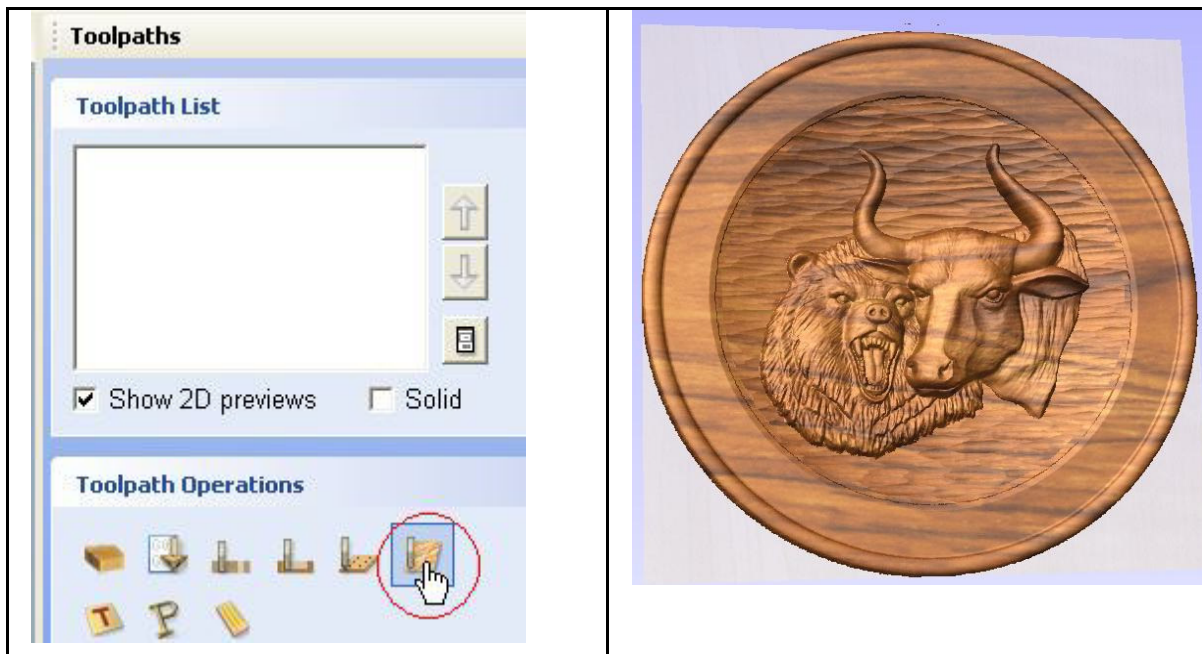


3D Models With Textured Background

This tutorial introduces a very interesting feature that can be easily achieved with Aspire. The Create Texturing Toolpath option is versatile and easy to use. An example is given in this tutorial that creates a hand carved look. By changing the cutters and the Texture Settings many textures can be created to add another dimension of interest to the carvings.



Once a textured file has been created the effect can be applied to the background of other projects without having to recreate the background for each project. The examples shown here demonstrate how to apply a hand carved texture. The same procedure can be followed to apply other textures. Many other textures can be created and applied in the same way. A Google images search will provide endless creative possibilities for textures

Textures can be applied to the 3D model as well as shown in the third example below.

There are a number of advantages to applying texture to 3D carved models. Among them are:

- Simulates hand carving.
- Reduces sanding, the tool marks left behind by a router bit are less obvious, the eye doesn't pick up the tool marks readily.
- A well chosen textured background can provide added visual interest to the work.

This tutorial will go through the steps to create a round plate with a recessed dish, a textured background and an imported 3D model from the 3D Model Club web site.

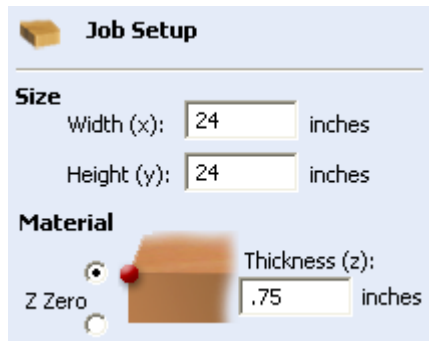
Topics covered are:

- texture toolpaths
- creating a model
- two rail sweep
- create shape from vectors
- importing components
- drawing techniques
- trim vectors tool
- circular array
- sculpting

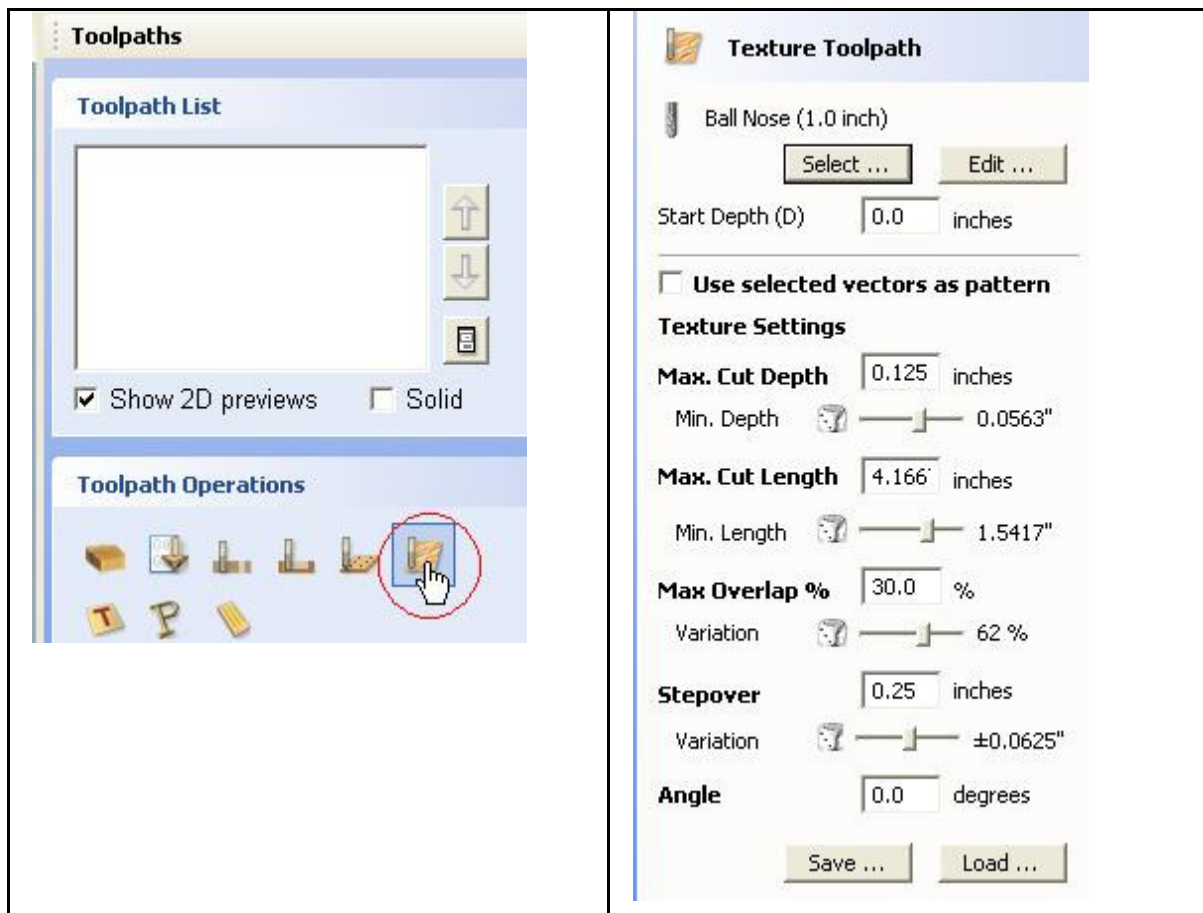
While working in Aspire the “F1” key will bring up a help menu, handy keyboard shortcuts are included.

Creating A Textured Toolpath

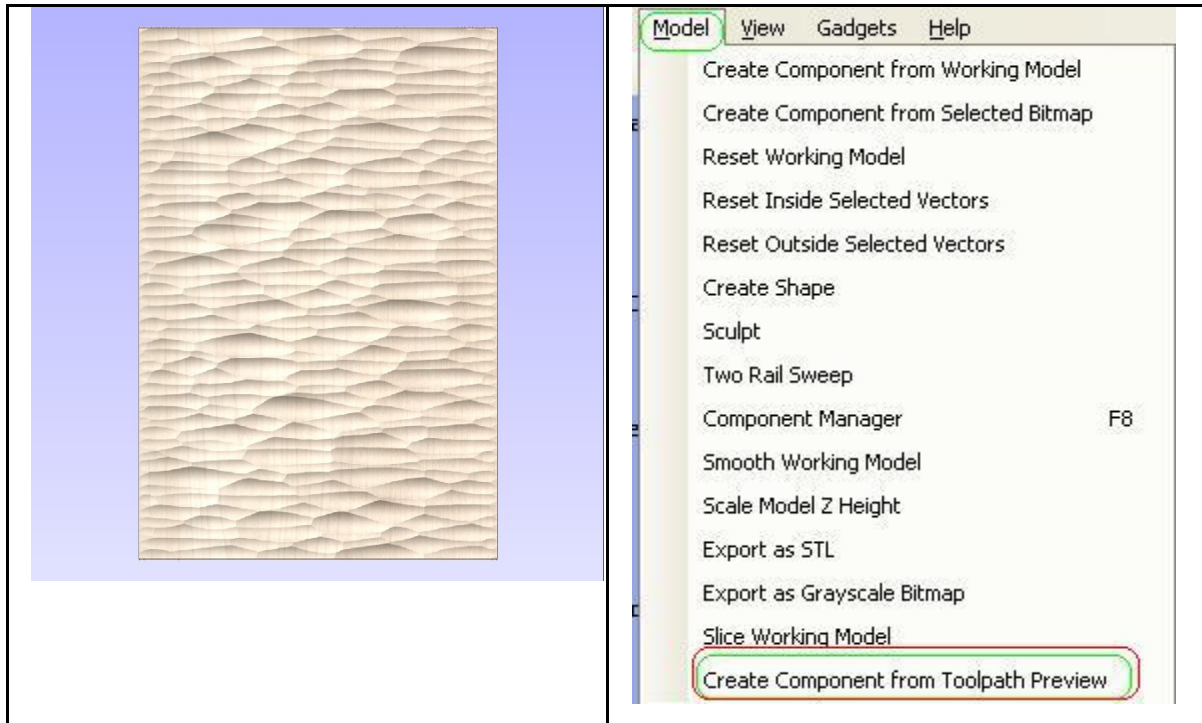
1. Create a new file



2. Go to the Toolpaths menu and click on the Create Texturing Toolpath Menu. The setting in this example should be considered as a good starting point. They were used to create the background shown in the Bull and Bear plaque examples. By changing the cutting tool and the Texture Settings an endless variety of textures can be created.



3. Calculate and Preview the Textured Toolpath.
4. While still in preview mode click on Model - Create Component from Toolpath Preview.



5. Hit "F8" there is now a component available to use as a textured background. This component can be scaled to fit the size of the project.
6. Save this file for use in other models for example 24 x 24 Texture.

Examples of Hand Carved Textures

The images shown below show how the textured toolpath can be used to create the look of a hand carved background or to create a hand carved look to the background and the 3D model.

The 3D model use in the example is # 99154 - Bull and Bear from the 3DModelClub website.

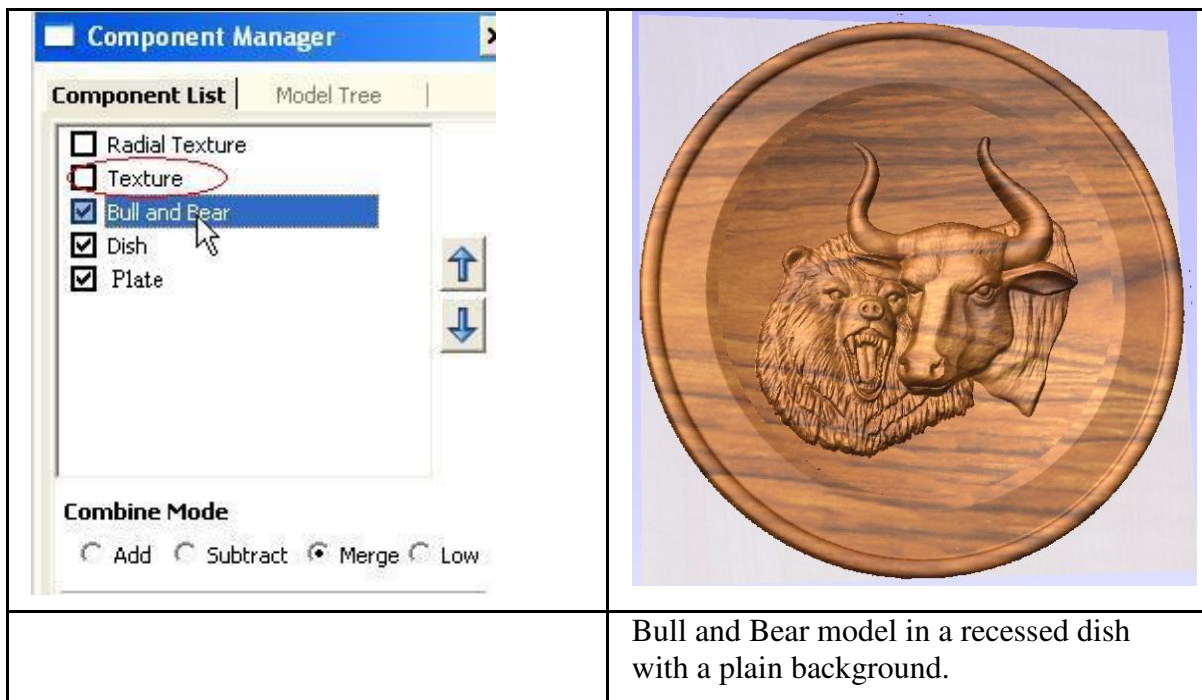
The first image shows the Bull and Bear model in a recessed dish with a plain background.

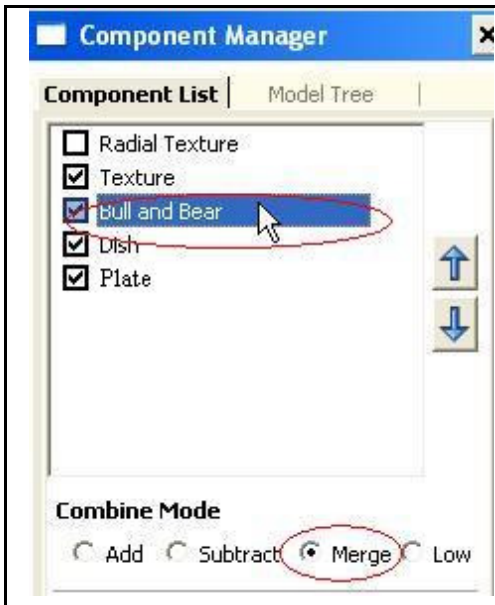
The second image shows the Bull and Bear model in a recessed dish with a carved texture background.

The third image shows the Bull and Bear model in a recessed dish with a carved texture on the background and the 3D model.

The fourth image shows the Bull and Bear model in a recessed dish with a radial texture background. More on the radial texture later.

The order of components and the Combine mode settings control how the texture interacts with the other components.





Bull and Bear model in a recessed dish with a carved texture background.



Bull and Bear model in a recessed dish with a carved texture on the background and the 3D model.

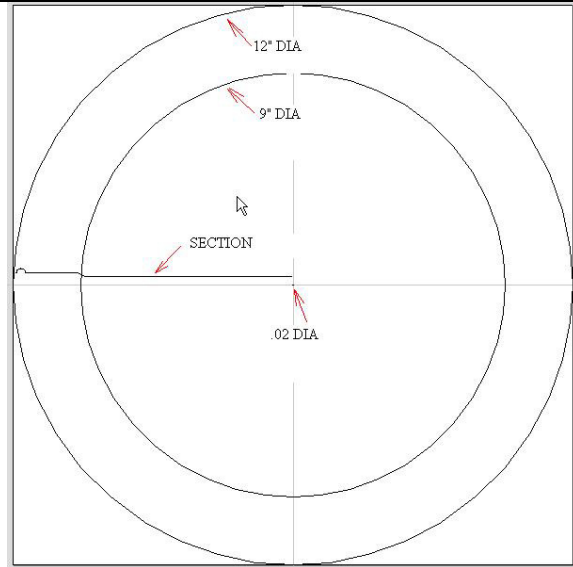


Bull and Bear model in a recessed dish with a radial texture background. More on the radial texture later.

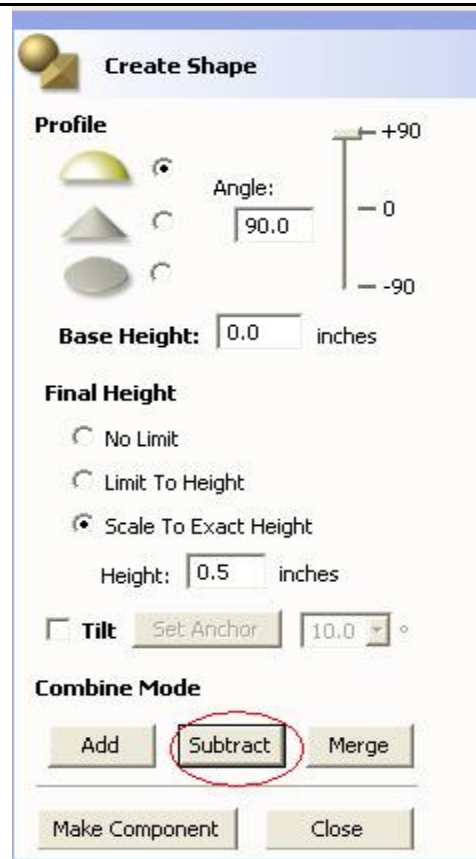
Creating the Model

1. Start a new job 12" x 12" x 0.75"
2. Create the plate using the vectors shown here

The plate is created using the “Two Rail Sweep” function. Select the 12” Dia circle, the tiny .02” Dia circle and the Section. Set Combine Mode to “Add”. Create a Component named Plate



To create the recessed dish select the 9” dia circle, open the “Create Shape From Vectors” tool and apply the settings below. Set the Combine Mode to Subtract. Create a Component named Dish.



The model should look like the image on the right.



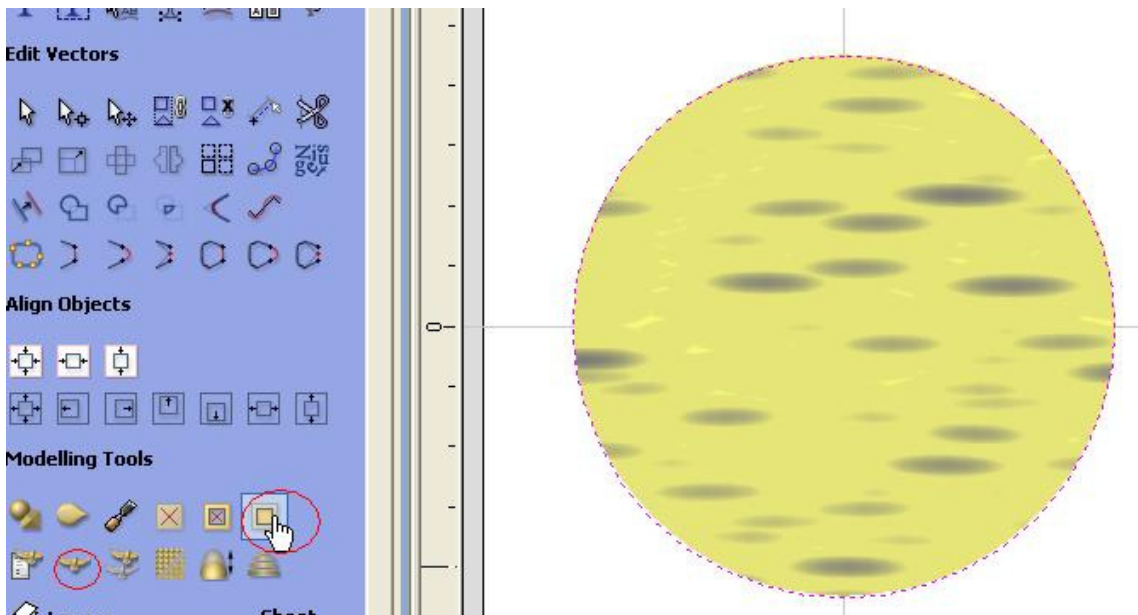
Import the Bull and Bear Model, scale to fit, in this example X=7.25", Y=7.0"

Open the Component Manager "F8", move the Bear and Bull to the top of the list. Leave it set to "Add"

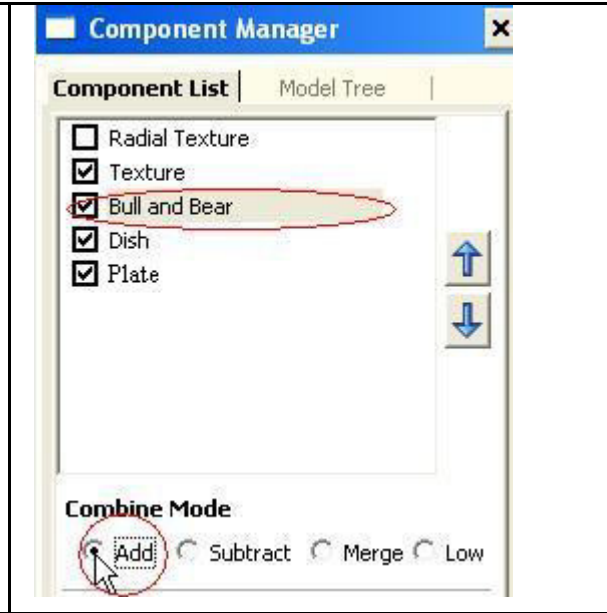
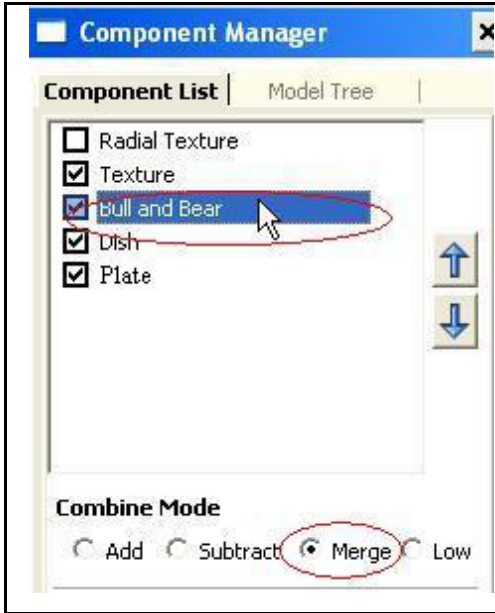


Applying the Texture

1. Open the Component Manager “F8” and Hide all components.
2. Import the 24” x 24” Textured Toolpath created earlier. If desired scale the component to achieve a suitable hand carved look. In this example the component was scaled to 12” x 12”.
3. Open the Component manager “F8”, select the Texture Component, Click “Copy into Model” and deselect the Texture Component.



4. Close the Component Manager, select the 9” Dia. Circle click “Trim area of working model outside of selected vector”.
5. Click “Make working model into a component”. Name it Texture.
6. Open the Component Manager “F8”. The Texture should be at the top of the component list, set it to merge
7. Check all of the components except the 24 x 24 Texture.
8. Changing the Bull and Bear component from Add to Merge will control how the texture is applied to the Dish and 3D Model.



Setting the Bull and Bear Component to Merge will create a textured background.



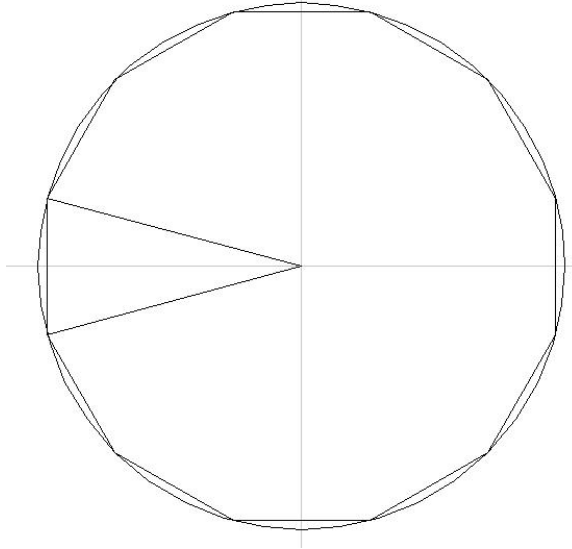
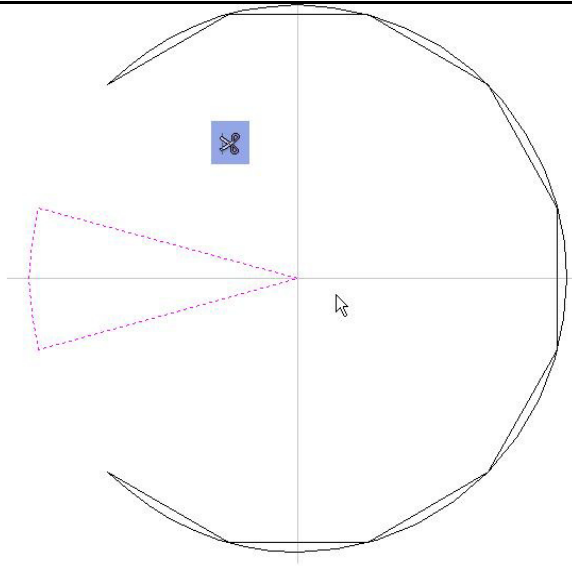
Setting the Bull and Bear Component to Add will create a textured model and background.

Creating a Radial Texture

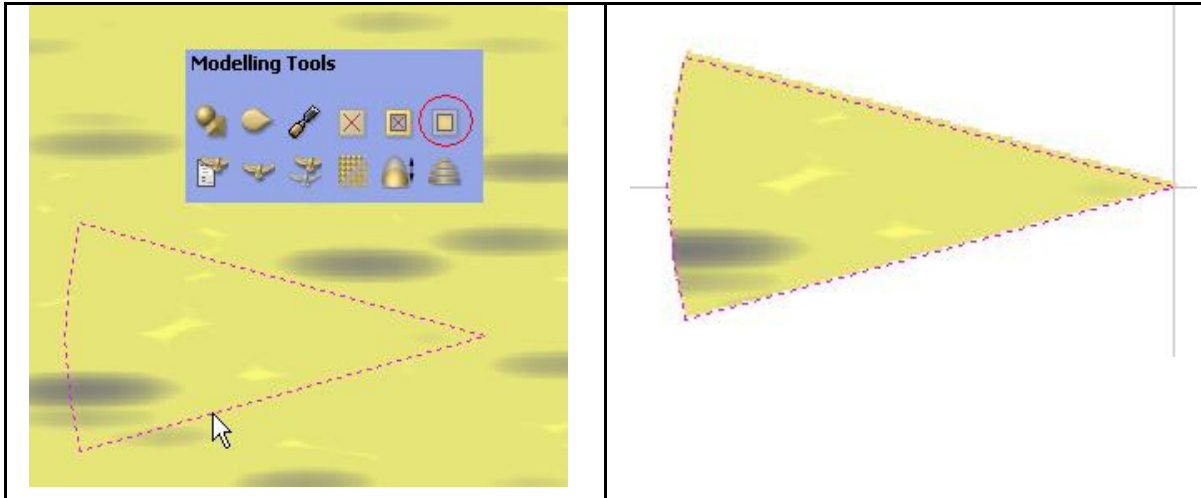
Many interesting variations of the texturing effect can be created. This example shows how a hand carved model would look if the carving tool were used from the edge of the border to the center rather than from left to right.



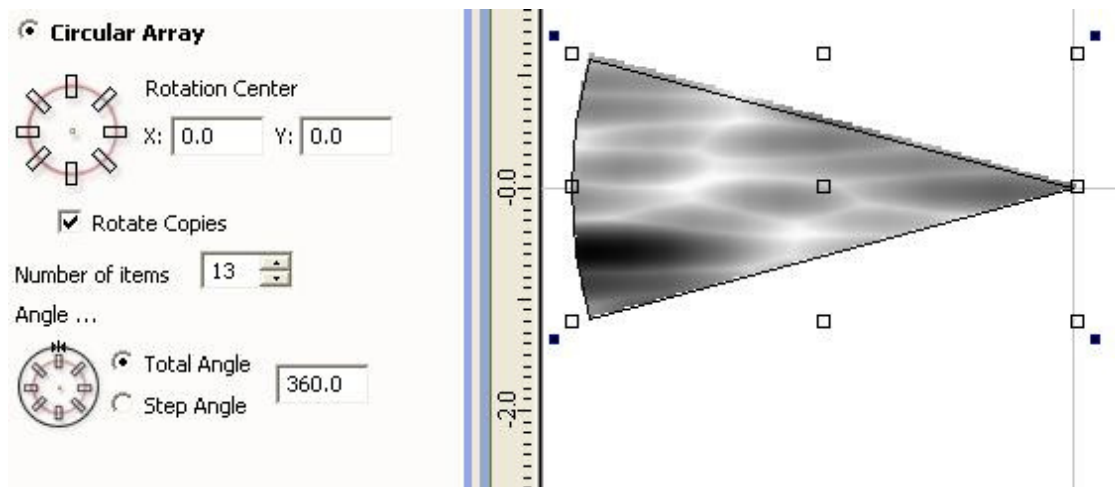
1. Start a new job 24 x 24 x 0.75 and import the 24 x 24 Texture file.
2. Draw a 1/12th pie circle.

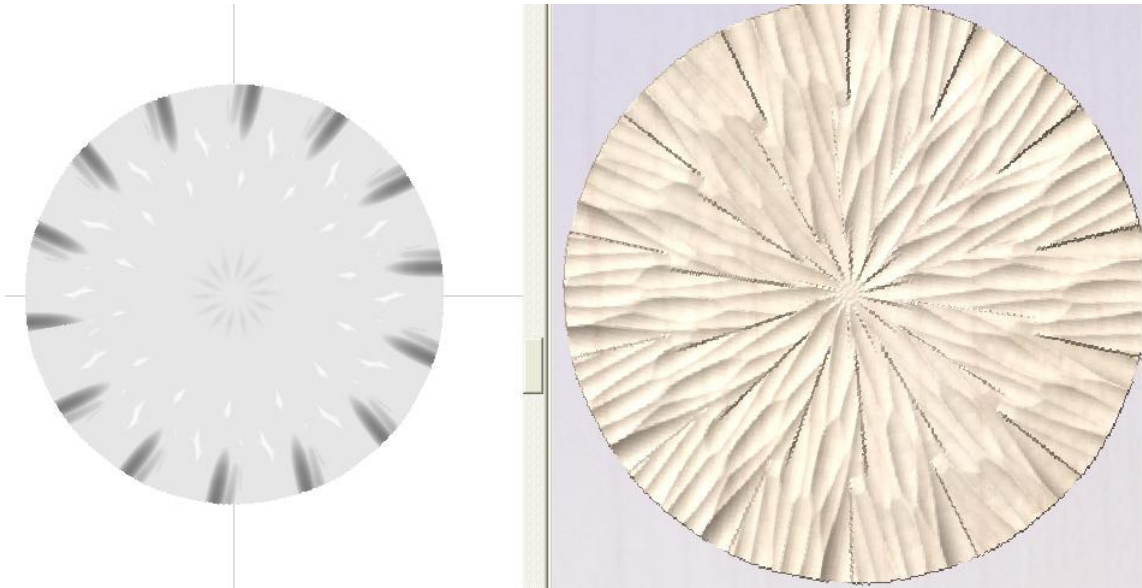
<ul style="list-style-type: none"> - draw a 9 in dia circle - draw a 4.5 in radius polygon - draw the two straight lines shown in the first figure 	
<ul style="list-style-type: none"> - with the Trim Vectors tool (small scissors) trim away the construction lines as shown in figure 2 - delete all of the construction lines leaving only the pie shape. 	

3. Import the 24 x 24 Texture component.
4. Go to the Component Manager “F8” select the texture component, click copy into model and uncheck the texture component.
5. Select the Pie shaped vector.
6. Click Clear Area of Working Model Outside Selected Vector.

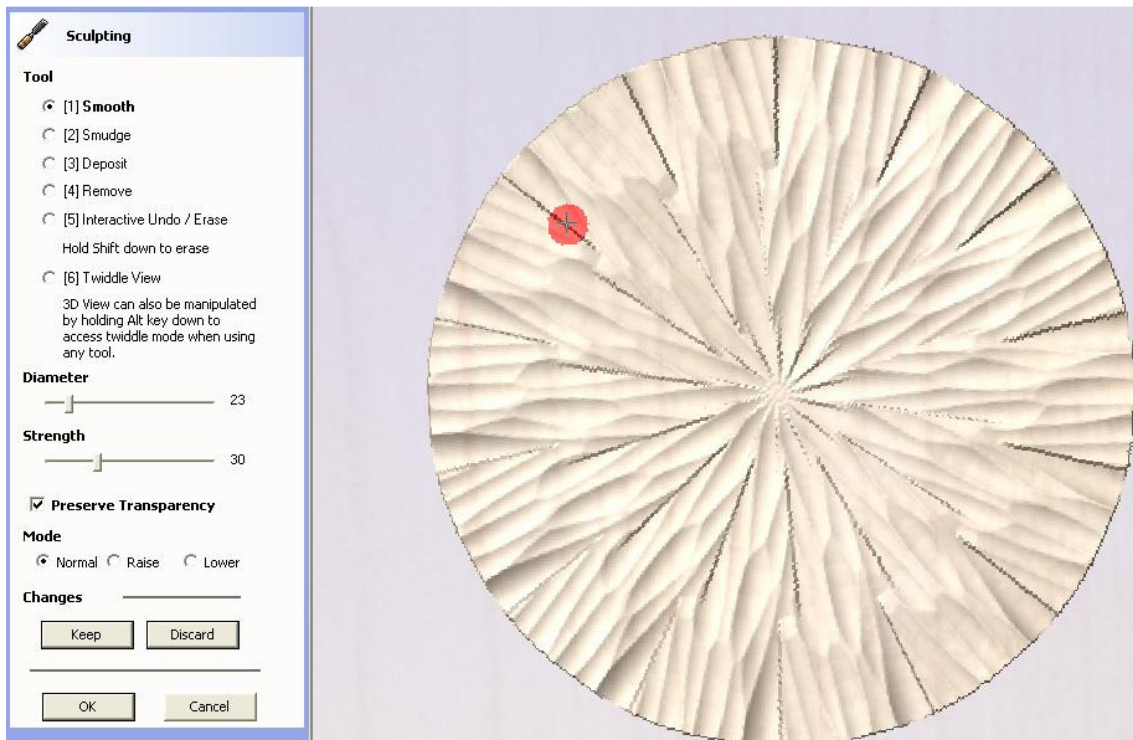


7. Click Create Component From Working Model.
8. Open the Component Manager “F8” and set the Combine Mode for the Pie Piece to Merge.
9. Select the Pie Piece and use the circular array to complete the radial texture.





10. Select all of the Pie Pieces and group them “CTRL G”
11. Open the Component Manager “F8” Select the Component Group (rename if desired), Copy into Model, uncheck Component Group.
12. Close the Component Manager, maximize the 3D view and use the Sculpting Tool - Smoothing set to a small diameter approx. 23 and low strength approx. 30 to smooth out the overlaps in the pie pieces.



13. Click Keep and OK to exit Sculpting.

14. Click Model, Create Component From Working Model.
15. Save the file as Radial Texture

Working model after smoothing.

The Radial Texture Model is ready to use as described above by importing into other projects.

