

UV Projection and texture sheets.

By Alan Maxwell 13th March 2009



With Decal sheets you can actually shift the UVs of your model geometry to line up with pre-laid textures on a texture sheet of your design and making. For example you could create a 2K texture sheet put some concrete in one area, metal in another, bricks in another then allocate the UVs accordingly through various planar maps.

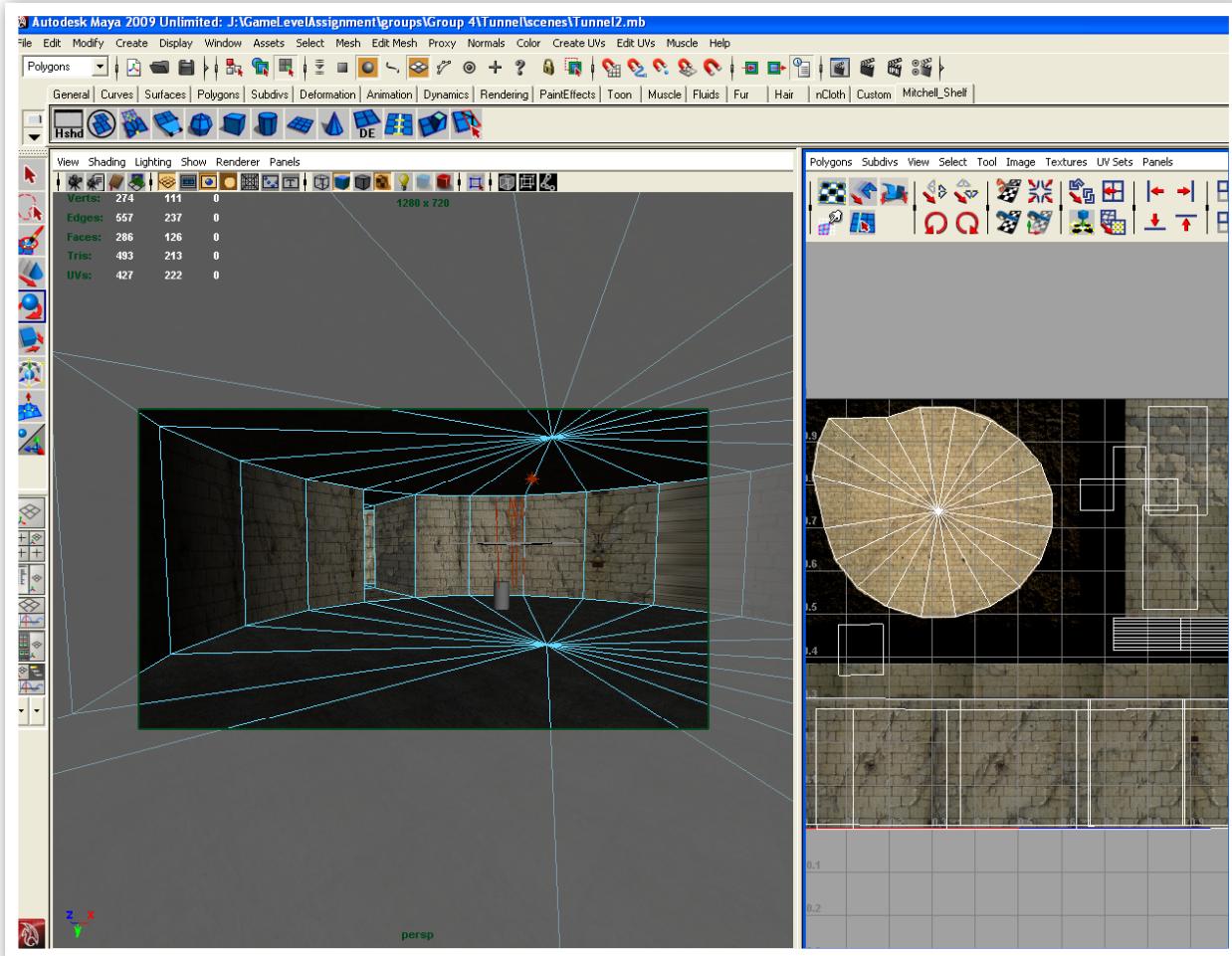


Fig. 2: Mitchell's Perspective/UV texture Editor layout.

In the examples shown here these are actual models from the Sydney Cert IV class games project.

The roof of the cavern shown above was planar mapped with a projection coming down on the Y axis. In other words projecting straight down. The wall textures were mapped with planar projections coming flat on largely X and Z axes.

Remember to delete history once you are happy with the UV layouts. If not you will be in trouble when you move the geometry, the texture will swim across the surface.

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We are looking for uniformity in the UV layouts otherwise it means you'll need to paint textures with different scales across the texture map.

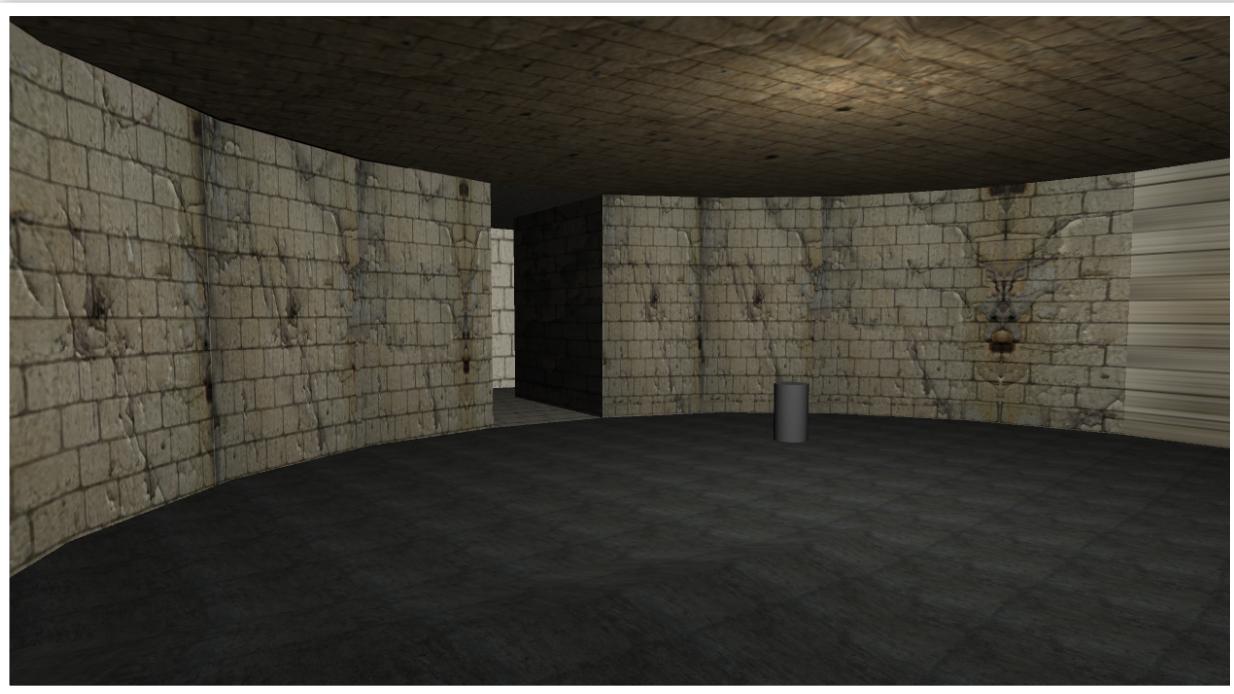
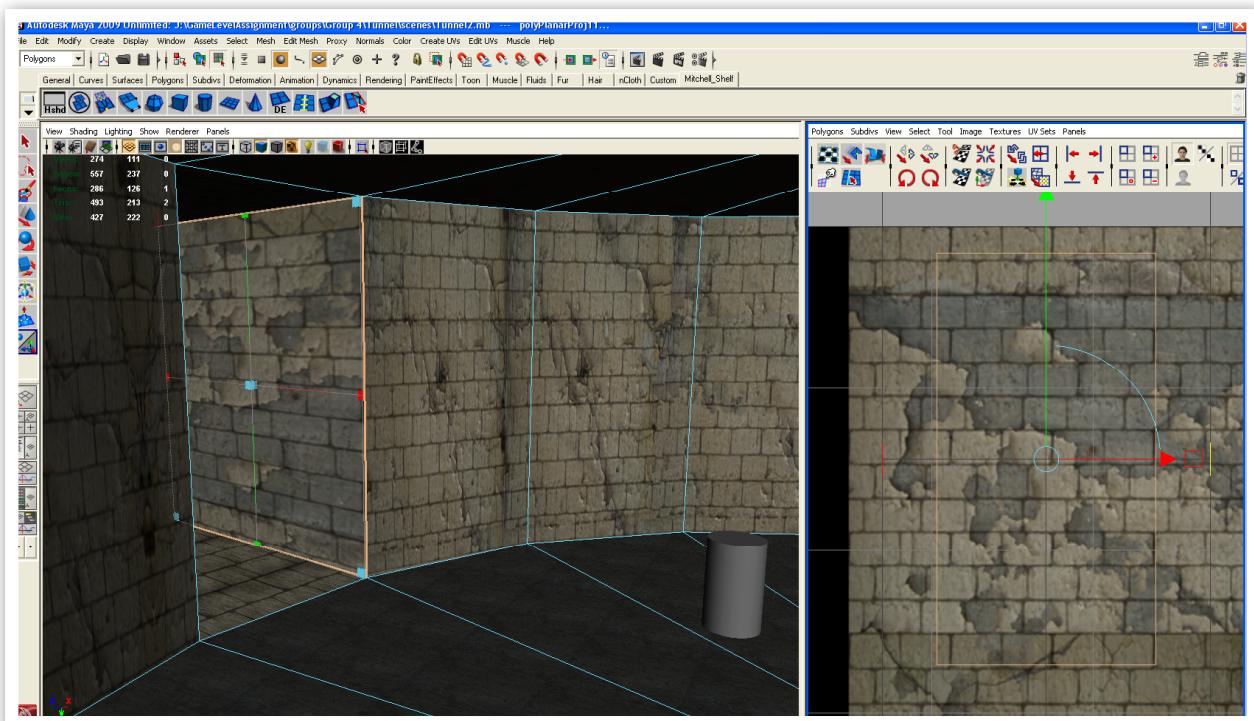


Fig. 2: test render of textures as they are being laid up. A more finer detailed block pattern was laid into the roof.



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Fig. 2: A side tunnels face is selected and you can see the planar map sizing handles displayed. In the UV texture editor you can see where the texture is coming from on the texture sheet.

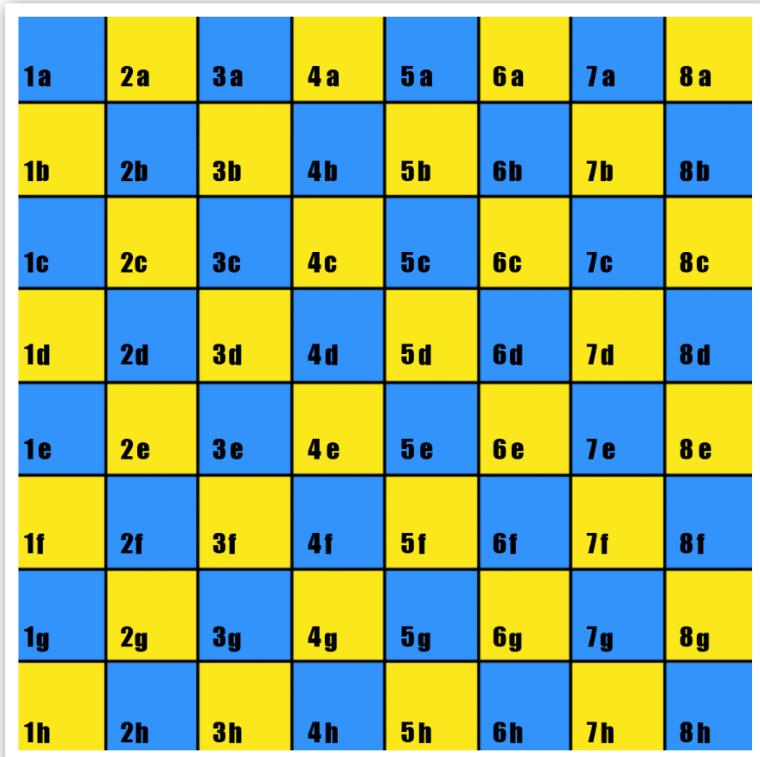
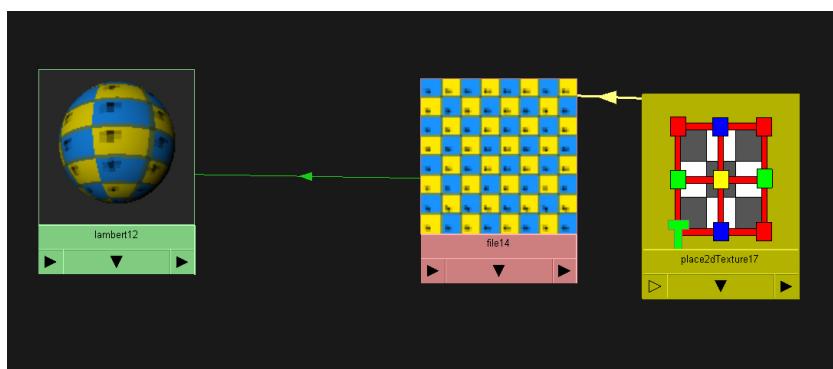


Fig. 2: 1K grid with alpha numerics this really helps understanding of muddled UVs when applied to your polygonal models.



Here is a lambert shader with grid connected to default colour output. Simply drag and drop on your geometry or assign to UVs.

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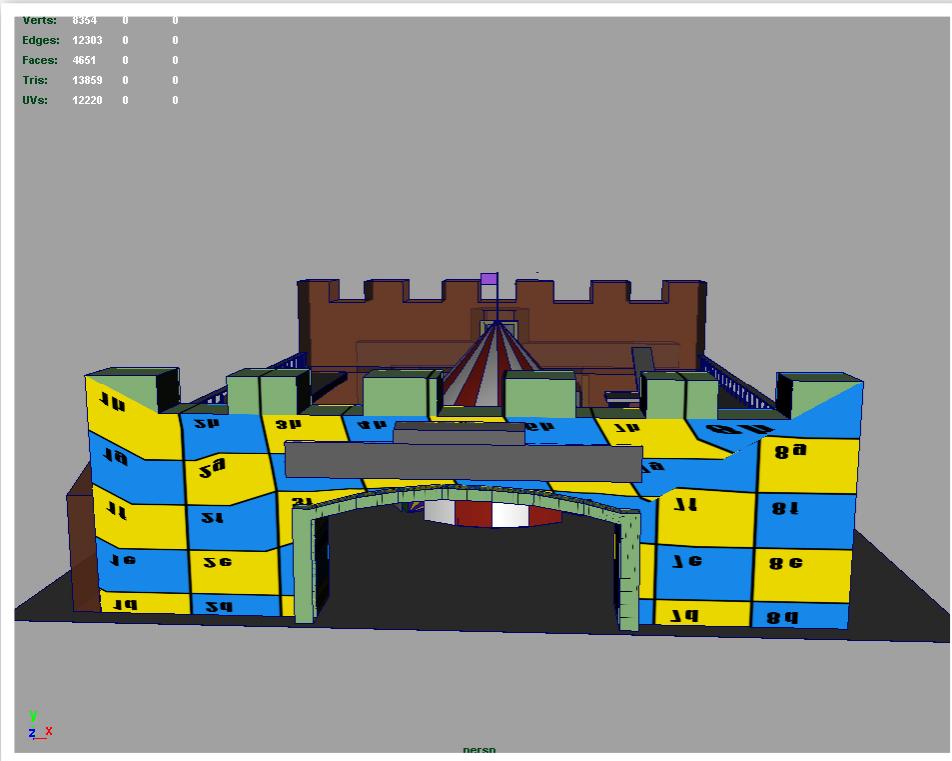


Fig. 2: A lambert with a grid is applied to the model and clearly demonstrates that the UVs are inconsistent, might even say a muddled

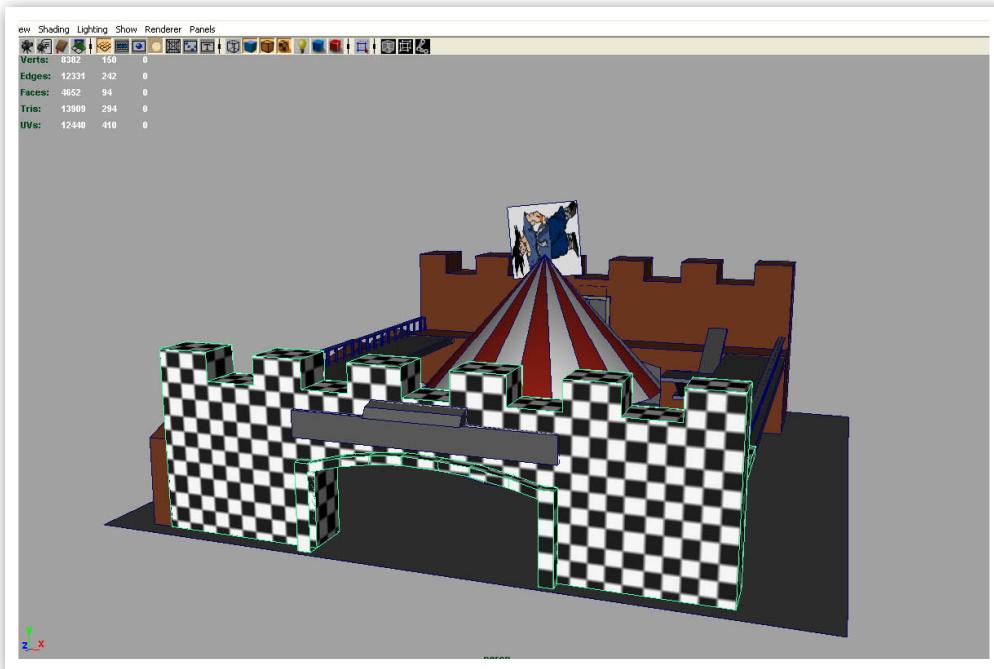


Fig. 2: Now the UVs are unwrapped and a chequer shader is applied to the castle to check for texture stretch.

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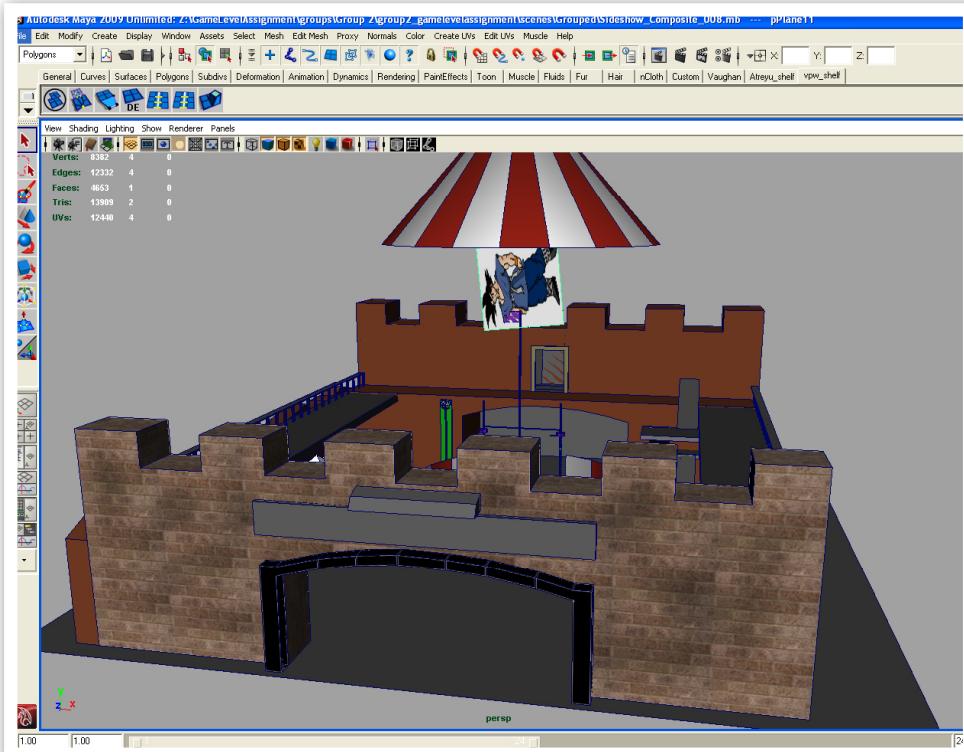


Fig. 3: Now the UVs are unwrapped and a brick shader is applied to the castle it looks much better.

Links to investigate

<http://cgtextures.com/>

<http://www.game-artist.net/>

<http://www.ballisticpublishing.com/>

<http://www.objet.com/Pages/CaseStudies/Entertainment/Coraline/tabid/661/Default.aspx>

<http://features.cgsoociety.org/articles/>

<http://www.3dxo.com/>

<http://www.3dm3.com/tutorials/zbrush/sebastien/>

<http://www.3dm3.com/tutorials/>