Create a grayscale image that shows the high and low spots of the pillow surface. This was done in Photoshop with the airbrush tool. (Preferably with a pen/graphics tablet). You might want to photograph a pillow from directly above for use as a template to paint over. The idea is simple; the darker the color, the lower the mesh and vice versa. Because of this, the darkest parts of your map should be along the outside edges. I just applied layers of paint with the airbrush until the edges were as dark as I could get them. To be sure I would get a clean edge, I changed the background color to black and then increased the canvas size by adding 1/2" to the Width and Height in the Canvas Size dialog. This created a 1/4" border of black all around the image, which is about 18" x 18".

**In form•Z,** start by creating an 18" x 18" plane that matches the size of the pillow image.

• Click on the plane with the Displace tool. This will invoke the Displacement Map dialog.

• Load the pillow image you just created.

• In the Displacement Map dialog, set the following options:
  • **Lock Size To** = Displacement Map.
  • **Horizontal Tiling Size** = **Vertical Tiling Size** = 1' - 6" (same size as the plane).
  • **Min** = 0' and **Max** = 3", which is half the thickness of the pillow.
  • Change **Smoothness** to about 3-5% (too much will smooth out the wrinkles).
  • Select Adaptive Meshing and Triangulate Mesh.
  • **Maximum Segment Length** = 1/4".

• After the options are set, click the Show Displaced button to see the results.

This completes the derivation of (half of) the pillow, but you may next want to refine its form by getting rid of that square edge to create a more free formed one.

• In the front view, draw a line about 3/8" above the bottom of the mesh and execute a trim.

• Copy the trimmed surface to a new layer. Ghost the layer.

You may next want to create a cording around the pillow.

• Unghost the line used for your trim and extrude it to create a flat surface. Make sure it is larger than the mesh object.

• With the Line of Intersection tool, click on the plane and the object. This produces the line of intersection of the two objects, which will be used as the path for sweeping a circle to create the cording around the pillow. This path may have an excessive number of points arranged at uneven distances. You can fix this by clicking on the path with the C-Curve tool with NURBS selected. Set the number of points to 250.

• After drawing a 1/8" radius circle to use as a source shape, with the Sweep tool set to Axial Sweep, click on the circle and on the path.

To complete the pillow, we shall next Copy/Mirror the top mesh. To do so you first need to unghost the top mesh. After the mirror operation is completed, you may look at the pillow from the side and may conclude that it still has very rigid geometry. You can fix this.

• In the Disturb Options dialog select Wave Disturbance, Circular, and set the wave Height to 1/8" and Width to 4". Then with the Disturb tool click on each of the two surfaces. This adds some more irregularity to your pillow.

Finally, you may want to add a button to your pillow.

• Create a little cylinder and then round its edges.