



Part 3

With Lloyd Humphreys

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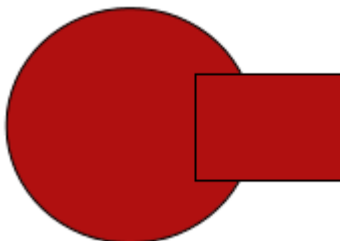
Combining Objects

Bitmap Images versus Vector Images

The difference between Bitmap and Vector images is barely visible at 100% zoom. However, when you zoom in on a Bitmap, quality deteriorates. Blend performs what's called "Anti Aliasing", which fills in the edges with more subtle shades of the same colour, to give you the impression the corner or curve is smoother. When you save a Bitmap image, you're essentially saving the pixels. Vector images are far different. They're rendered using mathematical techniques and plotted points, so no matter how close you get, the curve will be perfect. This is because instead of saving pixels, you're saving the formula to create that image, which means it will scale better.

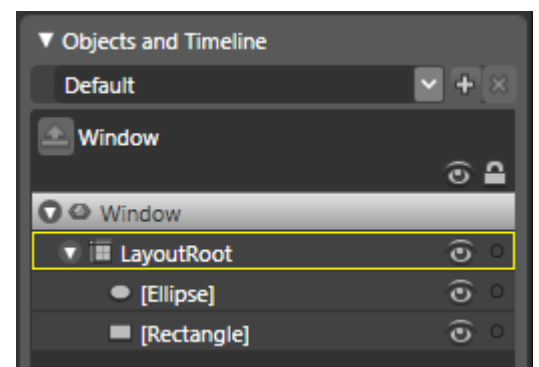
Shapes

In Blend, creating shapes is simple. You simply select shapes from the Shapes toolbar; in the Toolbox. However, there is some more to it. Holding Shift, as expected, creates a perfect shape. Holding Shift+Alt allows you to create a shape from the center outward.



As you can see here, these two shapes are overlapping. The ellipse is behind the rectangle. In the visual tree, this shows as to the right.

Note how "Ellipse" comes first, followed by "Rectangle". This is because the ellipse is at the back, and the rectangle is on top. When the rectangle is sent to the back, with the ellipse on top, they switch places on the visual tree.

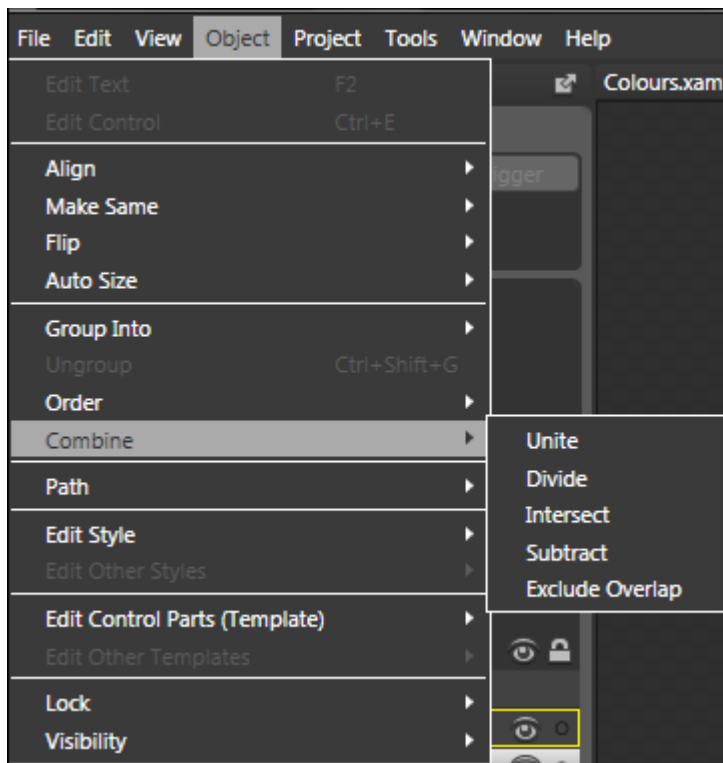


The Visual Tree when the rectangle is on top, and the ellipse below.

Combining Shapes

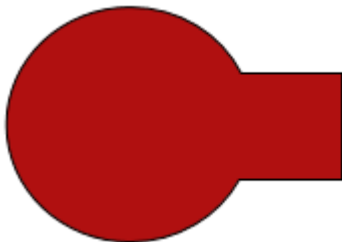
You can also combine shapes, or "paths". Select the two objects by clicking on one, holding Shift and clicking the other. In this case, we'll use the two shapes shown above. There are 5 different types of combination in Blend – some definitely less useful than others. These techniques are destructive, meaning you won't get your objects back unless you "undo" them.

Learning Expression Blend



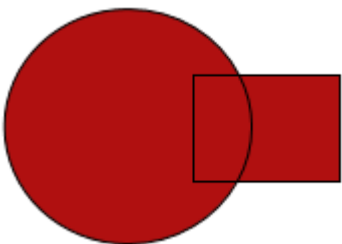
To combine objects, select them, then click Object, Combine and then select one of the options. What they do is listed below.

Unite



Uniting the two objects has the following result. The two objects are merged into a single object, named "[Path]" in the Visual Tree.

Divide



This merges all of the objects but leaves all the lines. I don't personally see how it would be of much use, usually.

Intersect



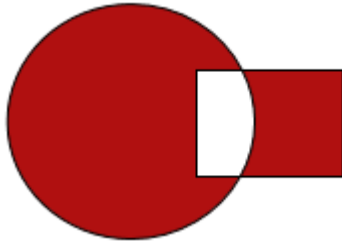
This removes everything apart from the intersection where the two shapes overlap.

Subtract



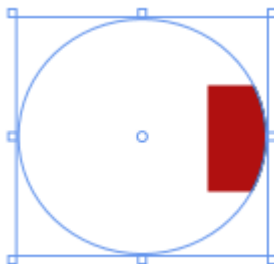
This removes the bottom image and overlap, leaving only what's left of the overlaid shape.

Remove Overlap



This removes the overlap. I don't see much point in this either.

Another way of shaping existing shapes is Clipping. It's somewhat pointless but I suppose you could implement it quite powerfully. Select both, click Object, Path, and Make Clipping Path. The result:



This is non-destructive, as when the object is selected it is still there; just a part of it is filled. When it's not selected, only the red area shows up. Useful to an extent. The rectangle has completely vanished however.