
Using the Layout Transformation

Written by Jonathan Sachs
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Why Use the Layout Transformation?

Picture Window's Layout Transformation lets you create a composite output image of a specific size and resolution by placing multiple images and/or blocks of text over a background. Each image component occupies its own layer and can be positioned and adjusted independently of the others. You can also alter the layering order to make one component appear in front of another where they overlap.

You can use the Layout Transformation to create album pages with captions, ad layouts, photo business cards or greeting cards, slide show frames, image catalogs, or any time you need to place multiple images and text on a page.

There are three important reasons to use the Layout Transformation:

Convenience

The Layout Transformation automates the many tedious steps involved in creating a page layout such as resizing the images to the required dimensions, rotating them as necessary, creating antialiased text at the proper resolution for the output image, and placing all of the text and component images on the background in the correct locations.

Flexibility

While the Layout Transformation is in progress, a preview of the finished output image is continuously displayed and updated. You can select and freely reposition or resize any of the component images or text blocks and see the results immediately. This lets you experiment with every aspect the layout until you get it just right. In addition, there are many layout options to let you control image proportions and transparency, borders, text fonts, colors, sizes, and styles, and so on. The background on which all the components are superimposed may be a solid color, an image, or a tiled image.

Precision

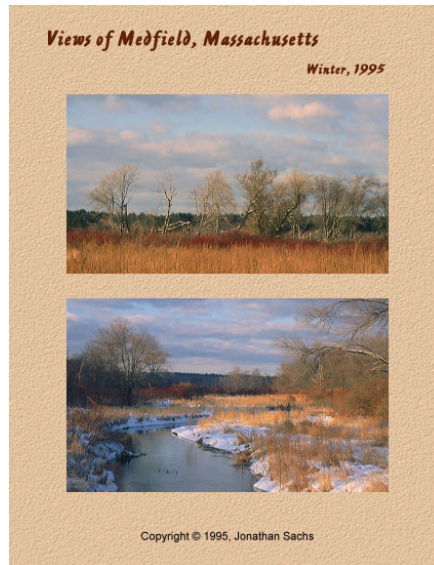
The Layout Transformation's snap-to-grid feature lets you easily align images and text by hand, precisely and without guesswork. There is also a feature for automatically creating arbitrary grids of evenly spaced images or text blocks anywhere within the layout.

Repeatability

Layouts can be saved and then reloaded at a later time. Once you save a layout, you can quickly restore it and make whatever modifications you wish, even though the final image has already been created. This feature also lets you create multiple, individualized output pages each of which conforms to a standard page layout template. For example, you could create a standard layout for a slide show which included a textured background, the title of the slide show, and a place for the slide caption and image. Creating a series of slides is then as simple as dropping the desired image and caption into the layout. Saved layout files are very compact so you can create as many of them as you need. Layouts can include references to specific images and/or text or it can simply provide a place holder for inserting custom images or text.

Examples

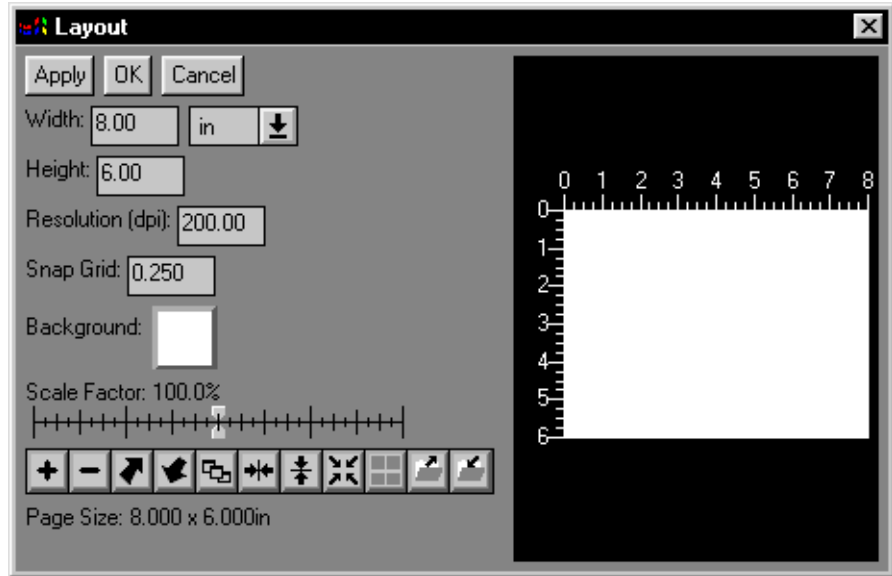
Here's a photo business card created using the Layout Transformation. Saving the associated layout makes it easy to create other cards with the same look but with different text or to change the underlying photo.



Album pages like this are easy to create. This one illustrates the use of a tiled background pattern and five panels—one for each image and one for each section of text.

Using the Layout Transformation

There are several steps to using the Layout Transformation. To begin, select Layout from the Transformation menu. This displays the Layout dialog box:



The area on the left of the dialog box is used to enter or modify layout settings. The area on the right displays a preview of the current output image. You can make the preview area larger (or smaller) by resizing the dialog box. The larger you make the preview, the more detail you can see but the longer it takes to update.

To create a layout, you first specify the background and then add *panels* to the layout, one at a time. Each panel may have various properties which you can set in its Panel Properties dialog box. For example, you can place an image or block of text in a panel, set its background color, or add a border around the edge.

Specifying the Output Page Size

The first thing you need to do is to specify the size of the background area. This determines the size of the output image and must be done before you add any images or text to the layout. Enter the width, height, and resolution into the control in the upper left corner of the Layout dialog box. This is where you need to think ahead to the intended use of the output image. To prepare an image to be printed,

for example, you need to decide what size the image will be and what resolution you need. For most printers a resolution of 200-250 dpi results in very good image quality, although you may use values up to 300 dpi to get the best possible results. To create images for a slide show, select the width and height in pixels (by changing the units drop-down menu) to match the size of the slides on the screen. The resolution setting is not important in this case.

Specifying the Background

By clicking on the Background control, you can select a solid background color or image.


If you select a solid color, then Picture Window displays a color picker—when you select a color it is immediately reflected in the preview area.

If one or more images are already open, you can select one of these for the background. If you wish to add a background image that is not already open in a window, you can use the File Open command to open it without first closing the Layout dialog box. Background images are automatically tiled (repeated) as necessary to fill the output image. You can control the size of the tiles with the Scale Factor slider. As with solid color backgrounds, the results of selecting and scaling a background image are immediately reflected in the preview image.

You can create seamless background tiles using Picture Window's Texture transformation. There are also many commercially available collections of background images. For example, there are CDs containing seamless tiles (brick, fabric, stone, etc.), images of various kinds of papers, wood and metal surfaces, and so on. Or, if you prefer, you can create your own background images by scanning various materials on a flatbed scanner or by first photographing them.

Adding Panels to a Layout

The real power of the Layout Transformation becomes evident when you start creating and combining panels. A panel can be as simple as solid color rectangle, or it can include a block of text or an image with a rectangular or an irregular outline.

To add a blank panel to the current layout, click the  icon on the tool bar in the Layout dialog box (not the one on Picture Window's main tool bar). This places a

panel with a gray background in the middle of the current layout and pops up a Panel Properties dialog box.

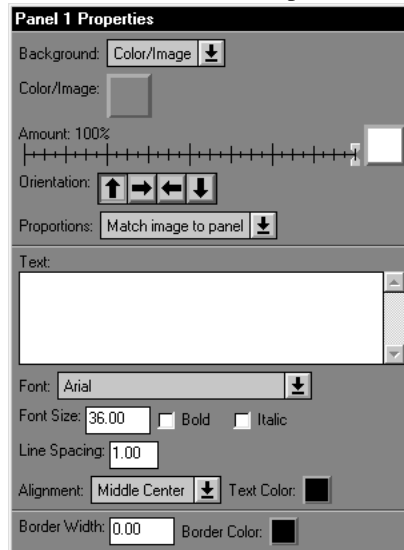
Repositioning and Resizing Panels

To resize a panel, simply click and drag one of its corners or edges. To move a panel, click and drag its interior.

The locations of the corners of the panel move in steps determined by the Snap Grid setting in the Layout dialog box. This lets you align panels or space them evenly. If you prefer, you can set the Snap Grid to zero to allow panels to be positioned freely.

Editing Panel Properties

When you first add a new panel, its Panel Properties dialog box is automatically displayed so you can specify what information will be displayed within the panel. If, at a later time you want to modify these settings, simply click on the panel with the right mouse button to select it. The Panel Properties dialog box looks like this:



Setting the Panel Background

Panels may have one of three types of background: transparent, solid color, or image. These settings are at the top of the Panel Properties dialog box. First use the Background control to select whether you want a transparent or color/image background. Then, if you selected color/image, use the Color/Image control to select the solid color or image.

If you selected a solid color, you can use the Amount control's slider to set the transparency of the color background.

If you selected an image, you can use the Amount slider to set the overall transparency of the image or to select a mask for use with the image (more on this later). Then you can use the Orientation toolbar to rotate the image (and its mask) in 90 degree increments within the panel.

Finally, you can select how the image will be cropped. When the Panel Properties dialog box is active, a cropping rectangle is displayed as an overlay on the input image in its window which you can use to select what part of the image will be placed in the panel. The Proportions control in the Panel Properties dialog box lets you select whether to constrain the cropping rectangle to match the proportions of the panel (this ensures that the entire panel will be completely filled with image data) or whether the cropping rectangle will be unconstrained (in which case part of the panel may not be filled). If you want the image to be a specific size such as 5"x7" on the page, then create a panel of that size and make the cropping rectangle match the panel proportions. Then you can decide what part of the image to display in the panel by resizing and/or repositioning the cropping rectangle over the image. If, on the other hand, you are creating an album page and want to include the entire image regardless of its size, then set the proportions to Free and resize and/or reposition the panel until the preview image looks pleasing.

To place an image over a solid color rectangle you must create two panels. First create a solid color panel of the desired size, then create the image panel which you can then position over the solid color panel as necessary. To get the image to sit on top of the background panel, you may need to adjust the layering order (see below).

Setting the Panel Text

To place text in a panel, simply enter the text into the Text control in the Panel Properties dialog box. You must place carriage returns where you want lines to break. To insert large blocks of text from a document or other program, copy the text to the

clipboard and then click on the Text control and press Ctrl-V to paste the information into the control. To insert special characters like the copyright symbol, use the Windows Character Map accessory application or the word processor of your choice to copy the desired character to the clipboard and then paste it into the control as above.


Once you have entered the text, you can alter its size, font, style, line spacing, alignment, and color using the controls immediately below the Text control.

The Alignment control provides nine possible settings for placing the text within the panel. If you need more control over the placement of the text, you can place it in a separate panel with a transparent background and then position the new panel anywhere you want.

Setting the Panel Border

By default, panels have no border, but you can add a rectangular border around the edge of a panel by setting the Border Color control to the desired border color and setting the Border Width to a value greater than zero. To turn the border off again, simply set its width to zero. Note that the border is drawn outside the panel, increasing its width and height by twice the border width. You can use borders with a transparent panel background to place rectangles in your layout.

Selecting Panels



The easiest way to select a panel is to click on it. If the panel you want to select is totally obscured by other panels, click on the  icon on the toolbar in the Layout dialog box to select panels one at a time until you get to the one you want.

To resize the currently selected panel, click and drag one of its corners or sides. To move the panel, click and drag its interior.

To edit the Panel Properties of the currently selected panel, click on it with the right mouse button.

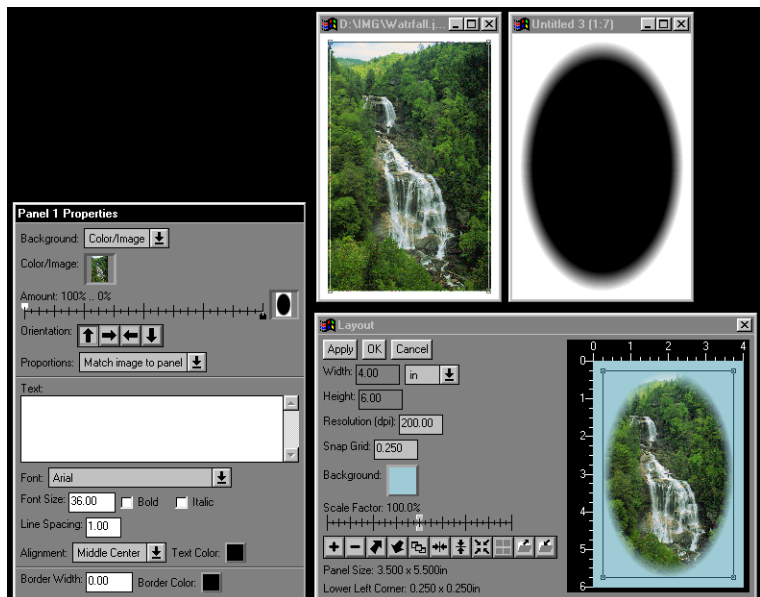
Controlling the Layering Order

The final output image is created by first painting the background and then applying each of the panels one at a time in layers. Each new layer obscures (partially or totally, depending on its transparency) any panels previously applied.

To alter the sequence of a panel in the layering order, first select it and then click on the  or  icon in the toolbar of the Layout dialog box to move it one level higher or lower.

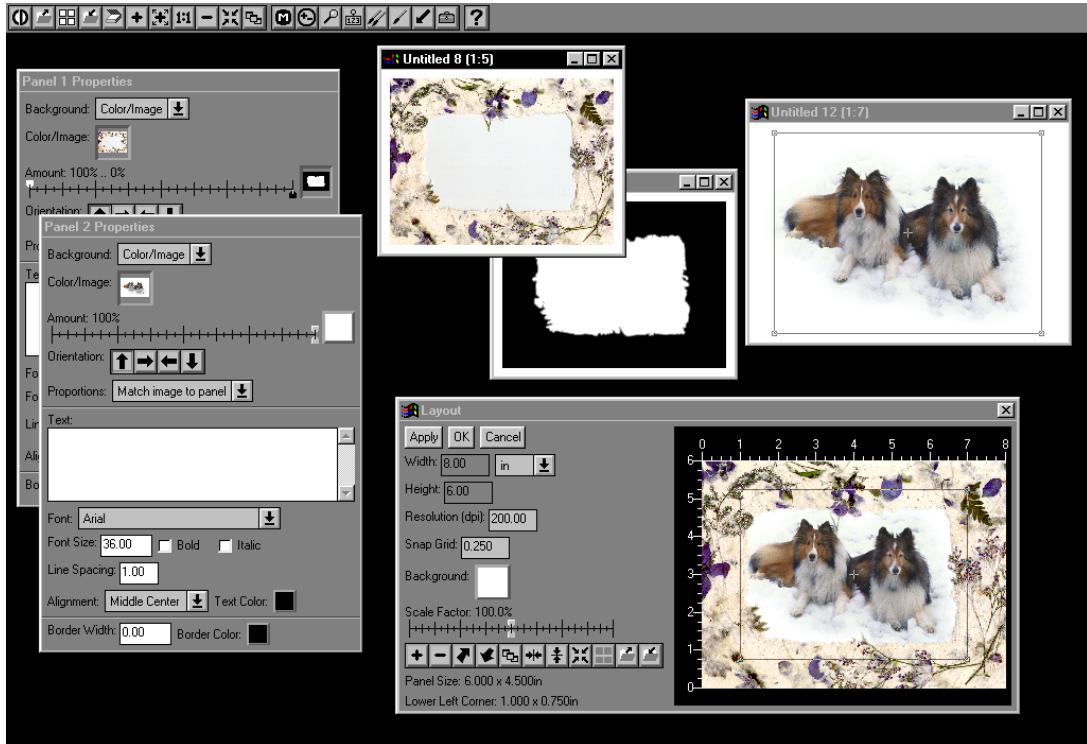
Creating Panels with Irregular Outlines

By default, panels are rectangular, but you can use masks to create panels of any shape. To create a solid color or image in a panel with a non-rectangular shape, start by creating a mask that is white where you want the panel to be transparent, black where you want it to be opaque, and an intermediate gray where you want it to be partially transparent. Then select the solid color or image in the Color/Image control in the Panel Properties dialog box and the mask in the Amount control just below the Color/Image control.



You can use this method to place images with irregular shapes into a layout or to create frames with irregular openings which can be placed over other panels.

Here is an example of placing an image in an irregular frame:




This example was created by scanning a handmade paper mat purchased at a stationery store and scanning it on a flatbed scanner. Next, a mask was created to identify the opening in the mat. The image of the frame was then placed in a panel and the mask selected into the Amount control. The white and black sliders had to be reversed because the mask happened to be inverted. A second panel was created to hold the image of the dogs. It was necessary to alter the layering order to place this panel behind the frame. Finally, the position and size of the panel containing the dogs was adjusted to make it fit nicely within the frame.


Creating and Using Layout Templates

You can save and load complete layouts in layout files (files with the extension .lyt). When you save the current layout in a file, all of the settings for that layout are stored in the file with the exception of the images themselves—only the pathnames of images are stored in the layout file. This makes the layout files very compact, but if you are not careful you can get into trouble by deleting, renaming, moving, replacing, or modifying the images included in the layout. The rule is very simple: when a saved layout is reloaded, Picture Window looks for the images to which the layout refers in two places—in the original directory in which the image file was located and in the same directory as the layout file. If the image is not in either of these places, Picture Window displays an error message and leaves the panel empty.

There are two good reasons to save a layout.

- 1) To preserve the current layout in case you want to modify it later.
- 2) To create a template so you can produce pages that share a common layout.

To save the current layout, click on the  icon on the Layout dialog box toolbar. If the current layout includes any untitled (unsaved) images, you will be prompted to save them. Unless the images are saved, Picture Window will be unable to reload them when you load the layout. Picture Window will also ask you if you wish to save the images along with the layout. If you respond No, then all the panels will be blank when you reload the layout.

To load a saved layout, click on the  icon on the Layout dialog box toolbar. Picture Window will then restore all the saved layout settings and reopen the image files, assuming it can locate them.

Cautions

The Layout Transformation has an important limitation, namely that all of the component images must be present in image windows before you can create the output image. If the component images are very large or if there are a large number of them, you can run out of memory if there is insufficient free space on your hard disk.

Another limitation is that once the output image has been created, unless you save the layout, the text and the locations and sizes of the images are frozen and there is no way to modify the layout at a later time. However, if you save the layout and all of the component image files, the layout can be reopened and adjusted. Note that the saved layout includes only the names of the image files, not their contents. The advantage of this technique is that layout files are very compact and quick to save. It also means that if you delete or rename any of the component image files, they cannot be restored to the layout, and if you modify one of the image files, the new version will replace the old version when you reload the layout. If you want to ensure that a specific layout can be restored exactly or if you wish to transfer the layout to another computer, copy the saved layout file along with each of the referenced image files (including the background image and mask images if any) into an empty folder.