



Swansea School of Digital Media

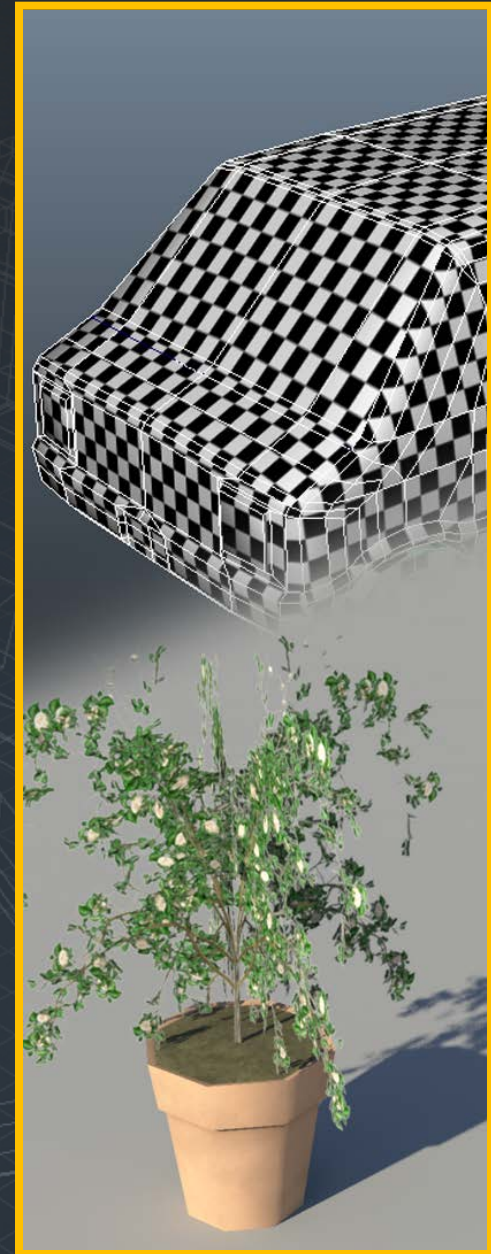
DIGITAL CONTENT CREATION

RICH MORGAN

BA CREATIVE COMPUTER GAMES DESIGN
2013 / 14

Texturing

- Creating / Using a Reference Texture
- Creating and applying Alpha maps

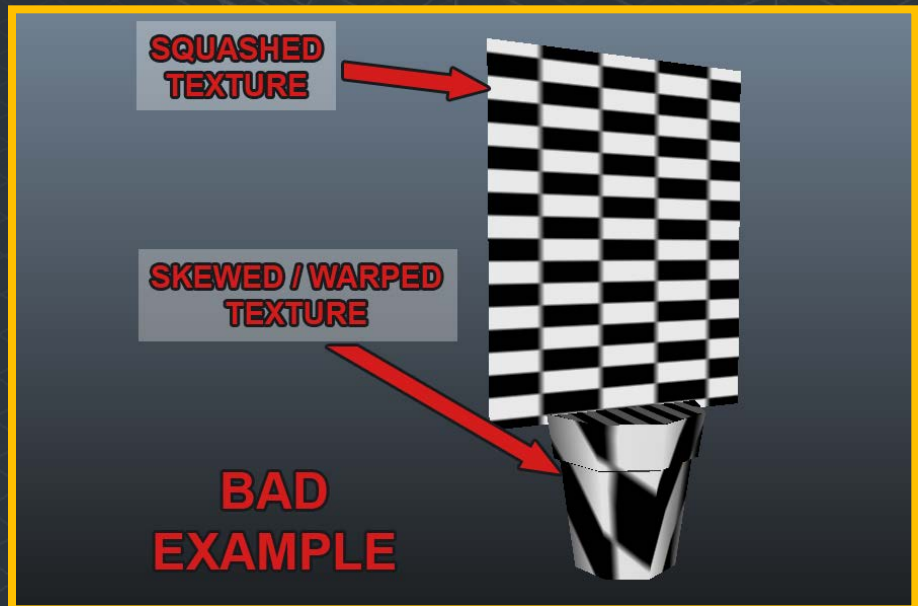
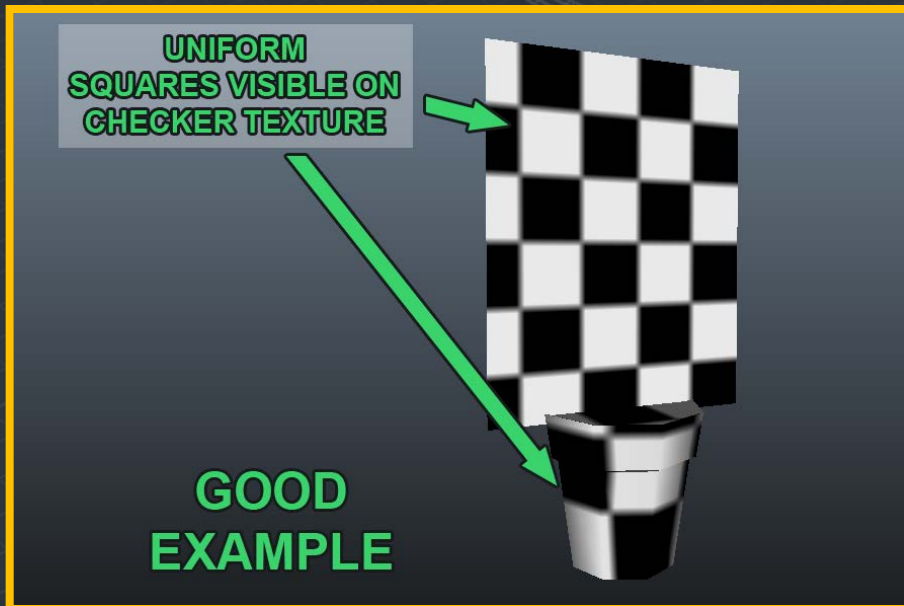


Reference Textures
Maya Checker Texture

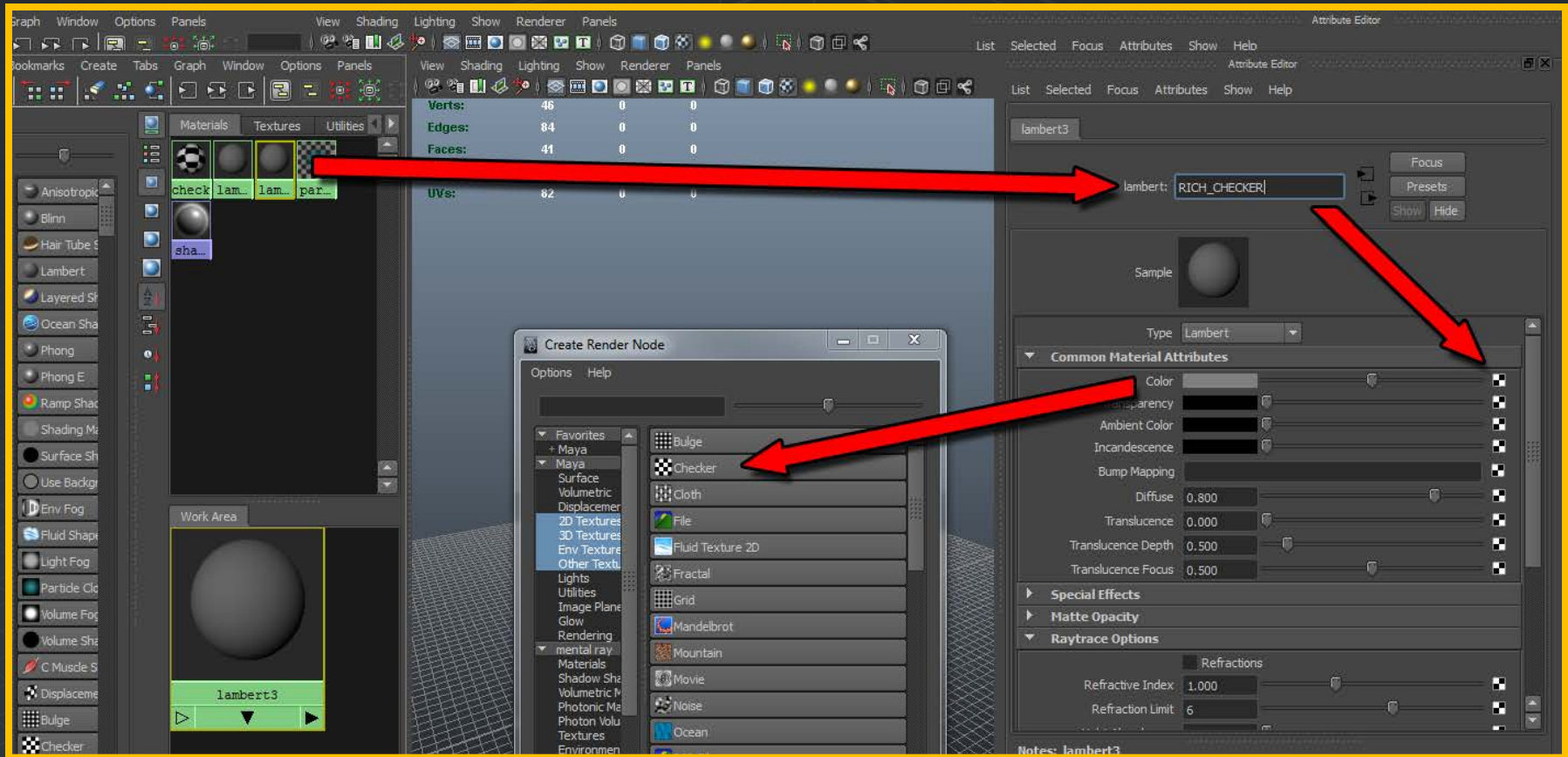
Reference Textures

Using a reference texture can quickly determine whether your UV map will work effectively.

By applying a 'checker' texture in Maya you will quickly see if a UV unwrapped model needs to be amended.



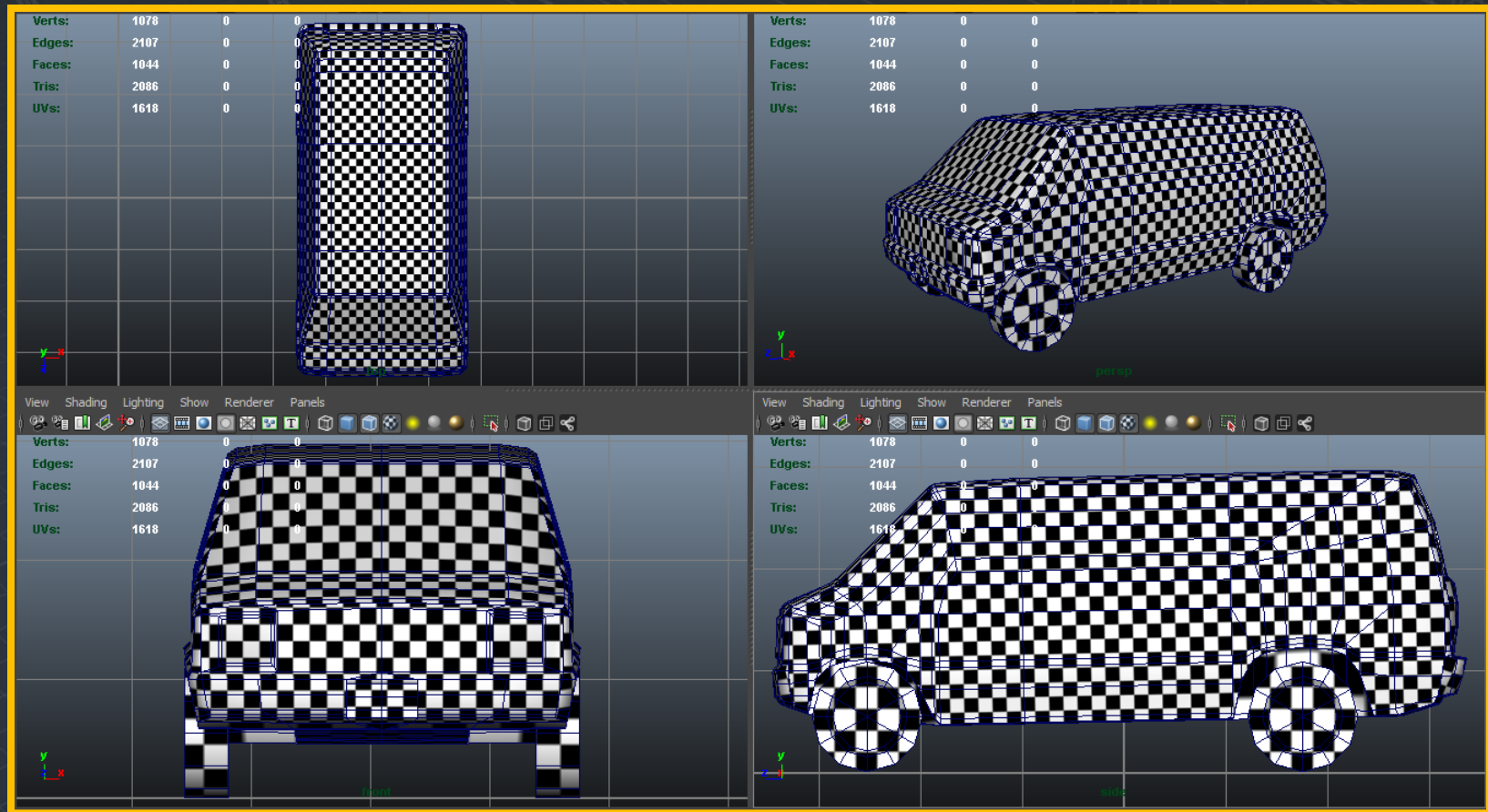
Setting up Reference Textures



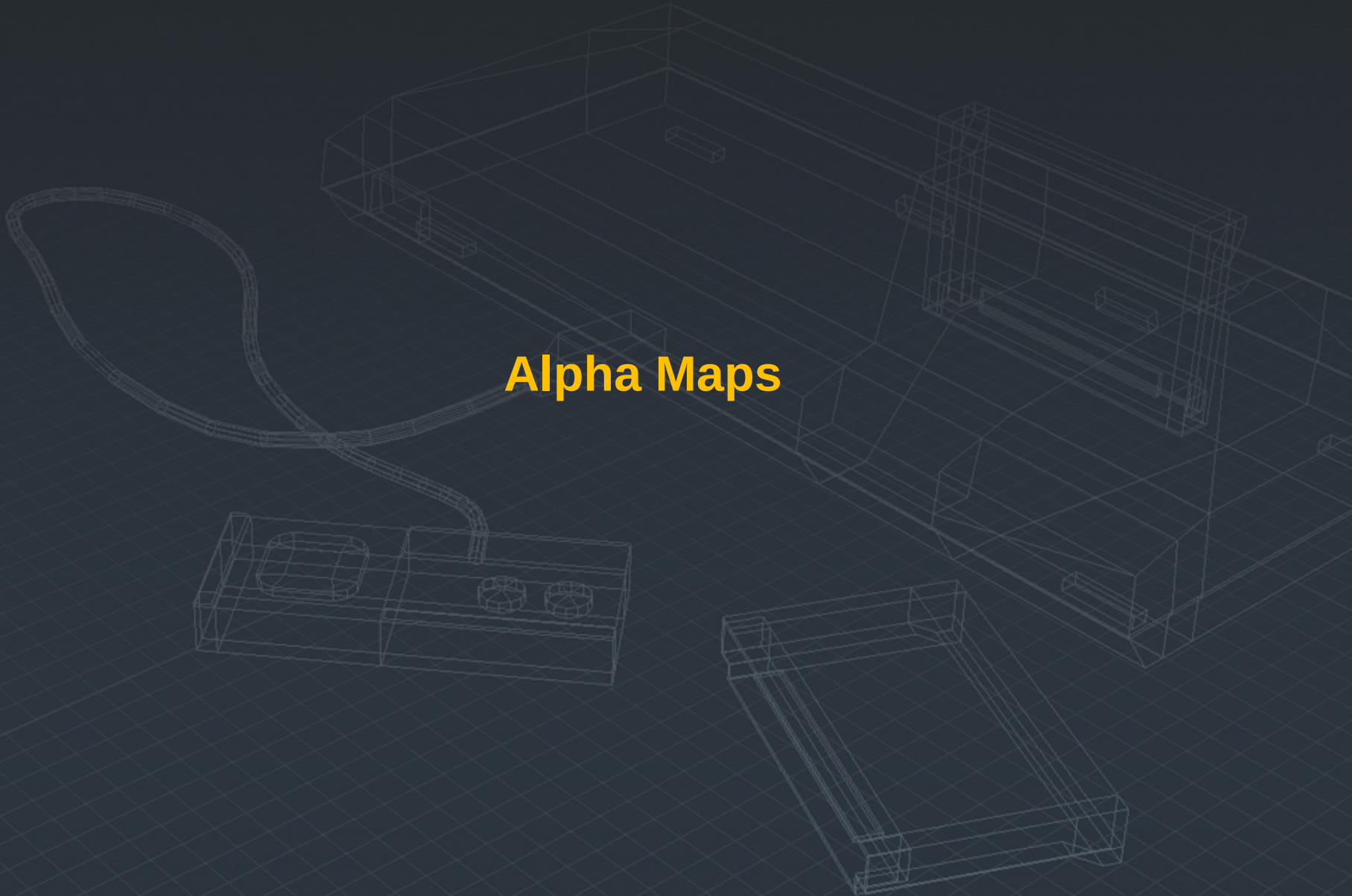
Create a material in Maya as normal, then select 'Checker' instead of 'file' in the Create Render Node box.

Using Reference Textures

The 'checker' texture can be applied in the same way as any other material in Maya.



Alpha Maps



Alpha Maps

An Alpha map applied to a polygon object gives the illusion of transparency or translucency.

Alpha maps are applied in a similar fashion to a basic diffuse texture, and are set up as part of a material that is then applied to a 3D model in a game engine.



Alpha Maps

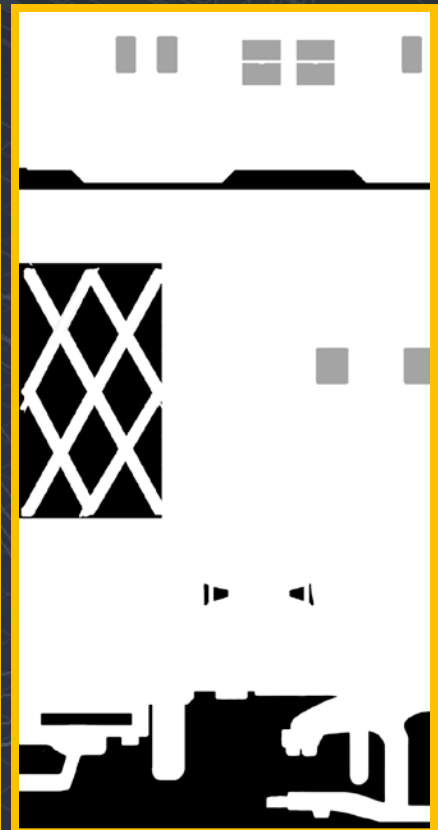
Alpha maps are typically created in programs such as Photoshop and use greyscale information to produce different degrees of opacity.



WHITE = OPAQUE

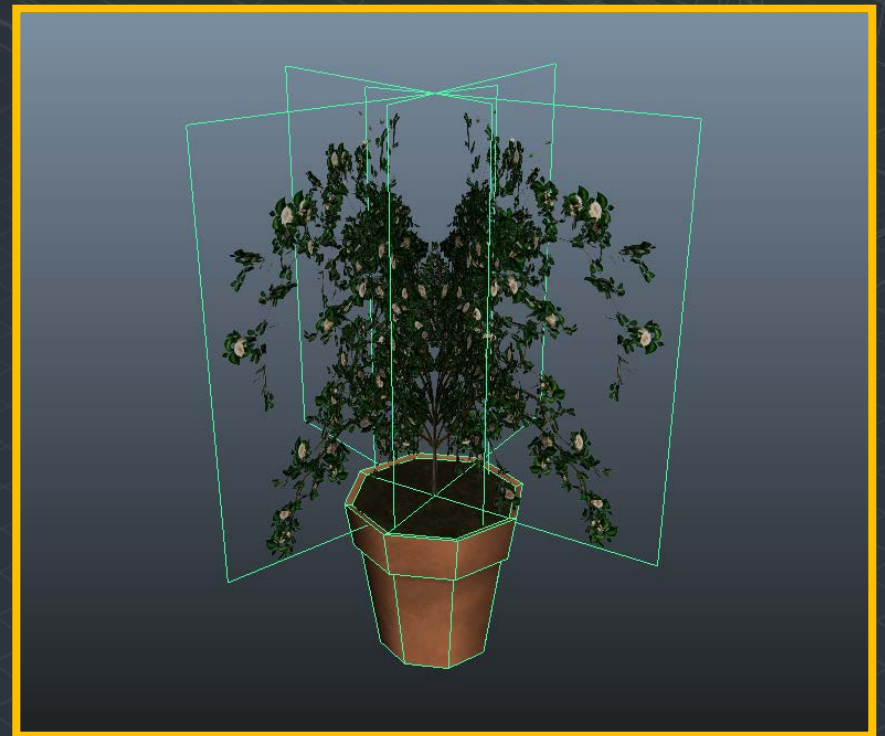
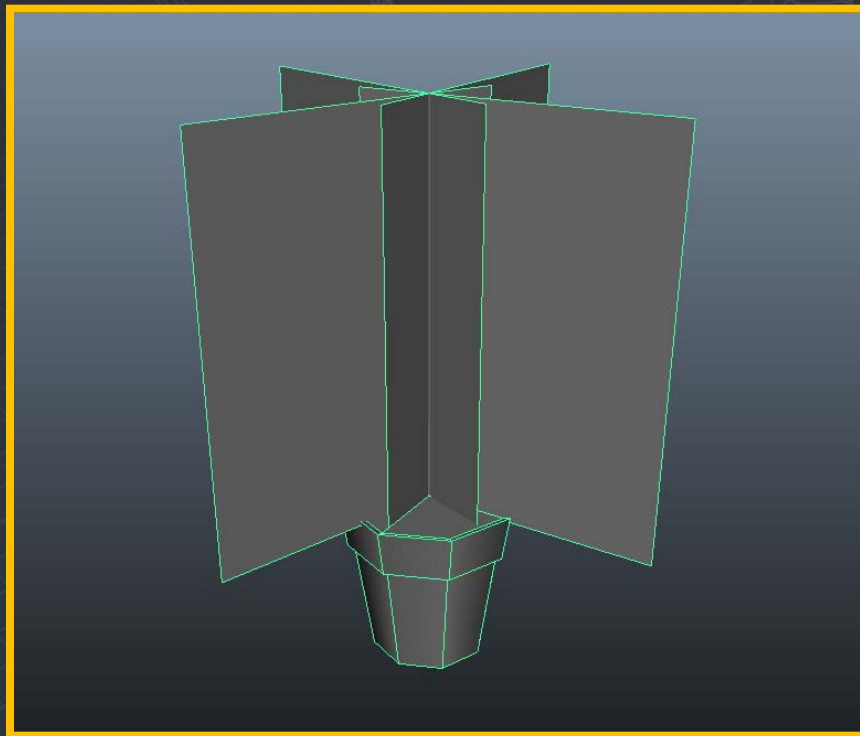
GREY SHADES =
DEGREES OF
TRANSLUCENCY

BLACK = FULL
TRANSPARENCY



Alpha Maps

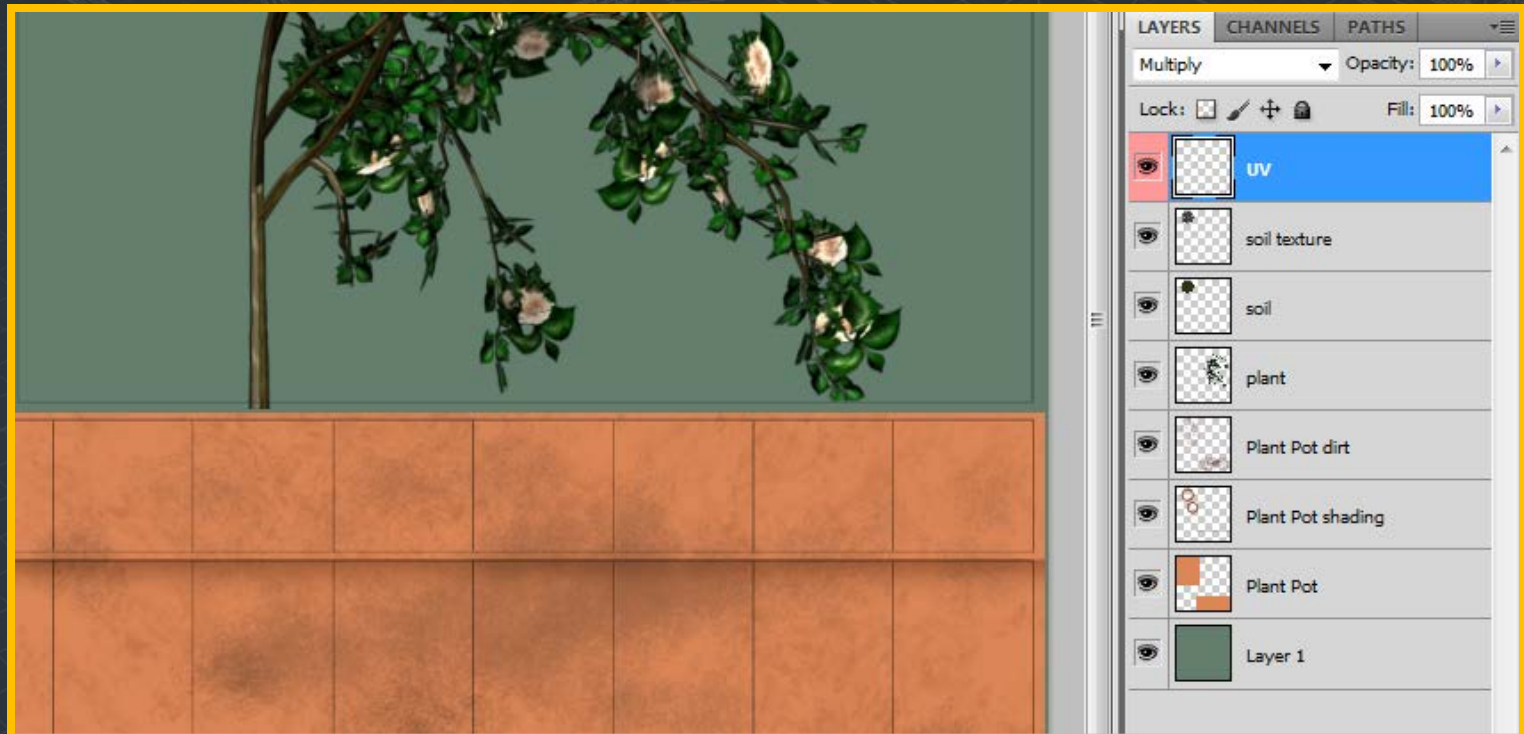
Alpha maps do not physically change geometry – they create an illusion that can be used to optimise game assets and speed up production times.



Creating Alpha Maps

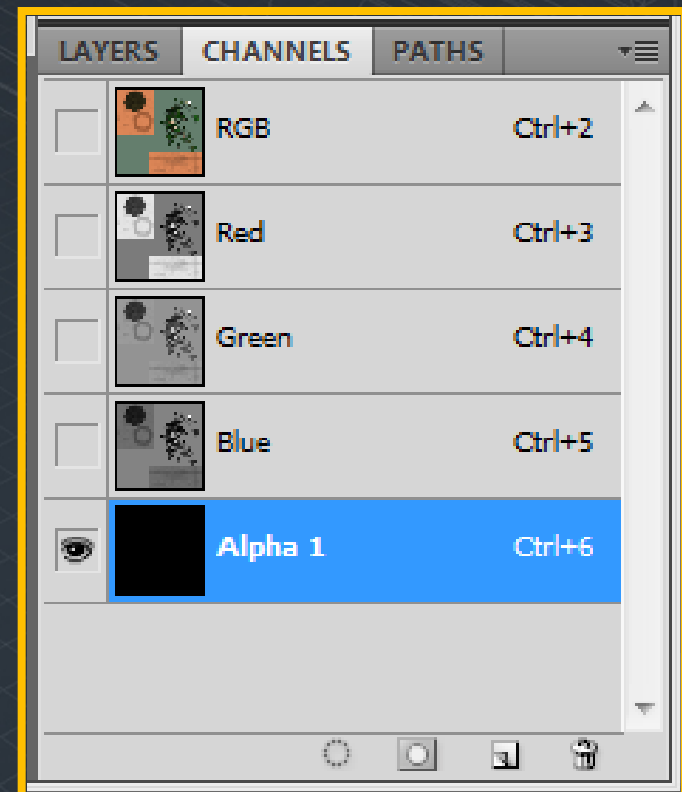
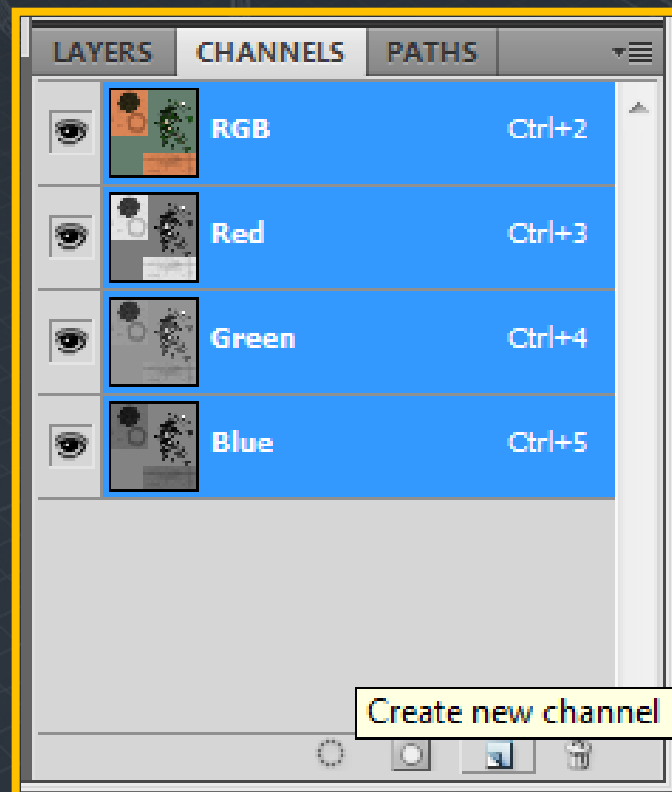
Creating Alpha maps in Photoshop:

Using different layers on your Photoshop textures (save originals as PSD's) helps speed up the process.



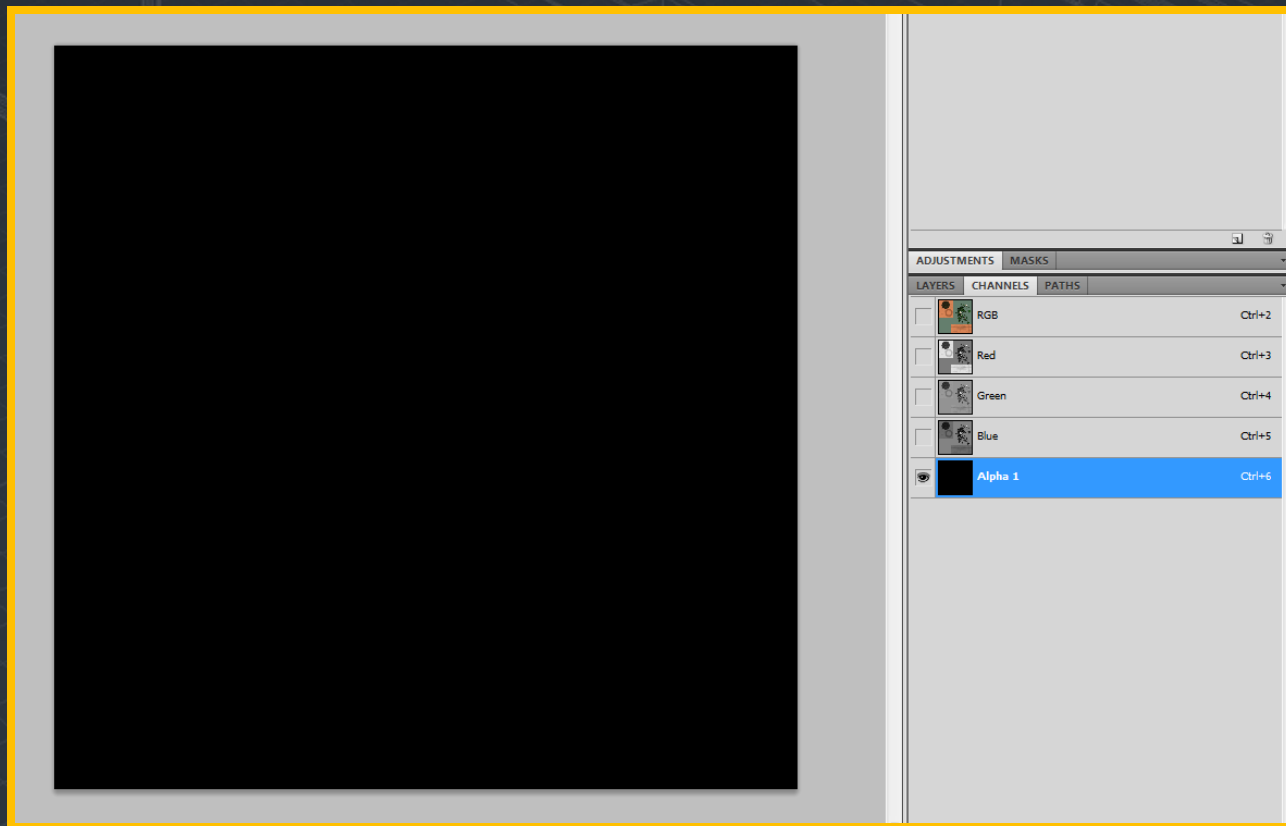
Creating Alpha Maps

Create a new Alpha layer in your file by clicking the 'create new channel' button in Photoshop's 'Channels' Box.



Creating Alpha Maps

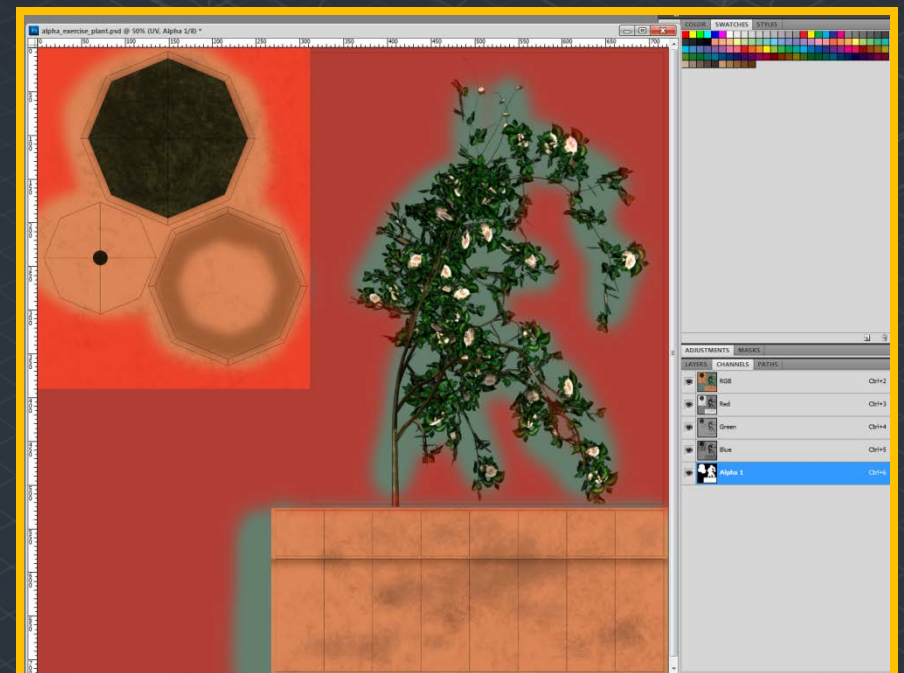
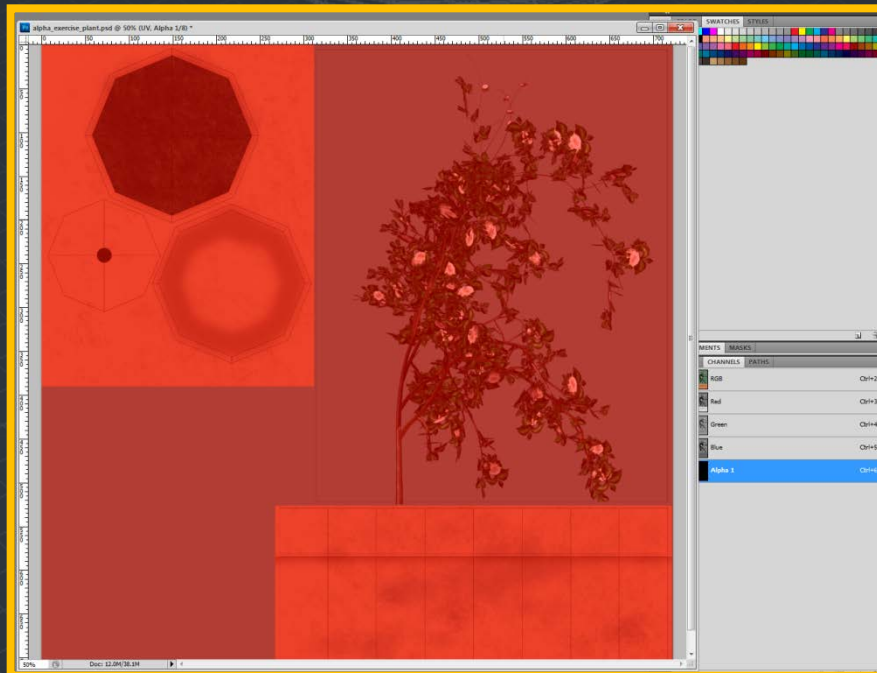
If the image turns black / white this is normal – an alpha mask has been applied. The Alpha still needs to be defined in the Photoshop file.



Creating Alpha Maps

This is easily achieved using layers and a selection tool.

If this is not possible, you can 'paint' the alpha mask using the standard paint tools.



Creating Alpha Maps

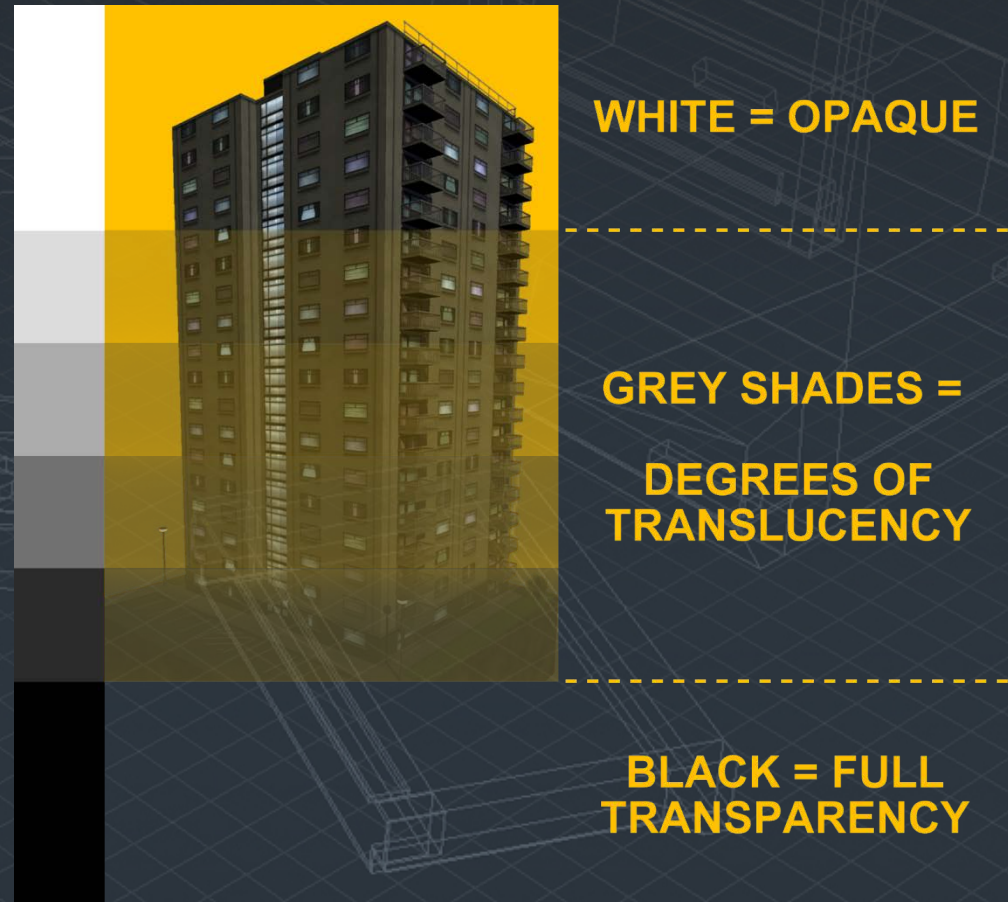
Define areas you want to contain transparency using either the Paintbrush or Fill tools.

Remember:

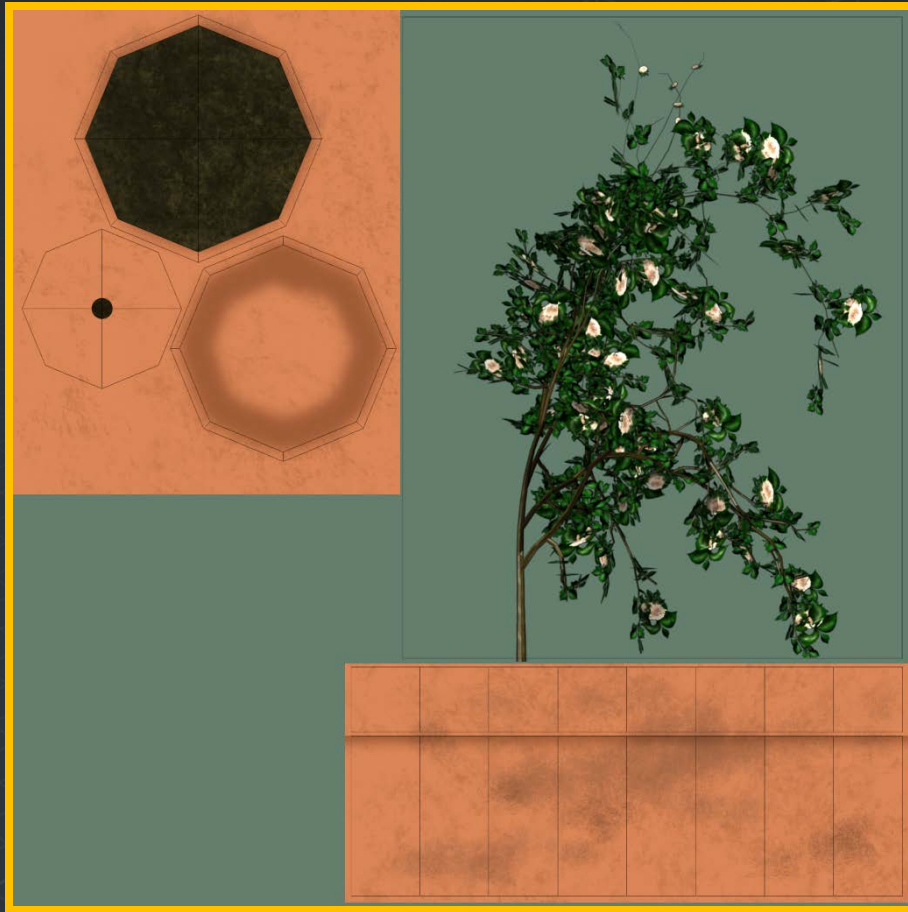
White = Opaque

Black = Transparent

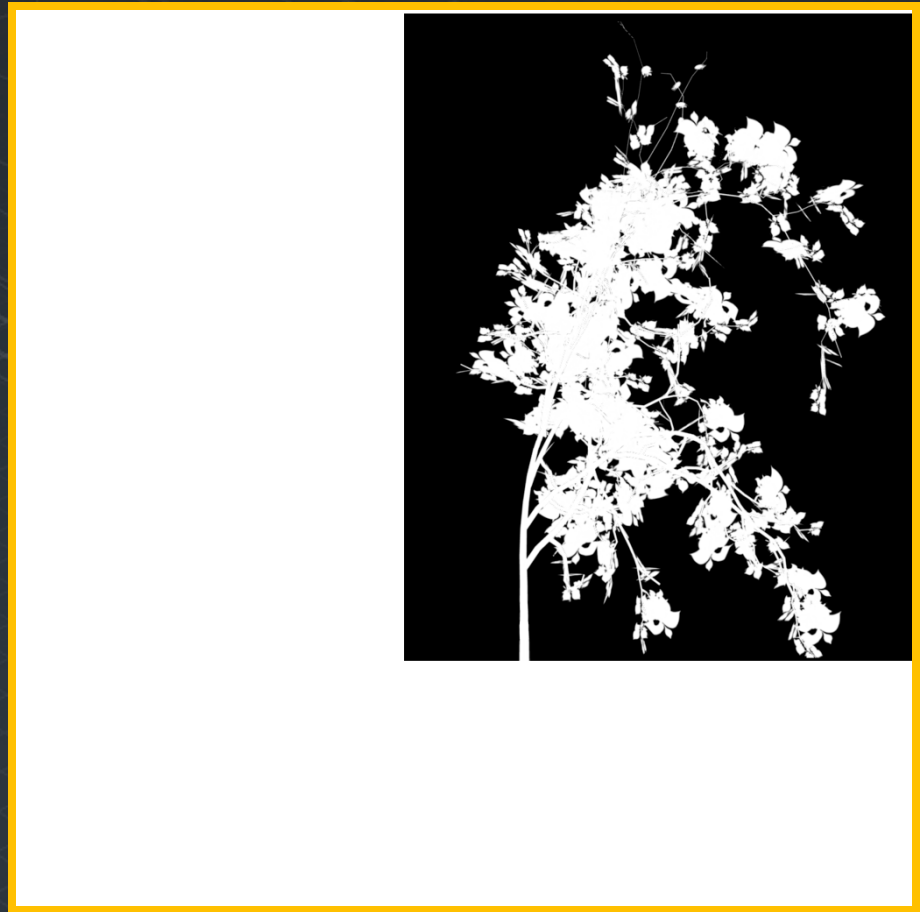
Shades of grey =
degrees of translucency



Creating Alpha Maps



Diffuse Map



Alpha Map

Saving / applying Alpha Maps

Saving Alpha maps require using specific file formats. If you do not follow these steps, your Alpha maps will not work!



Saving / applying Alpha Maps

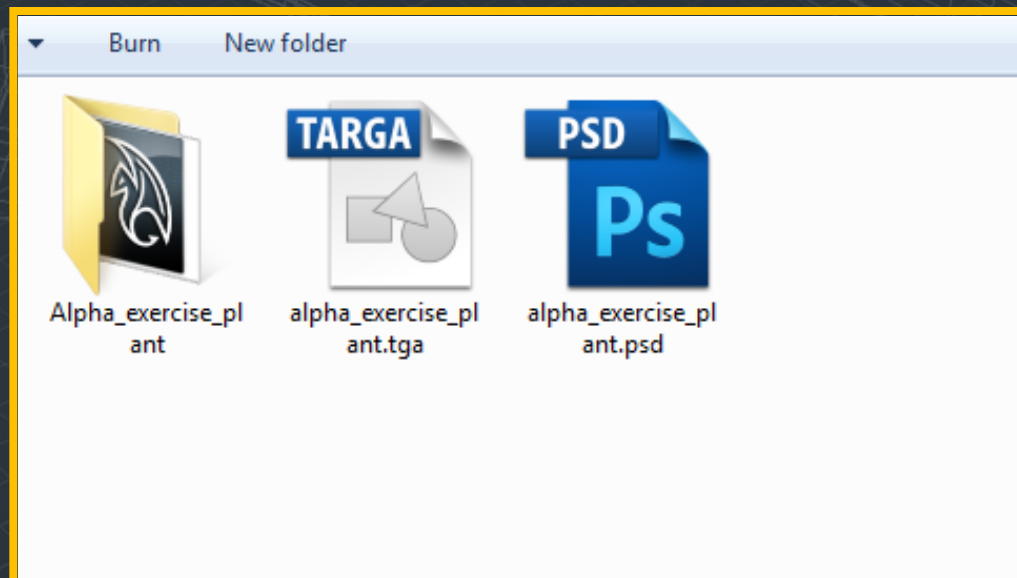
Make sure all channels are visible – anything that will appear transparent / translucent will be covered with a red hue.



Saving / applying Alpha Maps

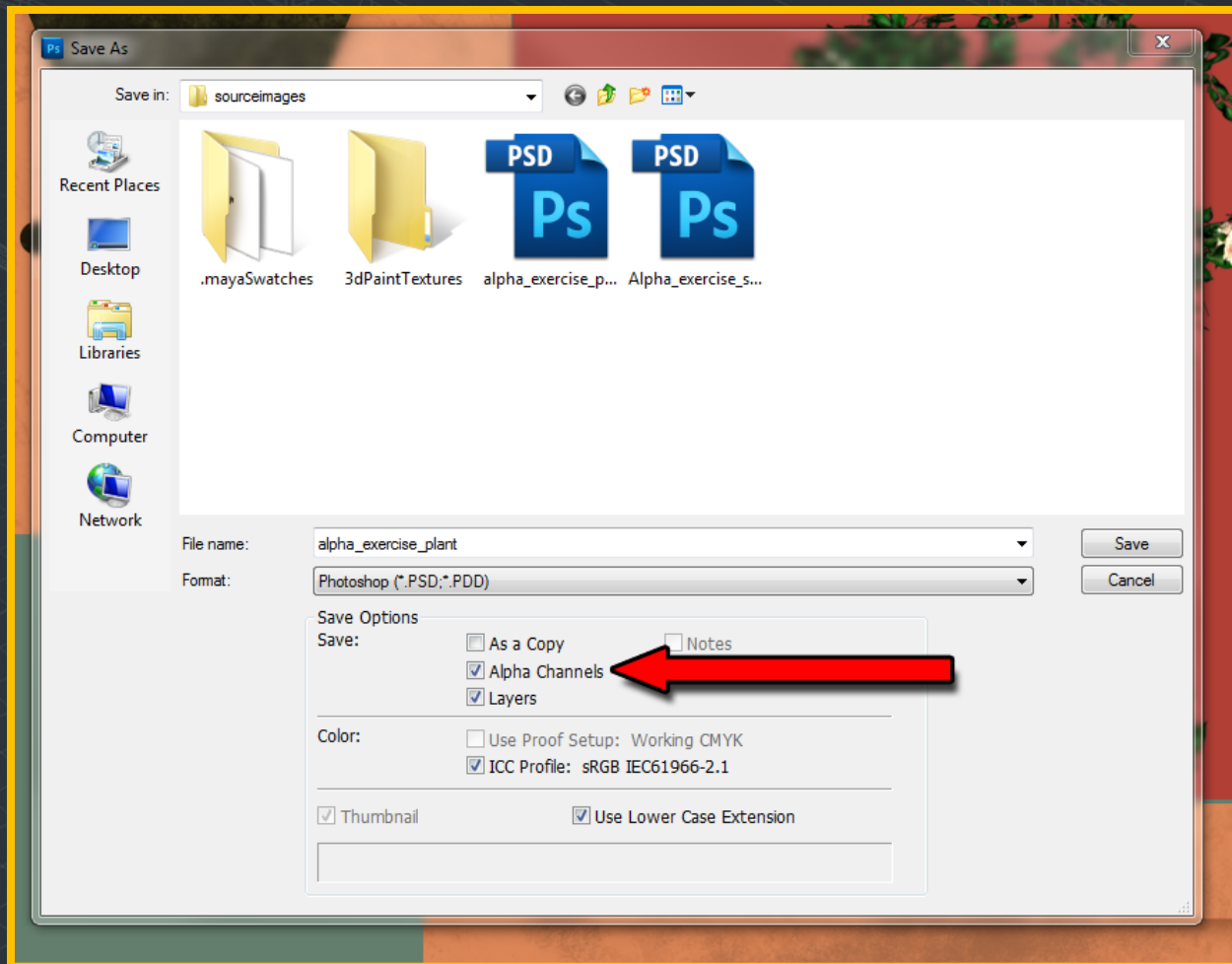
Save your original layered image as a PSD – you may want to keep an uncompressed file for use later, particularly if the texture needs to be adjusted!

Save a copy as a TGA file. This will be the texture file applied to your material in Maya.



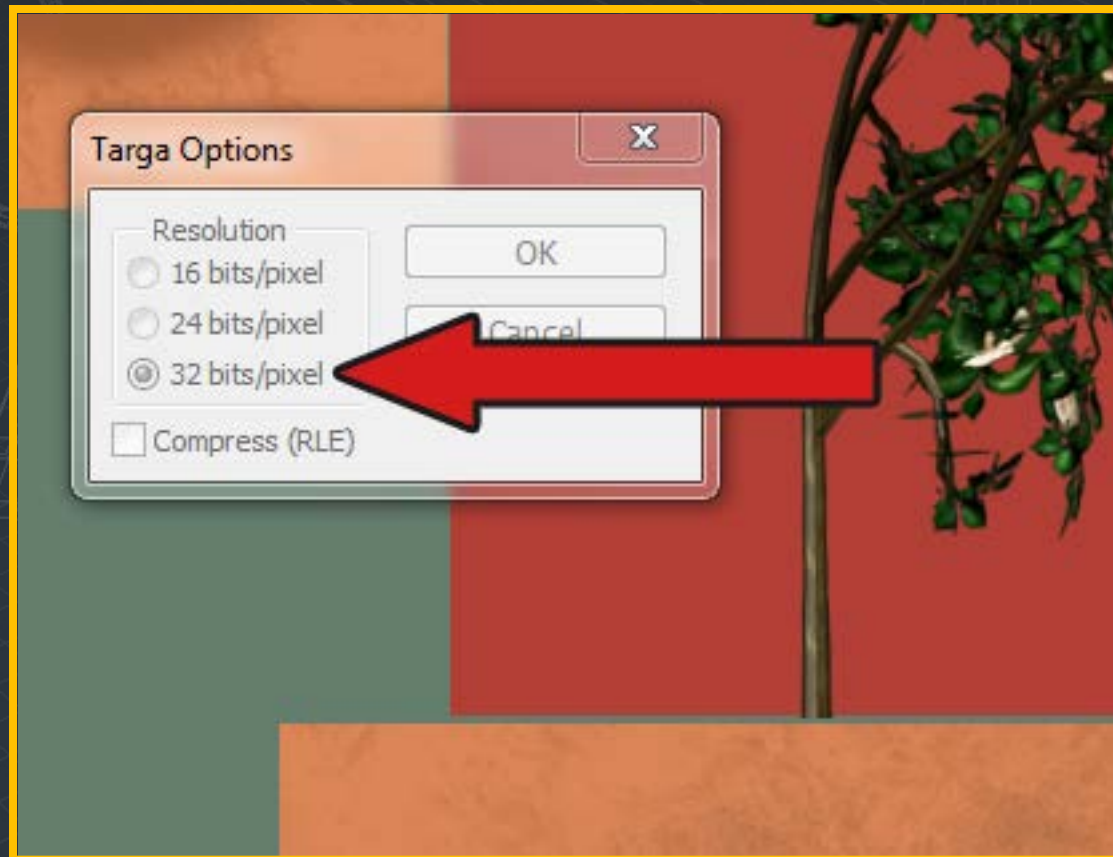
Saving / applying Alpha Maps

Make sure 'Alpha Channels' is ticked when saving!



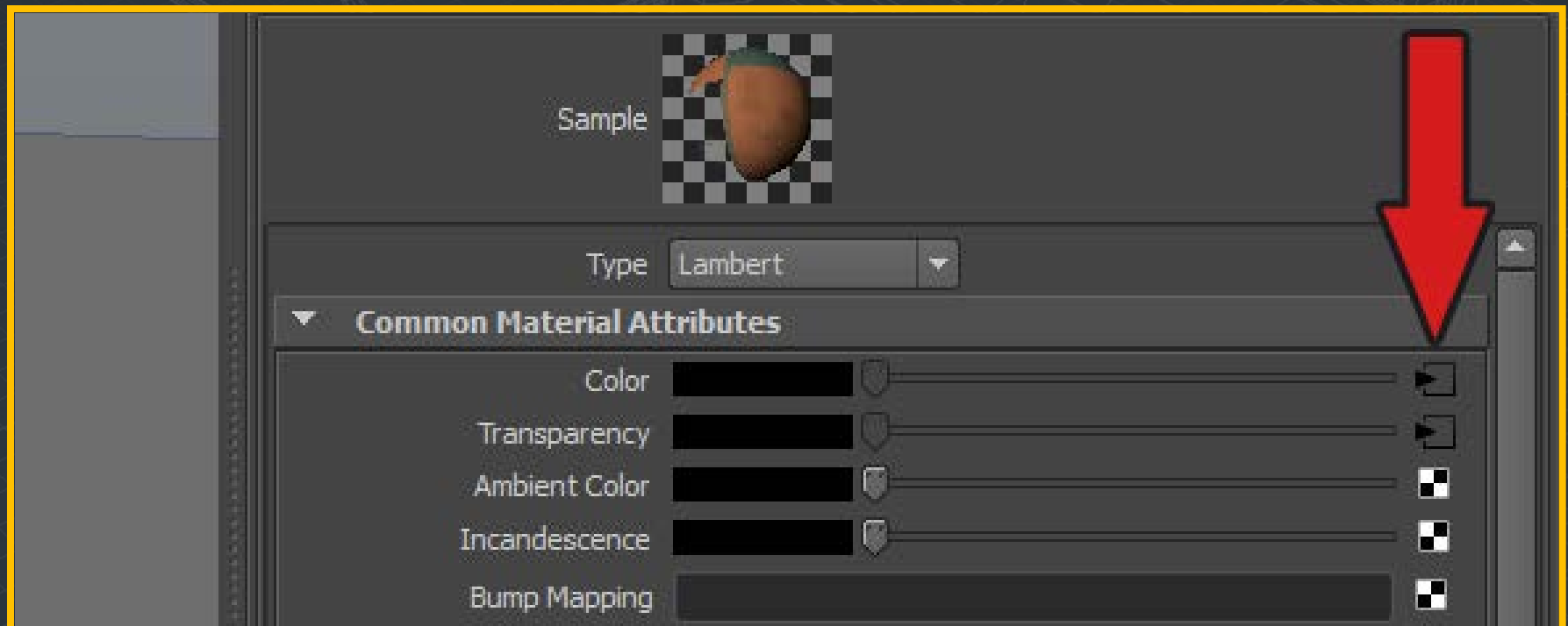
Saving / applying Alpha Maps

Each TGA must be exported as 32 bits/pixel if Alpha maps need to be preserved in the file.



Saving / applying Alpha Maps

By using a TGA with an Alpha map, you do not need to create a separate file. When you apply the TGA file to your material in Maya, it should automatically load the transparency / alpha data with it.

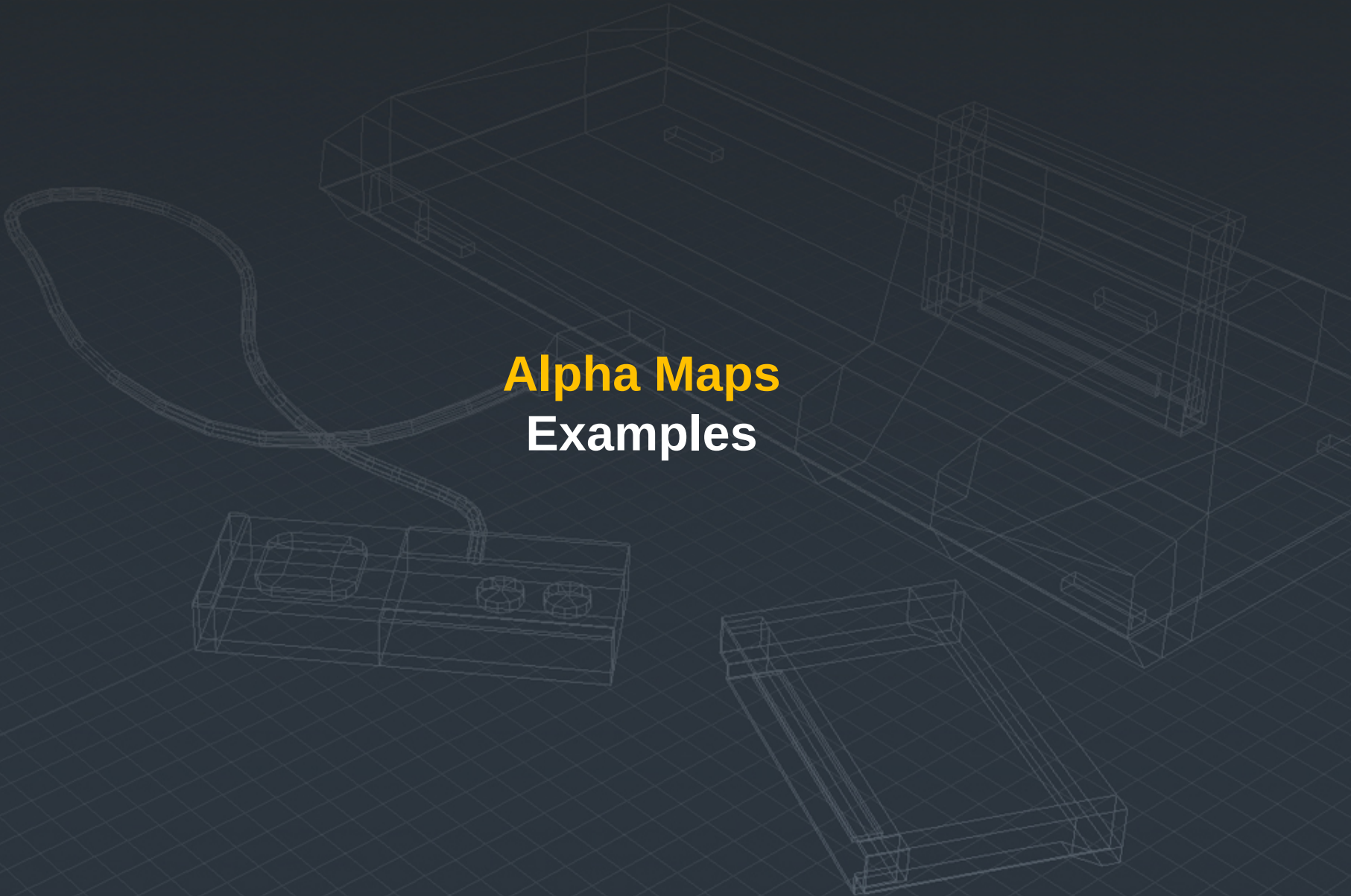


Saving / applying Alpha Maps

Bear in mind that Maya occasionally has issues with viewing Alpha maps in the viewports – a quick test render can often indicate if the texture is working as it should be.

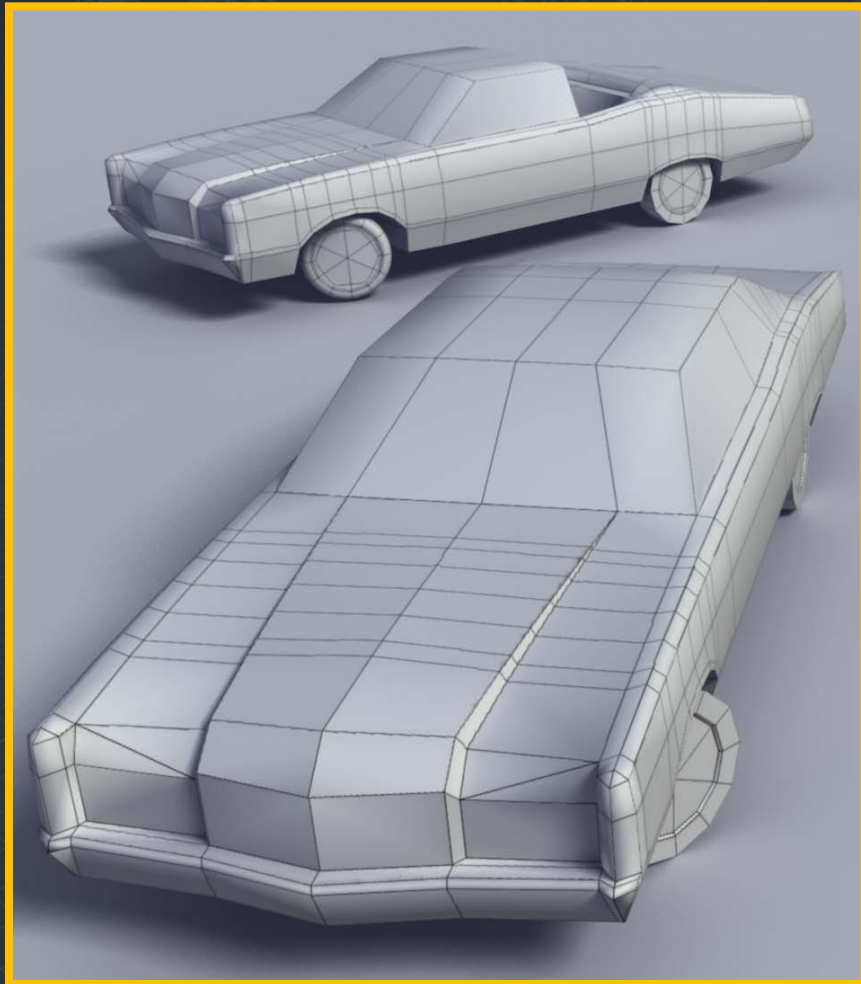


Alpha Maps Examples



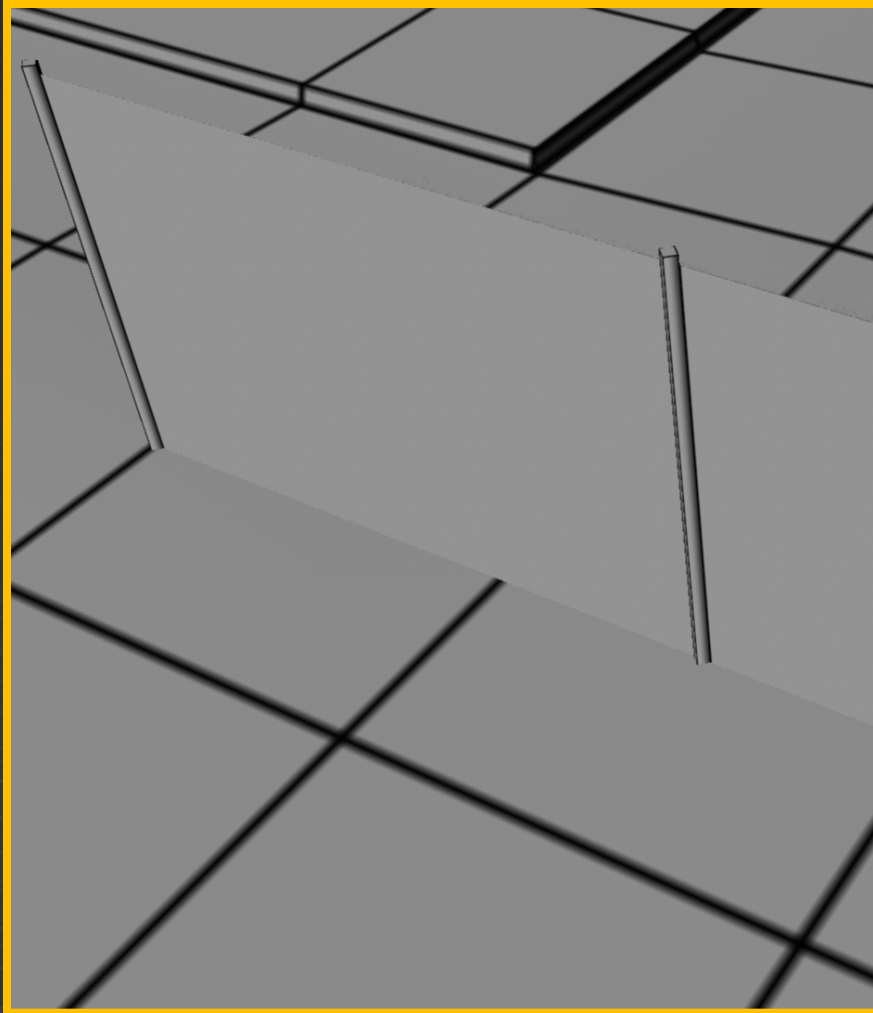
Alpha Maps

Examples on models



Alpha Maps

Examples on models



Alpha Maps

Examples in games



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Examples in games



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Examples in games





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