Using the script
"Path-referenced Scale, Move, and Rotate"

One use for this set of scripts is HDR work.

We'll merge these two images taken at different times so that the warm glow in the windows of the evening picture appears in the daytime shot.

Find the script at the Gimp Plugin Registry at
http://registry.gimp.org/node/26974

The script file is
"SS-path-referenced-scale-move-rotate_v1-0.scm"

Visit my page at savvysaffer.deviantart.com and leave a comment!
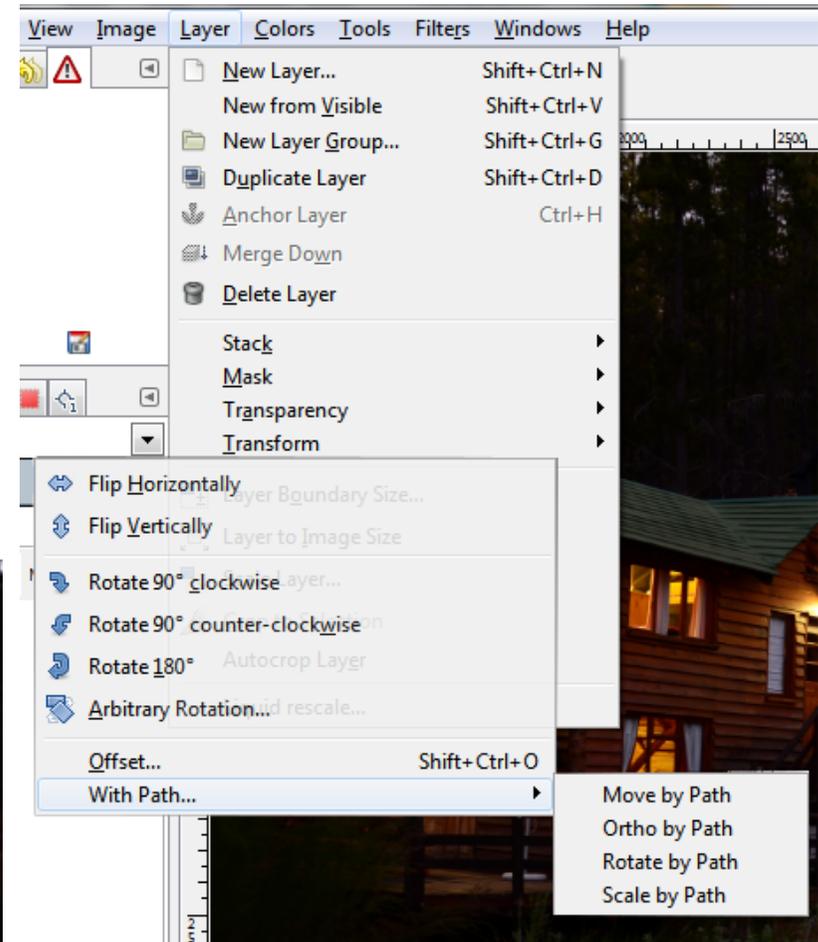
The two layers must be aligned with one another. It is clear by toggling visibility of the top layer that the scaling is different and one image is slightly rotated. We need to fix that.

First, scaling. The longer we can make our reference lines, the more accurate the final scaling will be. There's two good spots we can use, one on the driveway lamp on the right, and a spot on a treetrunk on the left.

I make the top layer invisible (it will be scaled) so I can line up the spots on the reference image. Then I make the top layer visible, ctrl-click for a new stroke, and mark the same two points on the top layer. I made blend mode "Value" transparency 50% to see the two layers. Then I selected "Scale by Path". Done!

The picture above is after scaling. The windows look the same size and the roof length seems good. Obviously the two layers are still not aligned properly, so no we have to get at least one point properly aligned. On to the Move by Path tool.

Now that the two layers are scaled properly we can move them into position. I put blend mode back to normal, deleted the previous path, and with a new path on the top layer I select a reference point that needs to move over a spot on the lower layer. I want to find a spot that has an easy reference for the final rotate into position. Then I switch visibility and find the same spot on the lower image. "Move FROM here TO there". I put blend mode back to "Value" transparency 50% to see the movement and click on Move by Path. Done!

After the move, a new three-point path will appear. Do not move the corner point! It is the same point we moved to register the two images!

Nearly there. The two layers are pretty close now, but the walls are not aligned yet. The bottom-right anchor on the path is for the top layer and the top anchor is for the bottom reference layer. (Yes, I know! The script was already published by the time this tutorial was made… Perhaps version 2 will switch the two!)

A three-point path defines by how much a layer must be rotated. The first point is the point on the top layer that must be rotated into position. The second point marks the centre of rotation, and the last point is the point on the lower reference layer the top layer must be rotated towards. "Rotate this point about this centre until it is over this line" If "Move by Path" was used, this path is already drawn for you.

I like to use the layer mode "Grain Extract" to check the final alignment. The closer the two images are to registration, the more grey and featureless the image will appear. The layers may need a little fine tuning of position and scaling for perfect registration, but these tools bring the image very close in less than a minute. Have fun!

First, I check the image to see that it is actually straight. I pulled a horizontal and a vertical guide to see how straight things were.

Not good. I created a path along one of the edges that should be vertical and zoomed right in to place the end points as accurately as possible and then zoomed out again.

Then I clicked
<Layers/Transform/With Path…/Ortho by Path>

The image turned to bring the path to the vertical. If I'd used a horizontal path, it would have turned the same amount. A third anchor point would have marked the centre of rotation id the centre of the image was not good enough.