Image Edges

If you want to build a scene out of pieces with edges that match exactly, there are some caveats. Even if pieces appear to fit perfectly on the PC, they may not fit correctly after scaling, rotation, and positioning on certain platforms. The problem has to do with GPUs treating pixels at the border of a polygon differently than pixels that are fully within the polygon. This can cause gaps to appear between pieces.

For example, if you had a scene that was static except for a small part that was animated, your first thought might be to break it into two pieces, as shown below. One piece would be a sprite for the animated part. The other would be a big, static bitmap with a transparent hole for the sprite. Unfortunately, this could lead to gaps appearing on certain platforms if the scene was not displayed 1 to 1.

Again, this is because the edges of the sprite are polygon edges, but the edges of the transparent hole are probably fully within their polygons. If the pieces need to fit together exactly, all the important edges must be polygon edges. We can force this by cutting up the background into more pieces and drawing them separately, as shown below.