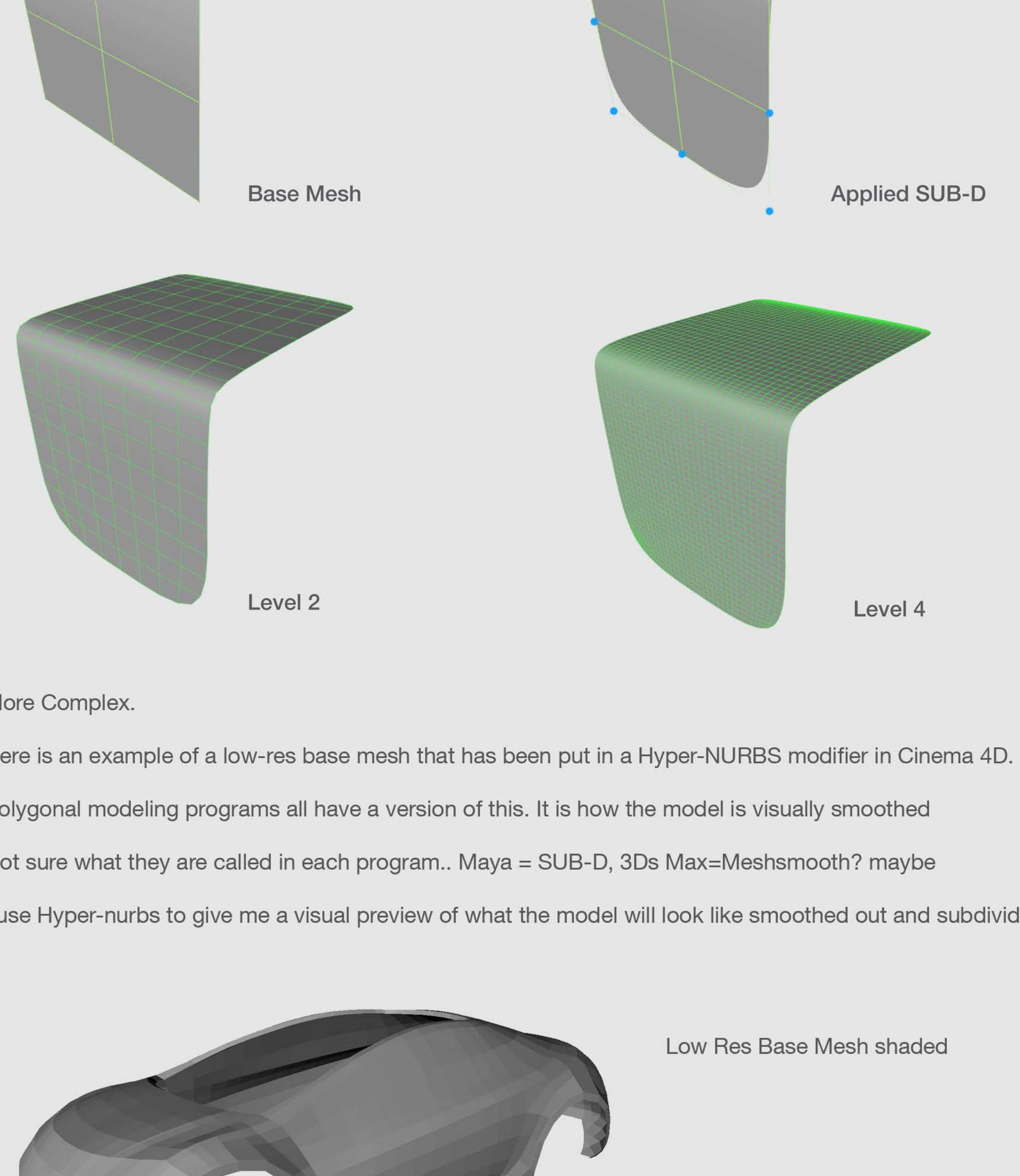


The form of the object is based on the (CV's) or vertex positions (Quick definition)
Its based on the Catmull-Clark method. Google it for more info..
Basically the closer the vertex are, the sharper the surface.

I've used this simple form to visualize this..
The Blue dots show where the vertex are compared to the subdivided surface.
There are many tutorials out there that show how to create various objects like cars, creatures or what-ever.. Google them..



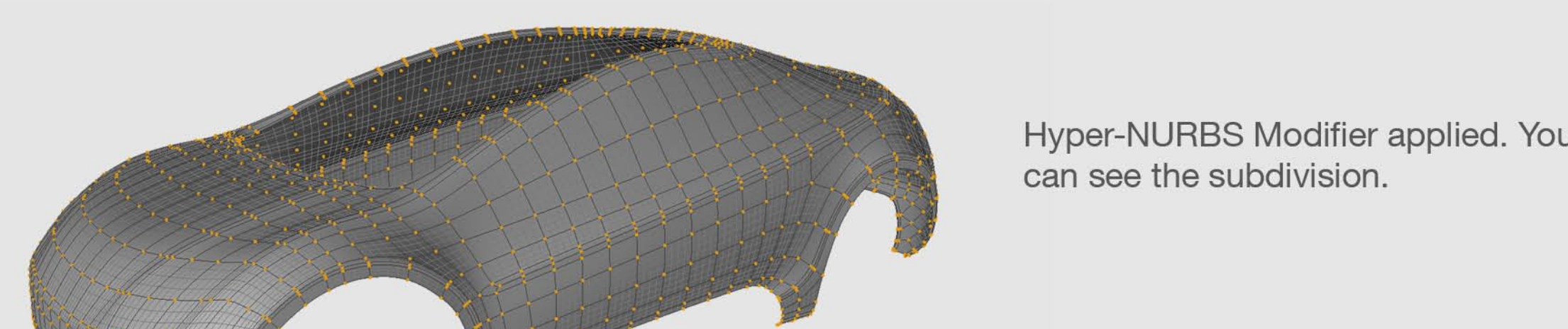
More Complex.

Here is an example of a low-res base mesh that has been put in a Hyper-NURBS modifier in Cinema 4D.

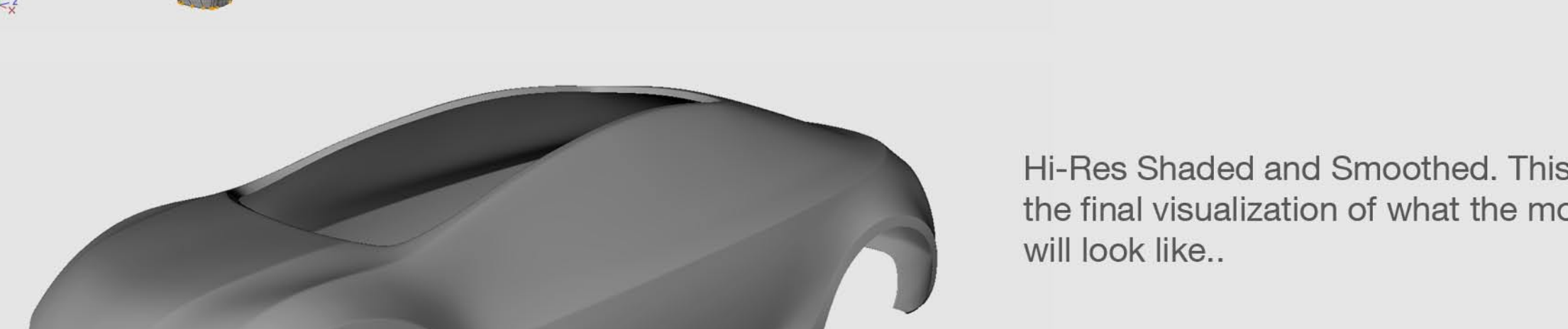
Polygonal modeling programs all have a version of this. It is how the model is visually smoothed

Not sure what they are called in each program.. Maya = SUB-D, 3Ds Max=Meshsmooth? maybe

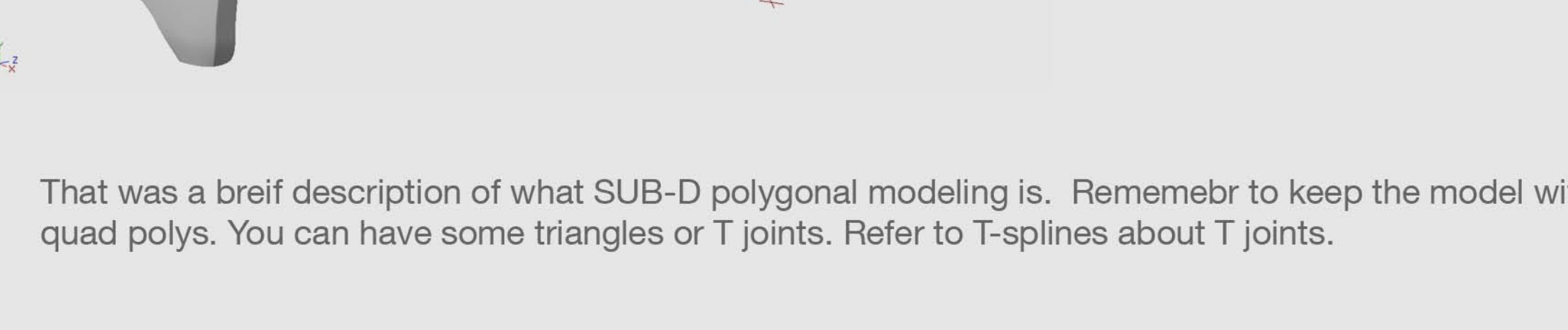
I use Hyper-nurbs to give me a visual preview of what the model will look like smoothed out and subdivided.



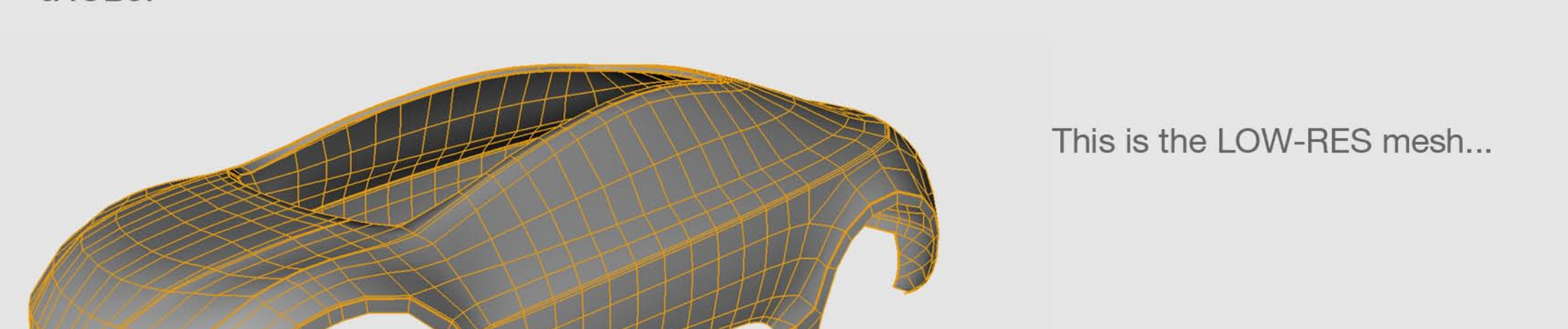
Low Res Base Mesh shaded



Low Res Base Mesh Vertex position



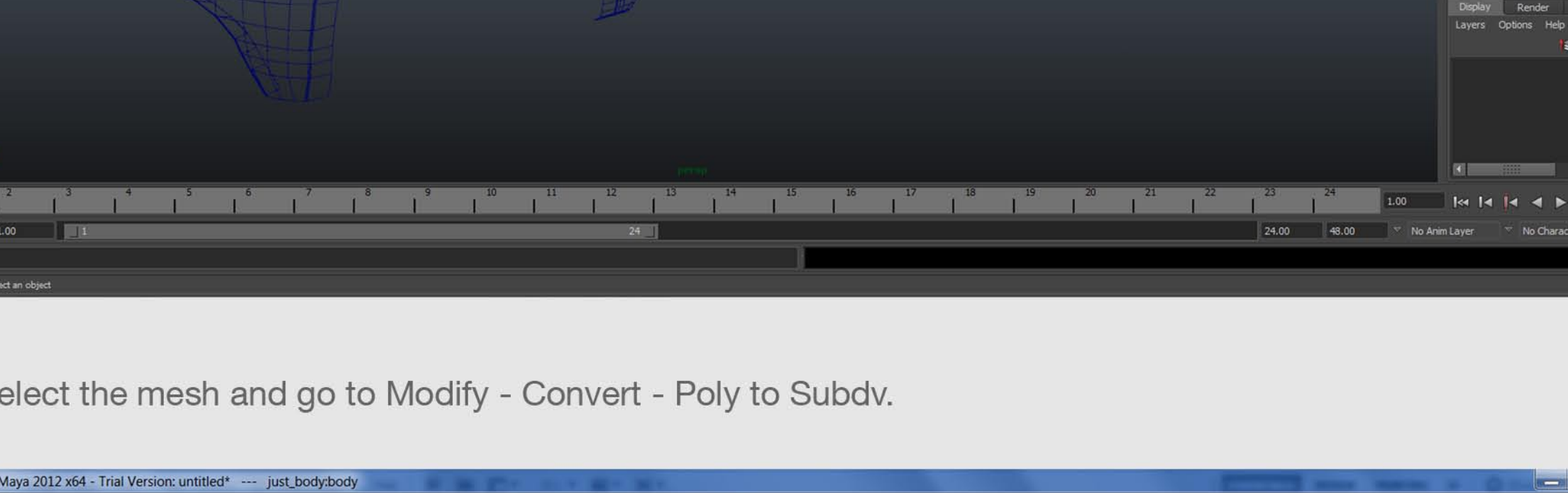
Hyper-NURBS Modifier applied. You can see the subdivision.



Hi-Res Shaded and Smoothed. This is the final visualization of what the model will look like..

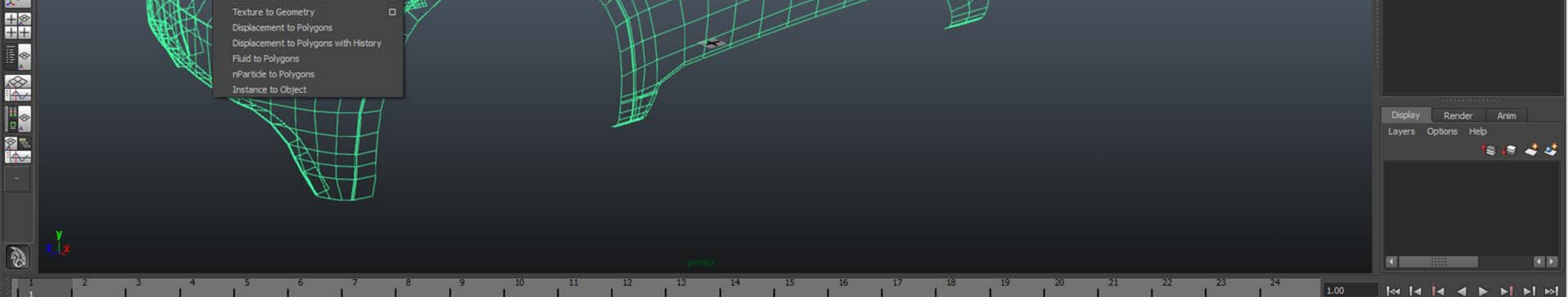
That was a brief description of what SUB-D polygonal modeling is. Rememr to keep the model with quad polys. You can have some triangles or T joints. Refer to T-spines about T joints.

After I make the model and get it looking the way I want I export the LOW-RES base mesh as a .OBJ.

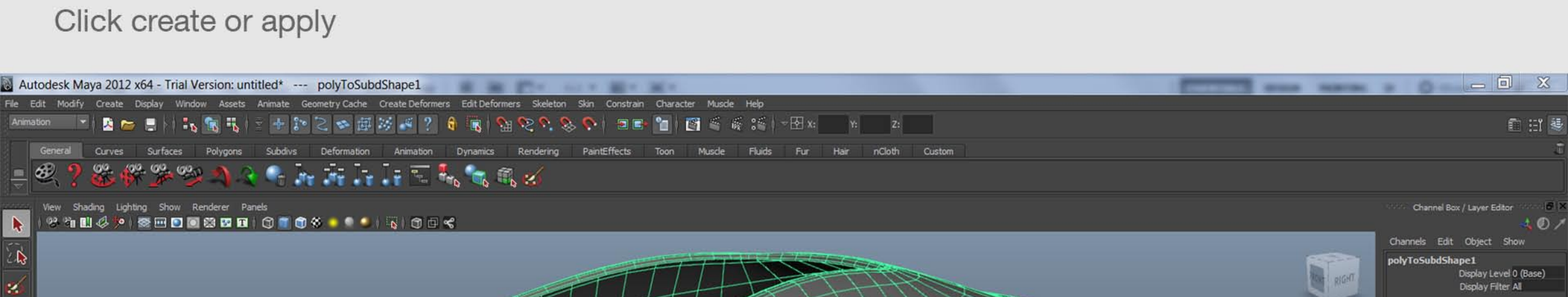


This is the LOW-RES mesh...

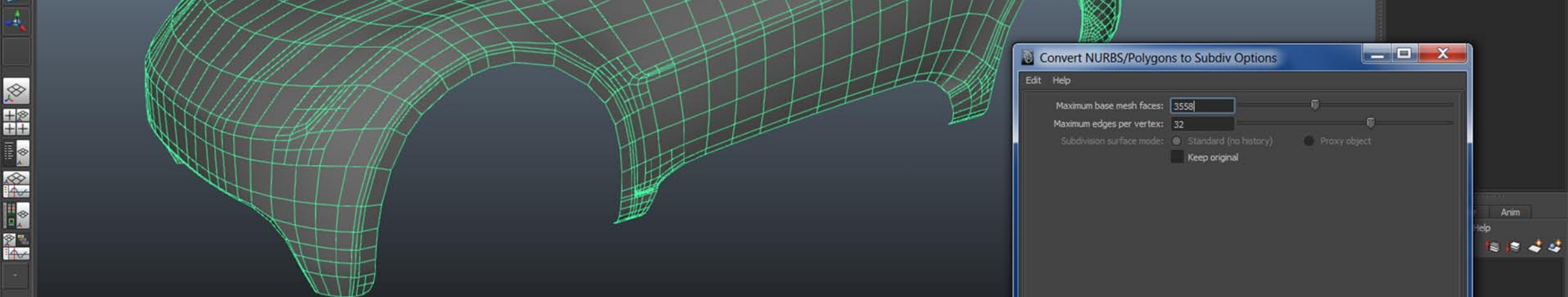
From here I open Maya and Import the .OBJ file.



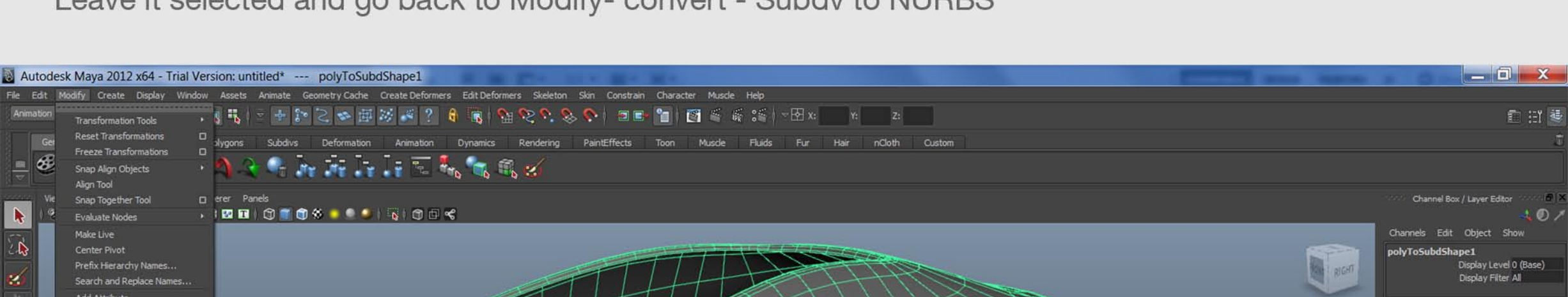
Select the mesh and go to Modify - Convert - Poly to Subdv.



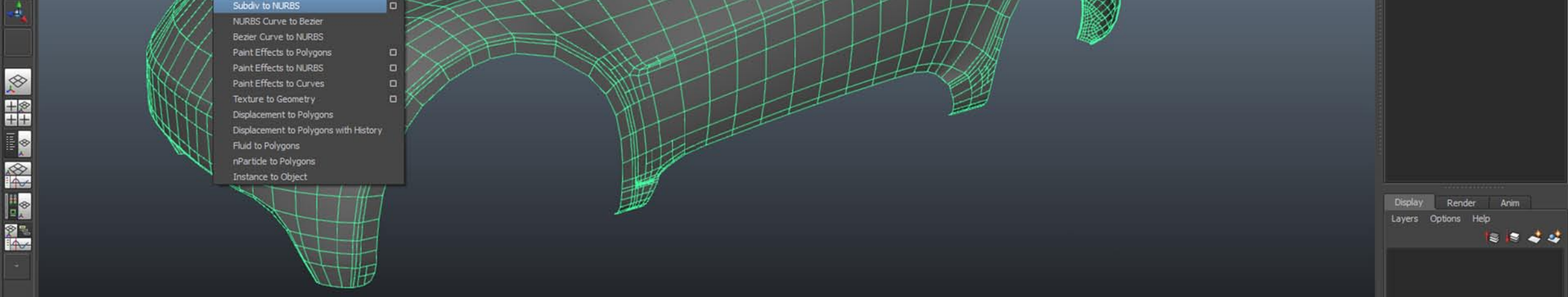
Click create or apply



Leave it selected and go back to Modify- convert - Subdv to NURBS



Click Convert



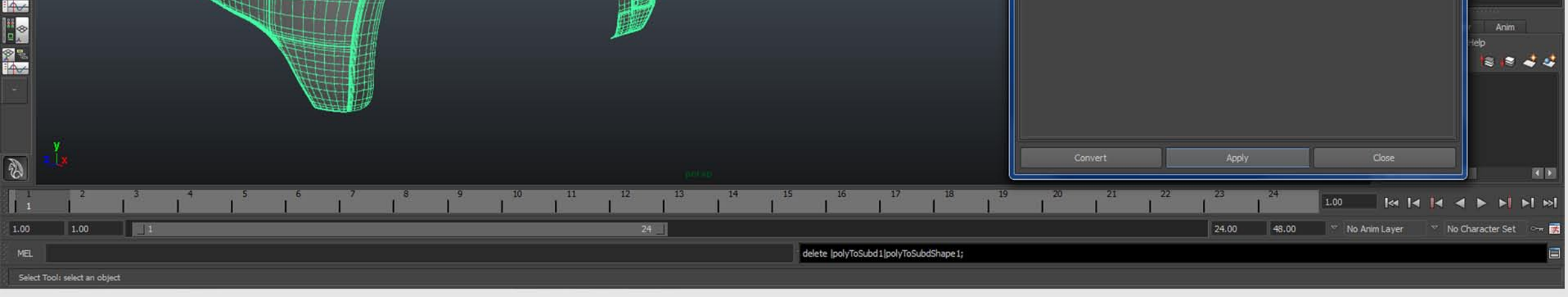
Now you will Export as a .IGES file.. You may have to load the .IGES export plugin.

Go to Window - Setting/Pref - Plug-in Manager .

Click the load boxes.

In Maya 2011 it is called .IGES (i forget the exact name but it says .iges in the plugin)

In Maya 2011 the plugin is DCExport



Then just file - export selected and choose .iges in the file type drop down.

The next Images show the model in Alias automotive.

1. Shows the U-V isoparms. it is a pretty heavy model but has G2 continuity throughout.

2. Shows the surface patches created by Maya with isoparms off.

3. Shaded

4. Evaluation shader. Zibra stripes showing continuity..

