



# A Simple Bowl Tutorial

*Using Cobalt™, Xenon™, Argon™*

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3DBOWL0807

# A Simple Bowl



This tutorial will demonstrate how to create a simple shape like this bowl.



## *Tips Before You Begin*

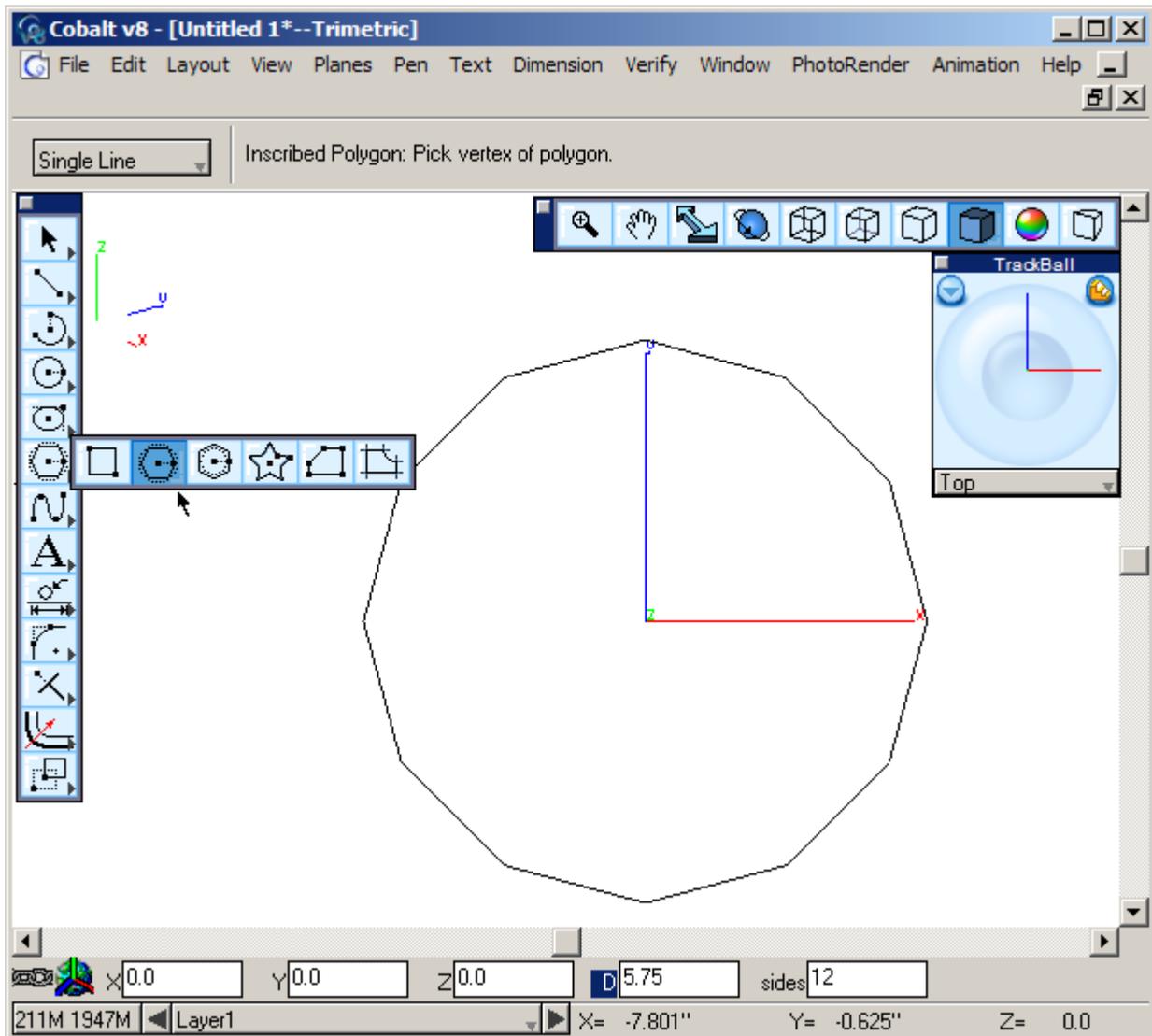
While creating the bowl, use the Trackball to rotate the image into comfortable views.

Use **View** palette to display the bowl in different view modes.

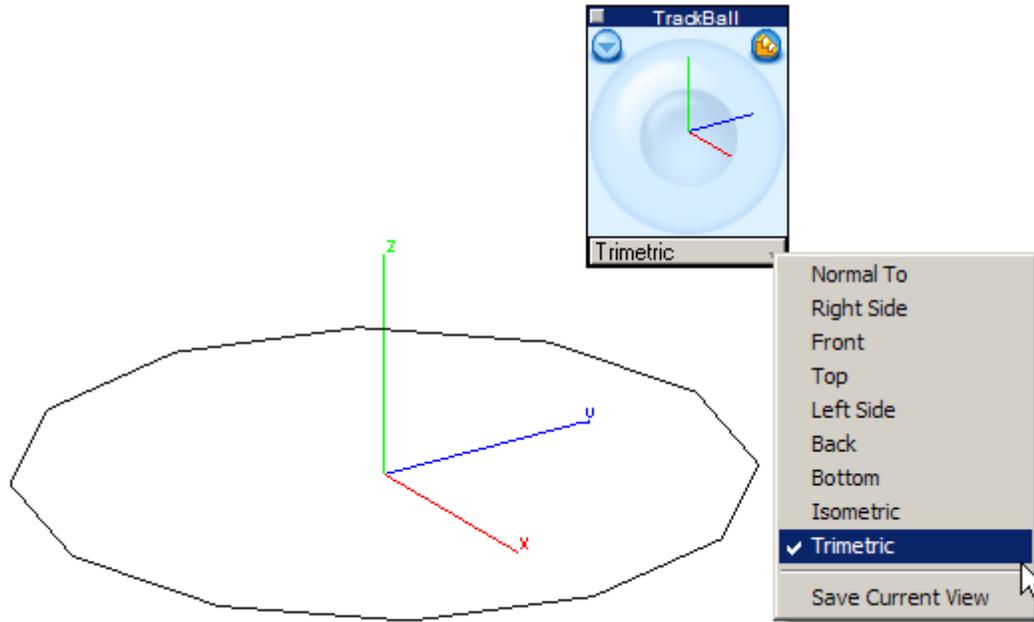


## Creating the Bowl

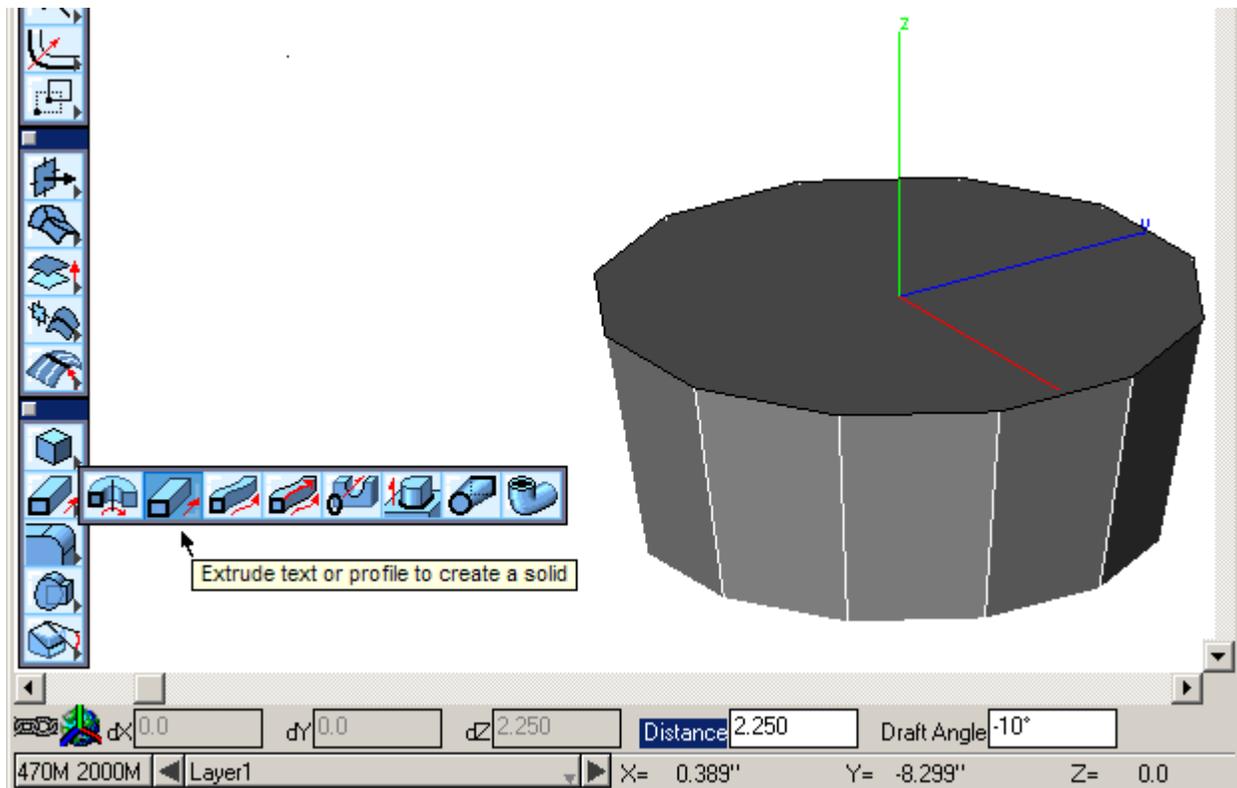
1. Draw a 12-sided polygon using the **Inscribed Polygon** tool starting in the Top view. Make sure to begin the polygon at the origin. Select the **Inscribed Polygon** tool. Define the diameter of the polygon as well as the number of sides in the Status Line. Enter **5.75** in the **D** field for the diameter and **12** for sides, then press ENTER. Click with the cursor in the origin and press ENTER. The polygon is created with the values in the Status Line.



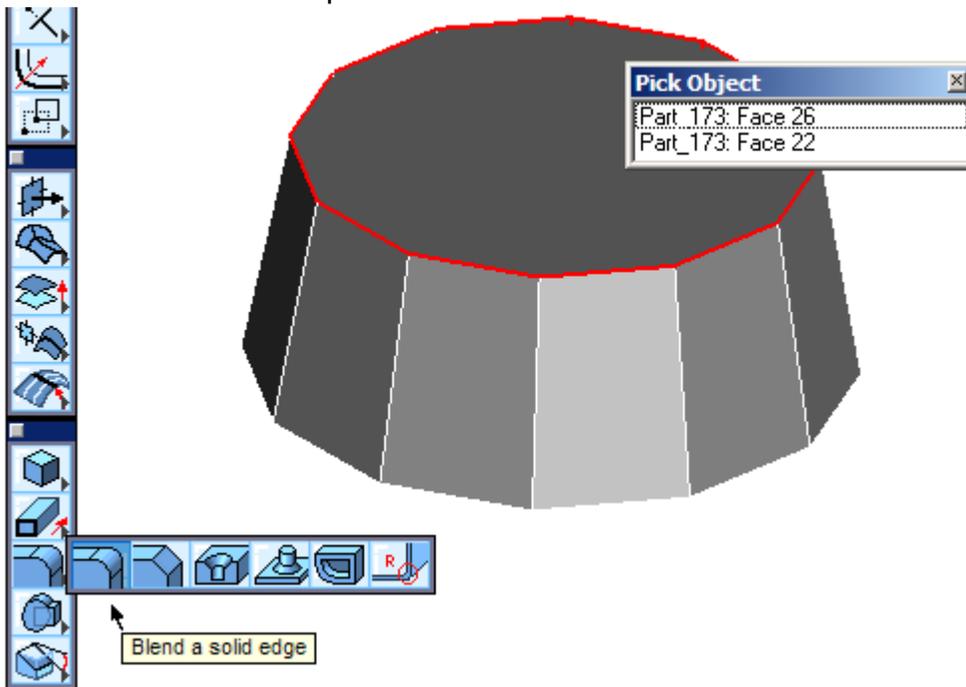
- Switch to the Trimetric view from the menu at the bottom of the Trackball.



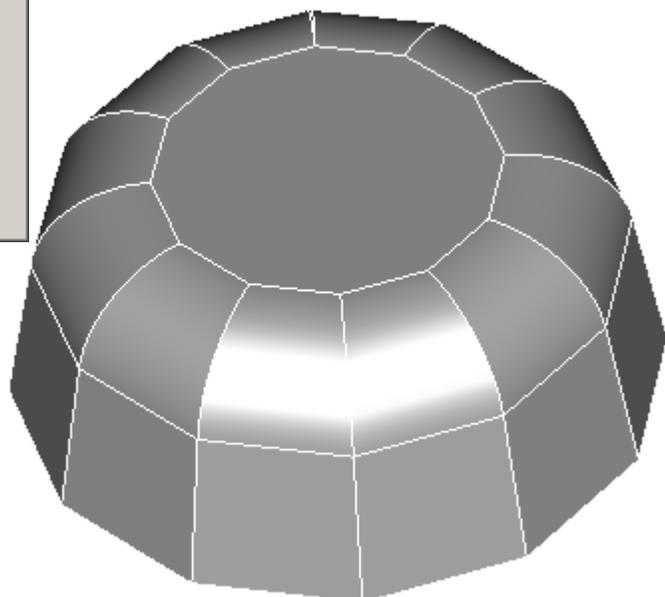
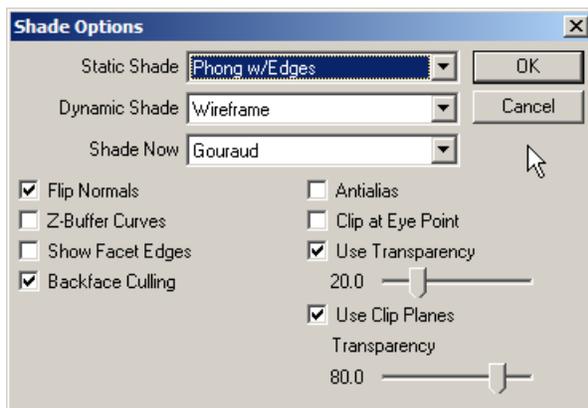
- Select the **Extrude Solid** tool. Choose the **Distance** option from the drop down menu in the Message Line. In the Status Line, enter **-2.25"** in the Distance box for the extrusion and **-10** degrees in the Draft Angle box for the draft.
- Drag the mouse from the upper left corner to the lower right to select the polygon. Release the mouse and the polygon is extruded.



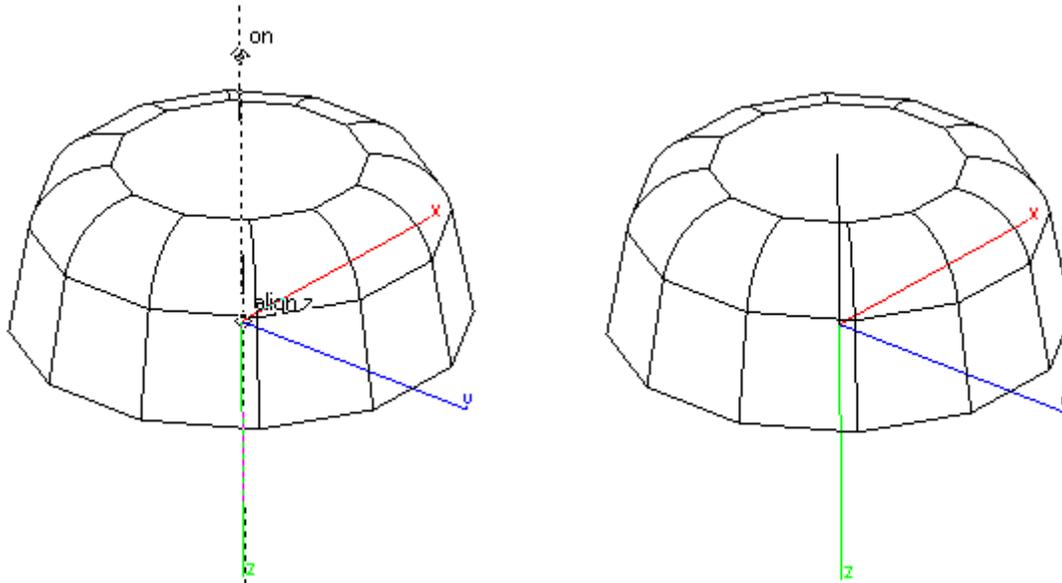
- Next, put a blend on the bottom of the bowl. Select the **Solid Blend** tool and click on the bottom face of the bowl. Make sure to select the correct face for the blend. After the blend is created, type **1"** in the **R** box of the Status Line for the blend radius and press ENTER.



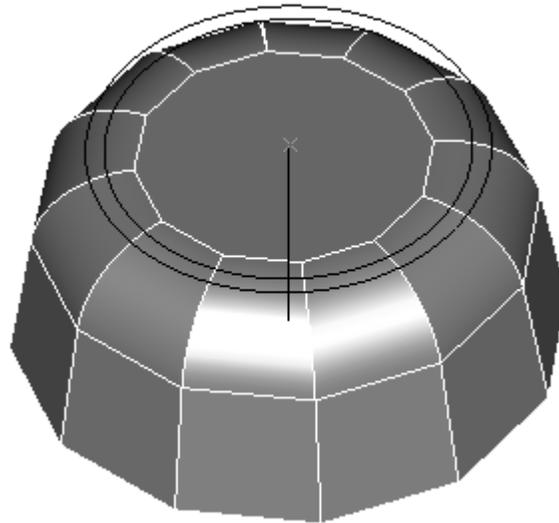
- Below is the resulting shape. To make edges look like the picture below, use **View>Shade Options** to display the window and edit the parameters of the edges displayed. Set the Static Shade option to *Phong w/Edges* then click OK.



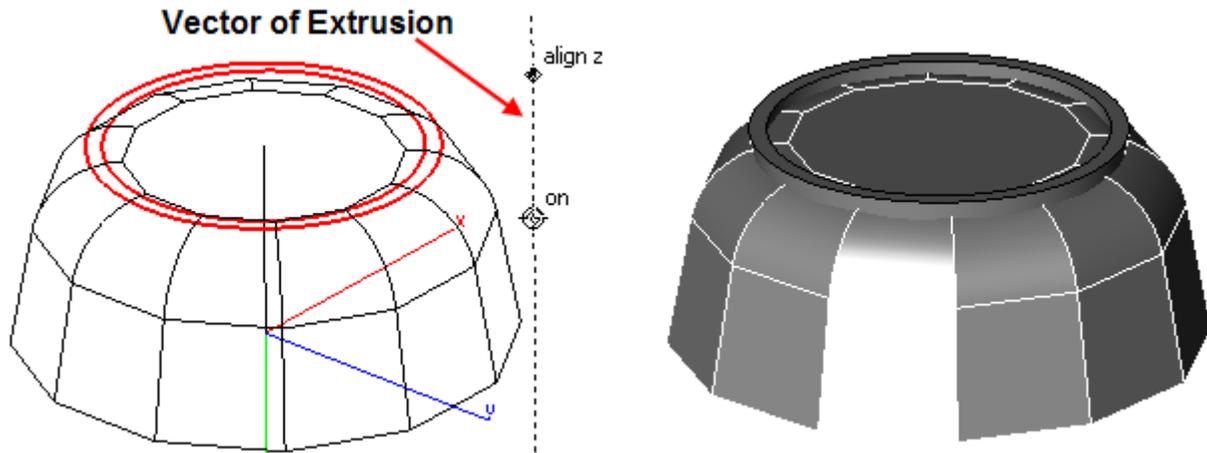
7. Next, create a ring shape that will become the base of the bowl. To start, draw a vertical line starting from the origin. Make this line **2.375"** tall. This line is just for reference so that there is a known place from which to start the ring shape.



8. Draw two circles starting from the end-point of the reference line. Make one circle **4"** and the other **3,625"** in diameter.



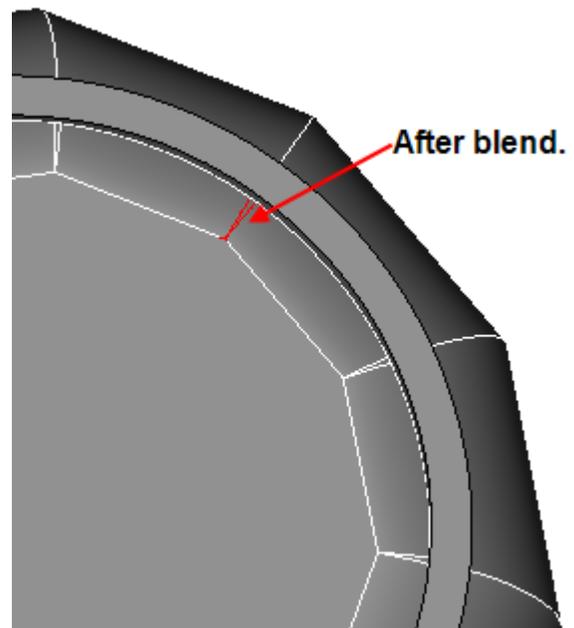
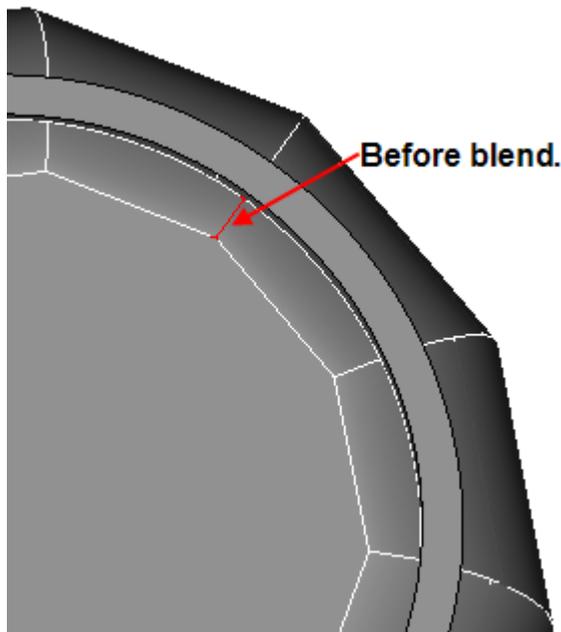
9. Select the **Extrude** tool and specify **Vector** option in the Message Line. Extrude the two circles downward some distance so that they protrude into the bowl. Hold the SHIFT key and select both circles at the same time. Release SHIFT and specify the vector of extrusion in an empty space along the z axis.



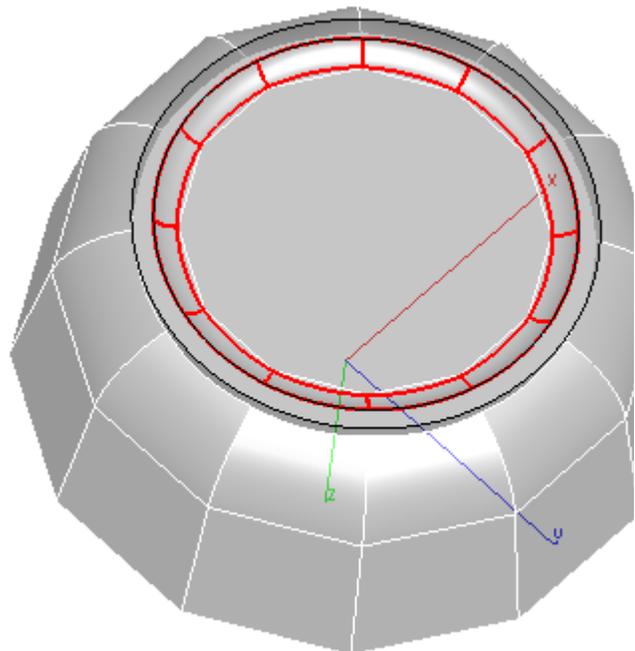
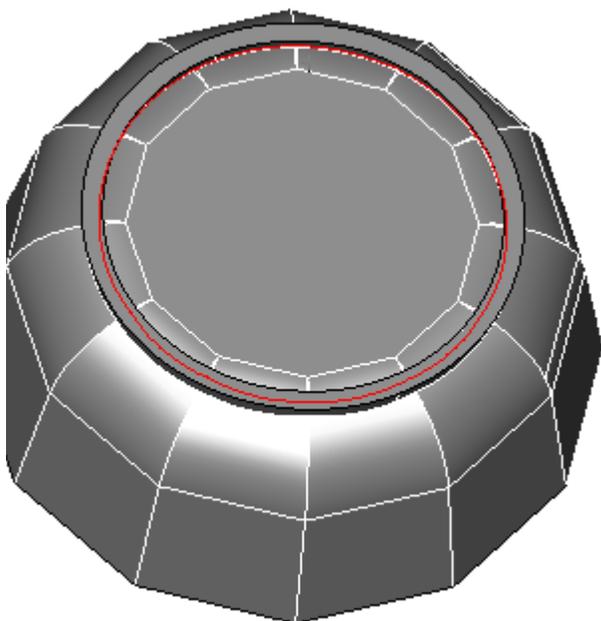
10. Select the **Union Solid** tool and union the ring to the bowl following the prompts of the Message Line.



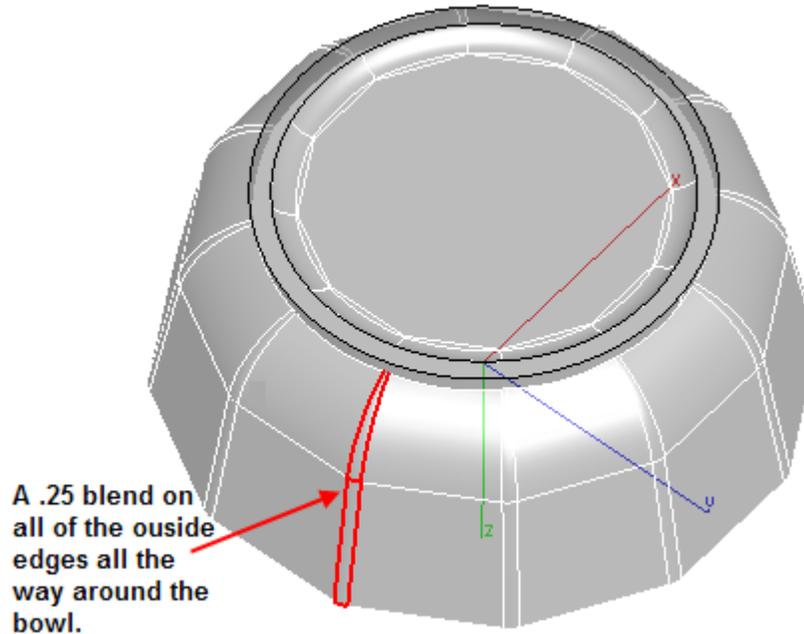
11. After the ring is joined, put a **0.25"** blend  on all of the small inner edges inside of the ring.



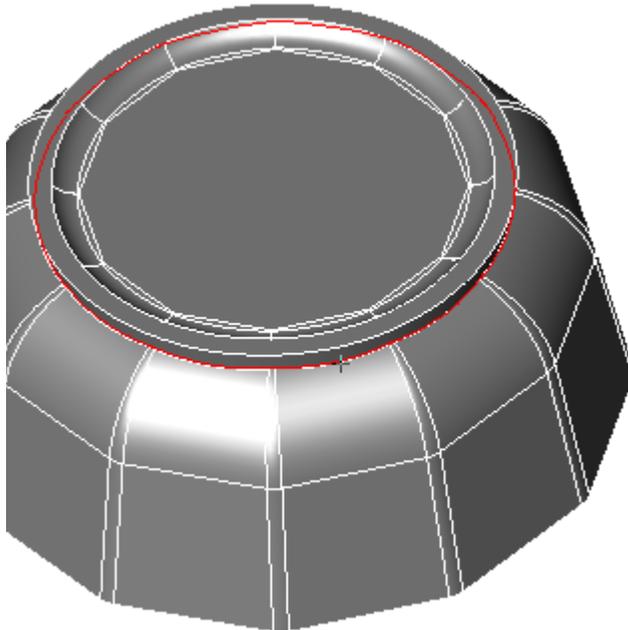
12. Now put a **0.225"** blend on the inside bottom edge



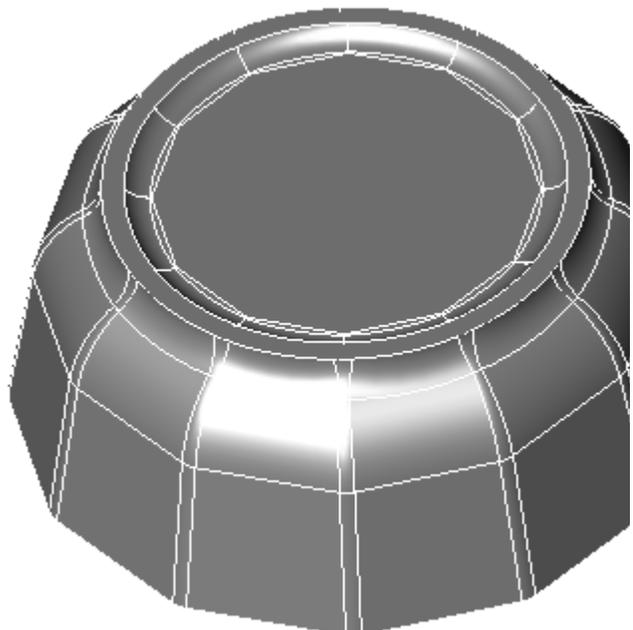
13. Put a **0.25"** blend on all of the outside edges all the way around the bowl.



14. Put a **0.375"** blend on the outer edge of the ring.

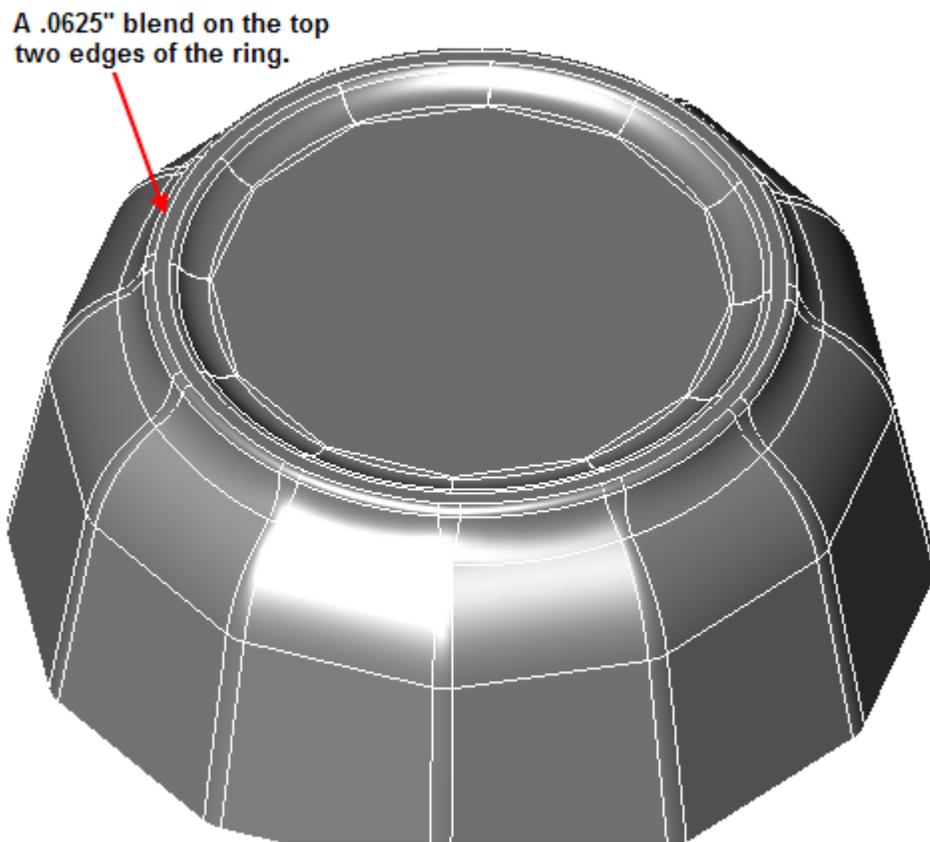


The selected outer edge to blend.

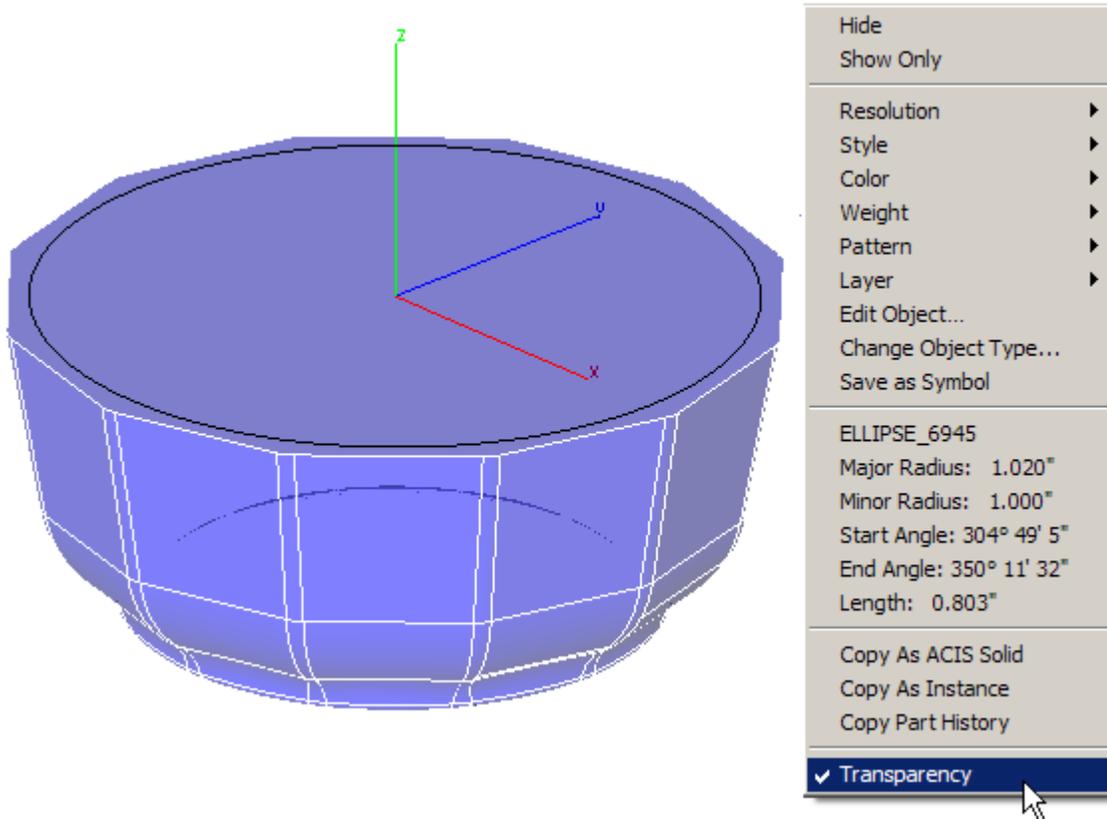


The edge after blending.

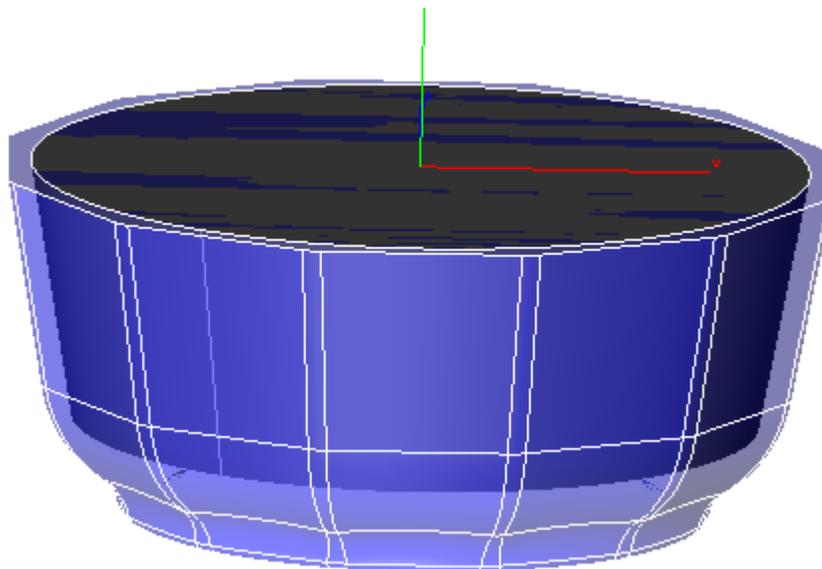
15. Put a **0.0625"** blend on the top two edges of the ring.



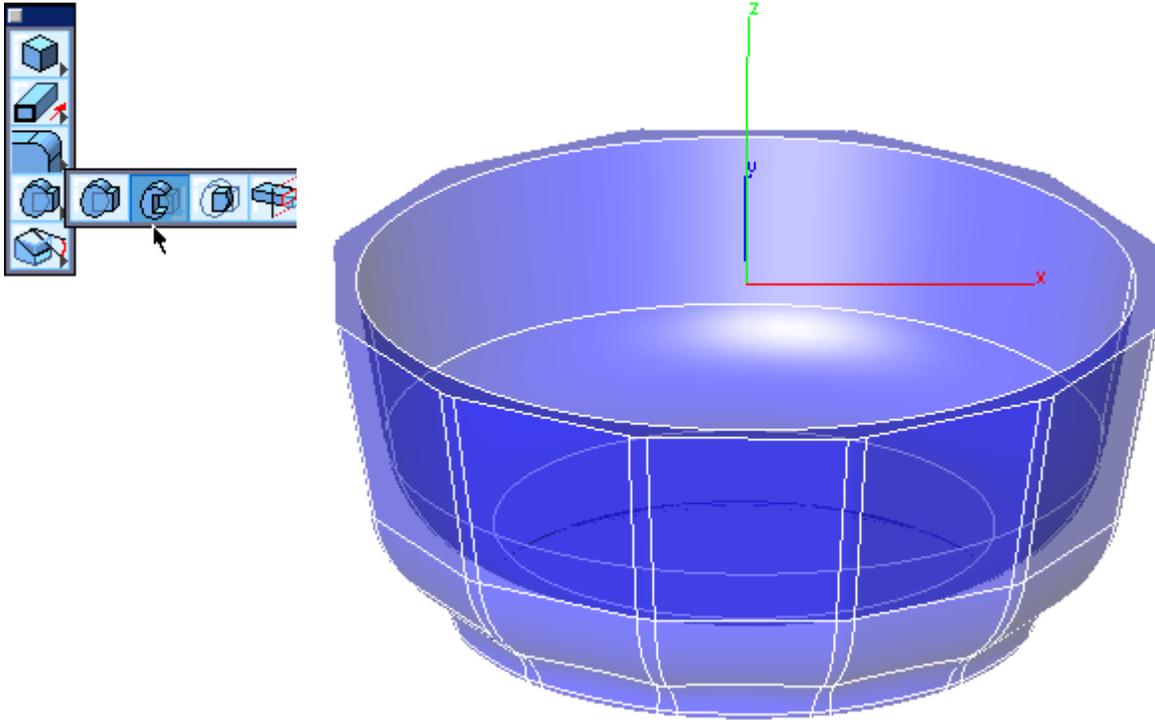
16. Create the inside of the bowl. Draw a circle as shown that is **5.25"** in diameter. To make it easier to see the shape, right-click on the bowl and select Transparency.



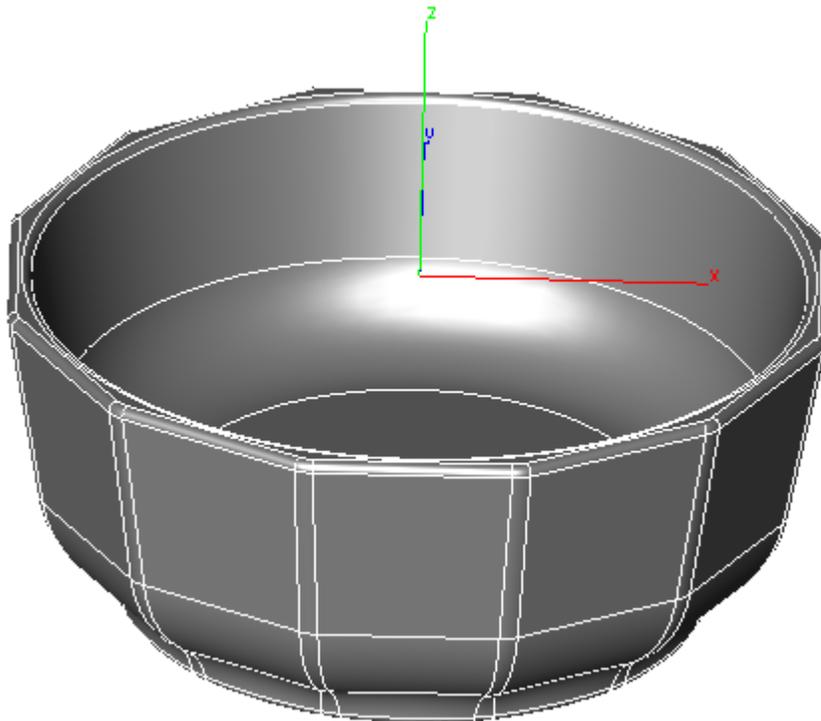
17. Select the **Extrude** tool with the **Distance** option, extrude the circle about - **1.75"** and give it the same amount of draft as the outer shape (-10 degrees).
18. Add a **.75"** blend to the bottom edge of this shape.



19. Use the **Boolean Subtract** tool to subtract the inner extrude from the outer bowl shape. Follow the prompts of the Message Line.



20. Turn off transparency in the right-click menu. Add some finishing blends of **.0625"** to the top edges.



21. The bowl is now finished. In the image below, a floor surface, lights and ceramic material were added. See additional tutorials for more information on photo-realistic rendering.

