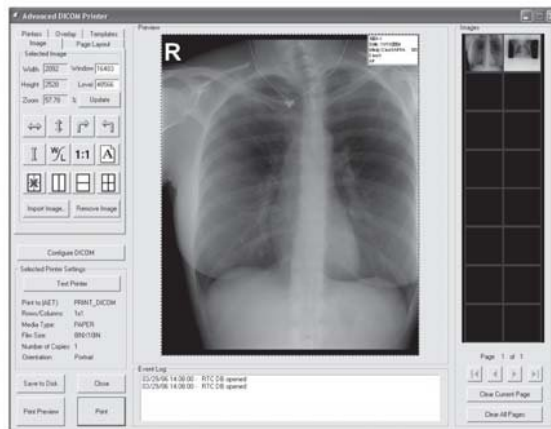


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Advanced DICOM Printer

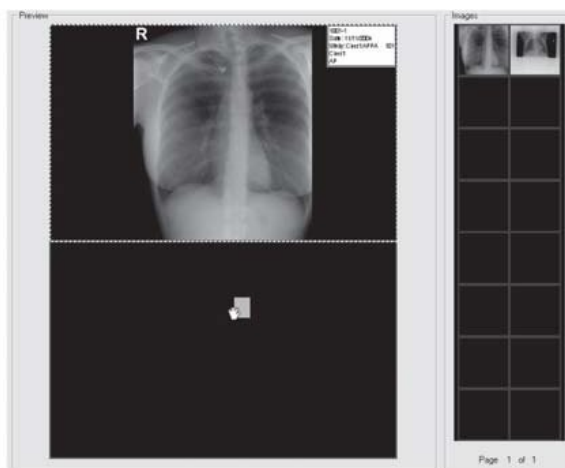
Select images for printing

In QPC XSCAN32, select the images to print in the image icon view, then select **DICOM Print** from the toolbar. The Advanced DICOM Printer application will open with the selected images imported into the right hand side. Alternatively, the user can select the region in the preview window where the user wants the image, then select the **Import Image** button.



Drag and Drop Images





To drag images into the print region hold the left mouse button down on one of the image icons on the right hand side and drag it into the preview window. A dragging cursor will appear  as the user drags the image from the image icon window to the preview window. If the user is out of the accepted region for dropping, a cursor  will appear letting the user know that this is not a correct region to drop the image into.

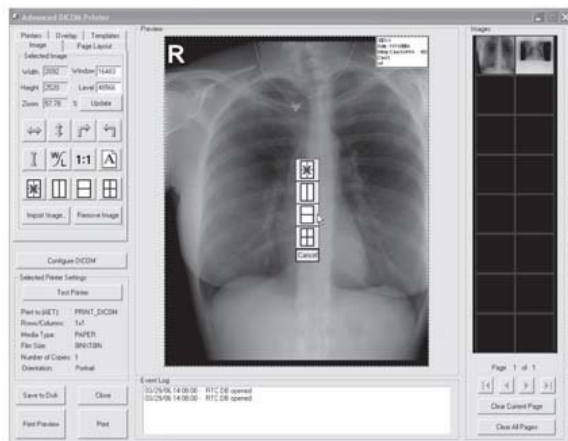



Split the preview window into regions

To split the preview window the user needs to first select the region to split. For example, if there are currently no divisions in the preview window then click anywhere in the preview window and a green line will appear around the window. This will enable the image division buttons. Alternatively, the user

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can press Shift+     right mouse click inside the preview window region to split it. A pop-up menu will appear with these division buttons (as the image to the right shows).

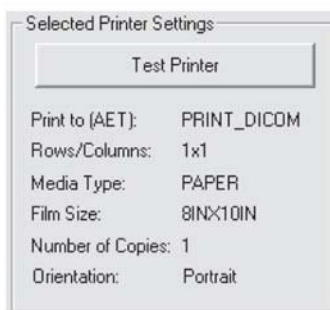


Select one of the image division buttons and the preview window will be divided into regions. To split one of these regions again select the specified region and again select one of the image division buttons. The user can drag and drop images at any stage. If the user has an image in the region that is desired, the interface will automatically move the image into the split regions. To remove a division, click in the region that has been split and click on the no-division  button.



The user can show and hide the image divisions by clicking on the *Page Layout* tab, then click **Show** and **Lock** under *Image Divisions*. The user can view the current print settings by looking at the left hand side of the *Advanced DICOM Printer* dialog. To change these settings, or to view more settings, click on the *Printers* tab.

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Manipulating Images in the Preview Window


The Advanced DICOM Printer allows the user to flip, rotate, zoom, pan, invert and window/level images. To manipulate the images select the image in the preview window (the selection will be shown by the green box surrounding the image).

The user can flip, rotate and invert by using the buttons on the left hand side of the DICOM Printer dialog.

The user can zoom by using the right mouse button on the selected image.



To pan the image use the left mouse button on the selected image.

 **Note:** The user can only pan the image when it is zoomed in. To window/level the user can either use the middle scroll button on the mouse or type the required window/level into the edit boxes on the left hand side of the *Advanced DICOM Printer* dialog. Then press the **Update** button to change the window/level for the image.

The user can also press the **1:1** button to tell the *Advanced DICOM Printer* dialog to print images at 1:1 resolution.

The user can use the *Orientation* button to change from landscape to portrait view.

Change margins

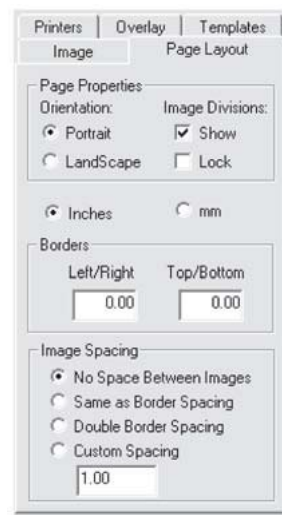
The margin tab permits the user to specify, in English or metric units, the size of the borders on the printed image. The top and bottom borders on the page can be adjusted independently of the borders for the left and the right hand side of the page.

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Additionally, the user has the option to control the internal margins, which define the amount of space left between individual frames on a page with multiple images. Internal margins are defined as multiples of the print page border size.

By default, internal margins are the same size as the borders, with image margins on, the left and right hand side of each frame are equal to the left and right hand borders. Margins on the top and bottom of each frame are equal to the top and bottom borders of the printed page.

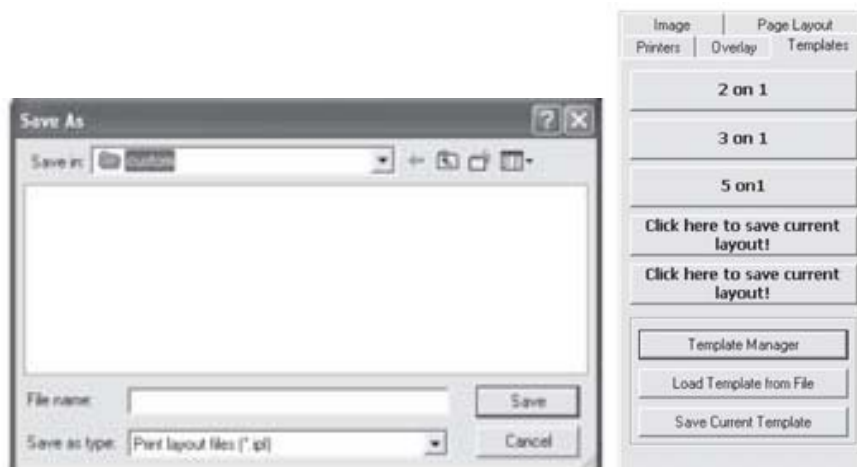
If the user intends to cut individual frames out of the printed page, it is recommended that internal margins are set to twice that of the page, which will give a uniform border size on the individual image segments. If it is necessary to maximize the amount of space on the printed page, the internal margins can be turned off altogether.



Saving and Loading Print Layout

The *Templates* tab allows the user to save and load pre-defined print layouts. There are five user defined layouts. Set up the layout on the preview window and then select one of the buttons labeled **Click here to save current layout!** The user will be prompted for a title.

To save more layouts click on the **Save Current Template** button. here the user can set a file name for the Layout. The default save location is *C : \XScan32\Layout\Custom*.



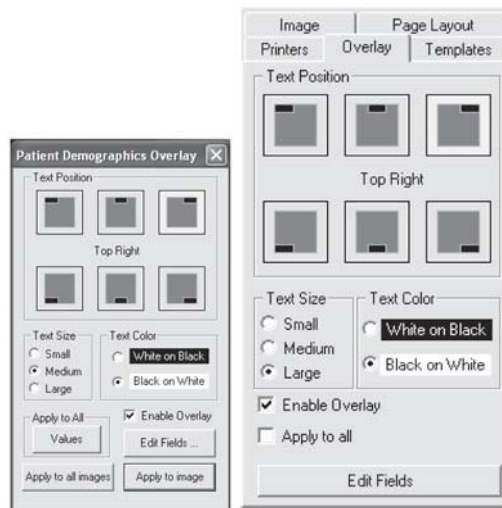
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Adding patient demographics

Select the *Overlay* tab to bring up the patient demographic layout options.

From here the user can select:

- Text position (includes top left, top center, top right, bottom left, bottom center, bottom right),
- Text size (includes: small, medium, large),
- Text color (includes: white on black, black on white).



The user has the option to apply the current settings to every image in the print view or only in the currently selected image via the **Apply to all images** button or the **Apply to image** button.

By selecting the **Enable Overlay** check box the user can turn patient demographics overlay on and off for all images. The user can also edit the fields that are available on patient demographics overlay by clicking on the **Edit Fields** button.

From here the user is able to:

- Select a field and determine what kind of a delimiter following the field (includes: none, space, tab, comma, newline, custom).
- Change the position of the fields with the up and down arrows.
- Remove or display a field by selecting the Print Field check.
- Print the title for the field (i.e. the title "Date:" would be printed in front of the date field).

After editing the fields select the Done button.

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Print preview

To see a print preview, select the **Print Preview** button.

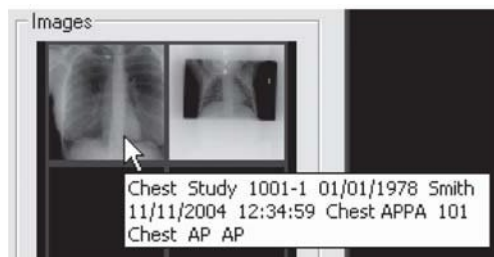


Print an image from DICOM Printer

When the user has finished dragging and dropping the desired images onto the preview window and manipulating size, position and window/level (if necessary), then press the **Print** button in the bottom left hand corner of the *DICOM Printer* dialog. Please ensure all the printer settings are correct first.

Patient Demographics for Icons

When the cursor is over the icon bank, Advanced DICOM Print will display the demographics for the image.



Multiple Icon Pages

Advanced DICOM Print has an unlimited number of icons that can be loaded. However, the PC's memory is a restriction.

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To clear the current page of icons, click on **Clear Current Page** button. To clear all the pages of icons and preview window, click on **Clear All Pages** button.

To move between pages and move to first and last pages click on the arrow buttons.

