Layering it on a bit thick

Gordon Laing looks at what layering can do for paint and photo retouching applications, and finds some funky fonts, too.

This month I'm going to look at a technique that can be used in layout, vector drawing and even some bitmap paint packages. The layering facility is apparently universal and extremely useful.

Like many other well-programmed electronic publishing tools, layers are best understood and used if you imagine you're working with conventional art materials. Each layer acts like a sheet of transparent acetate onto which various items may be placed. The cunning part is that layers can be reordered (placing certain elements over or behind others), moved, or even deleted altogether without affecting the layers above and below — experimentation without commitment.

Layers have been a staple part of vector drawing and DTP packages like FreeHand, Illustrator and CorelDraw since day one. Who could consider PageMaker or Quark XPress without the facility to place pictures over text or vice versa? Many thought that's where it would end, and while layers would be nice on bitmapped packages they would probably remain a pipe dream.

In the past year or so innovative programmers have incorporated layers into such bitmapped paint and photo retouching applications as Fauve Matisse, which inspired Micrografx and Adobe to include the facility in Picture Publisher 5 and Photoshop 3.0. Incidentally, Macro-Media (the company which took up the FreeHand reins following the Adobe/Aldus merger) has recently acquired Fauve. This expands MacroMedia's portfolio substantially with two excellent bitmap packages, Matisse and, particularly, Xres.
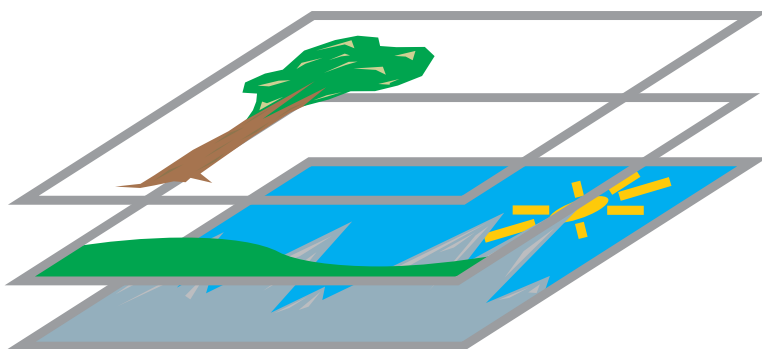
Layers in bitmap packages work in exactly the same way, allowing you to manipulate layers to create the desired effect. Most packages also allow you to temporarily "switch off" one or more layers, in order to get a clearer view.
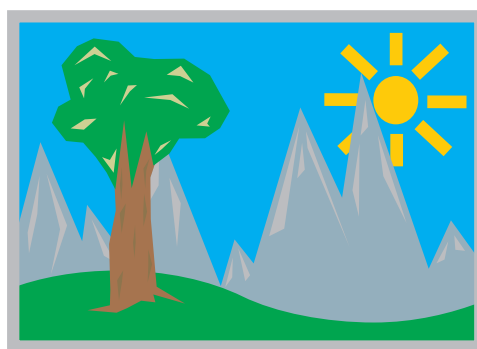
Prior to layers, any modifications made to bitmapped images were permanent and rarely reversible beyond a few levels of undo. This could be a real problem when you pasted an element on to the image which, once deselected, became a permanent fixture. If you'd wanted to move it a bit to the left, you could forget it. You could experiment to a certain extent with channels, but it wasn't an ideal situation.

So that's the theory; what about the practice? With bitmaps still in mind we'll begin with the ubiquitous Photoshop 3.0, although as usual any techniques discussed will be applicable with little modification to any other layer-equipped bitmapped package.
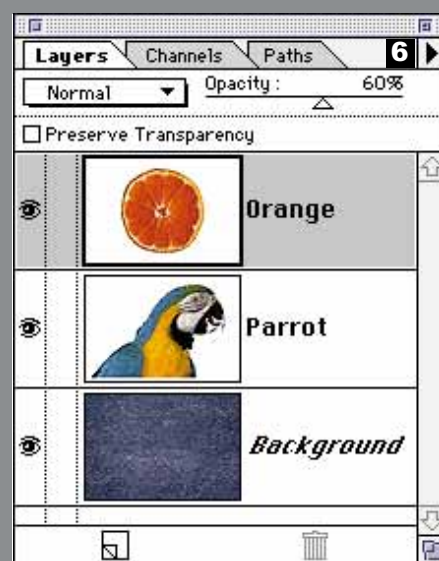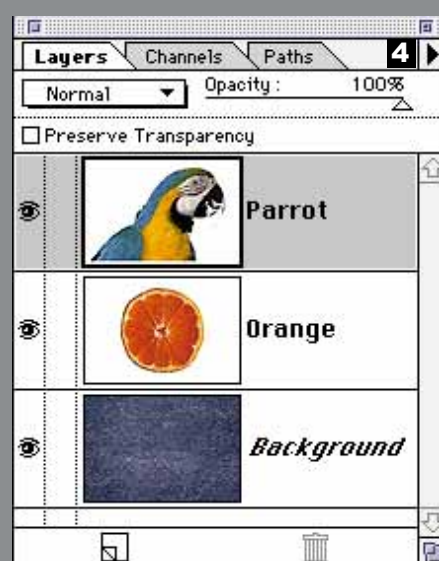
How layers work

Separate Layers

Merged Layers

Layers In Photoshop 3.0

Layers | Channels | Paths
Normal Opacity: 100%
☐ Preserve Transparency
Parrot
Orange
Background

Layers | Channels | Paths
Normal Opacity: 60%
☐ Preserve Transparency
Orange
Parrot
Background

This montage was assembled in Adobe Photoshop 3.0 for Windows running on a P90 with 16Mb. Layers are memory hungry, so I switched to my Mac 8100/80 with 32Mb to take the palette screenshots; this configuration was much faster.

When creating a layered document, it's handy to have elements without backgrounds. The parrot originated on a dark background (1). I removed the background using the magic wand tool, resulting in the cut-out (2).

Starting with a textured asphalt background, I added two new layers: orange first, followed by the parrot (3), and palette (4). Above is the orange over the parrot (5) but set with 60 percent opacity; see palette (6). After playing around, merge the layers together; see palette (7).

Layers | Channels | Paths
Normal
☐ Preserve Transparency
Background

Layers in Photoshop 3.0

Three options are presented at the bottom of Photoshop 3.0's new document dialogue box, referring to the background of that new image. Background colour, not surprisingly, returns the background to the colour that existed prior to the new document command. White colours the background white but the really interesting new option, exclusive to version 3.0 and upwards, is Transparent.

Transparent backgrounds are just that — they act as sheets of acetate. You can draw or place images on these transparent backgrounds as you would a solid coloured background, with the advantage that if it's used as a layer you'll be able to see through unoccupied areas.

Layered documents are often best started with a background, which could be a picture, a solid colour, or perhaps a blend. Opening the layers palette shows just one layer, labelled background, with a thumbnail of your image. The arrow in the top right corner of the palette presents all layer options.

Adding a new layer prompts for a name, after which a new thumbnail appears above the original background. Since there's nothing on this layer as yet, the thumbnail is blank. Each new additional layer appears above the one that is currently selected in the palette.

The layers palette arranges each layer from top to bottom — the first thumbnail is the top layer. You can rearrange the layers by dragging them around the palette.

To the left of each layer's thumbnail is a little eye. When the eye is there, the layer is being displayed. Clicking it hides that layer, which can help when things get a little complicated.

Double-clicking a layer in the palette brings up a dialogue box including options to vary the opacity of that layer. At 100 percent opacity nothing will be visible below the layer, while zero percent renders it invisible. Unless you want to place images on top of each other as a montage you'll probably opt for, say, 40 percent opacity where the layer is clearly visible but whatever is below shows through.

So you'll have a whale of a time merrily adding new layers for pure experimentation, until at some point your system grinds to a halt. The reason is that each layer is effectively a new document at the same resolution and in the same mode as the first. If your background is a 4Mb CMYK document, each new layer will be 4Mb in size, so four layers would then be 16Mb. Layers in bitmap packages may be fun, but they're more than a little demanding on your system. Photoshop 3.0 shows both the size of the layered file and what it would be, post-merge, at the foot of the screen.
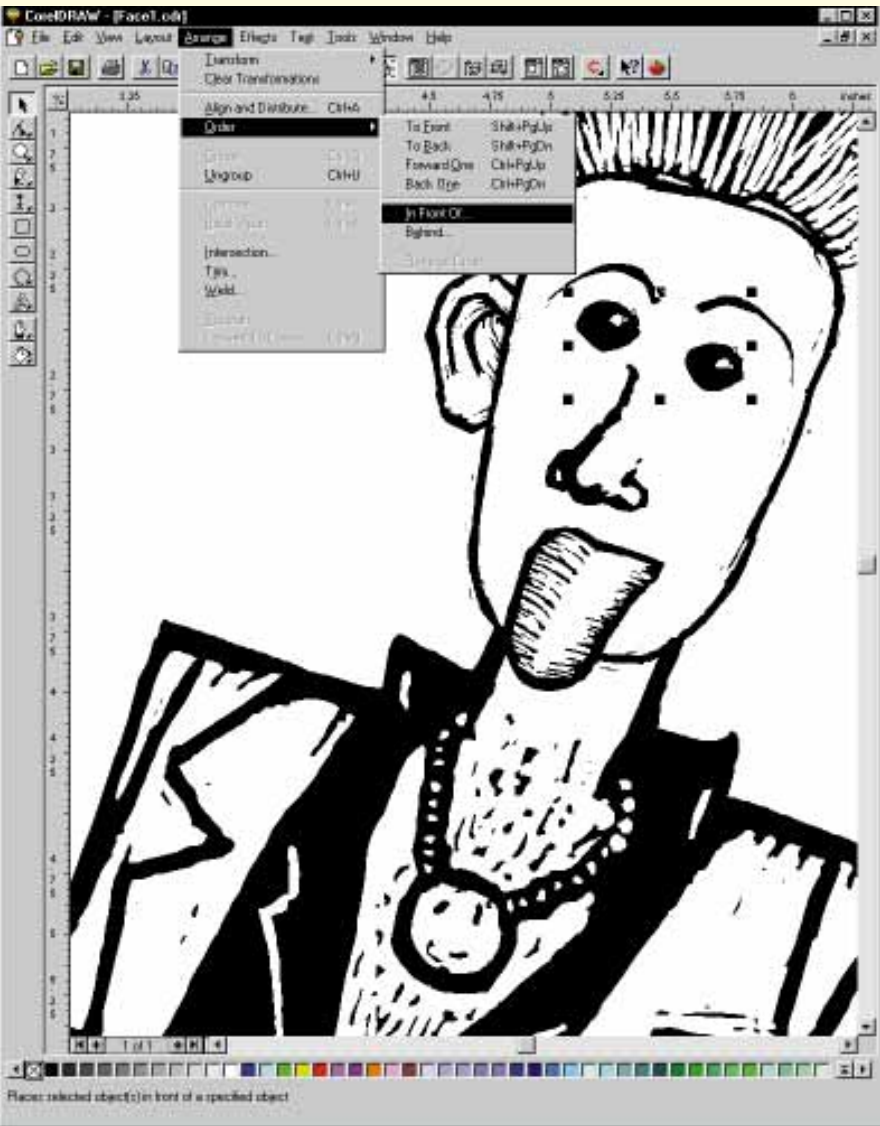
Layers are also proprietary to that application. Photoshop 3.0 can only save its layered documents in .PSD format, which can only be reopened in Photoshop 3.0. You won't want to keep them in this format for long however. Once all your work is done and you've finished switching layers on and off and moving them around, select the merge command to combine all the layers into one standard bitmap. In our earlier example, the four-layer 16Mb file will be reduced to a 4Mb document, exportable as a bog-standard TIFF. Much more manageable in size and compatibility.

Layers in DTP and drawing packages

When working on a layout, you'll unintentionally be adding a new layer for every element you place on the page. Unlike bitmapped packages, multiple layers in DTP applications are a standard way of working and don't result in huge files.

The way to understand them is to consider each new element, be it text or a picture, as being on its own layer. As you place them on the page they sit on top, obscuring everything below: imagine a block of text on one layer, then placing a picture on the top (effectively on another layer).

As it stands, the picture would be

Left There's no such thing as a free lunch, or a layers palette in a drawing package for that matter. Just select the desired element, then send it forward or backward a level, or all the way to the back or front
Right CorelDream 3D; the latest module in CorelDraw version 6 for Windows 95. Who knows what'll be in version 7…?

obscuring the text below. This may or may not be the effect you would want.

Some layouts would place the text on top of the picture, particularly if it's a large type heading. It's not uncommon to place white or lightly coloured text over a predominantly dark picture. With text over picture, or picture over text, you are dealing with two separate layers.

But then there's the third option of wrapping one element around another; usually text around a picture. In this instance the two layers are merged, with one element repelling the other. There's usually an option to set the space around the edges of both elements. This is called the "runaround" and could typically, taking *PCW* as an example, be 8mm.

Runarounds aren't just useful for visible objects in DTP. Usually text is fitted in square boxes with vertical columns. Sometimes you want the edges to be anything but vertically straight. How about a diagonal or a wavy line? These effects can be effective. Unless you have the facility to create irregularly-shaped text boxes, you'll have to force the text to runaround in the direction and manner you desire by plonking a suitable shape in the way.

In most cases you won't want this shape to be visible. All you do is draw the line or shape you desire, force the text to runaround it, then give it the colour of the background (or no colour at all). The line disappears from view but still forces the text to flow as desired.

There's no such thing as a layers palette to navigate in DTP or drawing applications. Instead you have to click on the desired element, then from an Item or Element menu choose to send that selected object one layer forward, one layer back, all the way to the front, or all the way to the back.

Sometimes its difficult to select the element you require if loads are popped on top, so some applications allow you to cycle through stacked items while mouse clicking with a key held down.

It's very easy to find yourself just doing layout with a DTP package, but some fairly sophisticated shapes can be made using layers and basic tools. Remember that almost every package will be able to do squares, rectangles, circles and lines — experiment and you may not need that drawing package after all. Try placing rotated white squares over part of a filled-in circle and hey presto, you've got a cheese, or a Pacman character. Okay — not spectacular, but perhaps sufficient for some people's needs.

Font of the Month

Flo Motion

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnöpqrstuvwxyz 1234567890

Just my type

Some of you may have come across *FUSE*, FontWorks' quarterly typographic promotional pack. Each costs £30 and contains a selection of fonts, posters and information. It's all great fun and highly recommended. So far it's Macintosh only, but plans are afoot for Windows versions.

FUSE is over 15 issues old, but back issues are available. We recently got hold of *FUSE* 5, which includes Flo Motion by Peter Saville, Spherize by Lo Breier, Alphabet by Paul Elliman, and Scratched Out by Pierre Di Sciullo.

This issue's font of the month is Peter Saville's Flo Motion. After graduating from the faculty of Art and Design at Manchester Polytechnic in 1978, Peter Saville was co-founder of Factory Communications. He worked there as art director for 14 years, working with New Order, a band on the Factory label.

FUSE 5's theme was virtual reality (VR), and Flo Motion was inspired by the unresolved shapes that may be found in a low-resolution VR scenario. Saville took a traditional serif typeface, put each character through a gaussian blur, then adjusted the contrast to create Flo Motion. In fact, I think I might take an existing face and muck about with it in Photoshop and export the results into FontoGrapher. You never know; you may even see my work on sale one day. But it's not quite that easy: Saville's work is excellent and *FUSE* is an essential purchase for type fanatics. Let's hope FontWorks sorts out a Windows version soon.

PCW *Contacts*

Next month it's our Christmas issue and I'm already polishing my baubles. If you've any festive thoughts, write to the usual *PCW* address or email me as **gordon_laing@pcw.ccmail. compuserve.com**

Faces 01276 38888
FontWorks 0171 490 5390
Adobe 0181 606 4000