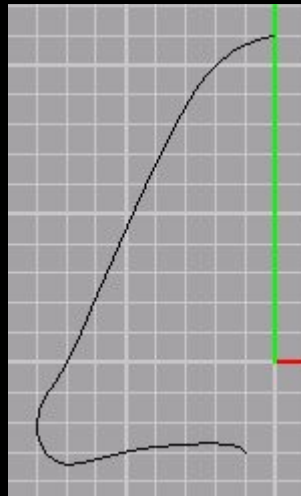




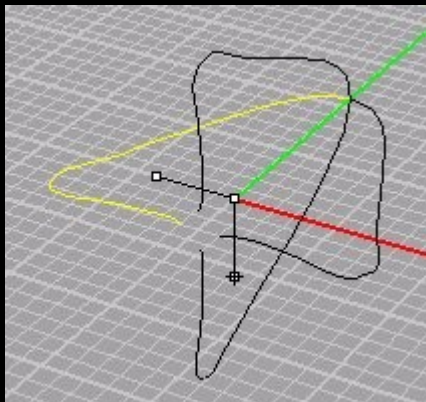
Creating a Mushroom in Rhino3d

By Mike Erickson

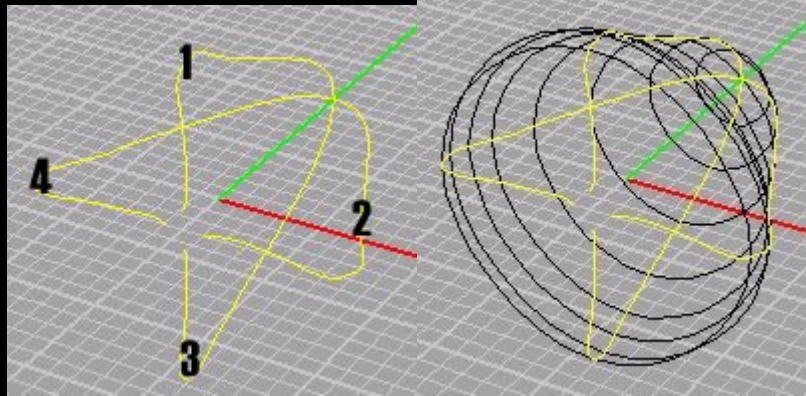
The first thing that we will do to create a mushroom is to create a curve. For this tutorial, you can just leave gridsnap on almost the whole time. I like to work with gridsnap on, it saves alot of time wasted on snapping to lines/pts/etc. so Turn on gridsnap.



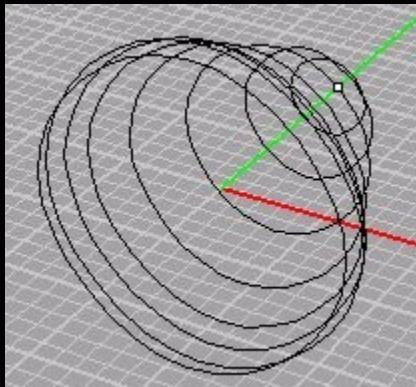
Once we lay out this curve, we want to make copies of it around it's central axis. To do this, go to a perpindicular viewpoint, and click rotate, hit C to make copies, and place a copy every 90 degrees. You will need gridsnap to do this correctly. If you don't know how to rotate, read the Rhino Users Guide available at www.rhino3d.com



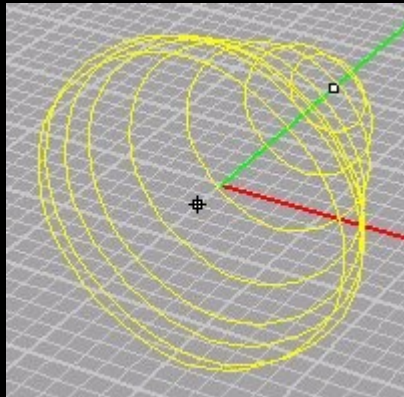
Now, type Csec and select the curves in order. Then From a side viewport, create lines through all of the curves. This will create cross section curves that will help us make a tweak-able loft-able mushroom cap.



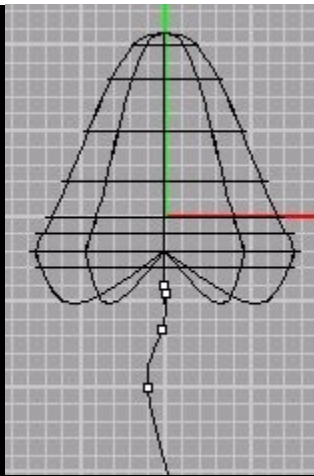
Next we want to create a point that will be the apex of the mushroom. Create a point at the top of the curves and move it down a little so that it will smoothly transition across the top and won't create a depression or a peak.



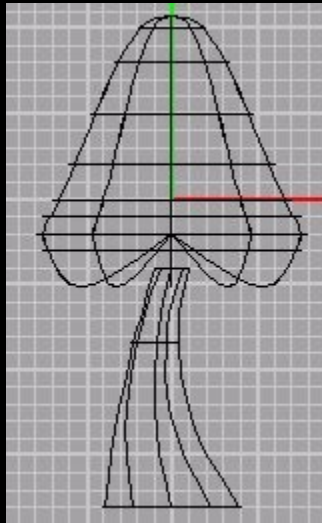
Now type prepcurves and make sure all the arrows are lined up. Use 5 control pts. Then loft the curves. type loft; hit N, hit P, goto the snap toolbar and select point snap. Move your mouse over the point that you created, click, then click all of the curves down to the very base. From there, hit P again. This time you will want to create a point up inside of the cap to make the bottom concave.



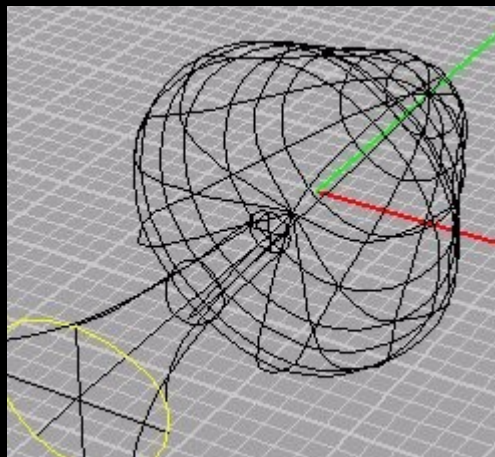
Now that you have the cap done, create the line that will be the basis of the stem. Drag a line and give it some curve. Then show the control points and tweak it around in a perp viewport.



Now create a circle at the base of the mushroom. Stretch it out length wise and make a few smaller circles that are rotated and stretched along the line. Make sure that they follow the curve, but are not at extreme angles. Prepcurve and loft them using the same method as before.

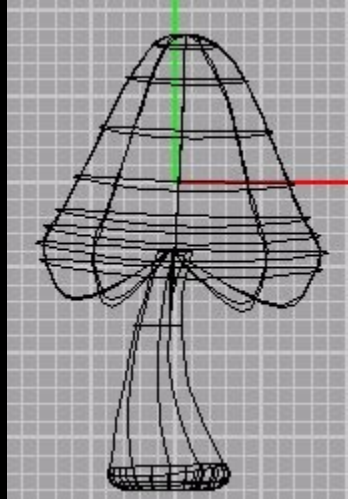


Now you want to fillet the edge of the bottom of the stem. Type "cap" and select the stem. This will cap the open ends and make it an edge that can be filleted. Type Flte and select the edge that you want to fillet. Give it a radius of 1 to make it nice and smooth.



Now move the stem up into the cap to meld them together. It would have been possible to have them seamlessly blend

into each other, but it's not as good looking imho, and would create dozens of useless polys. On top of this, you can select the cap and type "showcv". This will show the control points of the NURBS mesh. Select GROUPS of them and move and rotate them. This will make the mushroom look more organic.



Your done. Select them, give them a color, and render.



eMail comments to [Mike Erickson](#).