

Clipping Paths ~

How to create them and
when to use them



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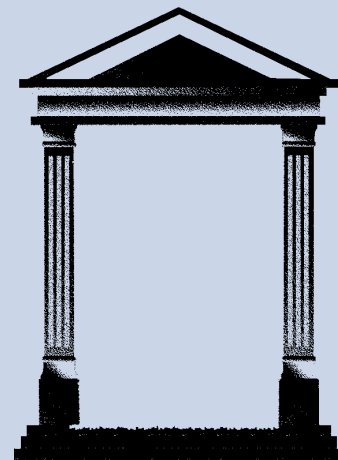
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Introduction

We are frequently asked how to create clipping paths, or, more often how to stop the background of an image from printing. This is an attempt to explain how this can be achieved, and when it is necessary.

There are two basic forms of image files, vector images, and raster images. Vector images are a series of mathematically instructions, which say, 'Draw a line from here to here', or, 'Draw a box this size, here'. This is the sort of file produced by a drawing program. Raster images consist of a 'map' of individual pixels describing position and colour, and this is the type of file created when an image is scanned, or created in a paint-type program.

Any raster-format image has to have a rectangular shape. This is a limitation of file formats. Whatever raster-image format is chosen, it will always be described in the file as being so many pixels by so many pixels. This is fine for many uses, but there are occasions when we want a non-rectangular image printing on the page. How this is achieved depends upon both the image and upon the production method. For use on a web page we can use the GIF89a format, and set the background to be transparent, but when we come to producing hard-copy in the form of ink or toner on paper, life becomes a little more complicated. This is the area we will be discussing here. If the image is just black and white, with no tones (a bi-level bitmap), there is usually no problem.



Bi-Level Bitmap



Greyscale Image

Most page layout and drawing applications have the ability to treat the white areas as non-printing or transparent. However, as soon as we introduce tones of grey, or colour images, the situation changes. This is when we have to use 'Clipping Paths'.

What is a 'Clipping Path?'

A clipping path is a non-printing line that encloses one or more areas of a raster image. The receiving application recognises this path. The path is effectively saying to the application, 'Only print what is inside the path, and ignore anything outside it'.

Creating a Clipping Path in Adobe PhotoShop

As with most operations in PhotoShop, there are more ways than one of creating a clipping path. The simplest method is often to use the selection tools to select the area that you wish to be transparent, and then inverse the selection. If the image is such that it is easier to select the area that you wish to have print, then select that area instead. In either case, once the required area is selected, you can create a path from the selection by choosing from the Paths Palette, Path>Make Work Path. You will be asked to choose a tolerance, and unless it is an extremely complex selection, it is best to choose 1 pixel.

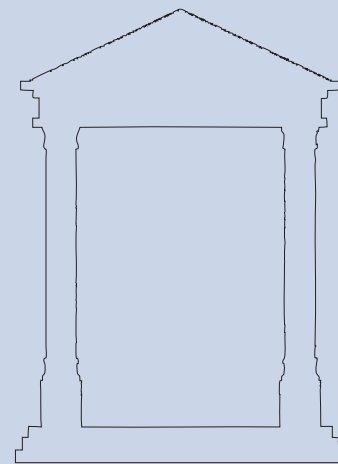
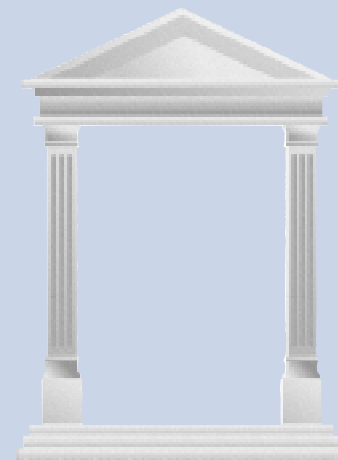


Image clipping path



Same grayscale image with clipping path

Having created a path, it is now necessary to tell the application that this is to be a clipping path. First we have to save the path, and this is done by selecting Path>Save Path. Give the path a name such as Clip Path, or accept the default, which will be Path1 if you haven't saved any other paths. Lastly, select Paths>Clipping Path and nominate the path you have just saved. You will also be asked to select a flatness value. If you will be outputting to a Level 1 PostScript device, it is necessary to select a flatness value of 4 or more, otherwise there is a danger that the path will be so complex that it will refuse to print. With a Level 2 device a flatness of 1 is fine.

Not all file formats will save paths with the file, and it will be necessary to save the image in a suitable format. Photoshop's native format, .PSD, will save the paths, but unfortunately this is not a format that can be opened or placed readily in other applications. TIFF and EPS will also save the paths, and either are suitable if you will be placing the image in PageMaker version 6.0 or later. For most other applications that support clipping paths it will be necessary to save the file in EPS format. This includes PageMaker versions prior to 6.0., Adobe Illustrator and Quark Xpress®.

When saving the file in EPS format, you will be



asked to confirm that the path is a clipping path, and also to choose the encoding (ASCII, Binary or JPEG) and the type of preview (None, 1-bit or 8-bit). The 'safest' form of encoding to use is ASCII, as this can be readily transported across platforms, and can be interpreted by any PostScript interpreter. Unfortunately it also creates the largest files.

Binary format is smaller, but some printers, particularly under Windows95, will not print them satisfactorily. The most compact format is JPEG encoded, but this requires outputting to a PostScript Level 2 printer.

Placing the Clipped Image in another application.

Clipped images can be placed in other applications that support clipping paths just as any other image can. However, the image may not always look correct on the screen. If you are using PageMaker 6.0 or above, and using a clipped TIFF, then the screen image will be correctly displayed with only the area inside the clipping path being visible. However with an EPS format file, the image will not show the clipped image, but the whole area. This is because it is the EPS file which is clipped and not the preview, which is what you are seeing on screen. The clipped EPS will print correctly to a PostScript printer, though.



Clipped TIFF image



Clipped EPS Image

When don't you need to use a clipping path?

It is not always necessary to use a clipping path to prevent backgrounds printing. If we are printing to colour separations, it is sometimes easier to use another technique.

In the example opposite, the magenta flash was created in Illustrator. The file was then rasterised in Photoshop, and a gaussian blur applied to give the soft edges, and coloured black. A second layer was added beneath the first layer and filled with white. The first layer was then set to Multiply Mode at an opacity of 46%. The image was flattened, the mode changed to greyscale, and saved as a TIFF.

In PageMaker, a new colour, black was created, as 0%C, 0%M, 0%Y, 100%K and set to Overprint. This colour was applied to the placed greyscale image.

Back in Illustrator the Type on a Path was added, and the file saved. This file was then placed in PageMaker, on top of the TIFF file.

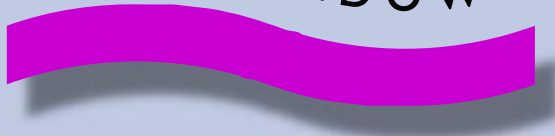
Although the screen image shows a white box around the drop shadow, and the shadow as being pure grey, when printed from separations, it will appear as the image opposite.

DROP SHADOWS



On-screen appearance

DROP SHADOWS



Final printed appearance

The secret of this is in the overprint setting. This prevents the image from 'knocking-out' the background, in both the grey and the white areas. Consequently the 'shadow' takes on some of the tone of the background, creating a realistic effect.

Finally.....

We hope that you will find this FAQ useful, that it will help your understanding of clipping paths, and increase your productivity. Please experiment with the various techniques discussed. Familiarity will soon bring confidence! If you would like to see other techniques covered in this format, or have any comments about this FAQ, please let us know in a message on the Adobe User to User Web Forums.

Production Notes.

This document was created electronically in Adobe PageMaker 6.51.

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The Gill Sans Schoolbook typeface family is used throughout.