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Image Bank User Manual

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1. Image Bank



For general and detailed information about the Product environment and the instructions for use of the Control Bar software, see the specific documents of the Product. The knowledge and understanding of these documents is mandatory for an appropriate and safe use of the Image Bank module, described in this document.

The Image Bank module is a solution for image and video acquisition. Image and video acquired from any standard video source can be archived, integrated in the user documentation and retrieved.

1.1 Module selection

To select the Image Bank module:

- Click the corresponding icon  on the lateral bar.

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 selection

To select a patient,

- Click the **Patient** button on the Control Bar (Fig 1).



Fig 1

The Patient Explorer module opens. See the patient explorer user manual (*USR ENG Patient Explorer*) for instructions.



Other modules can be configured for the patient selection in place of Patient Explorer, depending on the configuration of the Digistat Suite. If this is the case, see the specific documentation for instructions.

When a patient is selected the data displayed on the screen refer to the selected patient.

1.3 Main screen description

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

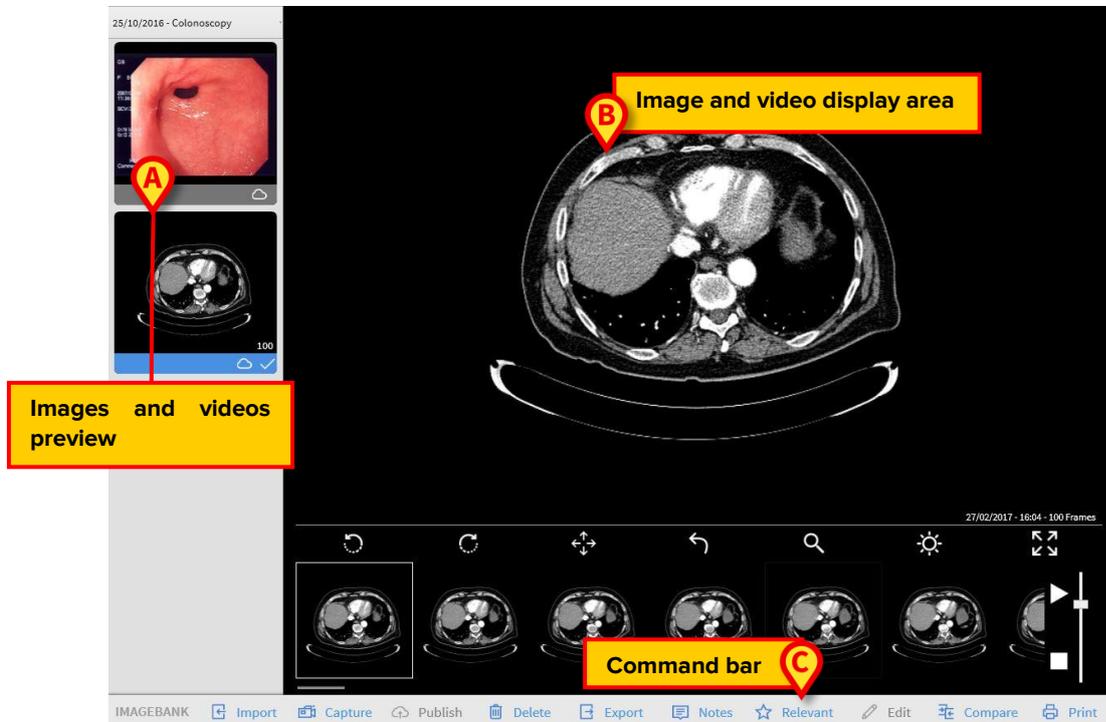


Fig 2

The screen is composed of three main areas:

1. The area containing the images and videos thumbnails (Fig 2 **A**);
2. The images and videos display area (Fig 2 **B**);
3. The command bar (Fig 2 **C**).

1.3.1 Images and videos thumbnails

On the top left corner of the screen, a scroll down menu makes it possible to select a specific visit as shown in Fig 2 **A**. Once a visit is selected, a small preview (thumbnail) of each image/video is displayed below. For the videos, the first frame is displayed as preview.

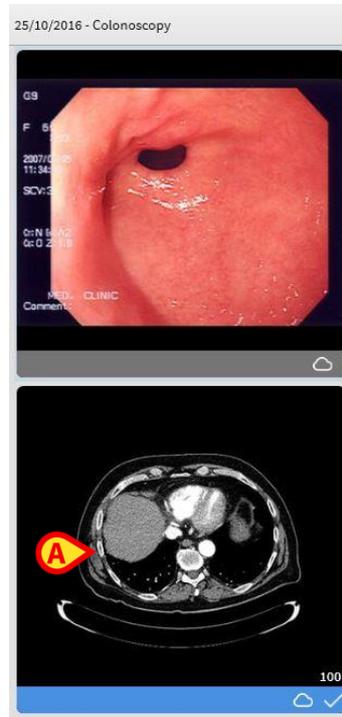


Fig 3

To display the full picture or video:

- Click the thumbnail referring to the chosen image or video.

The selected thumbnail will be highlighted (Fig 3 **A**). The image or video will appear, in full size, on the right (Fig 4).

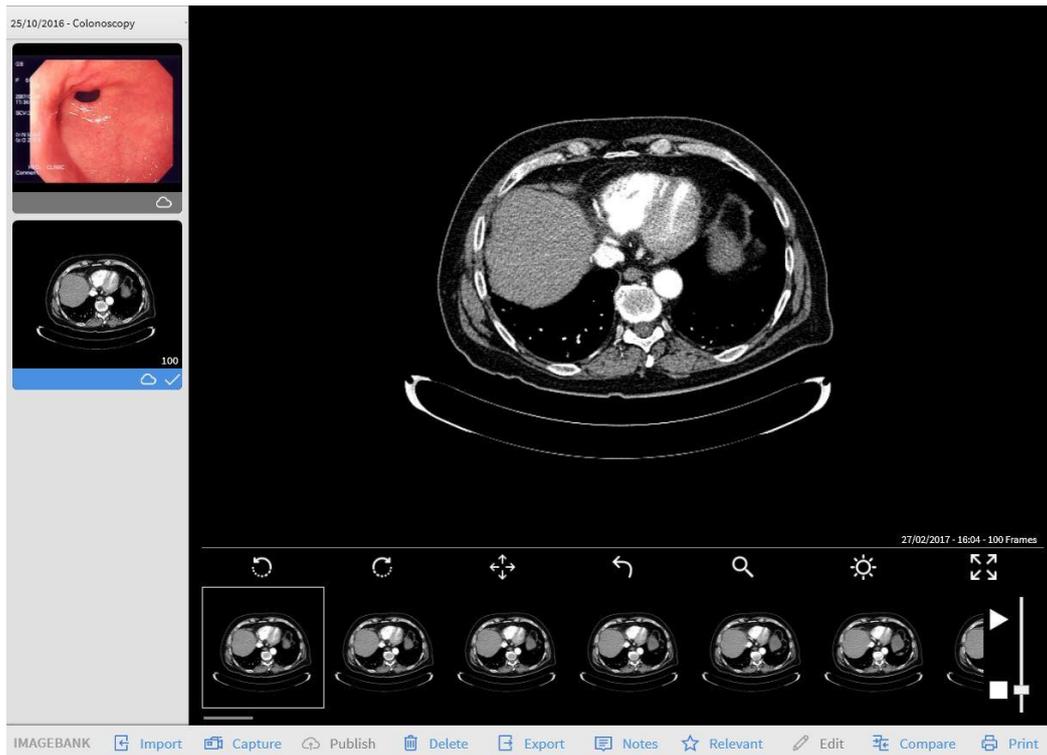


Fig 4

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

1.3.2 Display area

The central part of the screen displays in full size the selected images and videos.

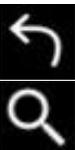


Fig 5

In case an image is selected, seven buttons placed below the image make it possible to operate on the images and change their display mode (Fig 5 A).

1.3.3 Functions of the buttons

The following buttons are available when an image/video is selected:

	Rotate the image counterclockwise
	Rotate the image clockwise
	Make it 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
	reset the image to the default state, undoing all the previous modifications
	Image magnifier making it possible to enlarge selected portions of the image. Touch the image. The image portion located near the finger is this way magnified
	makes it possible to adjust the image brightness. 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
	Enlarge the image full screen. Use the  button to go back to the image’s original size.

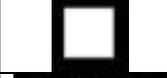
1.3.4 Videos function buttons

When a video is selected, seven additional buttons are present below the display area, making it possible to operate on the video reproduction (Fig 6 **A**).



Fig 6

The following additional buttons are available when a video is selected:

	start the video reproduction
	stop the video reproduction
	restart the video from the beginning
	make it possible to watch the video frame by frame
	make it possible to fast forward or rewind the selected video

- 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.

1.3.5 Dicom images

This particular kind of media type differs from the normal images for allowing an extra layer of control, adding an extra control bar displayed on the bottom right corner of the screen (Fig 8).

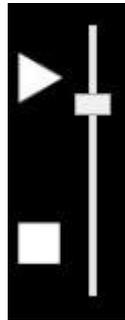


Fig 7

The vertical bar controls the media reproduction speed, accelerating it by moving the bar higher and decelerating it by moving the bar down.

On the bottom right corner of the screen (Fig 8 **A**) the media info are displayed, as:

- Creation date
- Creation time
- Total frames count

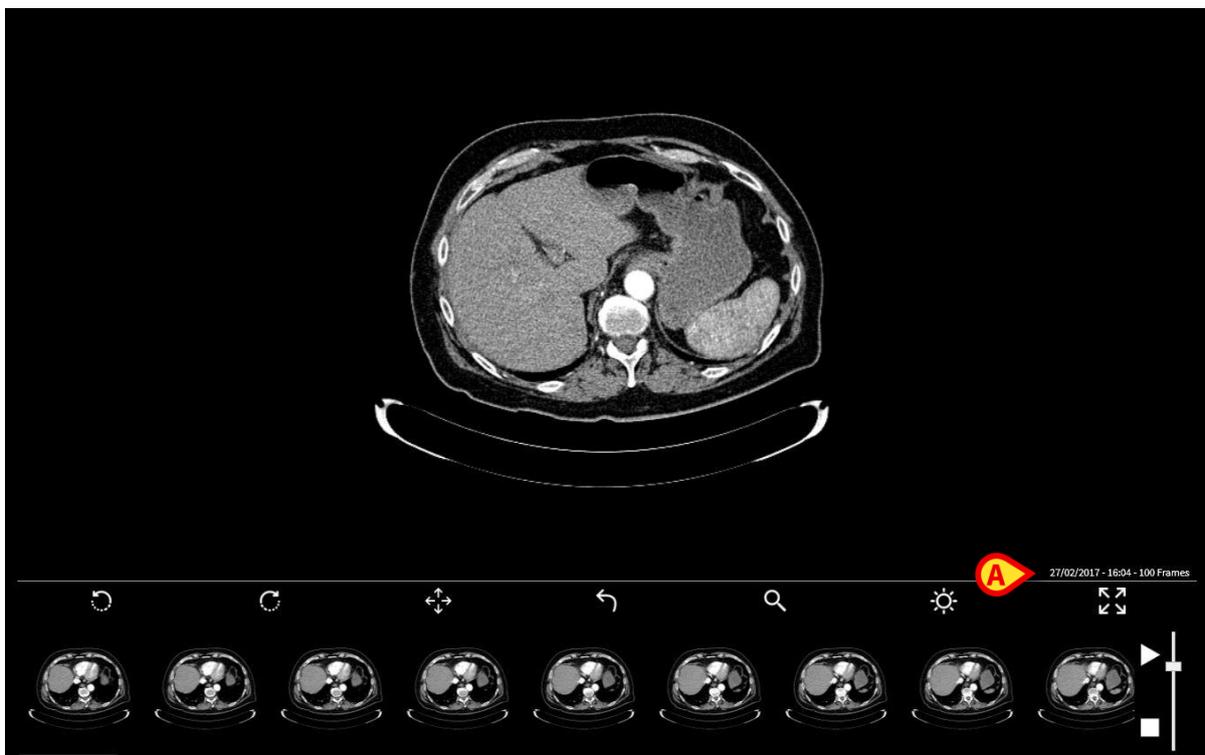


Fig 8

1.3.6 The command bar

The command bar (Fig 9) contains the function-buttons making it possible to perform different actions. The different functions are briefly described in this paragraph.



Fig 9

- Use the **Import** button to acquire an image or a video from four different sources:
 - Scanner
 - Dicom (Directory)
 - Dicom (File)
 - File
- Use the **Capture** button to acquire an image or a video (see paragraph 1.5).
- Use the **Publish** to publish a video/image (see paragraph 1.6).
- Use the **Delete** button to permanently delete one of the images/videos (see paragraph 1.11).
- Use the **Export** button to export image/video to a local folder (see paragraph 1.7).
- Use the **Note** button to add a note to the image/video (see paragraph 1.8).
- Use the **Relevant** button to bookmark a video/image (see paragraph 1.5.3).
- Use the **Edit** button to modify an image/video (see paragraph 1.12).
- Use the **Compare** button to access a specific screen making it possible to compare the image currently displayed with the ones previously stored (see paragraph 1.9).
- Use the **Print** button to print the examination documentation (see paragraph 1.10).

1.4 Import an image/video

The **Import** button on the command bar (Fig 10 **A**) makes it possible to add an image/video taken from an external source.



Fig 10

To do that:

- Click the **Import** button.

Four different source option are available:

- Use **Scanner** button to import a media directly from a scanning device.
- Use **Dicom (Directory)** button to import all the dicom (.dcm) present in a specified directory.
- Use **Dicom** button to import a single (.dcm) file from a specified file path.
- Use **File** button to import an image/video from a specified file path.

A specific folder opens (the folder pathname is specified by configuration). In Fig 11 it is the “Sample pictures” folder. To access a different folder use the standard Windows® navigation functions.

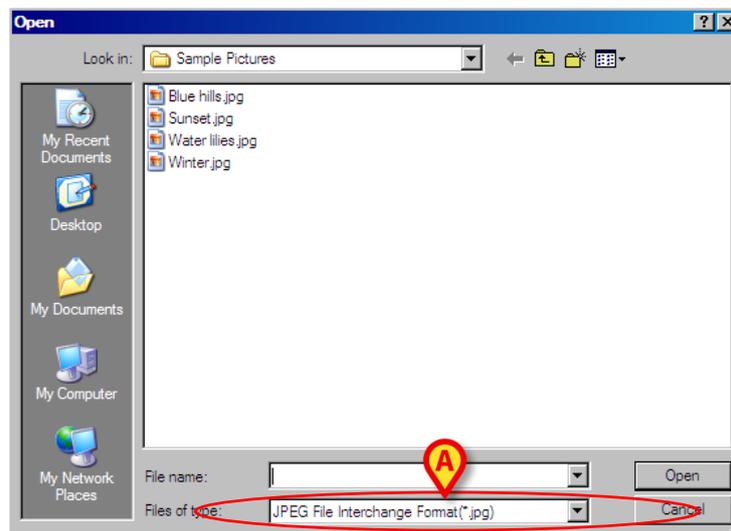


Fig 11

- Use the field indicated in Fig 11 to specify the file extension
- Click the name of the wanted file. The name is this way highlighted (Fig 12 **A**)

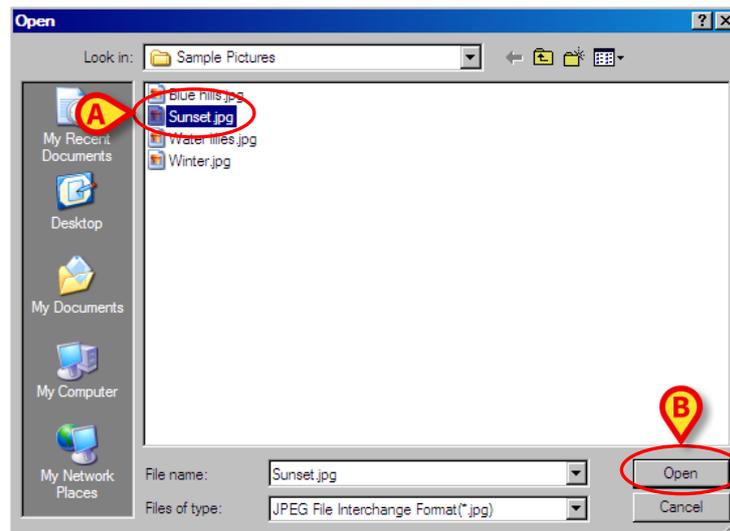


Fig 12

- Click the **Open** button (Fig 12 **B**)

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

1.5 Capture an image/video



Images and videos can be captured by remote controls as pedals or manual switches, radio-controls etc.

When a remote acquisition device is in use the 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 capture an image:

- Select the examination under which you want to record the new image
- Click the **Capture** button. The images/videos acquisition screen opens (Fig 13)

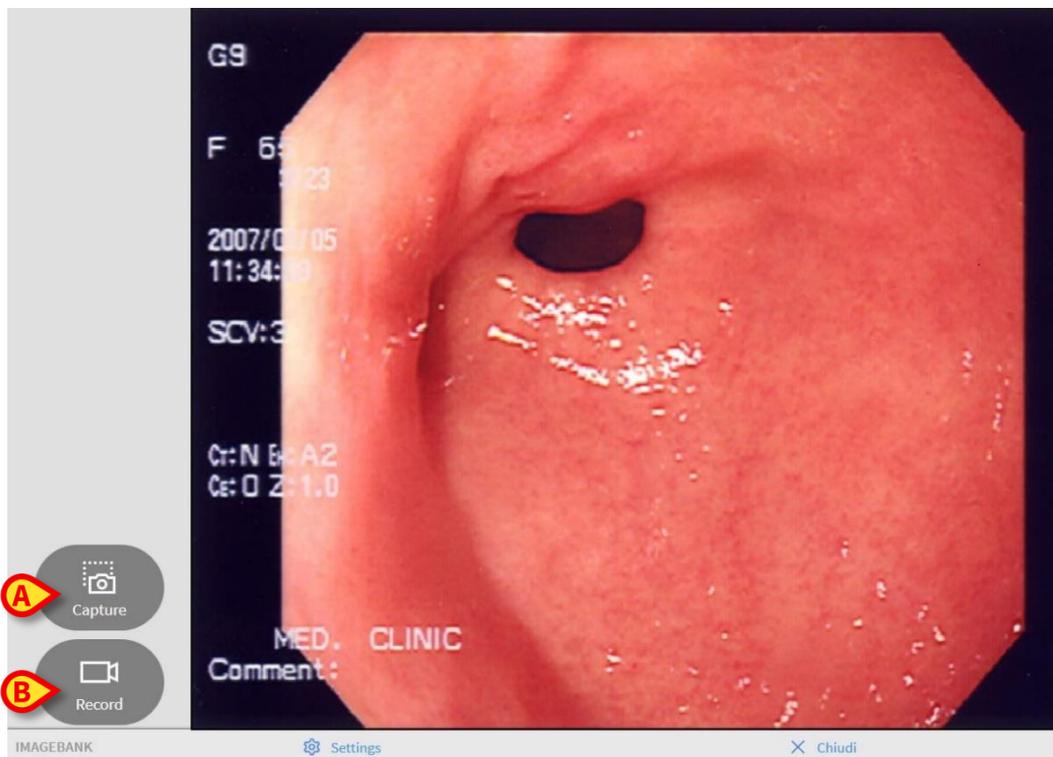


Fig 13

The central part of the screen displays the images coming from the configured acquisition device. On the left there are two large buttons:

- Click the **Capture** button (Fig 13 **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 referring to the selected patient and visit.

Otherwise, in order to capture a video:

- Select the examination under which you want to record the new video

- Click the **Capture** button. The images/videos acquisition screen opens (Fig 13)
- Click the **Record** button (Fig 13 B) to start video acquisition

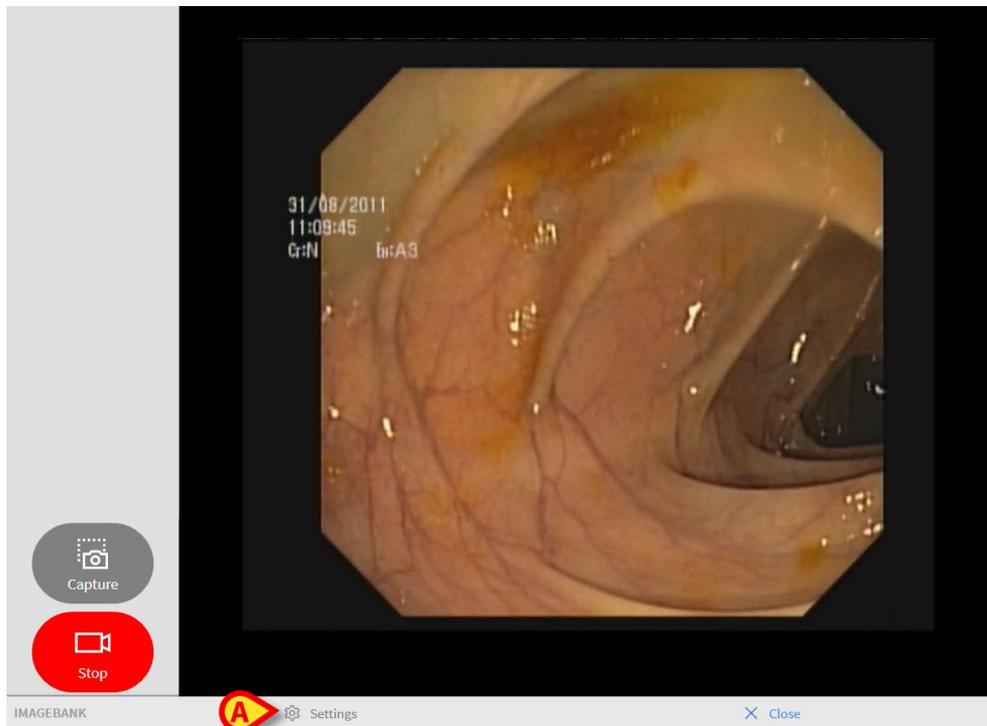


Fig 14

Video acquisition goes on until the **Stop** button  is clicked (Fig 14).

Click the **Record** button to stop the video acquisition

The video will be saved and will become visible on the “Examination details” screen referring to the selected patient and visit.

1.5.1 Capture settings

Click the **Settings** button (Fig 14 **A**) to select the capture device, resolution, input and color space (Fig 15).

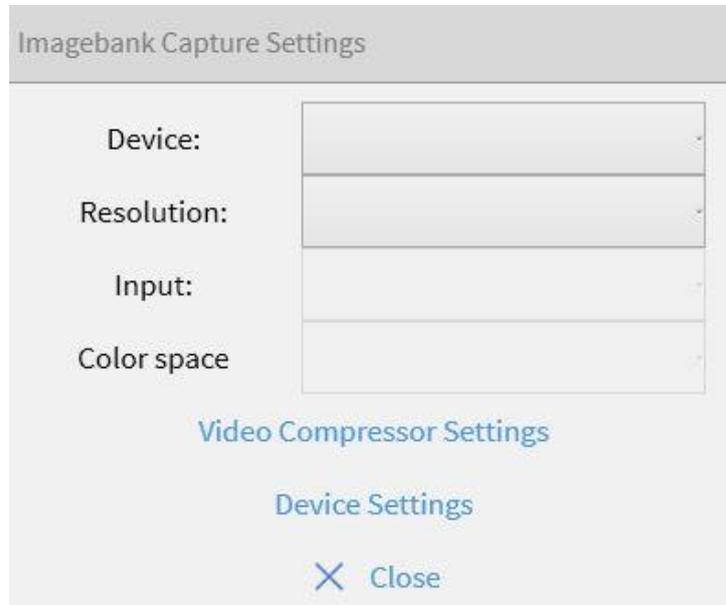


Fig 15

Further settings are available by accessing to Video Compressor Settings and Device Settings.

1.5.2 Remote acquisition devices

Remote acquisition devices can be used to facilitate and speed-up the Image Bank procedures. The presence of these devices depends on the clinical procedures in use. Refer to the hardware's specific documentation for a detailed description of the devices.

1.5.2.1 Footswitch

This device is a pedal board containing two footswitches.

Use the left footswitch to capture an image (analogous to the **Capture** button).

Use the footswitch on the right to record a video; press the right footswitch once to start recording; press the footswitch twice to stop recording.

1.5.3 Make a capture “Relevant”

It is possible to bookmark a specific image/video using the **Relevant** button

- Select the video/image from the content list on the left part of the screen
- Click the **Relevant** icon -  - on the command bar.

The image/video thumbnail is this way bookmarked with a star icon (Fig 16).

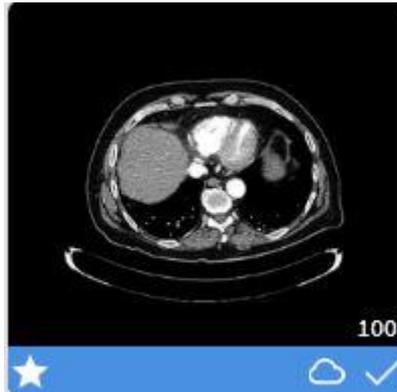


Fig 16

1.6 Publish an image/video

When a video or image content is acquired it is automatically stored on the local machine, by clicking on the **Publish** button it becomes available to all the other workstations on the Product network.

To publish an image/video:

- Select the video/image from the content list on the left
- Click the **Publish** icon on the command bar
- The image/video thumbnail is this way bookmarked with a cloud icon (Fig 17).



Fig 17

1.7 Export

Use the **Export** button to export the selected media to a specified directory.
To do that:

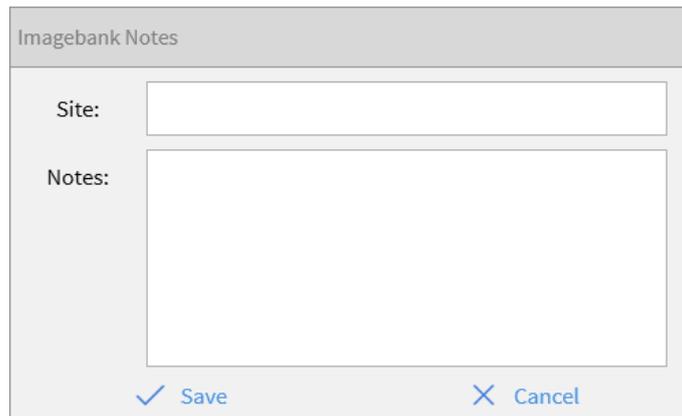
- Select the video/image from the content list on the left
- Click the **Export** icon on the command bar
- Select the destination folder path

The specified folder opens. To access a different folder use the standard Windows® navigation functions.

1.8 Add a note to an image/video

This functionality makes it possible to associate a text note to a specific image/video. In order to add note to a media proceed as follows:

- Select the video/image from the content list on the left
- Click the **Note** icon on the command bar



The dialog window titled "Imagebank Notes" contains two input fields: "Site:" and "Notes:". The "Notes:" field is a larger text area. At the bottom, there are two buttons: "Save" (with a checkmark icon) and "Cancel" (with an X icon).

Fig 18

A dialog window opens (Fig 18). Specify here the site and the note text.

- Click on **Save** to add the note to the selected image/video

The note is then displayed in short on the bottom left corner of the screen (Fig 19 **A**). To display the full text use the  button placed on the right (Fig 19 **B**).

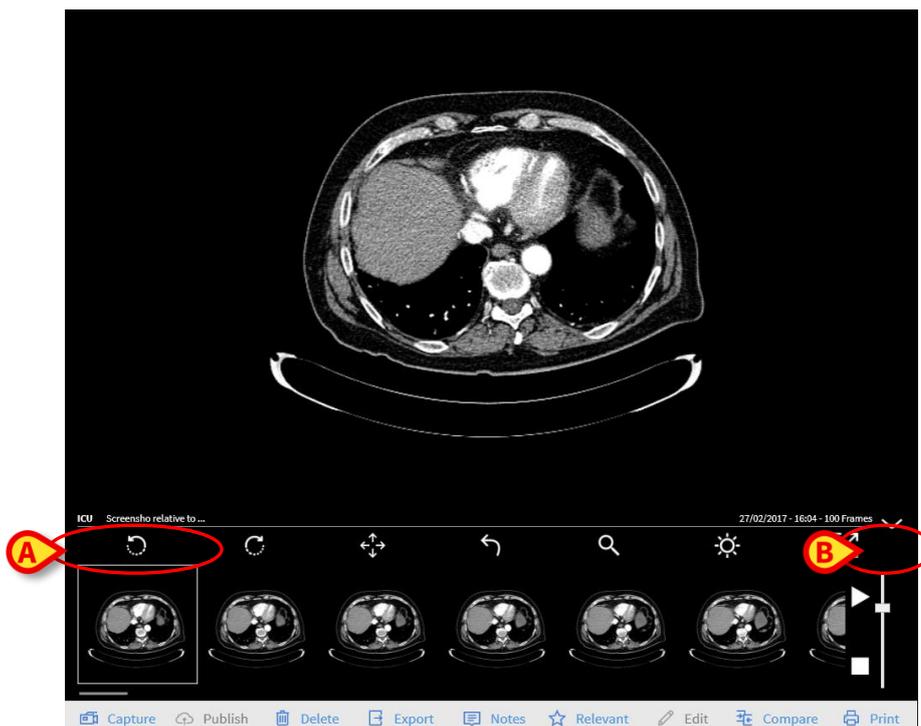


Fig 19

1.9 Compare

The Image Bank module makes it possible to display two images/video on the same screen, one next to the other, for comparison. To do that:

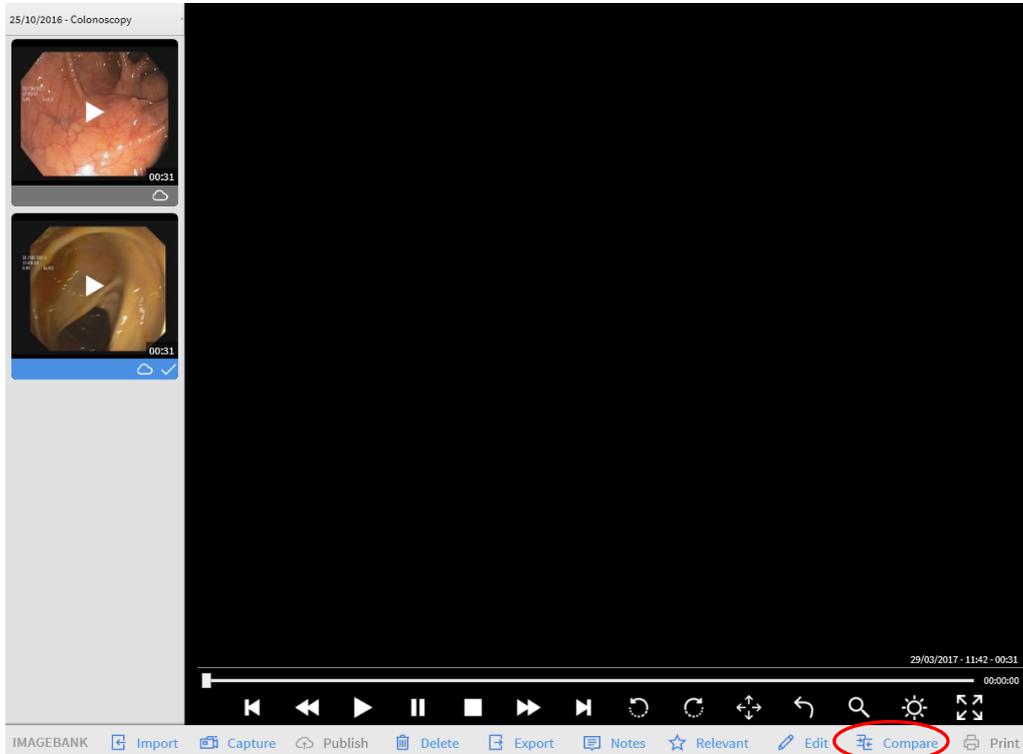


Fig 20

- Click on **Compare** on the command bar (Fig 20).

The comparing screen opens (Fig 21). Images and videos can also be selected from different visits.

- Click the image\video you want to compare

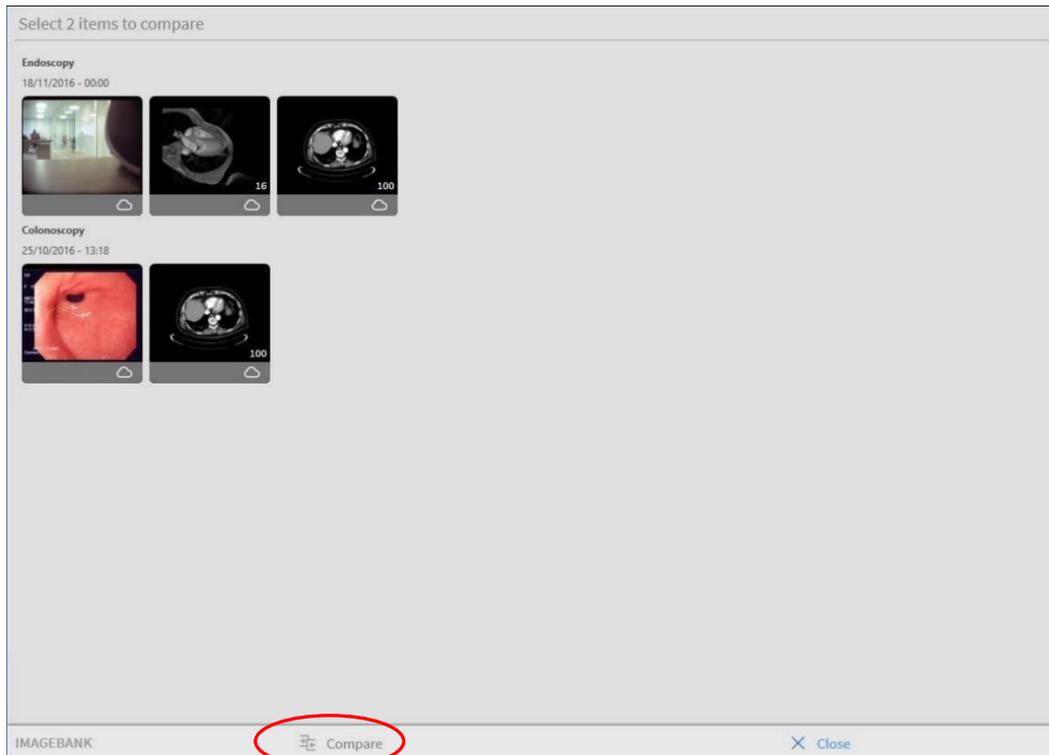


Fig 21

The selected images are this way displayed one beside the other (Fig 22).



Fig 22

Use the buttons displayed on the command bar to operate on the selected media (see paragraphs 1.3.3, 1.3.4).

1.10 Print

Different customizable print templates are available. To create a print report:

- Click the **Print** icon on the command bar (Fig 23).

The available templates list opens.

- Click the desired template on the list.



Fig 23

1.11 Delete an image or video

To delete an image or a video, after visit selection:

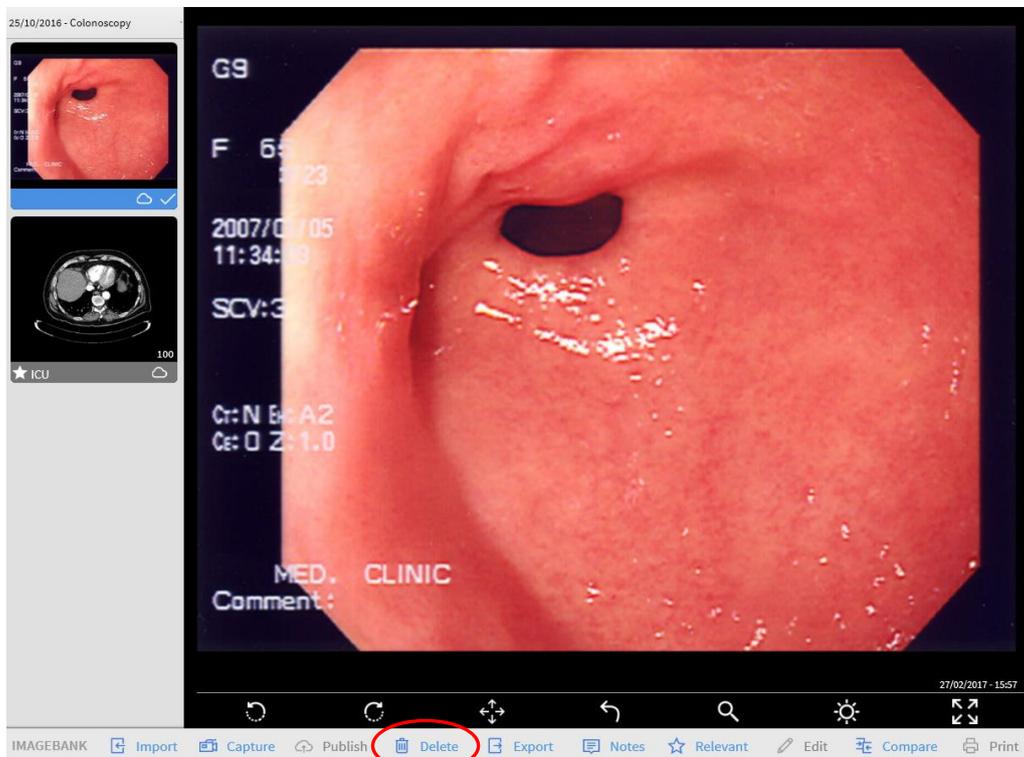


Fig 24

- 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 24). User confirmation is required (Fig 25)

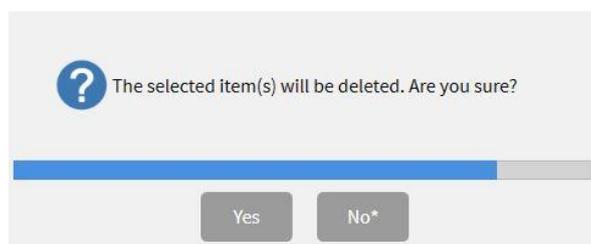


Fig 25

- Click **Yes** to delete the selected image/video

1.12 Edit

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 extract frames from a video and save them as autonomous images. The **Edit** button makes the above-mentioned operations possible. To proceed with video editing:

- Select the visit containing the video that will be edited (Fig 26).

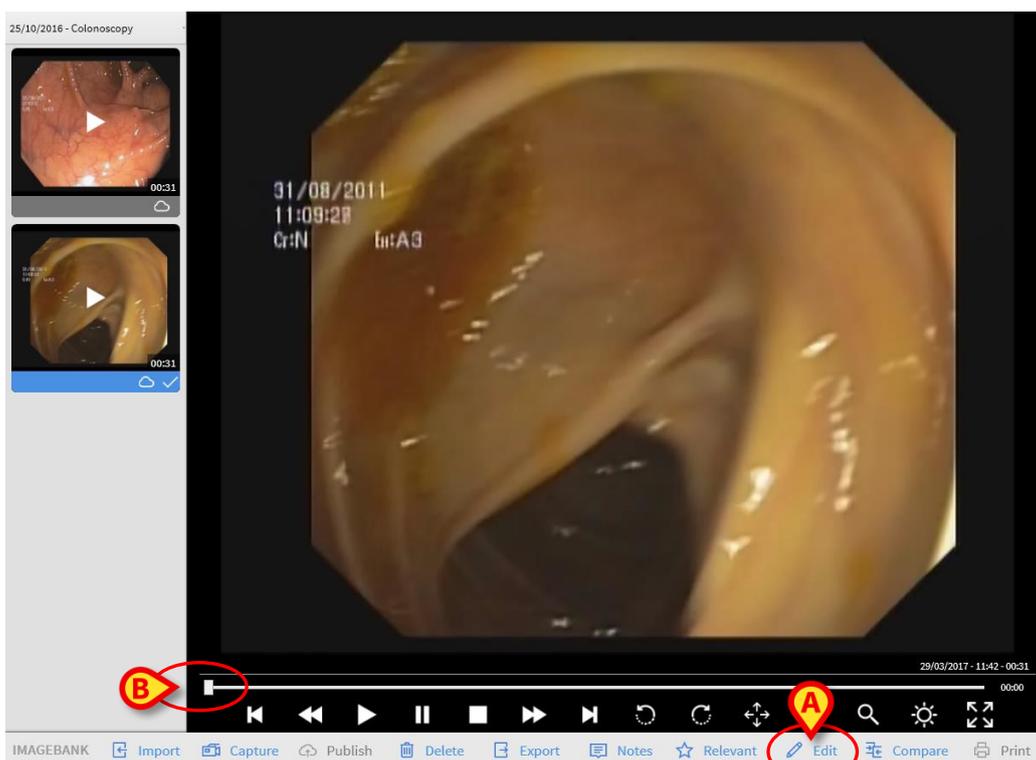


Fig 26

- Click the thumbnail corresponding to the video that will be edited
- Click the **Edit** button on the command bar (Fig 26 **A**)

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 26 **B** the frame is at the beginning of the video. The cursor can be operated 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 26):

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  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).

1.12.1 How to trim a video portion

The edit mode allows cutting a specific video part, saving it as a standalone video. To select a video portion and save it as a new video:

- Select the relevant video (Fig 26)
- Click on the **Edit** button on the command bar

The video is this way selected, it runs on the “display” area

- Click the  button in order to start the selected video
- Click the **Start** button in order to set the start position
- Click the **End** buttons to end the set the end of the trim portion



The video portion will be at this point visible on the progress bar by be highlighted in blue.

-
- Click the **Save** button on the command bar to save the trimmed video

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 26).



By using the **Reset** button, you can cancel the video cutout previously set.

1.12.2 How to capture a picture from a video

To proceed capturing a frame from a video and save it as an image of a certain examination:

- Select the relevant video (Fig 26)
- Click on the **Edit** button on the command bar
- Click the **Capture** button on the command bar (Fig 27 **A**)

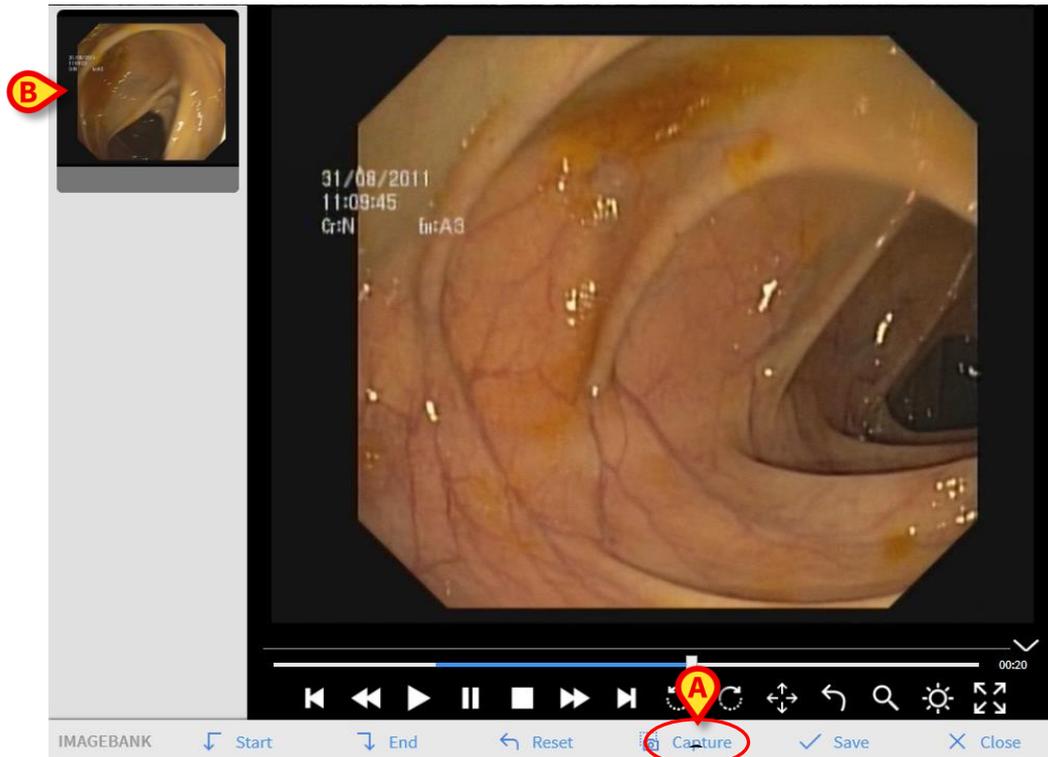


Fig 27

The frame currently displayed is this way saved as image, appearing now as shown in Fig 27 B.