Fine lines

Graphics packages aren't just for editing, they can be used to create original images too. As David Bedford illustrates, with vector-based programs like CorelDraw there's no limit to the size of your creation

The CorelDraw graphics suite, recently updated with the launch of version 11.0, fills a different niche from most graphics software. It has three major applications plus a handful of supporting utilities. Leaving aside Rave2, a web graphics package, and Photo-Paint 11.0, a bitmapped graphics package, we'll be exploring CorelDraw 11.0 here, a drawing package or, more properly, a vector graphics package.

As a vector graphics package, the £445 CorelDraw 11.0 (upgrades are around £220) competes with professional offerings like Adobe Illustrator 10.0 and Macromedia Freehand 10.0, each of which costs roughly the same as the entire Corel suite. Budget drawing packages are rare and most offer a template approach to design so don't really compete with CorelDraw 11.0.

In the following pages we'll show you how to design a company brochure using vector graphics (though of course, the processes may be applied to the creation of any document). This is a typical CorelDraw 11.0 application so, to set the scene, we'll take an in-depth look at this element of the Corel suite, paying particular attention to the new features that have been introduced in this version.

ILLUSTRATION: NATALIE WINTER

Creating a logo

Our company logo is based on a Celeron processor – its pins are 0.2in diameter circles filled in the appropriate colour. We made one pin then repeatedly copied it (Ctrl, R) 0.4in to the right until we had 19 pins. Then we selected all the pins and copied them 0.2in down and 0.2in to the right to produce a staggered row. With more copying we end up with a block of pins.
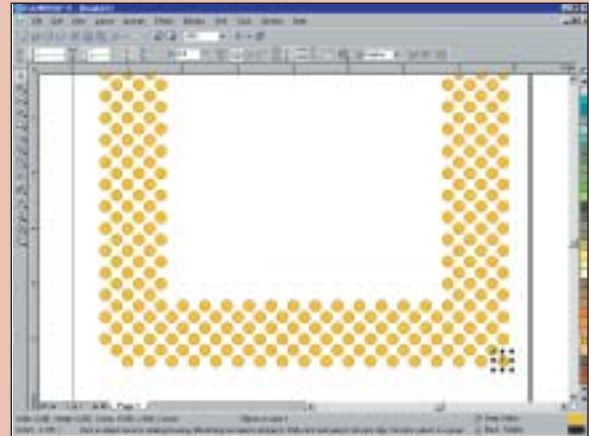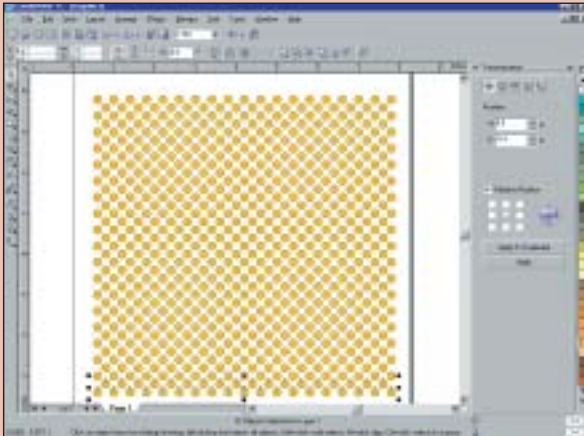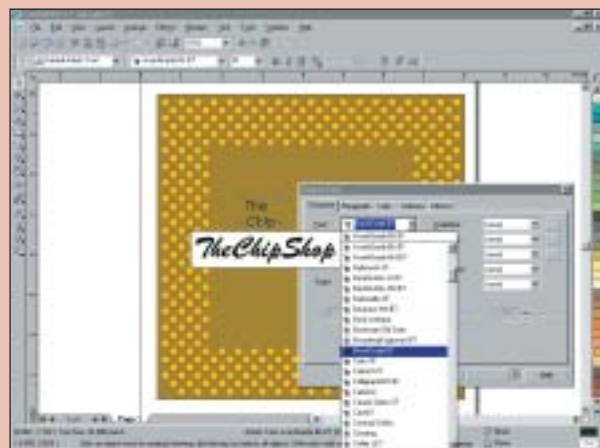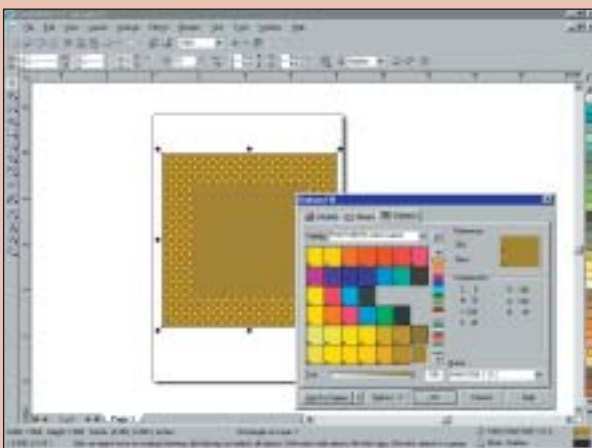

1 Choose the Ellipse tool from the toolbar running down the left of the screen and draw a small circle to represent a pin. Use the Object Size field (to the right of the X and Y co-ordinates on the horizontal toolbar) to specify a width and height of 0.2in. With this pin selected choose the colour from the fill colour bar at the extreme right of the screen. Now choose Transformations and then Position from the Arrange menu. Type 0.4in into horizontal position box and 0 in the vertical position box in the Transformations toolbar. Click the Apply to Duplicate button

2 Some of the pins we've created don't exist in the Celeron processor design so we need to delete the extraneous ones by selecting them and hitting Delete. Use the Zoom tool if necessary. First, remove the righthand pin from alternate rows and then delete a block of pins from the centre. Here we're deleting the final couple of pins in the bottom corners

Working with layers

Next we need to add the ceramic block that makes up the body of the Celeron processor. To do this we are going to draw a square round the pins and then move the square to the bottom layer of the image so it doesn't obscure the pins.

1 Choose the Rectangle tool from the toolbar running down the left of the screen and draw a small rectangle to represent the body of the processor. Use the Object Size field to specify a width and height of 7.6in. To finetune its position click on the outline with the Pick tool to select it and then drag it into place. Move the rectangle to the bottom layer by selecting it and then clicking on the To Back icon toward the right of the horizontal toolbar

2 We're going to add the name of our company, The Chip Shop, to the middle of the processor. Select the Text Tool from the toolbar running down the left of the screen, click in the correct position and type in the text. Now select the font and justification from the Format Text dialog box in the Text menu. To alter the size of an object, select it and drag one of the handles that appears. To rotate, click on an already selected object using the Pick tool and use one of the rotate handles. Save it as a separate image file

Vector vs bitmap packages

Bitmapped files are produced by digital cameras, scanners and paint packages in formats such as JPG, Tiff, BMP and GIF. These images are defined by the colour of the hundreds or thousands of pixels that make up the complete image. For example, an image with a resolution of 1,024x768 will be composed of 786,432 pixels.

A photograph at this resolution can be printed at about postcard size as the pixels will be small enough to blend into each other to the human eye. Much larger than postcard size and the individual pixels will become visible, creating jagged lines and squares of colour. Reducing the size can also cause fine detail to be lost.

A vector graphics file is quite different. It is defined in terms of basic objects – lines, curves, boxes, circles and text. Each object is defined by its basic attributes so, for example, a line is defined by its start and finish positions rather than the colour of the pixels along its length. When software reproduces the line onscreen or in print it simply calculates the position of the pixels between the two end points.

The effects of this difference become clear when you enlarge the image as this involves applying a scaling factor to the positions of the start and end points. After enlargement the file can be displayed or printed as before – the software will

Working on a grid and importing shapes
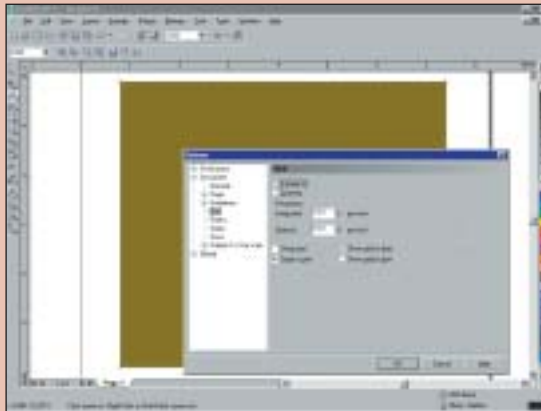
1 To specify a snap grid, select Grid and Ruler Setup from the View menu and enter 0.1in into the Horizontal and Vertical Frequency boxes. To make use of the grid, ensure Snap to Grid is checked in the View menu
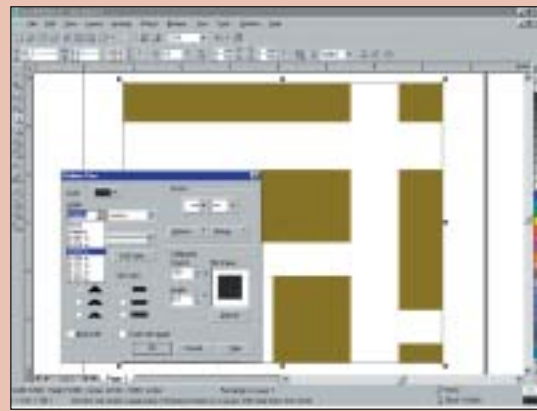
2 To represent the streets we've used the Rectangle shape tool (F6) and given each of them a white fill. By default, CorelDraw adds an outline to each shape, but we don't want them. To remove the outline from an object, select it and then click on the third icon in the flyout menu from the Outline tool in the lefthand vertical toolbar. To replace the outline of the whole map, place a rectangle with a thick outline and no fill over the top of the whole thing to rectify this
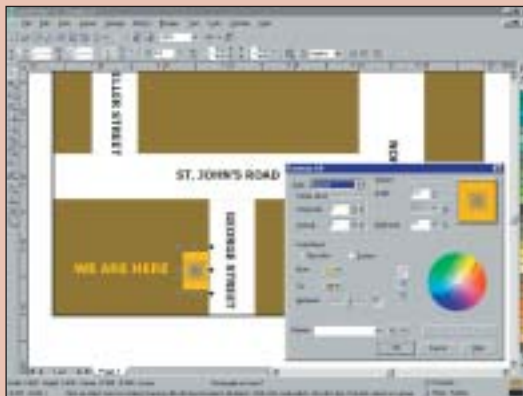
3 Having used fairly bland colours throughout we can afford to use a brighter colour and a graduated fill for the rectangle which represents our shop. For more colours or effects like Graduated Fill, use the Fill tool from the toolbar running down the lefthand side of the screen. Graduated Fill is the second icon in the fly-out menu. The Fountain Fill menu allows you to preview the effect so the easiest way to learn what each box does is to experiment
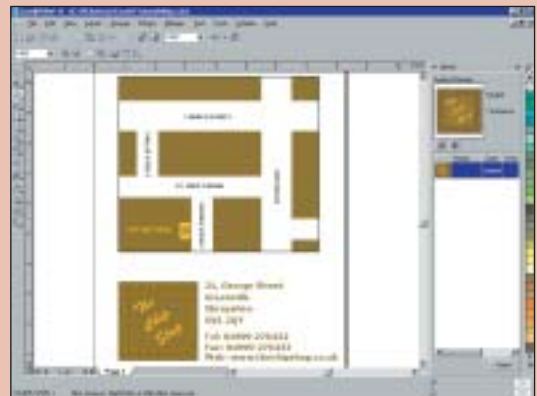
4 We saved the logo in its own file so we've imported it and, because it's going to be used a number of times in the brochure, we've made it into a symbol to save space. To import the logo go to the File dropdown menu and click on Import. To define the logo as a symbol, ensure all its objects are selected, choose Symbol and then New Symbol from the Edit menu. When you subsequently want to add another copy of the symbol, select Symbol and then Library from the Edit Menu, then pick the required symbol in the toolbar which will appear at the right of the screen and click Insert

calculate a new set of pixels according to the resolution of the hardware on which it's being displayed or printed. It's the hardware which limits the resolution, therefore, not the data in the file.

Editing drawings is also easier with a vector program as each line, box, circle and so on can be individually selected. This makes vector graphics ideal for engineering drawings, line illustrations, sketches and the like. All drawing packages provide tools for defining and editing the basic elements of line drawings. The main highlights of CorelDraw 11.0 are:

• Symbols support Most drawing packages allow you to group a set of objects so that they can be edited, moved and rotated as one. Making multiple copies of large object groups can result in very big files. CorelDraw obviates this by allowing you to define symbols stored in your file just the once yet they can be used repeatedly in your drawing.
• Smudge and roughen CorelDraw adds the ability to smudge or roughen the edges of objects, including polylines – lines that consist of one or more straight or curved segments.

• Enhanced text Choose to keep or discard the formatting associated with imported or pasted text. In addition, artistic effects can be applied to blocks of text while preserving formatting such as bullets or justification.
• Enhanced shaping functions A range of new functions can be applied to objects that have been 'shaped' – created from two or more existing objects. Corel has added Simplify, which keeps both objects but removes any overlaps, Front Minus Back which trims any overlap from the bottom object and discards to top object, and Back Minus Front which does the opposite. ■

Creating a montage
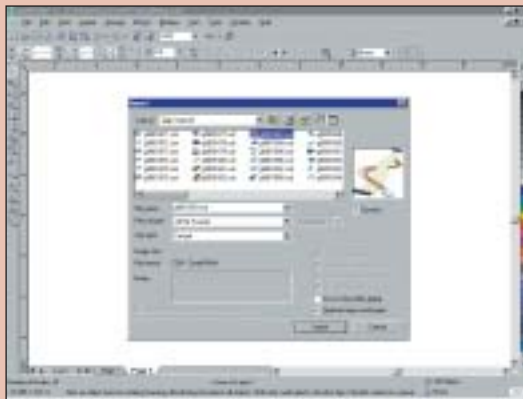
1 We want a montage of product drawings on the page to showcase our shop's products and services. We could have drawn these ourselves but, instead, we chose to use the library of clip art which comes with CorelDraw 11.0. We could also have looked in third-party libraries thanks to the vast range of file formats supported for import

2 Here we are in the process of editing a picture of a stack of floppy disks. We've made the colours more subdued so we have scope to add a splash of colour without the page looking gaudy. Imported clip art usually comprises a group of objects so it has to be ungrouped before it can be edited. Select Ungroup from the Arrange menu

1 Now we need to add some text to describe the products on offer. It's easier to edit text in a word processor than a graphics package. Because CorelDraw 11.0 permits us to keep the formatting of imported graphics, we're using Microsoft Word to create our descriptive text. All text formatting can be preserved when we paste it into CorelDraw

2 Draw the curve into which you'll paste the formatted text using the Freehand tool on the vertical toolbar. Choose the Text tool from the toolbar running down the left of the screen. Now move the pointer just inside the polygon and click when it changes to an Insert in Object pointer (when you're actually over the outline it will be a Fit Text to Path pointer). Select Paste from the Edit menu, click Maintain Fonts and Formatting in the Importing/Pasting Text dialog box and click ok