Italic
Underlined
🔳 - Left alignment
E - Centred text
- Right alignment
E - List buttons

After any editing; to save the changes,

▶ click the **Save** button on the command bar (Fig 27 **B**). The text is this way saved.

Three other buttons are on the "Report" screen command bar (Fig 28).

neset.	24112		Т	No. 20. Co.		
RESET	SAVE	PRINT				CLOSE

Fig 28 - Command bar

Use the **Close** button to close the "Report" screen and display again the "Examination detail" screen (see Fig 15 for an instance).

Use the **Reset** button to cancel all the changes made from the last data saving (i.e. from the last time the **Save** button was clicked).

User confirmation is required after the **Reset** button is clicked.

Click **Yes** to reset.

The **Print** button makes it possible to print the examination report. Click the **Print** button to display a print preview.

1.8.1. Adding a pre-defined code to the examination report

The "Diagnosis" area on the right of the "Report" screen (Fig 30) makes it possible to search and insert coded diagnosys in the current report.

The DIGISTAT[®] Codefinder module is used for this purpose. See the specific documentation for a detailed description of this module.

REPORT								DIAGNOSYS	
	۵ 🔏 🛍 ۱	_	<u>•</u> <u>B</u> <u>I</u> <u>U</u>					4.3.1.2., Duodeno, Pa	arete, Parete rigida
			COLONSCO	PIA				5.4.5., Stomaco duod Reflusso	eno op., Peristalsi,
					Medico Operato	re			
					Medico Referenti	e			
INTRODUZION	≣:								
CONSENSO :									
(il Consenso Ir perforazione, re Inoltre sono sta	formato è stato ot azioni allergiche,le te spiegate al Paz	tenuto riguardo,m esioni non viste,m ziente i vantaggi d	a non limitato, all: orte e necessità o ella procedura e le	a possibilità di cor li chirurgia. e sue alternative e	nplicanze quali sar d stata data risposi	nguinamento, ta a tutte le don	ande	"Diagno	sis" area
la Lui poste. Il j	paziente accetta p	ienamente i sotto	porsi alla procedu	ra stabilita).					
PREPARAZION	IE:								
MEDICAZIONE									
PROCEDURA:									
REPERTI:									
4.3.1.2., Duod 4.6.4.2., Duod	eno, Parete, Pare eno, Emorragia,	ete rigida Sangue dallo st	omaco						
5.4.5., Stomac	o duodeno op., l	Peristalsi, Reflus	SO						
COMPLICAN	ZE:								
TOLLERANZ	A:								
CONCLUSIO	NI:								
RACCOMAN									
RACCOMAN	DALIONI.								ß
								ADD	REMOVE
RESET	SAVE	PRINT							CLOSE
NEVE 1	JATE		T '	20 D'					12052
			Fig	; 30 - Diag	nostic cod	les			

rig 50 - Diagnosti

To add a diagnosis,

click the Add button indicated in Fig 30 A. The DIGISTAT[®] Codefinder module opens (Fig 31).

K DIGISTAT CODEFINDER Rel.5.0 - (c)UMS - Endoscopy	_ 🗆 ×
Search Tree view Preferred MFU LRU	
 1. 2 Esofago 3 Stomaco 4 Duodeno 5 Stomaco duodeno op. 6 Retto-Colon 6.1 Retto-Colon - Lume del retto e del colon 6.2 Retto-Colon - Contenuti 6.3 Retto-Colon - Parete 6.4 Retto-Colon - Peristalsi 6.5 Retto-Colon - Hurosa 6.6 Retto-Colon - Lesioni piatte 6.8 Retto-Colon - Protrusioni 	

Fig 31

- Search the wanted diagnostic code (see the specific documentation for the "Codefinder" search and selection procedures).
- > Double click the line corresponding to the wanted code.

The diagnostic code is this way added to the "Diagnosis" area. To remove a "Diagnosis"

Click the diagnosis to be removed. The diagnosis is highlighted (Fig 32).

	DIAGNOSYS
	4.3.1.2., Duodeno, Parete, Parete rigida
l	5.4.5., Stomaco duodeno op., Peristalsi, Reflusso
Ĩ	Fig 32

Click the **Remove** button indicated in Fig 30 **B**. The selected diagnosis is this way removed.

1.9. Image Bank print functions

The **Print** button on the command bar of the "Examination record" screen (Fig 33) opens a screen used to define the kind of documentation to be printed.

To print a document

> select the relevant examination (use for this purpose the buttons on the visits list - Fig 34).

The "Examination detail" screen opens (Fig 35).

click the **Print** button on the command bar (Fig 35 A). The following screen opens. \triangleright

Fig 36 - Print report selection

It is possible to select the type of print report to create. The visit's thumbnails are still displayed on the left (Fig 36 A).

Several icons, each one corresponding to a specific kind of document, are displayed on the right (Fig 36 B).

> Click an icon to select the kind of document.

The clicked icon is selected (Fig 37 A).

Fig 37 - Report selection

In the configuration here described the following reports are possible:

- report only;
- report and images;
- informed consent.

The number and kind of print reports is in part configurable. Please contact your system administrator for more details.

Two large buttons on the bottom of the screen make it possible to print the selected report (Fig 36 C, Fig 38).

Fig 38

The left button (Fig 38 A) opens a print preview. The right button (Fig 38 B) prints the report without displaying the print preview. E

1.9.1. How to create a print report (quick guide)

To create a print report

- select the relevant examination (use the buttons on the examinations list for this purpose -Fig 34). The "Examination detail" screen opens (Fig 35).
- click the **Print** button (Fig 35 A). The screen shown in Fig 36 opens.
- Select the kind of print report (Fig 37).

Click either the button to directly create the print report (Fig 38 A) or the button to display a print preview.

1.10. Deleting an image or video

To delete an image or a video, on the "Examination detail" screen (Fig 39),

- click the thumbnail corresponding to the image or video that must be deleted. The image or video is this way selected.
- Click the Delete button on the command bar (Fig 39 A). User confirmation is required (Fig 40).

Click Yes to delete the selected image/video.

1.10.1. Simultaneous deletion of several items

It is possible to select several images/videos together to delete them all at once. To do that it is first necessary to deselect any image/video previously selected. To deselect an image/video click on its thumbnail on the left part of the screen. The thumbnail is this way deselected. The command bar is consequently displayed as in Fig 41.

Then

 \triangleright click the **Multi** button (Fig 41 A).

The command bar changes in the following way: the Multi button becomes Single (Fig 42).

DELETE				SINGLE				CLOSE
Fig 42								

On the left part of the screen,

- click the thumbnails corresponding to the images/videos that must be deleted. The clicked \succ thumbnails are this way all highlighted
- \geq Click the **Delete** button on the command bar. User confirmation is required (Fig 43).

- Click **Yes** to delete the selected images/videos. \geq

1.11. Image/video annotation

To associate a note to an image/video, on the "Examination detail" screen (Fig 44),

- click the thumbnail corresponding to the relevant image/video. The image/video is this way selected.
- Click the Annot. button on the command bar (Fig 44 A). The following window opens.

IMAGE ANNOTATION	\diamond
Site	R,
Diagnosis	Code
Comments	
×	<u>C</u> ancel

Fig 45 - Image annotation

> Type the relevant information in the fields "Site", "Diagnosis", "Comments" (Fig 46).

MAGE ANNOTATION	
Site Example	B S
Diagnosis Diagnosis	Code
Comments	
Annotation	A DK

Fig 46 - Image annotation

Click the Ok button (Fig 46 A). The annotation is displayed under the thumbnail corresponding to the selected image (Fig 47).

<u>B</u>

Use the $___{Code...}$ button on the "Image annotation" window (Fig 46 **B**) to open the DIGISTAT[®] Codefinder module, making it possible to find and insert coded diagnosis in the appropriate fields. See the DIGISTAT[®] Codefinder specific documentation for the related procedures.

1.12. Compare images

The Image Bank module makes it possible to display two images on the same screen, one next to the other, for comparison. To do that, on the "Examination detail" screen (Fig 48),

F1g 48 - V1sit

- click the image you want to compare. The image is selected.
- Click the **Store** button on the command bar (Fig 48 A).

The selected image is this way stored. The **Store** button changes, becoming **Compare**. There are no changes in the image displayed on screen. It is now necessary to select the image to be compared with the stored one. To do that

▶ select the visit containing the image to compare (Fig 49).

•	
1	

The image can be selected on a different visit.

- Click the image to be compared. The image is selected.
- Click the **Compare** button on the command bar (Fig 49 A).

The following screen opens: the image stored for first is displayed on the right; the image selected later to be compared is displayed on the left. The header on top of area 1 (left) specifies the number of the visit, the date in which the image was grabbed, and the number of the image (Fig 50 A).

Fig 50 - Images comparison

The system keeps in memory all the images of a selected visit; use the **Prev** and **Next** buttons on the command bar to display, on the left half of the screen, all the other images.

- The **Rotate** button rotates the image displayed on the left 90° counterclockwise. Click the button 4 times to bring the image back to the original display mode.
- The **Store** button on the command bar makes it possible to change the image on the right with that currently displayed on the left. The image that was on the left is this way displayed on the right as "image in memory".
- The **Clear** button clears the stored image. Namely, it makes it possible to clear the image on the right (the one to which all the others are compared) and then store a different image in its place. After the **Clear** button is clicked, the **Store** button is displayed again on the command bar of the "Visit record" screen (as shown in Fig 48 A).
- The **All** button makes it possible to compare the selected image with all the other images of the same patient stored in different visits. The button appears as selected when the functionality is active. It is this way possible to use the **Prev** and **Next** buttons to display all the available images.
- The **Close** button closes the "comparison" screen and brings back to the previous "Visit Record" screen.

1.13. Video "editing" options

The user can operate in several ways on the videos. The user can, for example, cut portions of a video and save them as a separate film, or exctract frames from a video and save them as autonomous images. A specific tool, accessibile from the "Examination detail" screen, makes the above-mentioned operations possible. To open this tool

> access the "Examination detail" screen containing the video that will be edited (Fig 51).

			VC 95 F 70 01/07 06/21 14:15 CVP: D.F: B:8 0: B:8 0:	0002 7/1932 2002 ::08 H				
GRAB	ADD	REPORT	PRINT	DELETE	ANNOT	TRIM	SAVE	VICITS
			Fi	g 51 - Sel	ected video			

- Click the thumbnail corresponding to the video that will be edited. The video is selected; it runs on the central part of the screen.
- Click the **Trim** button on the command bar (Fig 51 A). The following screen opens.

Fig 52 - "Trim" options

The screen displays, on the large image on the left, the frame currently selected (Fig 52 A). A time bar indicating the video flow is below the image (Fig 52 B).

	VC 96002
	F 70
	06/21/2002
	CVP: D.F: #:8@:H
	1 (655) 3
	DR
A	
	SET AS VIDEO THUMBNAILS

Fig 53 - Current frame

A cursor is on the bar. The bar length represents the video total length. The cursor indicates the position of the frame displayed in the image. In the example shown in Fig 53 A the frame is at the beginning of the video.

In the example shown in Fig 54 A the displayed frame is placed just before the middle of the video. The cursor can be moved in two ways:

1) dragging:

place the mouse pointer on the cursor and, keeping the left button clicked, drag the cursor either to the right or the left; if using a touch screen the same operation can be performed with a finger;

2) using the buttons below the image (Fig 54 **B**):

use the **button** to place the cursor at the beginning of the bar (and therefore at the beginning of the video);

use the **button** to bring the cursor back frame by frame (one frame per click);

use the **bin** to bring the cursor forward frame by frame (one frame per click);

use the button to place the cursor at the end of the bar (and therefore at the end of the video).

The button has a different function. This button saves the frame currently displayed as an autonomous image. Click it to create a new image that will be added to those displayed on the "Examination detail" screen (Fig 51). Additional work tools are on the right of the "Trim" screen (Fig 52).

The box indicated in Fig 52 **D** and enlarged in Fig 55 displays information on the video and on the operations performed.

Trim Info								
Current Frame:	172	Start Frame:	0	Stop Frame:	0			
Current Time:	5,73	Start Time:	0	Stop Time:	0			
Video Info								
Total Time:	12,59	Frames:	378	FPS:	30,00			
Streams:	2	Video Stream	:0					
Fig 55								

The following information is displayed within the box.

Trim info:

- current frame currently displayed frame number;
- current time currently displayed frame time;
- start frame (possible) selected video portion start frame number (see paragraph 1.13.1 for the video selection functions);
- start time (possible) selected video portion start time (see paragraph 1.13.1 for the video selection functions);
- stop frame (possible) selected video portion stop frame number (see paragraph 1.13.1 for the video selection functions);
- stop time (possible) selected video portion stop time (see paragraph 1.13.1 for the video selection functions);

Video info:

- total time video duration (in seconds);
- frames total frame number;
- FPS frames per second;
- streams number of streams until the current one;
- video stream.

1.13.1. Selecting and saving a video portion

The area indicated in Fig 52 \mathbf{E} and enlarged in Fig 56 makes it possible to select a video portion. The selected portion can be saved as another autonomous video.

Fig 56 - Set start and stop frame

To do that it is necessary to set the first and last frame of the portion to be selected. To set the first frame,

➤ use the cursor or the buttons described in the previous paragraph (Fig 54) to display the frame that will be set as first frame (see the example in Fig 57).

Fig 57

Click the **Set Start Position** button (Fig 56 A).

The frame displayed in Fig 57 will be set as start frame. The selected frame is displayed (small) within the area shown in Fig 58 **A**. The selected frame number is displayed above the area (Fig 58 **B**).

Fig 58 - Start frame

It is now necessary to set the stop frame. To do that:

use the cursor or the buttons described in the previous paragraph (Fig 54) to display the frame that will be set as stop frame (see the example in Fig 59).

Current Video Frame	
VC 95002	
F 70 01/07/1932	
05/21/2002	
CVP: D.F: b:8 0a:H	
DR.	
ļ	-
	}
SET AS VIDEO THUMBNAILS	
Fig 59	

Click the Set Stop Position button (Fig 58 C).

The selected frame is displayed (small) within the area shown in Fig 60 **A**. The selected frame number is displayed above the area.

The video portion selected this way appears highlighted blu on the "time bar" on the left (Fig 61 A).

Fig 61 - Selected video portion

The area indicated in Fig 61 **B** contains information on the selected video portion (number of frames, duration, start frame time, stop frame time etc...). To save the selected portion as a new independent video,

click the Save button on the command bar (Fig 61 C). A new thumbnail, corresponding to the new video, is displayed on the "Examination detail" screen (Fig 51).

1.13.1.1. Film preview

The **Preview** button indicated in Fig 61 **D** makes it possible to display a preview of the selected video. When the button is clicked the screen changes in the way shown in Fig 62:

Fig 62 - Preview

The preview of the selected video portion is displayed on the right (Fig 62). Four buttons are below the "preview" area:

> Touch the video preview and move the finger horizontally.

Move the finger left to right to go forward frame by frame. Move the finger right to go backwards frame by frame.

WARNING!

!

This operation can be performed with the fingers only when using a "touch-screen". It is otherwise necessary to use the mouse device, moving the mouse pointer horizontally while keeping the left button clicked.

To close the video preview

> click the **Preview** button again. The screen returns this way to look as in Fig 61.

1.13.1.2. The "Trim" screen command bar

The command bar contains four buttons (Fig 63).

RESET	SAVE	GRAB						CLOSE
Fig 63 - Command bar								

- Use the **Reset** button to reset all the data specified on the screen. Click this button to go back to the initial screen, prior to any selection.
 - Use the **Save** button to save the selected video portion as a new independent video. The specific procedure is described in detail in paragraph 1.13.1 and in a concise way in paragraph 1.13.2.
 - Use the Grab button to save the frame currently displayed on the left of the screen as a new

independent image. The **Grab** button has the same function of the **button** button on the same screen. The related procedure is described in detail below Fig 54 and in a concise way in paragraph 1.13.3.

• The **Close** button closes the "Trim" screen. Click it to display the "Examination detail" screen again.

1.13.2. How to "trim" a video portion (concise procedure)

To select a video portion and save it as a new video

- > access the "Examination detail" screen containing the relevant video (Fig 51).
- > Click the thumbnail (on the left) corresponding to the relevant video.

The video is this way selected, it runs on the "display" area.

- Click the **Trim** button on the command bar (Fig 51 A). The "Trim" opens (Fig 52).
- Use the cursor or the buttons described in paragraph 1.13 (Fig 54) to display the start frame (see the example shown in Fig 57).
- > Click the **Set Start Position** button (Fig 56 A).
- Use the cursor or the buttons described in paragraph 1.13 (Fig 54) to display the stop frame (see the example shown in Fig 59).

Click the **Set Stop Position** button (Fig 58 **C**).

The portion corresponding to the selected video is highlighted on the "time bar" on the left (Fig 61 A).

Click the **Save** button on the command bar (Fig 61 C).

The selected video portion is this way saved as a new independent video. A new thumbnail, corresponding to the new video, is displayed on the "Examination detail" screen (Fig 51).

1.13.3. How to grab a picture from a film (concise procedure)

To grab a frame from a film and save it as an image of a certain examination,

- access the "Examination detail" screen containing the film from which the frame must be extracted (Fig 51).
- > Click, on the left of the screen, the icon corresponding to the relevant film. The film starts.
- Click the **Trim** button on the command bar (Fig 51 A). The "Trim" screen opens (Fig 52).
- Use either the cursor or the buttons described in paragraph 1.13 (Fig 54) to display the wanted frame.
- Click the Grab button on the command bar.

Otehrwise

click the button on the "Trim" screen. The frame currently displayed is this way saved as image.

1.14. Coordinated use of Image Bank and Clinical Forms

To display the examination information that is not immediately available on DIGISTAT[®] Image Bank select the DIGISTAT[®] Clinical Forms module. To do that

click the corresponding icon on the lateral bar (Fig 64).

Fig 64

The examination record is this way displayed (Fig 65 shows an example).

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IMAGE		Dr.								2 Refertazion		
	STRUMENTI					ACCESSORI				17/03/09		
	FARMACI	xilocaina spray	2.5	assistenza ane	95					3. Nurse		
	SUMMINISTRATI	Midazolam	2.5 mg							AnatomiaDate		
	REFERTO											
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					Fig (5	1. 1999 201					

When DIGISTAT[®] Image Bank and Clinical Forms are used together some functionalities are coordinated to speed-up the procedures. That is, some of the operations performed on a module affect the screens and the functionalities of the other module. This happens mainly in two ways:

- 1) selecting an examination on a module automatically selects the same examination on the other module;
- 2) creating a new examination on a module automatically creates a new examination on the other module.

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See the DIGISTAT[®] Clinical Forms module documentation for information aboute the module's goals and functionalities.

The functionalities described in this paragraph are active only if the DIGISTAT[®] *Clinical Forms module is active on the DIGISTAT*[®] *configuration in use.*

The screen shown in Fig 65 is an example. The DIGISTAT[®] Clinical Forms module is widely configurable. Its features change depending on the configuration in use.

2. Contacts

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