Texture and Lighting 2
Handout

3D procedural networks in animated productions
by Dru Abrams with notes from Maya Docs.

You have 3 main options for using 3D procedurals in any animated production. Choosing one option over another will vary based on the type of work you are creating.

1. You may convert your 3d procedural's to a file texture. There are disadvantage in this. The whole network is reduced to a file texture. You'll lose anything special you set up in the network...i.e. something that varies the network based on its location, scale, orientation to the camera, scene etc...

2. You can parent the 3d texture placement node to the object its attached to. This will work fine for a non deforming surface like a car, or a wine glass etc, but will not work for anyting that does deform like a character or a piece of cloth.

3. You're third option is to create a texture reference object. This 3rd option is discussed in more detail below. The following text is an excerpt from Maya's Help Docs:

Create Texture Reference Object

You can create a texture reference object for the selected surface to lock a 3D texture or projected 2D texture to the surface. As the surface animates or deforms, the texture stays with the surface, producing a very natural looking result.

Note

1. You must create a reference object before you animate or deform the original surface.

2. A reference object for a polygonal surface must have the same topology (number of faces) as the original surface. When you create a reference object, the topology of the reference object is identical to the original surface. However, if you make subsequent changes to the topology of the original surface, you must create another reference object.

3. A scene can contain any number of reference objects, but each surface in the scene can only have one reference object.

To create a Texture Reference Object

1. Select a surface and assign a 3D texture to it.
If the 3D texture node is grouped within an object's hierarchy, see When I move a referenced object, texture swim.

2. Select Texturing > Create Texture Reference Object.
Maya creates a templated copy of the surface called the reference object. You can move a reference object anywhere in the scene.

3. Use the texture placement manipulators to position the texture relative to the reference object.
Animate the original surface (not the reference object).
As the original surface moves or deforms, Maya uses the reference object to move or deform the texture so that it matches the motion or deformation of the original.