TFD 091. Typography

Introduction to Adobe Illustrator

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How does Adobe Illustrator help with unit 091?

Unit 091 deals with the techniques and conventions associated with producing text for screen based design. Working digitally there are two basic ways of generating text and graphics for the screen:

1/. Creating “bitmap” or “raster” files like those created by Adobe Photoshop

2/. Creating “vector” graphics files like the ones created by Adobe illustrator.

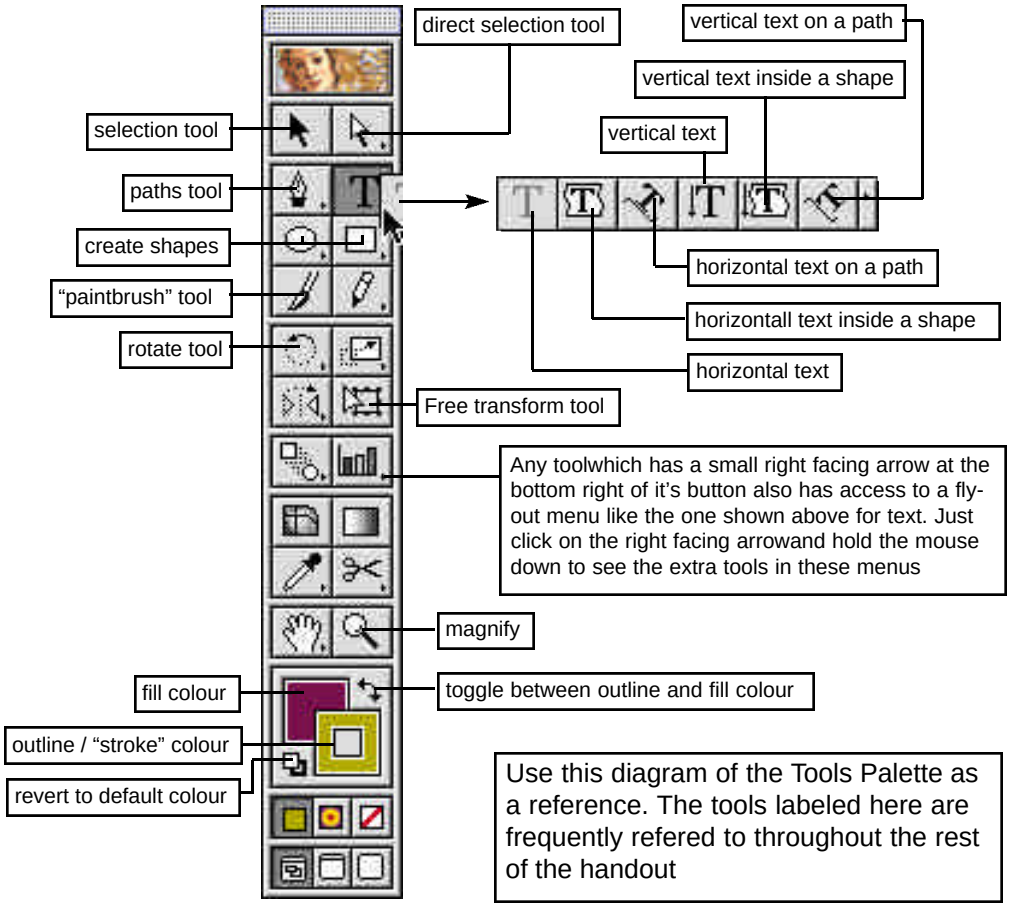
The difference between the two is simple. Bitmap images are created by assigning digital information for every one of the hundreds of thousands of pixels making up an image. Vector graphics are created by drawing lines between points, making shapes out of joined-up lines or “paths” and then filling those shapes with colours and textures.

On the whole, bitmap images are better for manipulating complex images like photographs and vector graphics are better for producing text and graphic objects.

Adobe Illustrator is an industry standard application dedicated to producing and manipulating vector graphics. You can also use it to create and manipulate text. This text can then be imported into Adobe Premiere 4.2 where it can be animated using the “motion controls” under the Clip menu (see Introduction to Adobe Premiere 4.2).

Illustrator is a powerful and flexible application capable of a great deal more than can be covered in one handout. This particular handout concentrates on the creation and manipulation of text in Illustrator and is designed to help with unit TFD 091.

The Illustrator Tools Palette



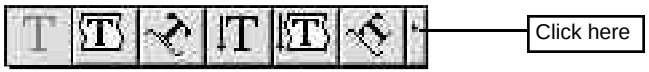
Use this diagram of the Tools Palette as a reference. The tools labeled here are frequently refered to throughout the rest of the handout

Creating Text

Creating text in Illustator is a very straightforward andflexible process.

First, select a text tool from the tool palette. The basic text tool is a letter T but by clicking and holding down the mouse over the small right facing arrow at the bottom right of the Text tool you can make a “fly out” menu appear which gives you access to a range of other text tools (see Tool Palette diagram).

Hint: By clicking on the small arrow at the far right of the flyout menu you can make that “fly out” menu appear as an independent (always visible) palette on the desk top.

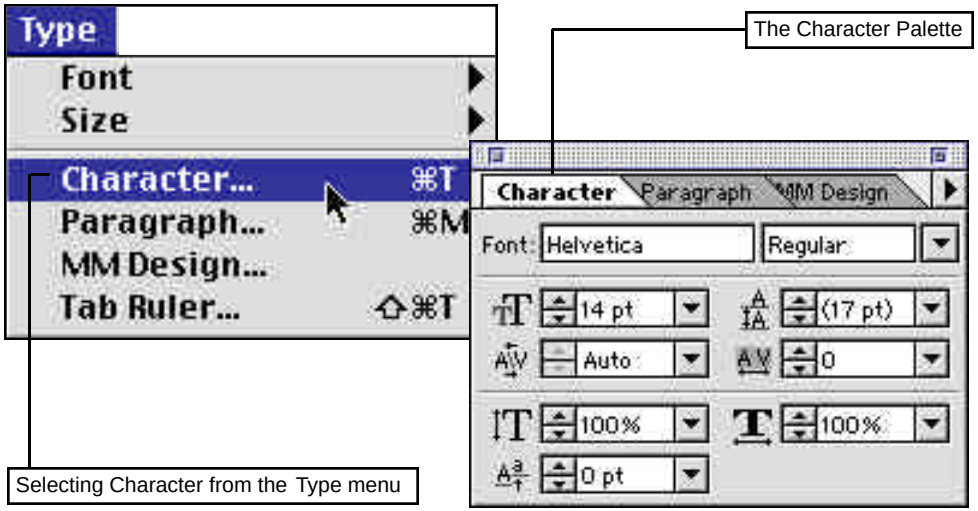


We’ll look at the other text tools in a moment, but first let’s work with the basic text tool. Having selected the text tool in the Tools Palette, Simply click at the point on the document where you want to create your type, and type in the letters you require. You should see the letters appear in whatever font is currently selected, at the currently selected font size and in the currently selected colour.

Text created using the text tool

Our first job then is to format the text we have created, to meet our requirements.

Formatting Text: The Type Menu and The Character Palette



By selecting Character from the Type menu we can display the Character Palette, which gives us access to the font attributes of the text we have just created. By selecting the text and then changing the attributes for that text in the Character Palette we can change the appearance of the text, for example its Font, Style and Point size.

We can select text in one of two ways: either by dragging across the letters using the text tool’s “I beam” cursor (in which case the selected text looks like this) . . .

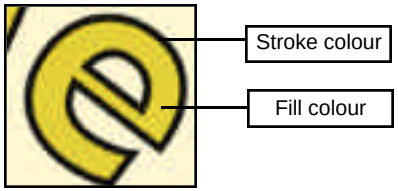
Text created using the text tool

. . . or by selecting the Selection Tool from the top left of the Tools Palette and using that to click on the text. This latter option will display the normally invisible “bounding box” surrounding the text, as shown below.

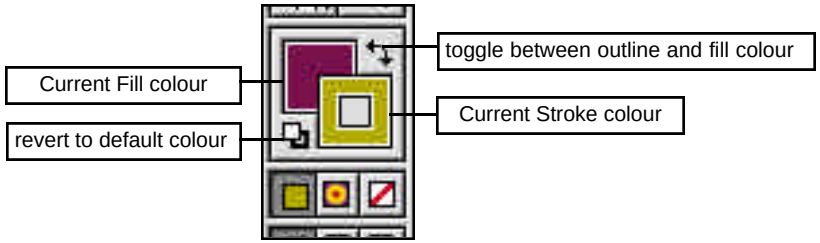
Text created using the text tool

Changing Text Colour

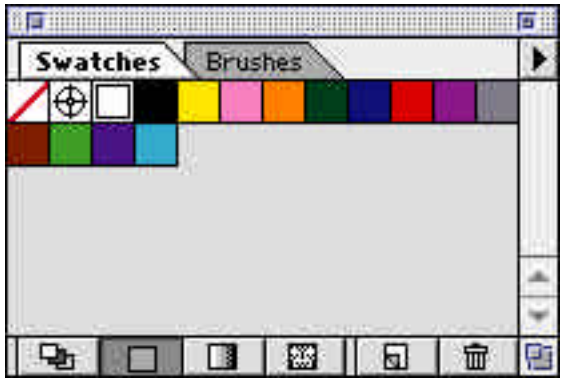
The text we are creating is comprised of two parts: an outline or “stroke” and a centre or “fill”, both of these can be coloured separately or left uncoloured. In the example below the outline or “stroke” is actually coloured black, while the inside of the letter, or the “fill” is coloured yellow:



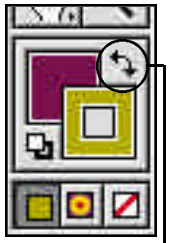
The currently selected stroke and fill colours are displayed in two swatches at the base of the Tools palette.



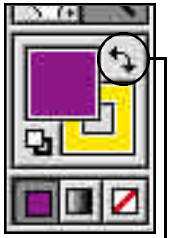
The Colour Swatches Palette



New Fill and Stroke colours can be selected from the Swatches Palette. To determine which will be recoloured (Fill or Stroke) when a new colour is clicked on in the Swatch palette it is necessary to select either the current Fill or Stroke colour in the Tools Palette (see below) . . .



In example **A** the stroke colour is the upper-most of the two swatches and Therefore selected. Any colour now selected in the Swatches Palette will change the current stroke colour



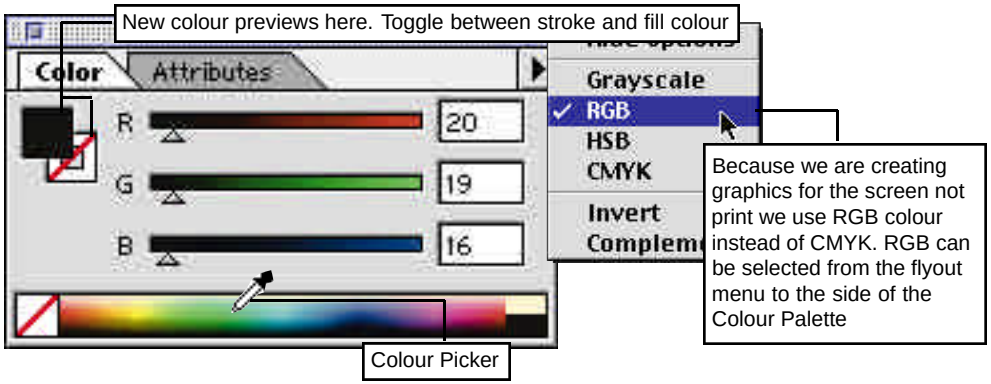
In example **B** the Fill colour is the upper-most of the two swatches and Therefore selected. Any colour now selected in the Swatches Palette will change the current Fill colour

A

B

To toggle between the Fill and Stroke swatches in the Tool Pallete (bringing the preferred one to the fore) we click on the Toggle Arrow.

New colours can be created using the Colour Palette



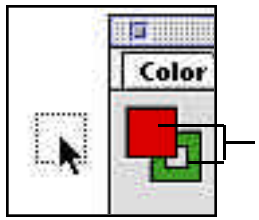
Because we are creating graphics for the screen not print we use RGB colour instead of CMYK. RGB can be selected from the flyout menu to the side of the Colour Palette

To create a new colour using the Colour Palette, either:

1/. drag the RGB sliders to create the correct blend. The new colour will automatically preview in the "currently selected colour" swatches both in the Colour Palette and in the Tools Palette.

2/. Use the eye dropper, which automaticaly appears when you move over the colour picker at the bottom of the Colour Palette, to select a new colour. Again the new colour will appear in the Colour and Tools Palettes.

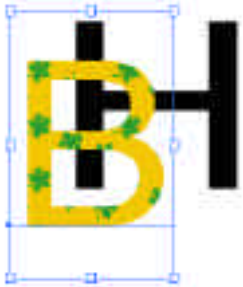
3/. Type an R, G or B value into the appropriate field to adjust colour. Again the new colour will appear in the Colour and Tools Palettes.



It is also possible to store your newly created colour in the swatches window for futrure use.

To do this simply click on the new colour, where it is previewed in the Colour Palette and drag the preview swatch into the swatches window.

Applying colour to objects



When selected in the Swatches Palette or the Colour Palette a new colour will automatically be applied to any selected objects. A selected object is either a shape you have clicked on with your selection tool or a piece of text highlighted with the text tool or selected with the selection tool.

In the example shown left colour is applied to the slected object (the one surrounded by the bounding box) but not to the unselected letter 'H'.

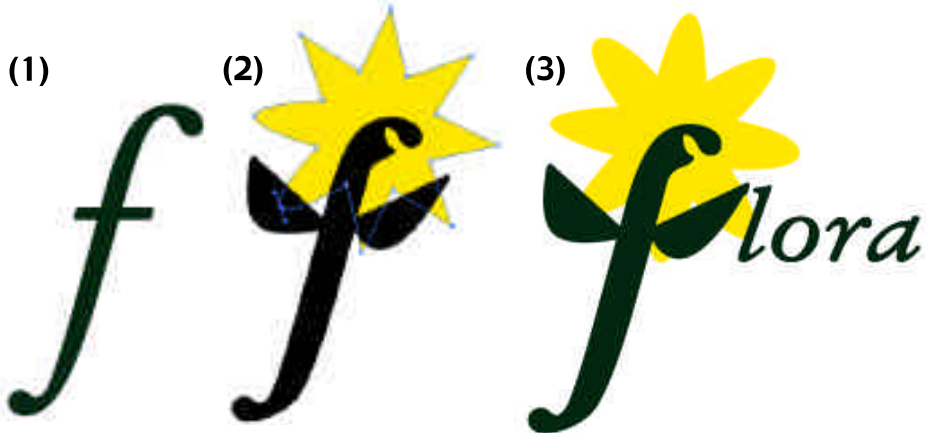
Resizing Text

Text can be resized by first selecting the text in question using the selection tool and then dragging on one of the blocks around the edge of the object's bounding box thiswill cause the box (and the text inside it) to change in size.

Hint: Hold the shift key down while dragging to retain the object's original proportions

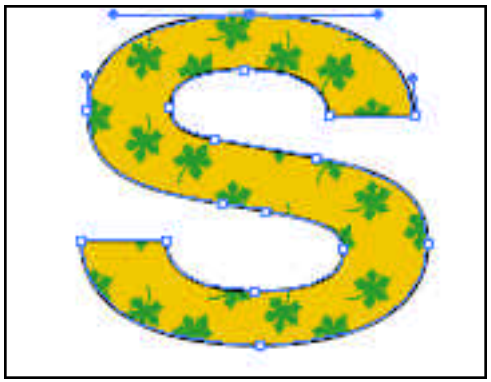
Changing text into paths: "Create Outlines"

One of the most important features of Adobe Illustrator, so far as manipulating text is concerned, is the command: "Create Outlines" which allows us to turn any text we create into graphic objects. This in turn allows us to alter the appearance of text by manipulating the lines which actually make up letters.



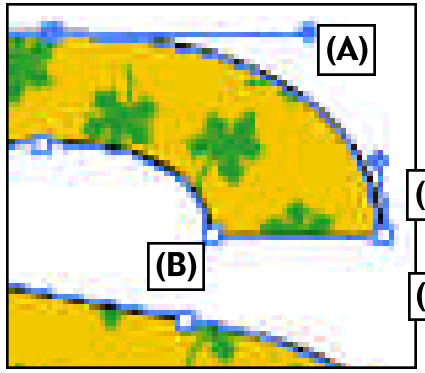
Above, a letter (1) is converted to a series of paths (2) using the "Create Outlines" command and then combined with a graphic object (a star) which is manipulated too and finally more text is added (3).

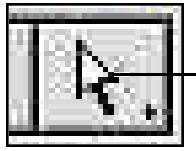
The "Create Outlines" command can be located under the "Type" menu.



Select it and any selected text will be converted to a series of component paths. The paths are made up of lines running between points. It is these points and lines that can be manipulated to change a letter's shape.

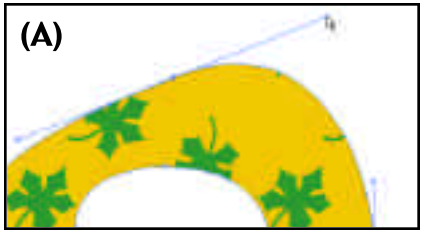
To select and drag lines to adjust the letter's shape use the "Direct Selection" tool at the top right of the Tools Palette. Use this tool to click on the points around the outline of the letter and drag them to adjust the letters shape.

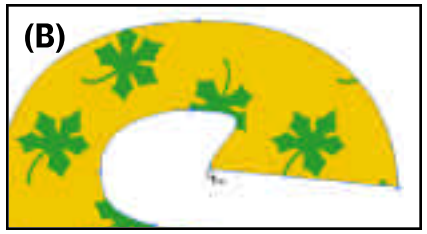




(A) Use the Direct Selection tool to click and drag on points like these to adjust the shape of a curve. Such curves are called Bezier Curves.

(B) Use the direct selection tool to click and drag on these points to change the position of points and therefore the object's shape.



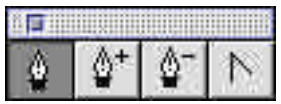


Text on Paths: Creating paths

Adobe Illustrator also allows us to attach text to paths and given illustrator's ability to draw and manipulate complex paths this means that text can be made to flow around sophisticated shapes.

To draw paths along which we can flow text we use a number of the tools from the Tools Palette.

The first set of tools which are used to draw paths consist of basic shapes. Text can be flowed around the inside or the outside of these shapes.



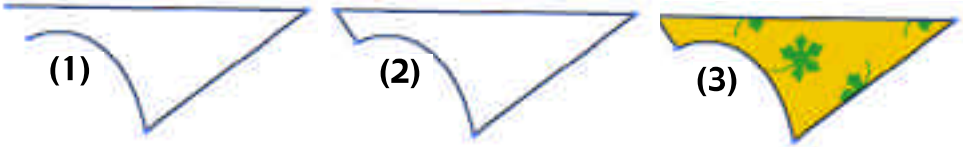
The second set of tools used to draw paths are the Path tools. these tools can be used to create either straight-line or curved paths along which text can be flowed.

To draw paths using a shape tool (available from the Tools Palette), simply select the required tool and, moving over your document, click and drag. In this way you can create spirals, stars, polygons and elipses . . .

Hint: the number of points on a 'star' shape and the number of sides on a polygon shape can be increased and decreased by clicking on the up and down cursor keys while dragging a shape tool to create a shape.

To draw paths using the Path Tools we first draw a series of points using the pen tool. Each point will automtically link up with the previous one. To create a 'completed' shape add a final point (by clicking with the pen tool) at the same position as the first point; joining the two ends of the path.

Below (1) is an open path (2) is a closed path and (3) is a closed path filled with colour. Only a closed path can be filled.

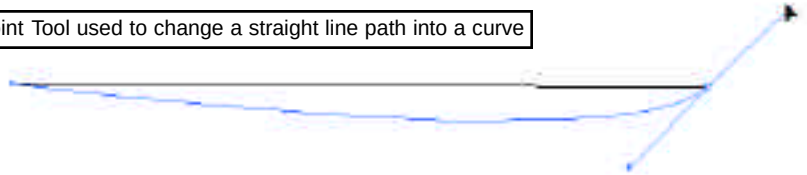


Manipulating Paths

Manipulating paths you have drawn is straightforward. Points can be moved and the shape of the object changed by clicking and dragging on those points using the Direct Selection Tool from the Tools Palette.

Initially straight lines can also be converted to curves by using the Convert Point Tool from the Paths Palette. Having created a straight line between two points using the Pen Tool, select the Convert Point Tool from the same "flyout palette" as the Pen Tool. Click the Convert Point Tool over one of the two points at the end of the line you have created. The selected point can now be dragged using the Convert Point Tool to change the straight line into a curve (see opposite). Once you begin to drag, the point in question acquires two extra handles which, when dragged themselves, allow you to control the shape of the curve created.

The Convert Point Tool used to change a straight line path into a curve



Extra points can be added to a path using the pen tool with a '+' sign next to it.

Similarly, clicking on a point with the pen tool which features a '-' sign will delete the point in question.

Adding Text to a Path

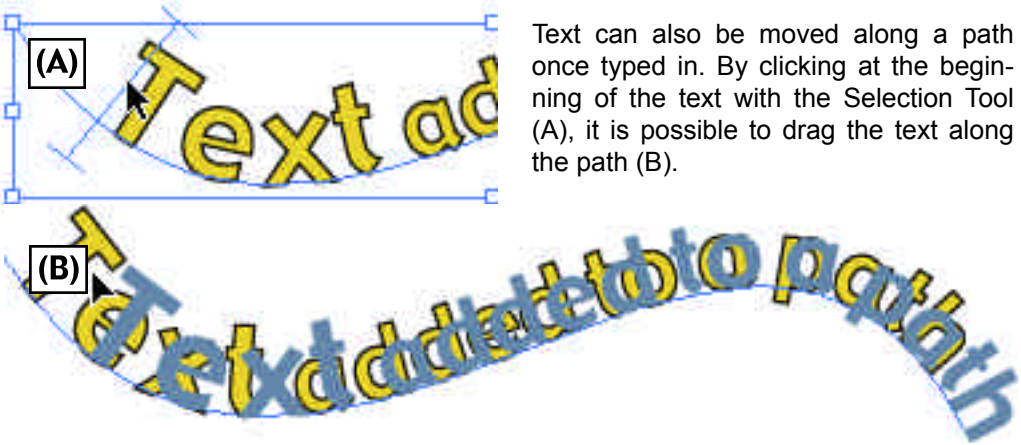
Once a Path has been created, using either the Path Tools or the Shape Tools, text can be made to flow along it. Achieving this is simply a case of selecting one of the Text tools which allow us to add text to Paths, selecting the path in question and then typing in text along that path.

Just to remind you, the two text tools which allow you to add text to a path are to be found in the Text Tools "flyout menu" in the Tools Palette. They look like this: On the left is the "horizontal" text on a path tool and on the Right the "vertical" text on a path tool.

The text shown below was created by selecting the "horizontal" text tool and clicking with it on a path to create a flashing cursor. Text was then typed in and automatically followed the shape of the path.

Once text has been added to a path, the path can still be reshaped using the methods explained above. The text on the path will move to fit the path's new shape

Moving Text along a Path



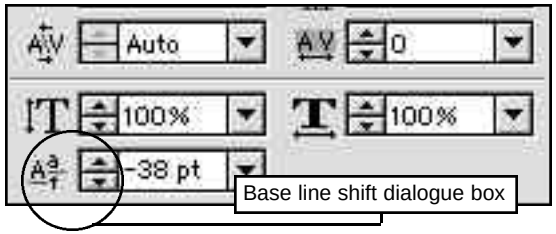
Text can also be moved along a path once typed in. By clicking at the beginning of the text with the Selection Tool (A), it is possible to drag the text along the path (B).

Whilst attached to a path, text can also continue to be formated and its fill colour & outline changed.

Making Text cross over a path

Text can be made to flow either side of a path. There are two ways of making the text you have created on a path move to the other side of that path.

The first option is to select the text (and path) by clicking on the text with the Selection tool and then to drag the text over the line of the path to the opposite side. When you do this the text "flips" over to the other side of the path. This method gives you a "reverse" image, with the text pointing in the opposite direction once it has flipped over to the other side of the path.



The Second option makes use of the baseline shift command in the Character Palette (see left).
Adjusting the value for baseline shift for selected text on a path to a negative number drops the text on the path, below that path this time without reversing it

Filters

As if all this wasn't enough, we can also apply a range of effects and Filters to our text and graphics objects in Adobe Illustrator. Some of these Filters, which can be found under the Filter Menu, can be applied to selected text straight away. These include drop shadow . . .

Other filters require you to change your text / graphics from vector graphics to bitmaps or "raster" image files. Before you take a step like this it might be worth while to illustrate some of the key differences between Bitmap files and Vector Graphics files.

Bitmaps & Vector Graphics

On the left we can see a Vector Graphics file magnified to 1600% and on the right the same file converted to a bitmap, also blown up to 1600%. You can't help but notice that the Vector Graphic is still smooth edged while the Bitmap has pixelated and appears very blocky.

These differences occur because of the way in which the two different kinds of files are created. As we said earlier, Vector Graphics are created by drawing lines between points. This means that images can be easily resized and reshaped since doing so is just a matter of moving the points which define a shape. The lines which make up the shape's outline are then automatically redrawn to match the new positions of the points.

Bitmap image files (eg. Photoshop files) on the other hand are composed of small dots or “pixels”, each pixel in the image having information about its own individual colour and brightness “attached” to it.

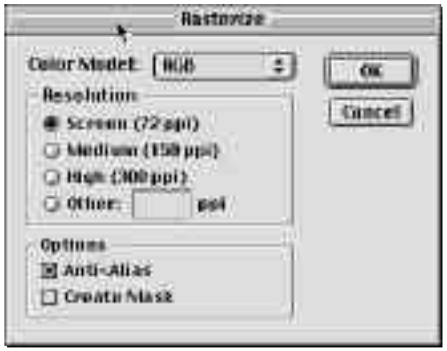
This pixel based format means that Bitmap images contain a finite amount of information (defined by the number of pixels which make them up). Enlarging a Bitmap image does not add extra information but instead “stretches” the existing information over a greater area. This causes the image to become “blocky” as the original pixels effectively increase in size.

This method of storing data does mean though that Bitmap files are ideal for use with photographs for example, which contain many subtle differences in tone and colour within a single image. Bitmaps also allow for a more subtle and effective use of filters. Below we can see a radial blur filter applied to a Bitmap image in Illustrator.

Rasterising Images

So far we have worked with Vector Graphics (which Illustrator automatically creates) but to apply filters like the one above in Illustrator we need to convert our images to Bitmaps or “Raster” files.

To “Ratsreise” an object in Illustrator first select the object with the Direct Selection Tool and then select “Rasterise” from the Objetc Menu. This process will open up the Rasterise Window . . .



With the Rasterise window open, select RGB for the colour model and select one of the resolutions on offer (72dpi is the same resolution as your Mac monitor so in theory this would be the resolution to choose for screen based work).

Checking the “Anti Alias” oprion will make the edges of any object you have selected slightly blurred or softened once rsterised.

Once you click the OK button in the Rasterise window any selected Vector Graphics objects will be changed into a Bitmap. This process is not reversible.

With your object/s converted to a Bitmap you can now add filters in Illustrator like “Radial Blur” shown oppposite, which are ‘greyed out’ and unavailable when an object is still Vector based.

Exporting Images for Adobe Premiere 4.2

Adobe Illustrator files cannot be imported directly into Adobe Prmiere 4.2 however objects like text and graphics can be exported from Adobe Illustrator in a file format that is acceptable to Premiere 4.2

The graphics file format readable by Premiere 4.2 is the PICT file. An object can exported from Illustrator in PICT format.

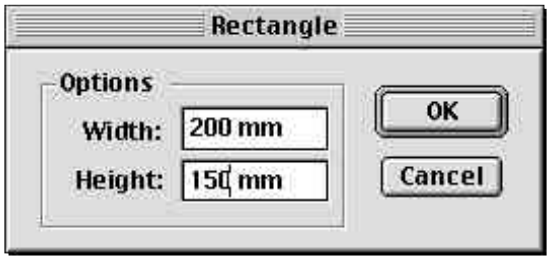
What follows is an example of how to create an object in Illustrator for export to Premiere.

1/. Create the graphic object you want to export.

2/. Use the Rasterise command under the Object menu to turn the object into a bitmap.

3/. Create a rectangle which has a 4:3 width to height ratio and which is large enough to fit around the object you have created.

Click on the Rectangle Tool in the Tools Palette and then click somewhere on your document with the cross hairs which now appear.



The Rectangle Window appears. You can type in values for width and height. In the example above, the rectangle's width is 200 and its height 150, an example of a 4:3 ratio (other 4:3 ratios include w320 and h240 or w160 and h120).

4/. Select the rasterised object with the selection tool and then, holding the Shift key down, select the box you have just created by clicking on that.

5/. With both objects selected, choose the 'Group' command from the Object menu.

6/. With the two objects grouped use the Rasterise command under the Object menu to turn the group into a bitmap.

7/. Now select Export from the File menu.

8/. From the file format options in the Export Window choose 'PICT' and, having given the new file a name, save it. This PICT file can now be imported into Adobe Premiere 4.2

Rasterising and Resolution

When an object is rasterised the resolution we choose is significant. 72dpi is the resolution of your monitor and if you export an image at 72dpi it will appear sharp on the screen at its original size. If you enlarge it, it will begin to pixelate. If you export at a higher resolution you can avoid this problem, but the higher the resolution the bigger the file size.