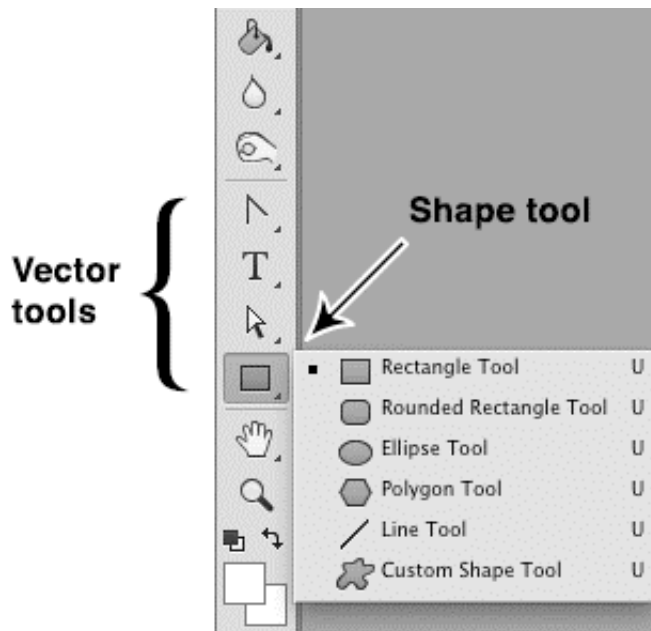


Photoshop: Introduction to Shapes

nigelbuckner 2013

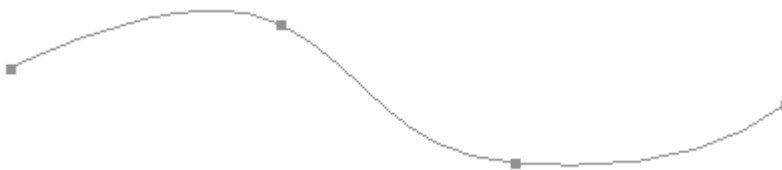
This handout is an introduction to get you started using Shapes.



What is a shape?

The Shape tool makes it possible to draw shapes such as rectangles, circles, lines and so on. Shapes can have strokes (outline), be filled with colour and have other effects applied.

There is a characteristic difference between a shape and an image such as a photograph. A shape is created by what is called a *vector path* (this is similar to how type is created).



A path

A vector path is a line that is drawn by co-ordinates. For instance a line going from A to B takes a particular route. The points of the route are mapped by co-ordinates in a similar way to using grid references on a map. When using the Shape tool, the beginning and end points of the path are joined to make a shape. The shape can then be filled with colour.

When a shape is drawn it appears in its own layer in the Layers palette. Shapes and pixel objects can be used in the same document but they cannot be mixed on the same layer.

Shapes are useful for creating things such as logos and graphics. Because they are created by vectors it is possible to resize and transform them many

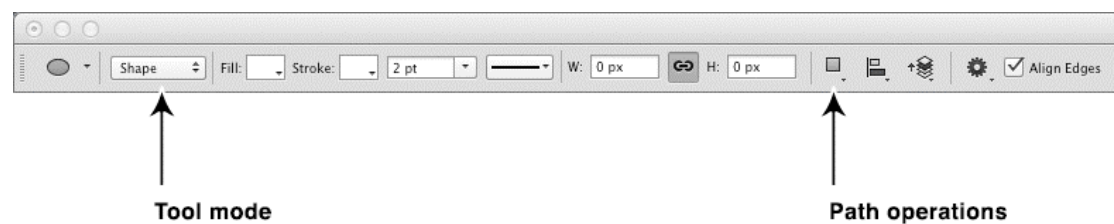
times without any loss of quality (unlike pixel based images). Software such as Illustrator is a vector drawing programmes and is used extensively in commercial art for creating logos and illustrations.

Filters cannot be applied to shapes without converting them to pixels first (rasterizing).

Getting started

Create a new document, File > New. The Shape tool can be found in the vector tools section in the Tools panel. Holding down the mouse on the Shape tool in the Tools will reveal the alternatives for drawing different shapes. Choose the Ellipse shape.

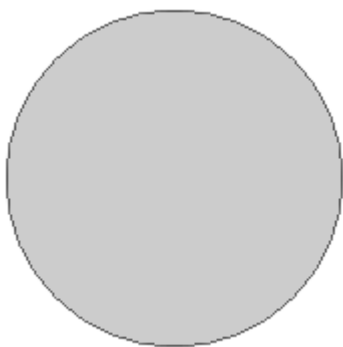
In the Options panel ensure that *Shape* is the selected tool mode. This will create a shape that can have stroke and fill applied.



Choose a colour for the shape. This can be set from the Options panel before drawing the shape or after drawing the shape.

Click and drag on the document and draw an ellipse. Holding down *Shift* as you draw will create a perfect circle. The shape can be repositioned with the Move tool

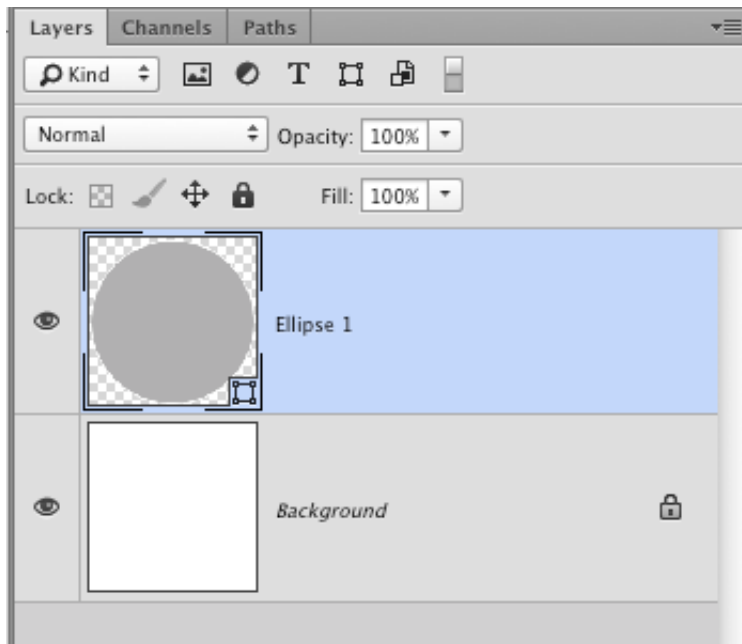
When the shape is drawn it will display the path as a narrow grey line.



Shape showing outline (path)

This path is there as a guide to indicate its position and to show that the shape is currently *active*. This path will not be visible in the final artwork. When the path is visible the fill and stroke can be changed from the Options panel.

In the Layers palette the shape appears on a new layer.



Double clicking on the shape thumbnail will open the Colour Picker.

Draw another shape

Drawing another shape results in a new shape Layer, providing New Layer is the selected option in *Path operations* in the Options panel. If the path for a previously drawn shape is visible then the new shape will use the same fill and stroke properties. These properties can be changed after drawing.

If you wish to set the fill and stroke properties for the new shape before drawing, then the path for the previously drawn shape must not be active. To deactivate it, select another non-shape layer in the Layers palette.

Editing a shape

The form of a shape can be changed in a number of ways:

- Transform/Free Transform
- Combining with another shape
- Manipulating the path

Transform/Free Transform

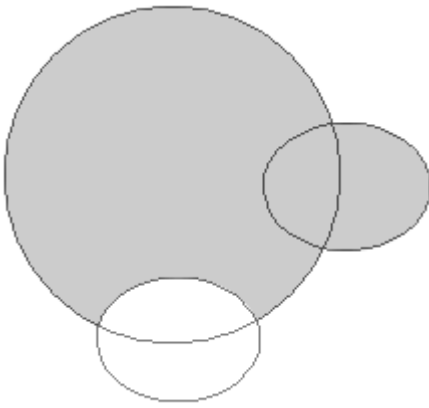
Go to Edit > Transform or Free Transform. The shape path does not need to be active for this operation.

Combining with another shape

Combining shapes enables you to *add to*, *subtract from* or *intersect* a shape. This is achieved by drawing a new shape on the same layer as a previously drawn one.

The method on how the new shape interacts can be chosen from the Options panel in *Path operations*.

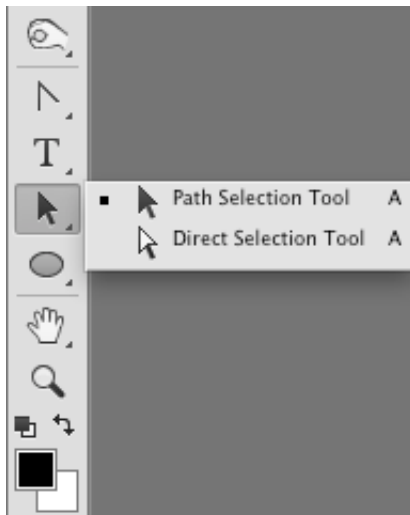
Draw the new shape so that it overlaps the first shape. The two shapes are now combined on the same layer and they can be moved together when using the Move tool. Shapes on the same layer cannot have different fills.



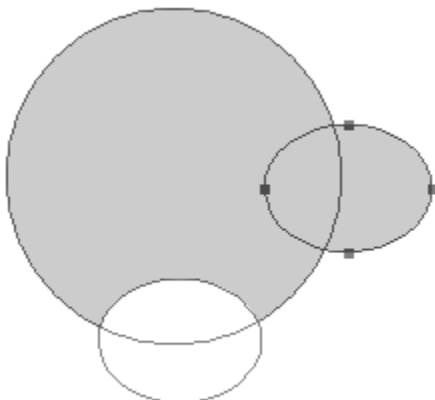
Three shape paths are combined in the illustration above. Notice that all three paths are visible and have not combined to make a new single path. We can use this to our advantage because it allows us to reposition the individual paths if necessary.

Repositioning combined paths

The shape tool has its own special path selection tools.



Holding the mouse on the Path Selection tool will reveal the Path Selection and Direct Selection tools. Choose the *Path Selection* tool and click on one of the combined shapes in the document. The selected path shows the anchor points of that path (more about these in *Manipulating a path* below).

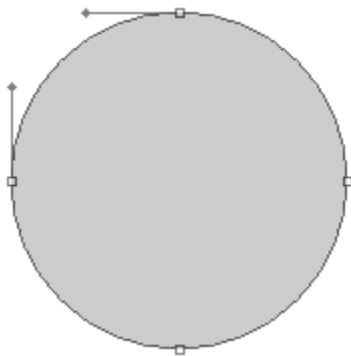


The path can now be repositioned by dragging with the cursor when placed over the shape or path.

Manipulating a path

Using the Direct Selection tool can alter the path of a shape.

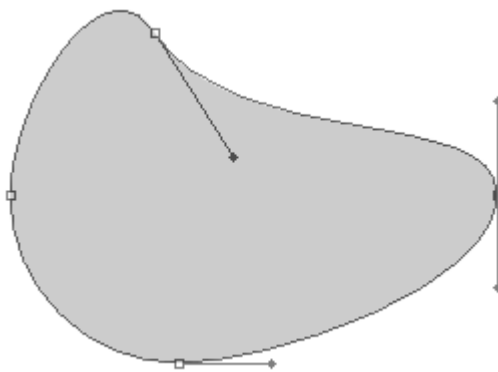
Choose the Direct Selection tool and click on the path of the shape. You will see that the anchor points of the shape are revealed along with two stems coming out at a tangent from the path. These are known as *Bézier* handles.



The anchor points reveal that the path of the circle is made from four segments.

With the Direct Selection tool, drag an outer end of a Bézier handle and move it. This will change the curve of the shape.

Click on an anchor point on the path to highlight it and then move it. This will move the path to another position.



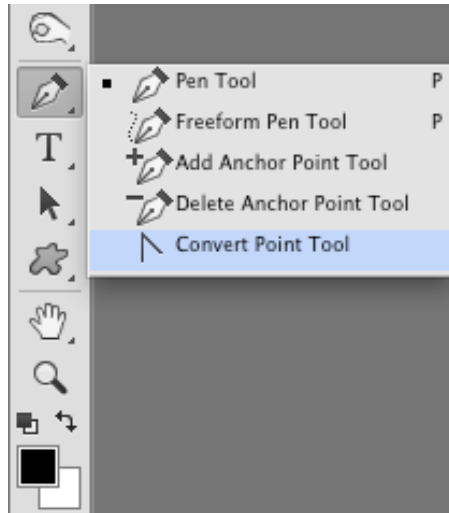
Moveable anchor points are those that are filled with grey. Empty anchor points will remain in position until selected. It is possible to use the arrow keys to fine-tune the position of highlighted anchor points. Shift click on anchor points to select more than one.

The whole shape can be repositioned without altering it by using the Path Selection or Move tool.

Shapes with corners

Shapes that have corners e.g. rectangles, do not have Bézier handles. Selecting the anchor points on these shapes with the Direct Selection tool only enables repositioning of the anchor point.

Corners can be changed into a curve and given Bézier handles by using the Convert Point tool.



To change a corner to a curve, click and drag on it with the Convert Point tool. This will pull out Bézier handles and adjust the path. When doing this it may be that the curve is drawn out so that the path overlaps itself. If this is not required, simply change direction when dragging the Bézier handle.

In the same manner, an anchor point that is a curve can be converted to an angle. To do this, simply click on the anchor point for a curve with the Convert Point tool.