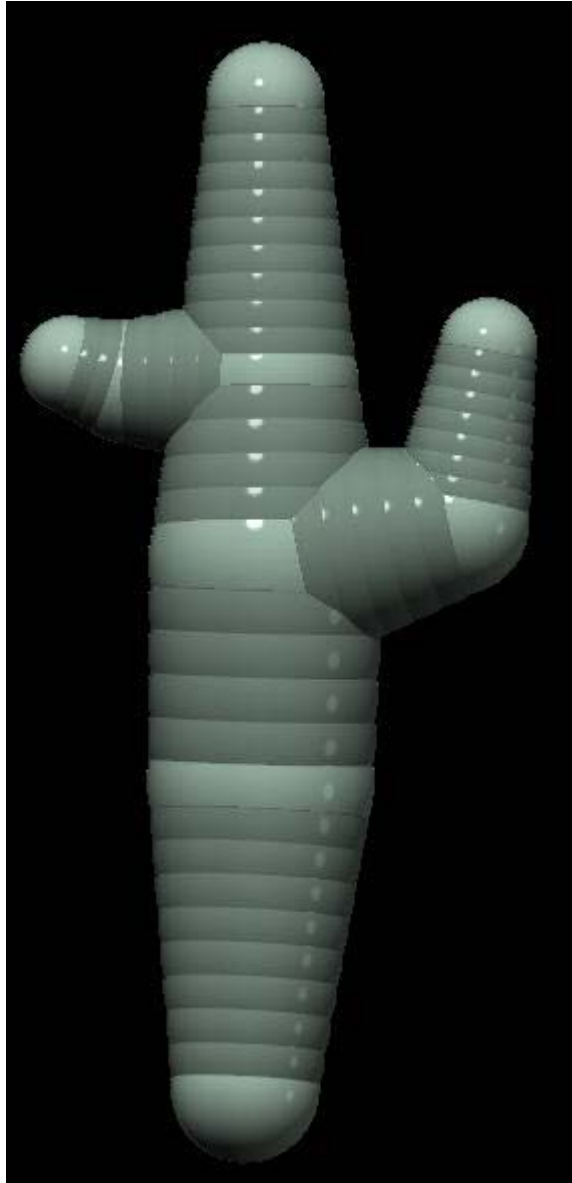


Cactus Tutorial

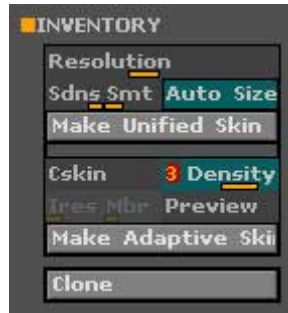
By Ken Brilliant



This tutorial is to illustrate how you can get far along in the modeling process with just a few simple adjustments of an object's geometry properties. This example is applied to ZSphere models, but the techniques can also be used with primitive objects.



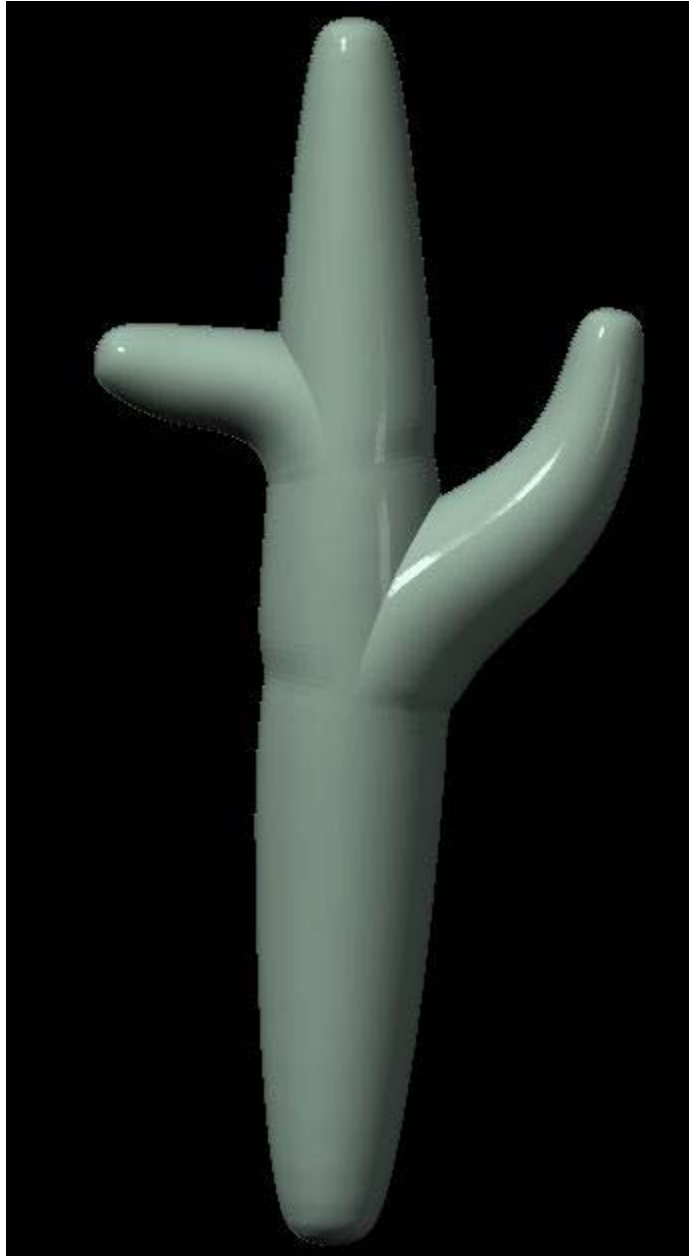
The model will be a cactus. To begin, make a simple ZSphere model of the cactus.



To make the mesh, make an Adaptive skin with a density of 3. Turn off Cskin. This will help make sharper joins where the branches meet the body.



Draw the object on the screen and press "T" to enter Edit mode. In Modifiers, set smoothing to 1. This is what we normally set it to for a smooth mesh without changing the geometry of the model. Set the Divide modifier to 7 or so, which increases the amount of smoothing that takes place.



The smoothed model.



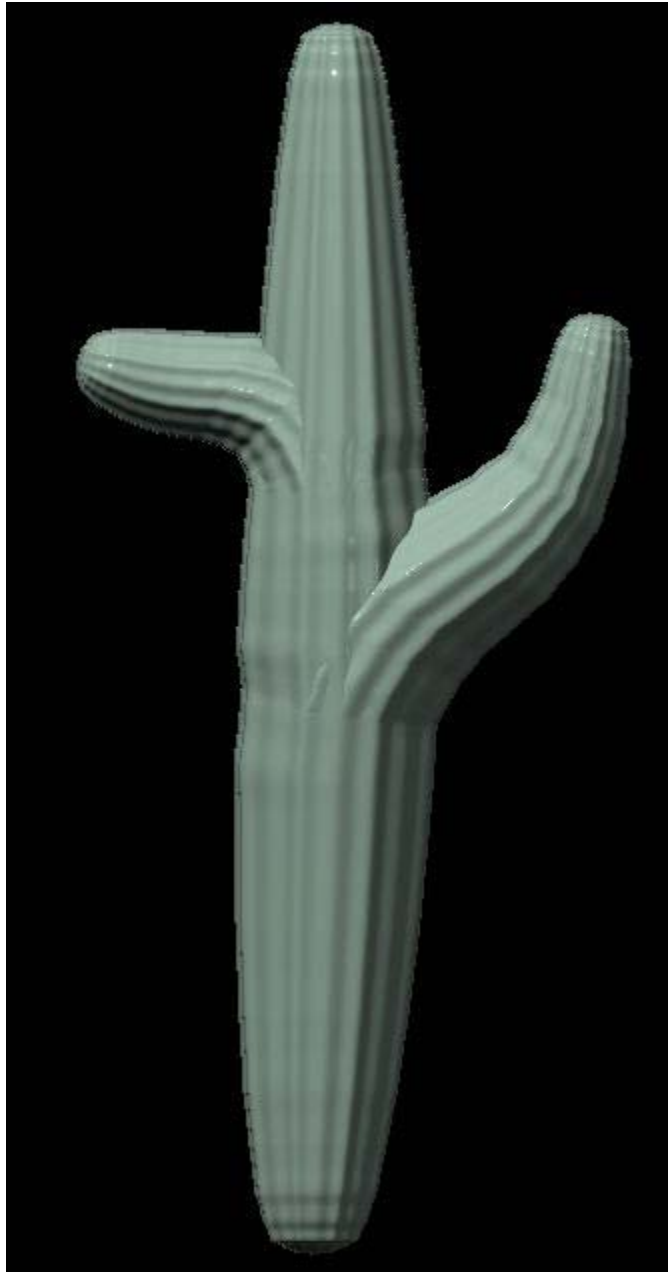
There is another Modifier that affects the appearance of the object; Edge Smoothness. For most models, we would naturally leave this at the default 100, but it can have other values. Observe the mesh when it is set to -100.



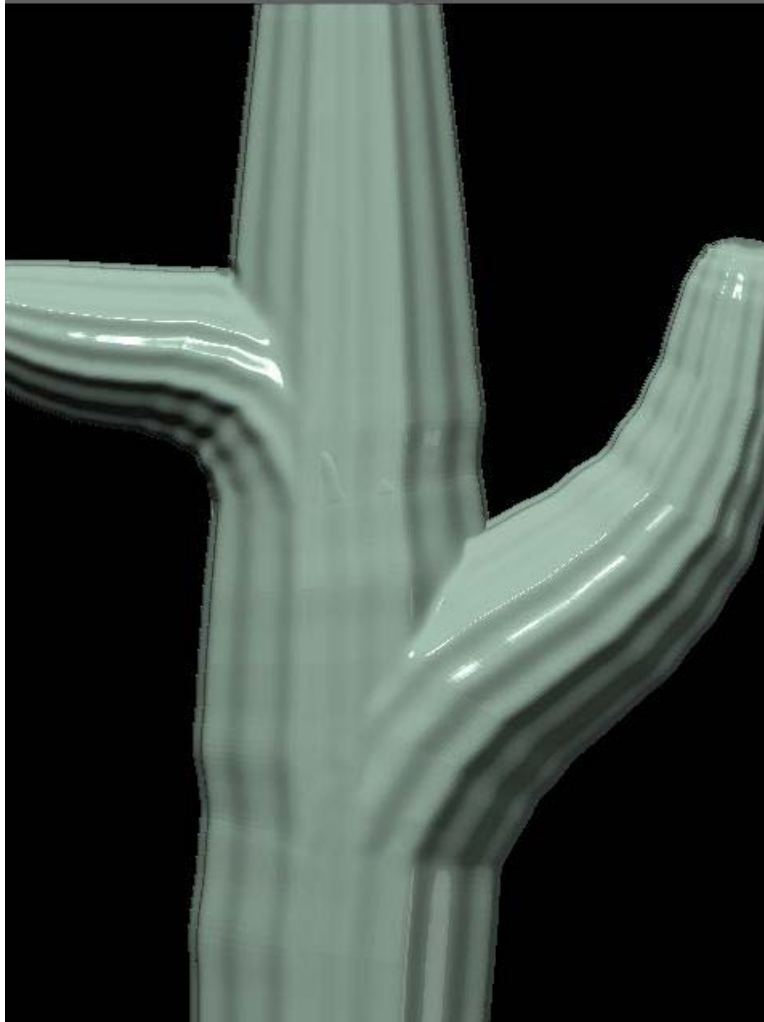


Now go to the Deformation panel and Divide the mesh once. Unlike the other Divide, this one actually does change the mesh – doubling the polygon count in all unmasked parts of the mesh. Since this model has not been masked, that means that the entire model is doubled.

View the results:



The model now looks very much like a cactus, but there are a few places where seams are visible in the mesh (such as where the branches join the trunk).



The Blur brush set to Zadd will help smooth over any noticeable seams from the skinning method. It is usually best to use a low ZIntensity setting in order to keep from changing too much, too quickly.

Note that once the Blur brush is selected, the model is snapshot to the canvas and cannot be rotated or repositioned. At this point it is no longer polygons at all, but has been converted to pixels. This is what makes it possible for the 2D and 2.5D brushes to be used on the figure.

That is how you can create the fastest cactus in the West. -- or anywhere else! It would have taken much longer to model this detail with traditional tools.

By experimenting with Edge Smoothness and the geometry-changing Deformations, you can achieve complex looking results with little effort. The 2D and 2.5D brushes can then be used to further refine the models without regard for geometry, easily incorporating them into a scene.

