

Soccer Ball © Gene Gunderson

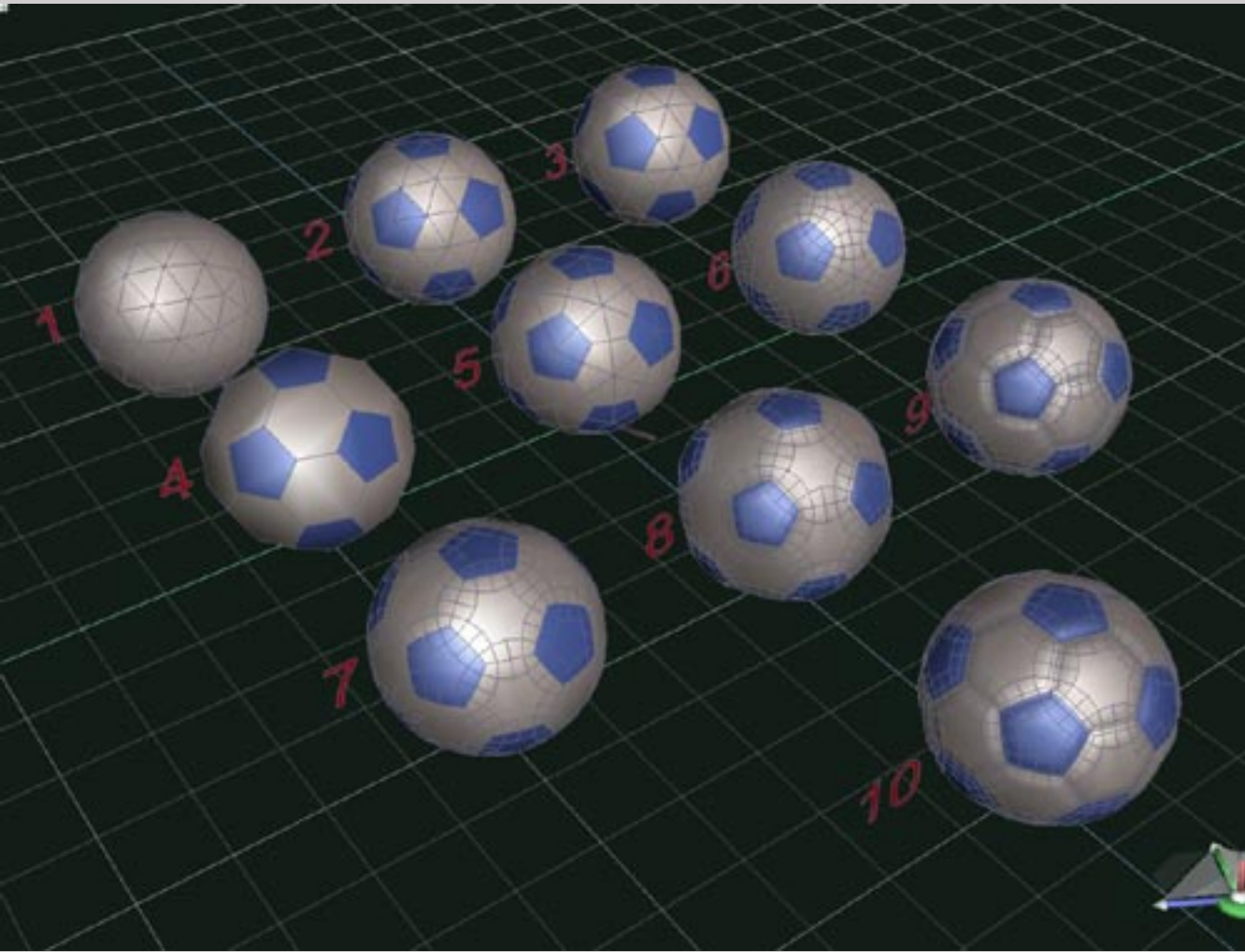
By request and because no one else stepped up to the pump, here is how to make a soccerball in truespace. I also love a challenge.

This ball was made in trueSpace 5.1 using a Geosphere, beveling, point editing, and Subdivision Surfaces. The same ball could made in tS 4.3 using the same methods and Alain Bellon's ThermoClay Plugin. Because tS4.3 doesn't support Geopheres, I've included a tS4.3 .cob object of the sphere so 4.3 owners can also follow along.

Warning! To follow along you'll need to use the point editing tools quite a lot.

It helps to be in 'Solid Outline' mode for the entire Tut.

The numbers below correspond to the numbers in the following pic:



Tutorial Pic 1

1) Create a Geosphere with a resolution of 3. (right click on the geosphere icon set to set the resolution). Make the size approximately 8 feet or 2.5 meters. These are rough numbers but are related to the numbers I used for beveling so get it close for it work correctly. Use the default light gray color, but change the reflectance to 'Caligari Phong'.

2) We now have a complex triangulated ball that is hard to make out any kind of a soccerball shape, so using the Material Editor, change the color to a light blue or whatever you favorite color is. I used RGB 114, 144, 255. Then, using 'Paint Face' from the Material Editor paint all 5 triangular faces of the Pentagon in

that blue. Continue around the object painting each Pentagon until all 12 pentagons are a blue color. Now you should be able to make out the rudimentary shape of the soccerball.

3) Using the 'Point Edit: Vertices' Tool, delete the center point from all 12 Pentagon.

4) Using the 'Point Edit: Vertices' Tool, delete the center point from all 20 Hexagons. Now the object looks more like a rough soccerball shape.

5) 'Smooth Quad Divide' the whole object to puff out the flat spots and get the correct centerpoint vertices and lines. If we used the lines that were originally created at the beginning, then, when we used subdivision surfaces later, all the corners of the Pentagons and the Hexagons would be rounded off because of the way SDS works.

6) SDS (Subdivision Surface) the whole object using a Level of 1, then 'Extract final surface form SDS object'.

7) Once again delete the center vertice from each Pentagon and Hexagon.

8) Using the 'Point Edit: Faces' Tool, and holding down the 'Ctrl' Key, select all 16 faces of the Pentagon and 'Bevel' them at 0.05 and a 45 degree angle. Do this for all the Pentagons.

9) Using the 'Point Edit: Faces' Tool, and holding down the 'Ctrl' Key, select all 19 faces of the Hexagons and 'Bevel' them at 0.05 and a 45 degree angle. Do this

for all the Hexagons. Only do one Pentagon or Hexagon group at a time, otherwise neighboring pents or hexs may become part of the others.

10) To finish up, return to the blue Pentagons and using the 'Paint Face' Tool paint the 20 faces around the outside of the Pentagon the blue color to pick up the original outline of the Pentagons that were painted a gray color when you beveled the pentagons.

Thats its! Congratulate yourself. The final object has 1292 faces. If you want to define the boundaries a bit more between the Pentagons and the Hexagons, then SDS the whole soccerball one more final time with a Level of 1. That makes an object with 5400 faces for those extreme closeup shots.

The finished Image of the 1292 face soccerball can be found here:



[Scene and object files.zip](#)

Close