

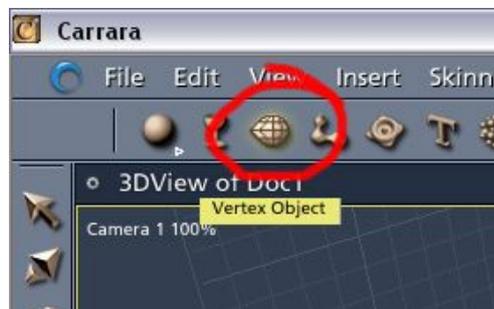


Making a goblet in Carrara (Vertex modelling)



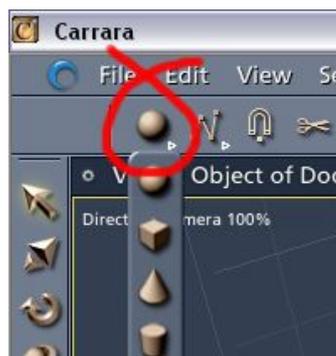
There are several ways to do this, but this tutorial focuses on vertex modelling. In order to complete the tutorial, you'll need to know how to change the view and navigate around your workspace, how to create and resize objects and move them around, how to assign a material and how to render. If you don't know how to do this already, see the guides in the Tutorials section of [my website](#) for how to do these things in Carrara 5.

To make the goblet: open a new document in Carrara. Select 'Vertex object', from the menu, or select Insert menu > vertex object.

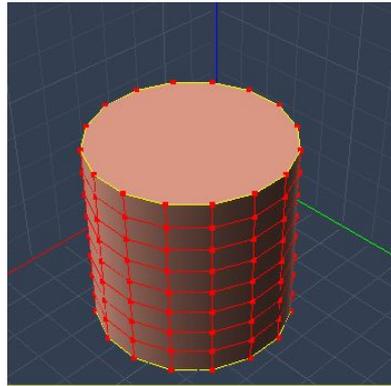


Click anywhere in the workspace to insert a vertex object. Carrara now takes you to the Modelling room.

From the Shape drop down menu on the left, select a cylinder. Click anywhere in your workspace to add it to your scene. Don't press return yet or click away from your new object!

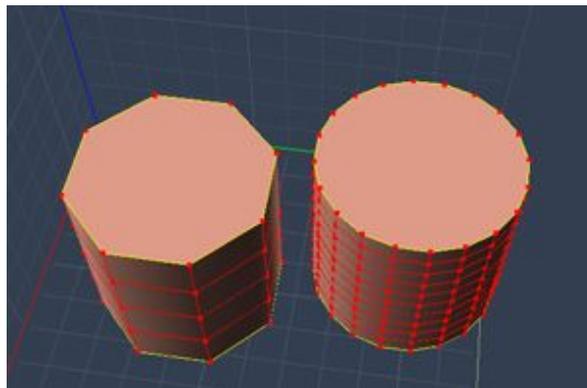


You should now have a cylinder with a set number of edges. You can increase the polygon count of your cylinder now by pressing the “+” or “-” symbols (your cursor will display a '+/-' symbol when this is possible).

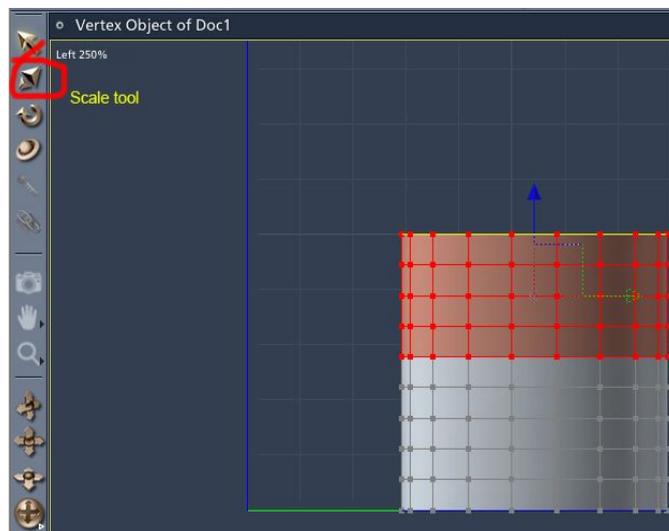


An object with a higher polygon count will generally appear smoother in your final render, but it will also take up more resources. This isn't so important when we're just making a simple prop, but it becomes much more so when you build a scene with many different elements.

The goblet I'm using for this tutorial is going to be reasonably smooth, so I'm going to go for a moderate count by pressing the '+' key a few times. You can see the basic difference in the picture below.

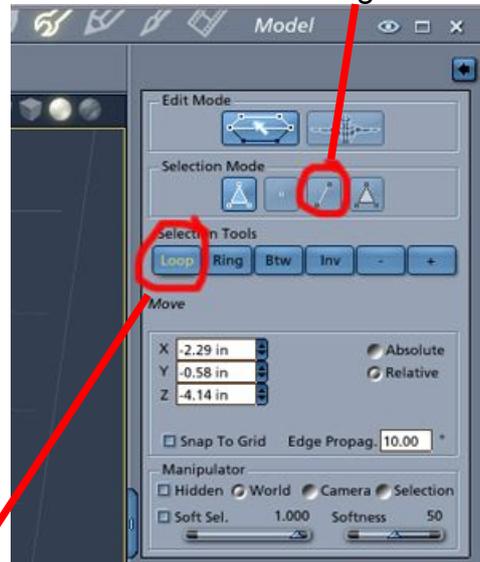
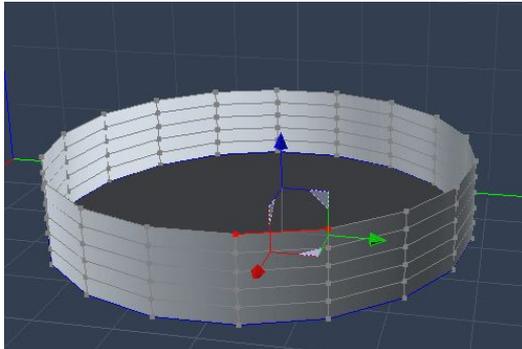


Next, take down the height of the cylinder, as it's going to form the base. Switch to a side view, and using the selection tool, select the top half of the cylinder.

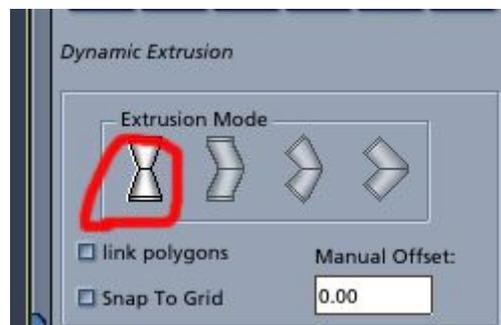


Press delete. Now switch back to director's camera so you can see what you're doing a little better. Select your entire object by pressing 'CTRL' + A, and now scale the cylinder down vertically using the scale tool on the left.

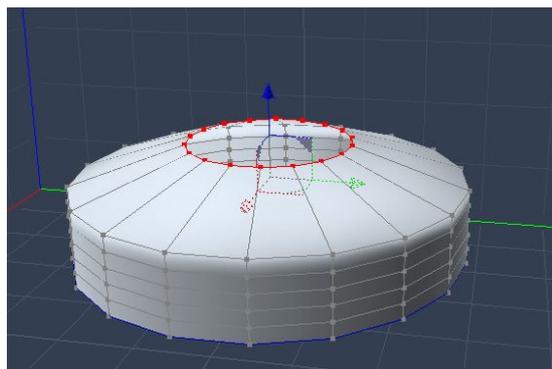
Select one of the edges on the top of your cylinder. If you're having trouble selecting a line instead of a point or a whole polygon, change the selection mode to 'Edge selector'.



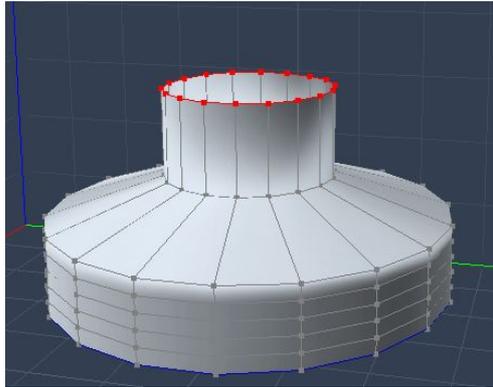
Once you have an edge selected, click 'loop' under the selection tools. This should highlight all the top edges for you. Now we're going to play with the extrusion tools! Click on the Construct menu, and select 'Extrude'. You now have a menu on the right that gives you options for which extrusion mode you would like to use. For the moment, we'll just use normal extrusion, but fiddle with the other choices and see what your model does.



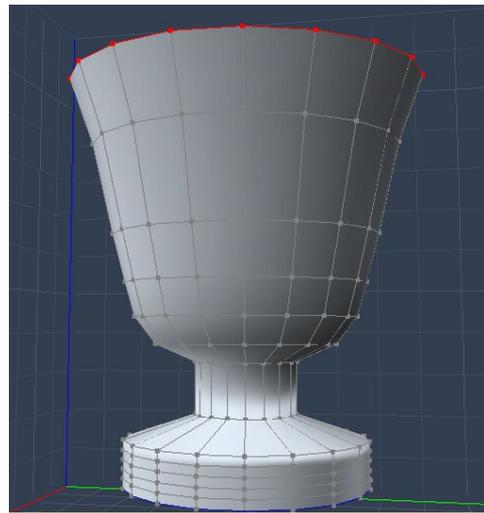
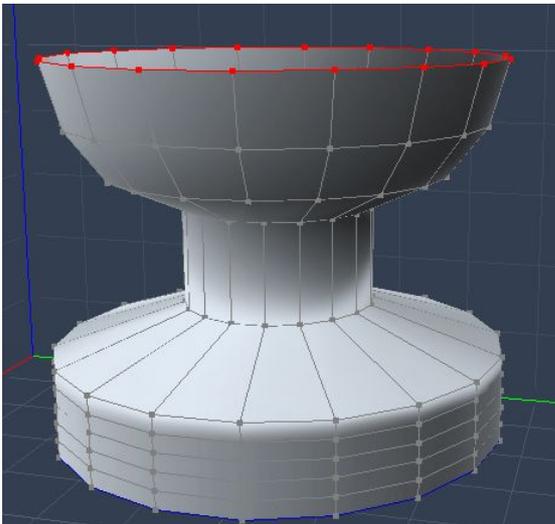
This shape will form the base of the goblet, so the next step is to make a short neck. With the top edges still selected, you need to extrude upwards and inwards. Your cursor should have turned into a set of crosshairs. Click and drag them on the red line to bring those edges in towards the centre, and up a little.



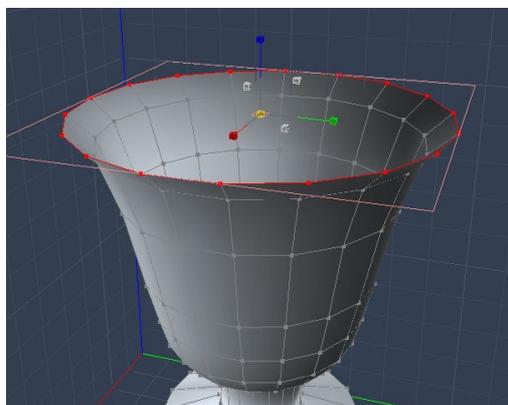
Click and drag again to make the neck. If you want this to go straight up, hold down shift as you drag (if you wanted it to go straight out to the sides at right angles, you'd hold CTRL instead).



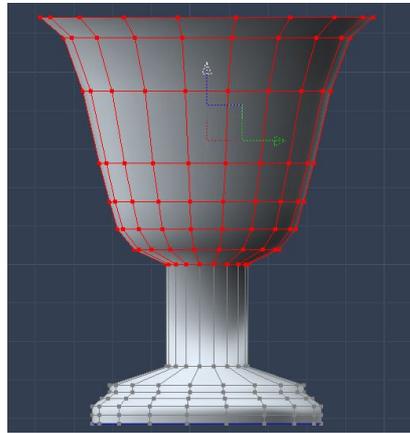
Now you need to bring the ring out to form the lower part of the goblet cup. Keep clicking and dragging the line until your goblet starts to take shape. Change your camera angle and / or switch views whenever you need to. You may need to reselect the line, and the Extrude option when you do this.



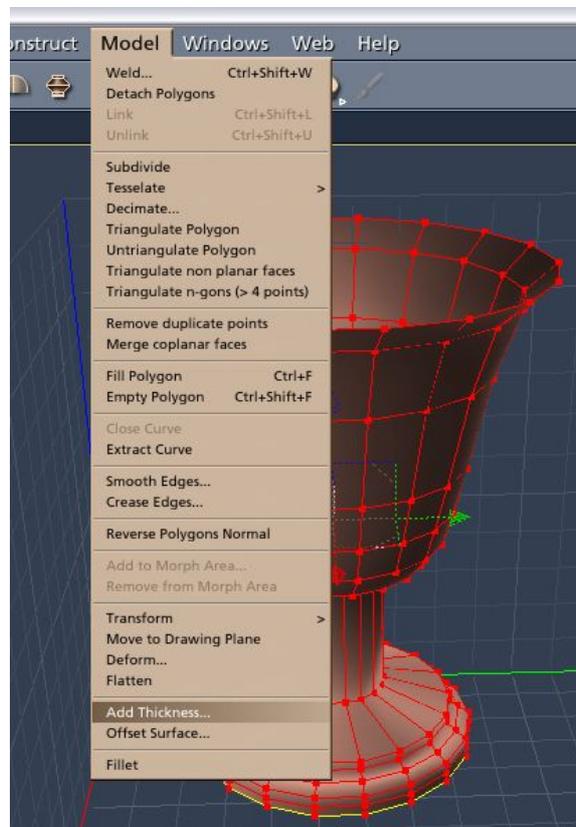
Now add a slight flare at the very top to make a lip for drinking. If you find you've extruded in the wrong direction, you can press undo, or you can use the move and scale tools to get your line back where you want it.



Right, let's have a look at our model from the side. The shape's almost right, but the base needs more detail. Using the selection tools and modes we used earlier, change the shape of the base by selecting an edge, then a ring and moving / scaling it as appropriate. After pulling those into shape, try changing the overall proportions of the goblet – for example if you want a longer neck, change to a side view, select the upper part of the goblet by clicking and dragging, and click on the move tool on the left. You can now drag the upper part up, thereby making a longer neck.



The last thing to do in the modelling room is to add some thickness to your goblet. Select all (CTRL + A), then click Model menu > Add Thickness. The default is way too high, so change the value to 0.2. Experiment with different values to see what they do. Your goblet should now look far more 3 dimensional. It's worth making sure your shape is just as you want it before completing this step, as it's harder to change the shape once you've added thickness.



Now click back on the assemble icon to go back to the main workspace, add a texture, and render it to see how it looks.

If you want a smoother finish, you can use the Edit menu > Smooth objects, and click the 'change smoothing' box. Experiment with the subdivision levels, but bear in mind the more you increase this, the higher your polygon count will be.

Below are two renders of the same model, one with smoothing, one without.



If you've any questions about this tutorial, or want to leave feedback, please email me on the link below.

Deedee
September 07

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