



Introduction — 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 →

Introduction

Modeling organic items, such as animals, human heads and other body parts is never easy and needs quite a lot of skills and patience to do so. Fortunately, latest version of Blender came with a new cool feature, called Surface Subdivision, that make organic things a lot easier to model. Trees, body parts and even faces now come more easily under our mouse.

The purpose of this tutorial is to show the basics of human face modeling. Using these guidelines, you will get a quite accurate basic shape to work with more finely, whether you want to achieve toon-like pictures, or more realistic faces like the one below. Sure, it will take hours to get something like this, but it will be a very enjoying task to do so, not an harassing one.



Hair and beard were post-processed with The Gimp

And hey! once you have a basic shape like this, it is very fast and easy to tweak it into something totally different but based on exactly the SAME geometry like the picture below. You will quickly see that modeling heads becomes easier and easier each time...



Hair and beard were done within Blender using the static particles features

OK, so here we go now.



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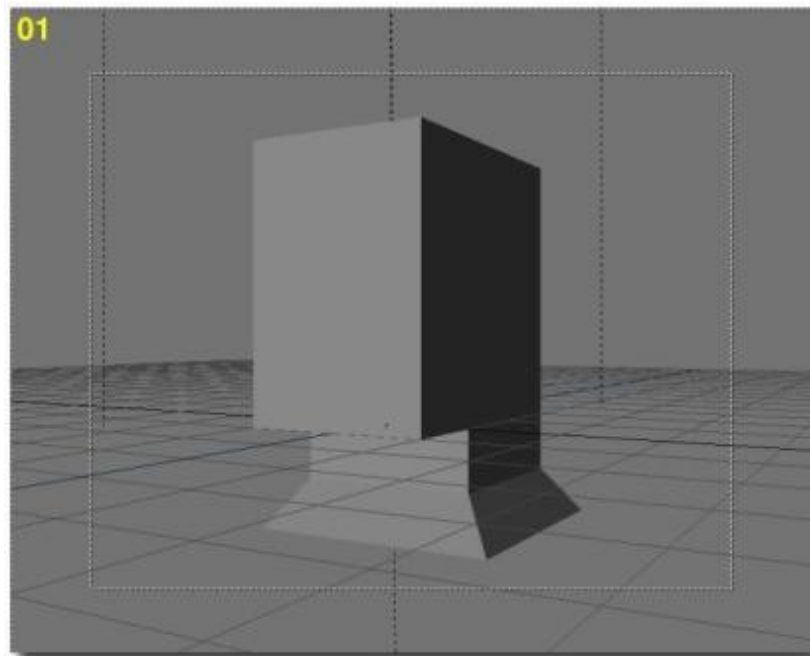
CHAPTER 1 – BASIC SHAPE OF THE HEAD

Step 01

At first, extrude (E-KEY) the base plane a few times, using G-KEY and S-KEY in order to get the proper starting shape. You can also download the according [blend file here](#). Anyway, modelling these basic shapes should not prove too difficult for you, unless you are a new blender user. In this case, you should read some basic tutorials about Blender Creator first.

You should also set the camera view in order to have a fair perspective view from the head-to-come, and set a few lights. I choosed to place a cold blue lamp in the background, and a warm red lamp in the foreground, to get more colour contrast during the intermediate rendering of the head.

During all the following steps, using the Z-KEY in order to toggle between the edged view and the shaded view will help a lot. Keep this tip in mind!

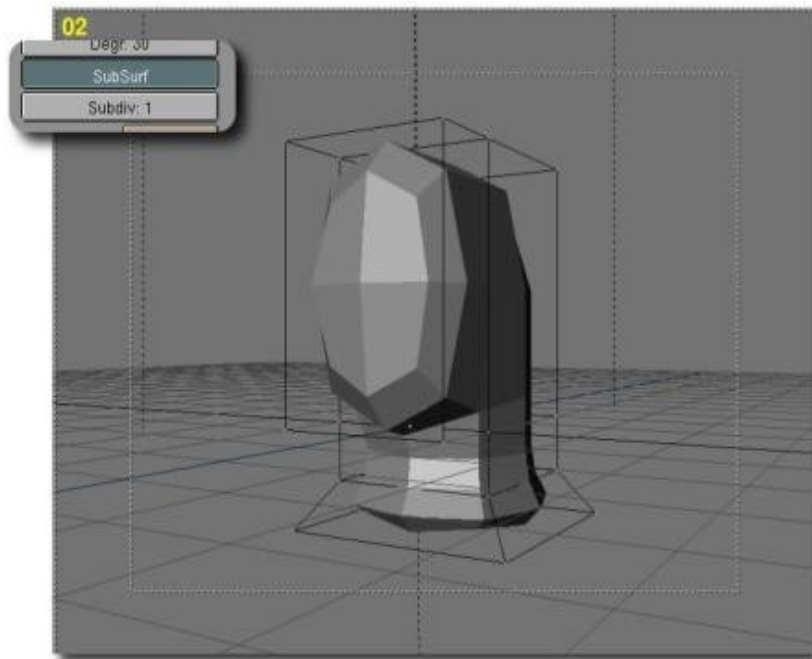




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Step 02

We are now about to use the SubSurf tool. Shift to the F9 Edit buttons, with the head selected, and set the SubDiv option to 1 and then press the SubSurf button. That's it! You now have a more accurate basic shape for you to work with!

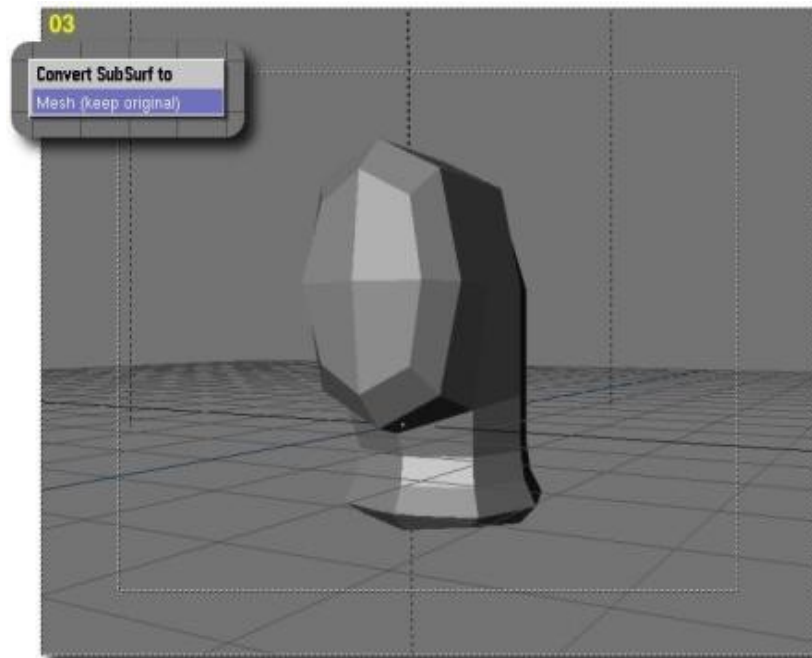




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Step 03

Now, we will turn the SubSurf into a real mesh using the ALT+C combo. Choose 'Mesh (keep original)' to the popup requester 'Convert SubSurf to'. Then press the X-KEY in order to delete the original mesh. You now have only the basic shape on the screen.

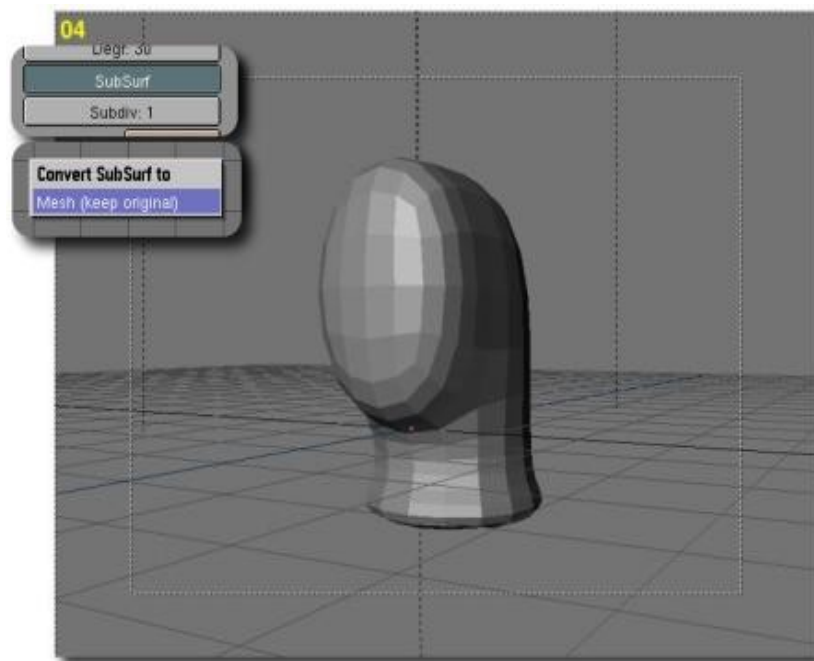




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Step 04

Press again the SubSurf button, and turn the SubSurf into a real mesh once again, and clear the original mesh exactly the same way as in Step 03.

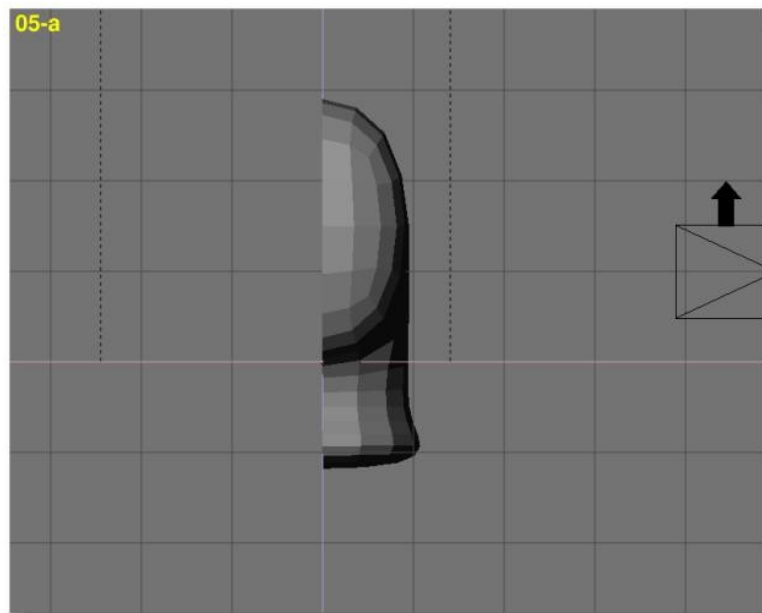


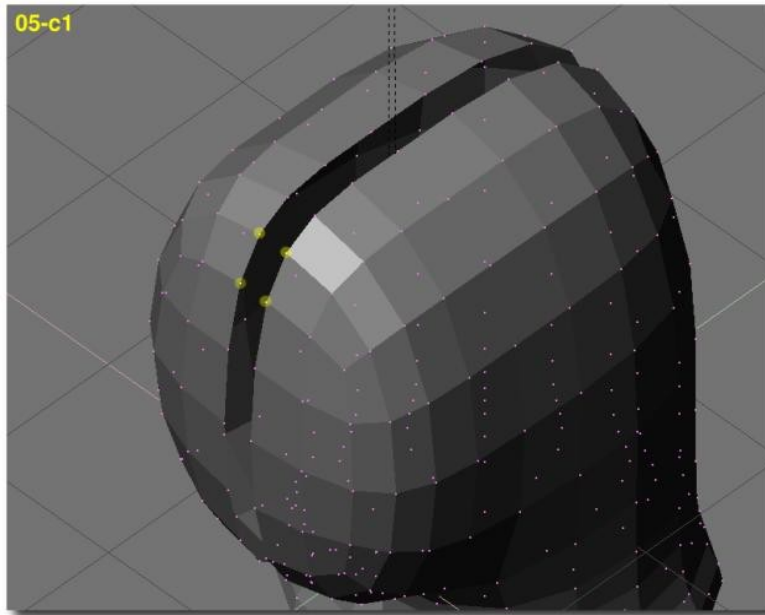
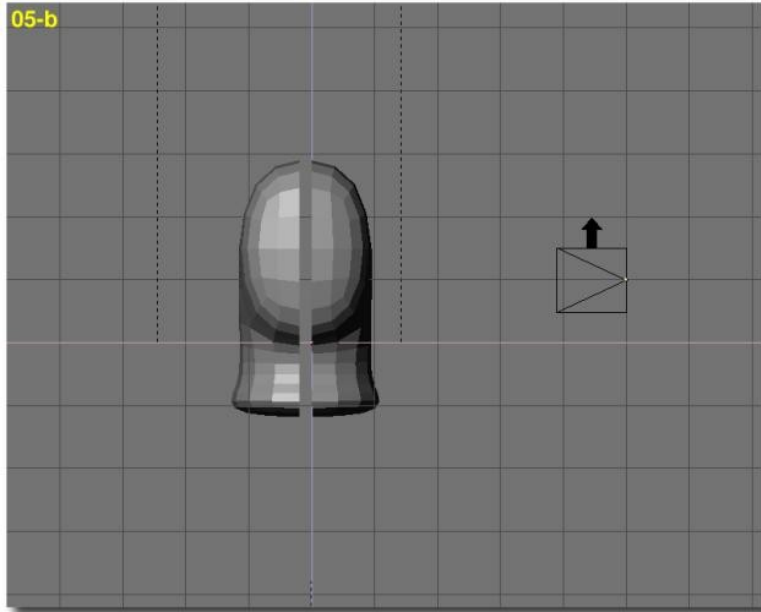


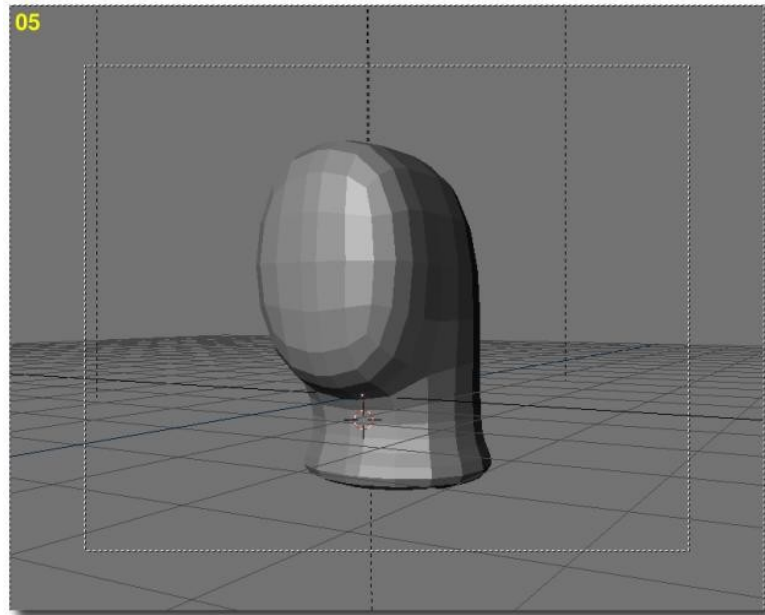
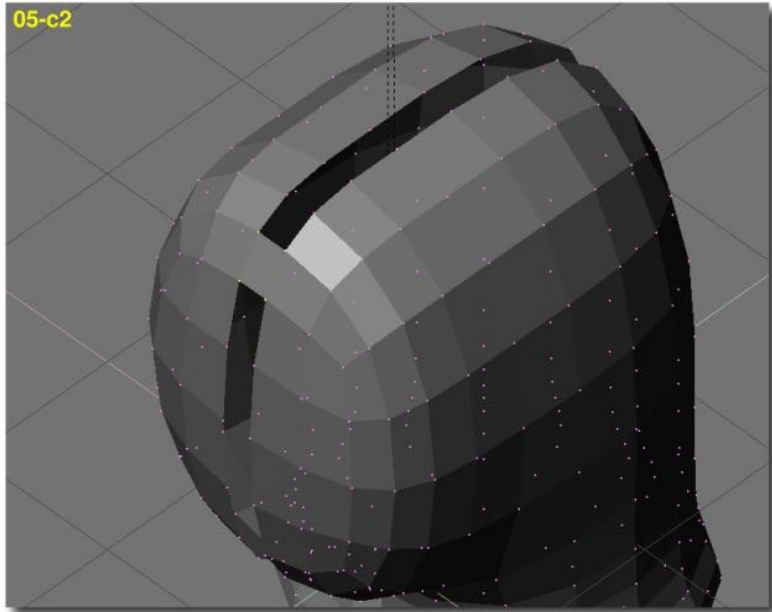
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Step 05

In edit mode (TAB), delete half of the face (a). Select all the vertice (A-KEY), copy them (SHIFT+D) and mirror them (S-KEY, X-KEY). Then move the copied half-face (b). Now select all the vertice except those to join and press the Hide button. Select the vertice four by four with the B-KEY, and make face (F-KEY). Tip: to make things easier, you can turn on the Draw Faces button and rotate the 3D view while you make faces. Be sure to close all faces! (c1 and c2)





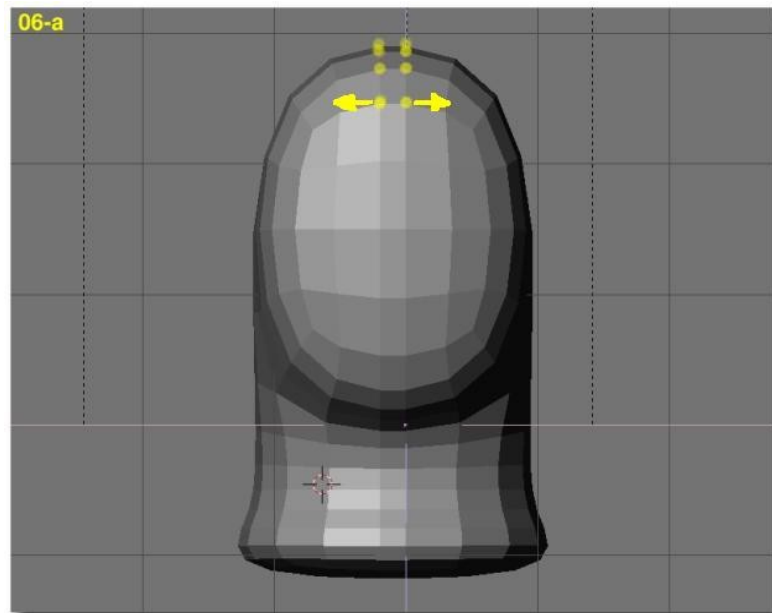




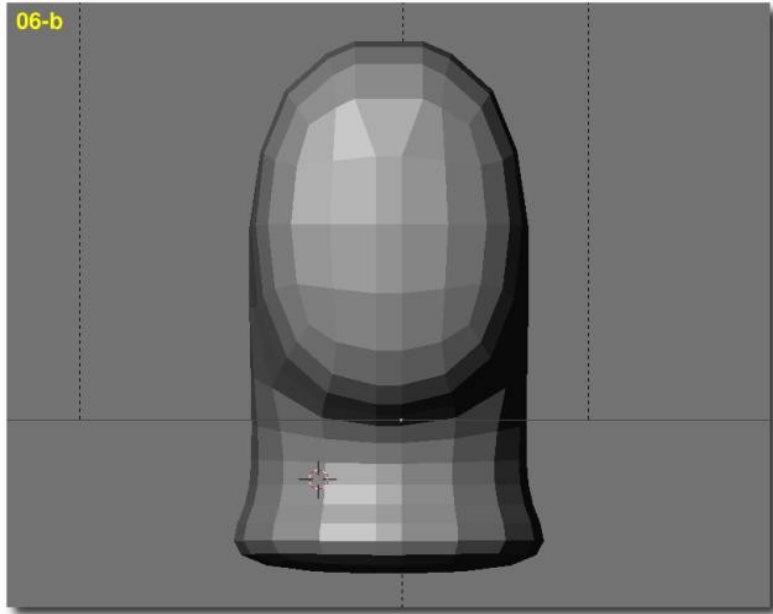
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CHAPTER TWO — WORKING OUT BASIC EYES AND MOUTH
Step 06

Rearrange slightly the vertice making up the forehead.



06-b

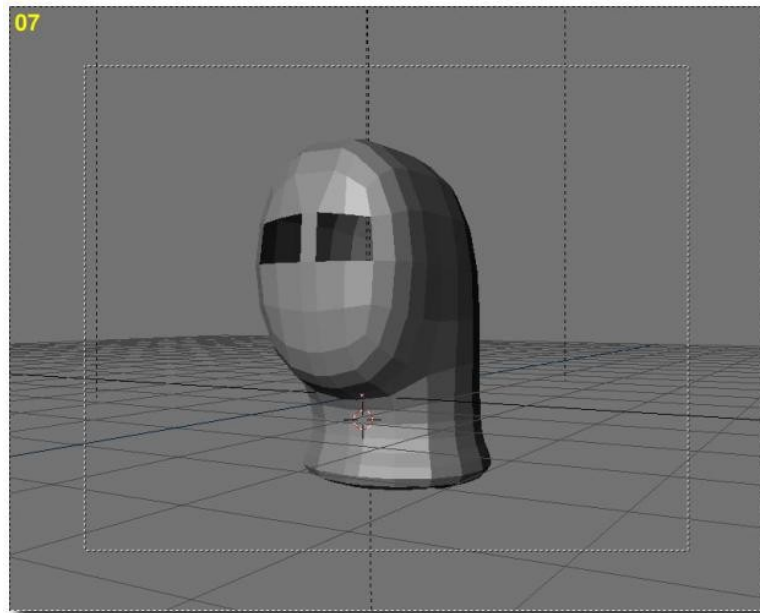




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Step 07

Delete the central edge from the eye area (X-KEY, select edges). You now have the eye sockets wide open.

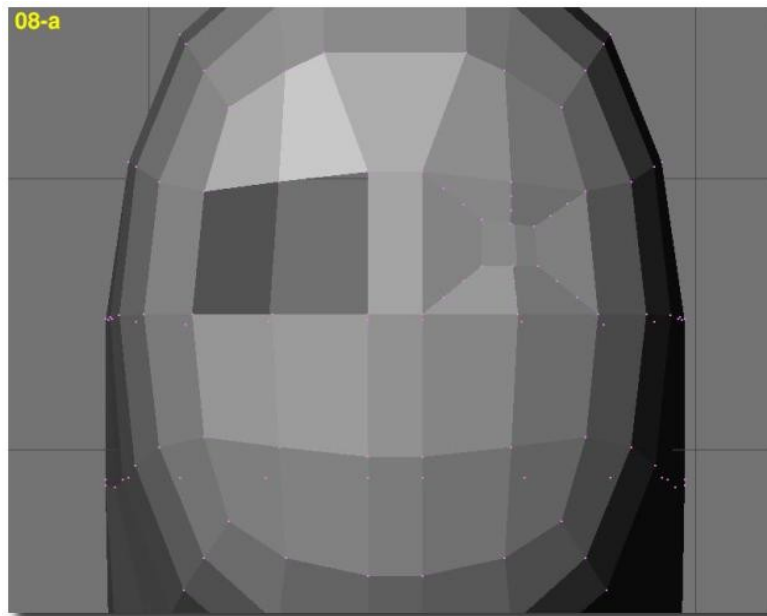


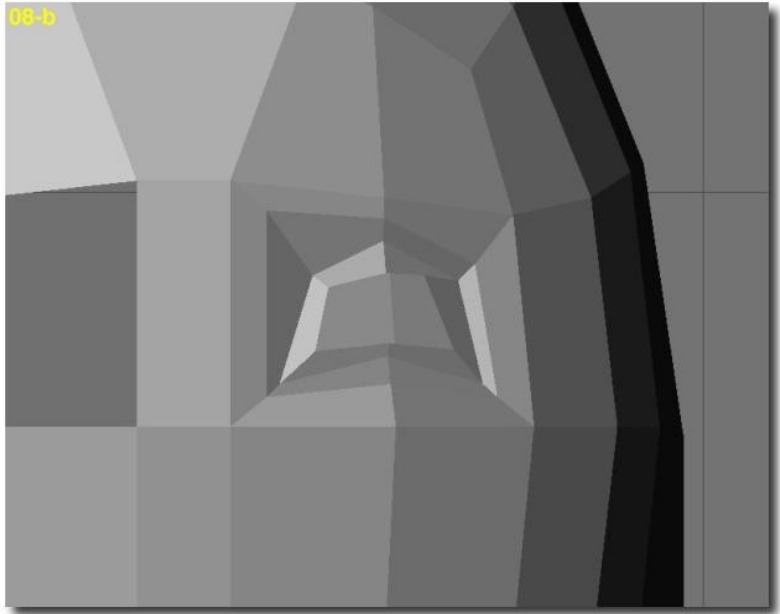


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Step 08

We will use extrusion (E-KEY) and resizing (S-KEY) to create eyelids. Go through it three times (a). Then select the faces from the eye socket, press Select Swap and then Hide. In front view and side view, rearrange vertex by vertex the shape of the eyelid, using the G-KEY. Especially, move the second circle of vertices slightly deeper in the head (b).





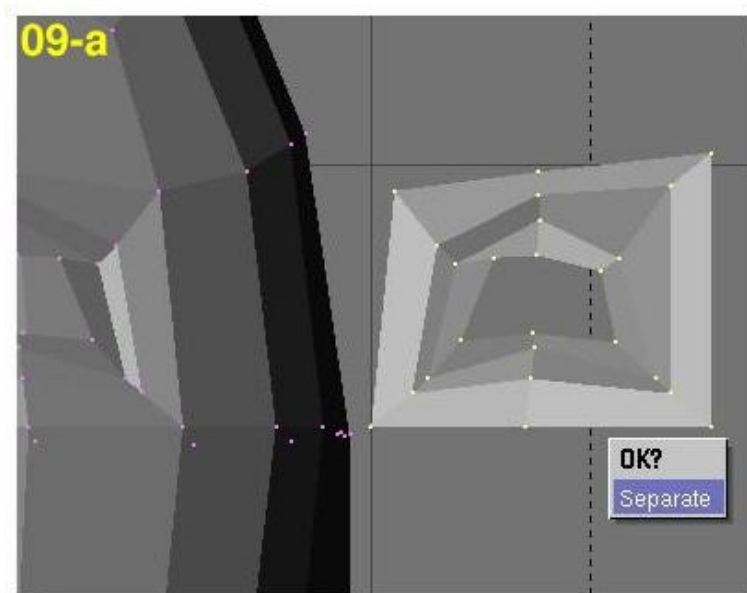


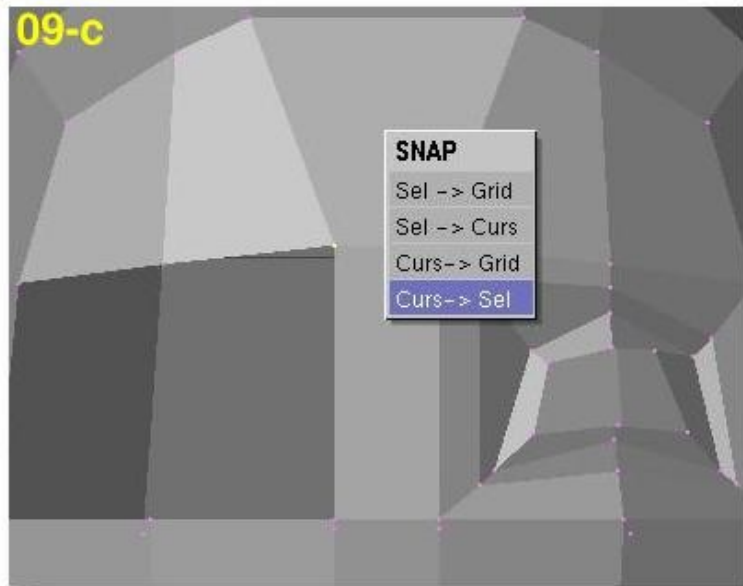
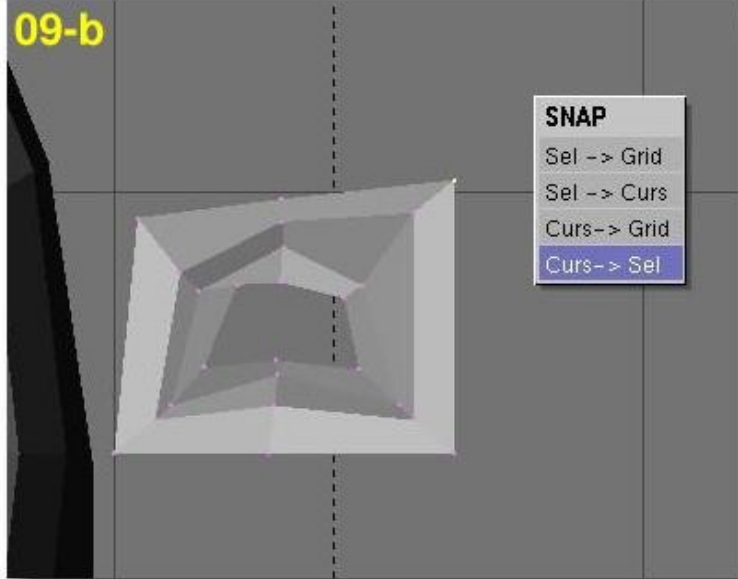
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Step 09

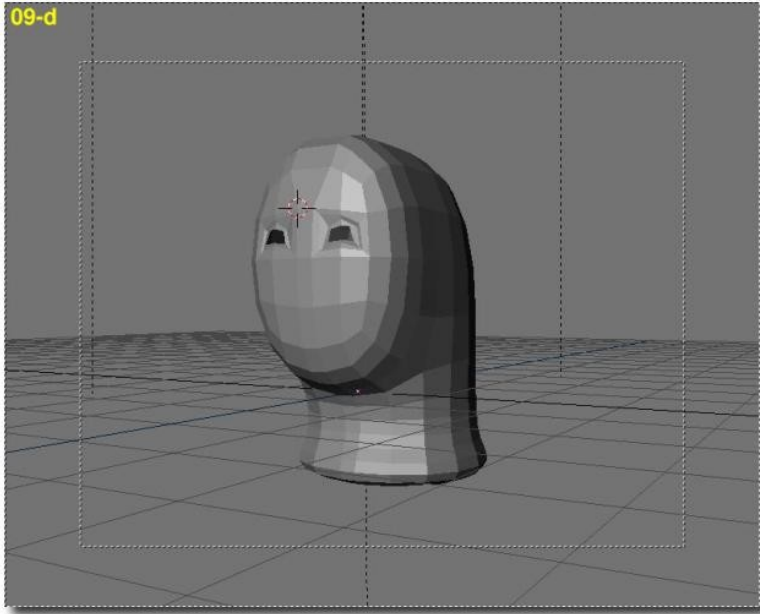
And now for the tricky part. To go through it, you should know how to place the cursor over a particular vertex, and how to set a new origin for any object. Here we go.

Select the eye socket newly created. Copy it (SHIFT+D) and mirror it (S-KEY, X-KEY) and press RETURN. Now, move it somewhere outside of the head and separate it (P-KEY) from the other vertices. Select the socket and enter edit mode (TAB). Select one of the outer vertices and set the new center of the object on it (Center button). Now exit the edit mode (TAB), select the head and enter the edit mode (TAB). Choose the inner vertex corresponding to the one to which you set the center at, on the eye socket. Use SHIFT+S (SNAP Curs->Sel) to set the cursor on it. Exit edit mode and select the eye socket. Use SHIFT+S again (SNAP Sel->Curs). The socket is now perfectly in place! Select the eye socket and then the head. Press CTRL+J to join the meshes. In edit mode (TAB), select all the vertices (A-KEY) and press the Rem Doubles button.





09-d

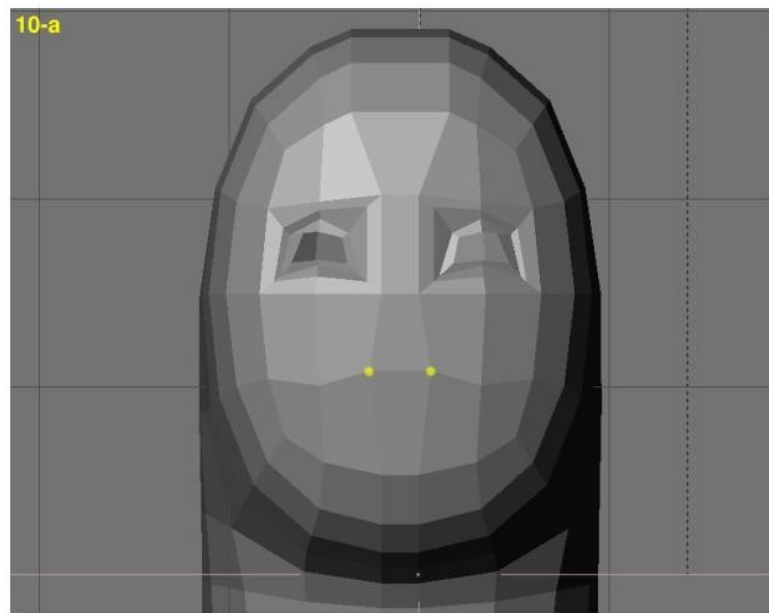




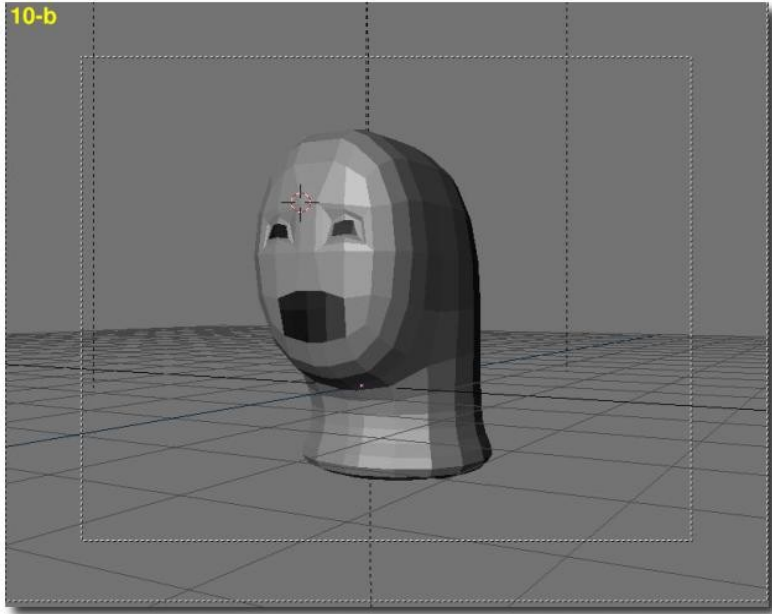
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Step 10

We are about to model the mouth exactly the same way we did with the eyes. First of all, rearrange slightly the vertice on the upper part of the mouth—to-be (a). Then select the two vertice shared by one of the vertical inner edges of the mouth and delete them (X-KEY, select edges). Do the same with the other two vertice of the last vertical inner edge of the mouth. You now have a wide open mouth gap (b).



10-b

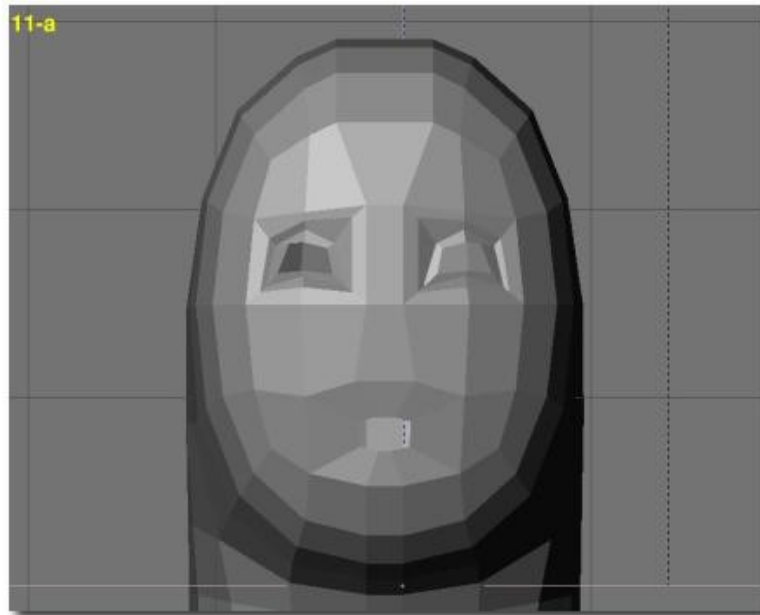


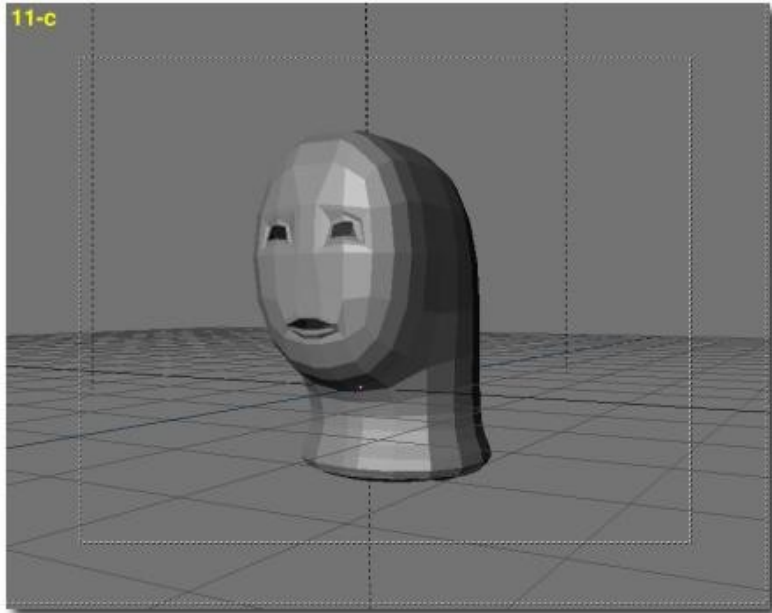
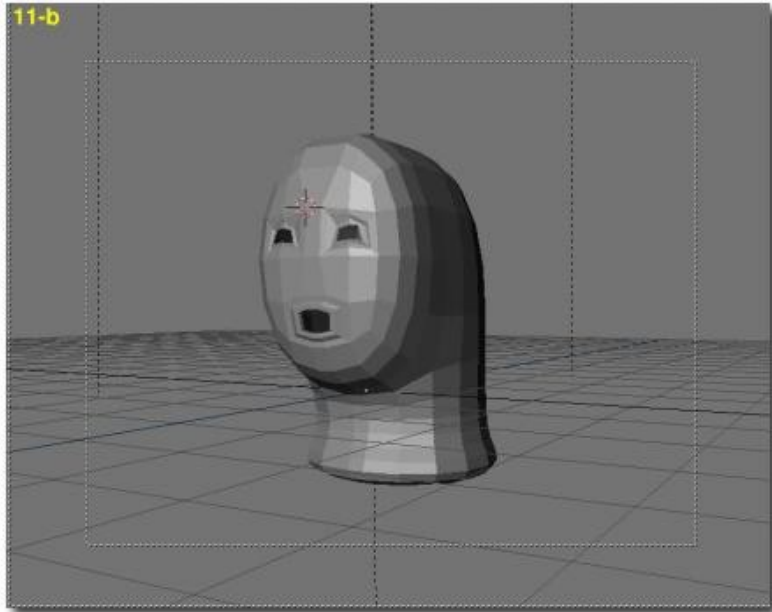


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Step 11

As in step 08, we will use extrusion (E-KEY) and resizing (S-KEY) to create the lips. Go through it four times (a). Now select the vertex newly extruded, press Select Swap and then Hide. First of all, move the third and fourth circle of vertex slightly deeper in the head, and resize the fifth and last circle in order for it to be only slightly smaller than the fourth row (b). Then, in front view and side view, rearrange vertex by vertex the shape of the lips, using the G-KEY (c).





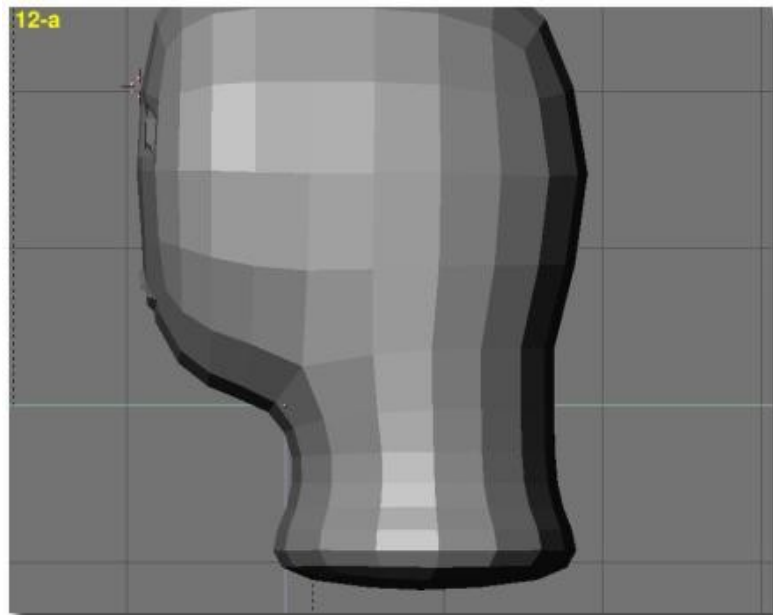


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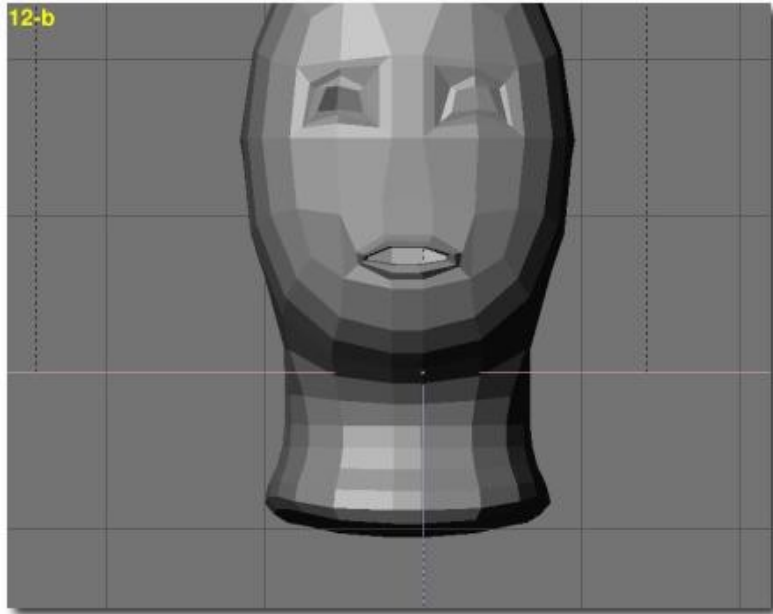
CHAPTER THREE – SHAPING THE HEAD AND FACE MORE ACCURATELY

Step 12

We will now pay some interest to the neck. First of all, in the back view, select the four middle columns of vertice constituting the neck and in side view, move the vertice in order to get something more realistic (a). You should turn on the magnet tool (O-KEY, smooth) and set the effect radius to more or less two grid units. Then, in the side view, select the two middle vertice columns and size them down in the front view (b).



12-b





USING SUBSURF FOR HEAD MODELING

By *Olivier Saraja*

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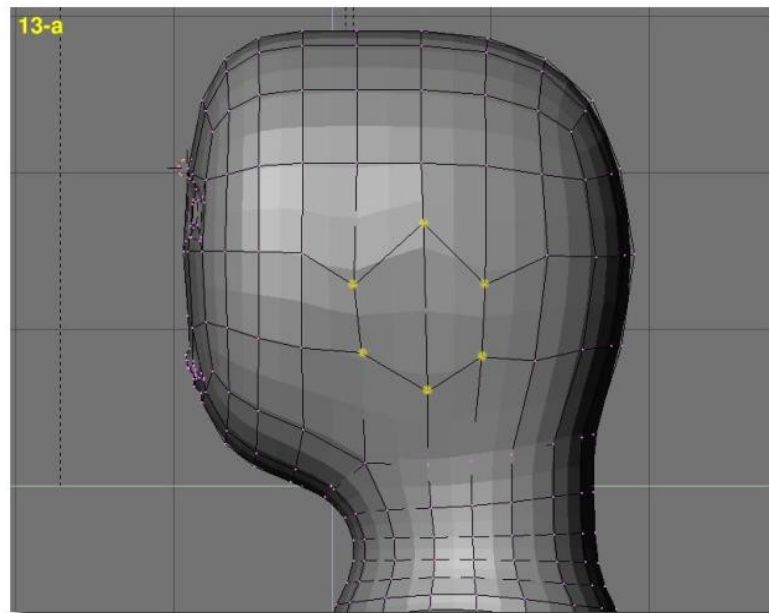
Step 13

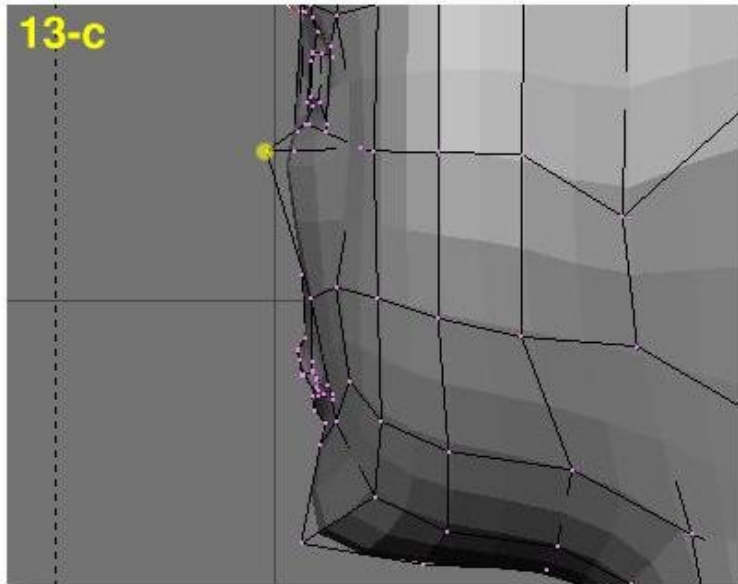
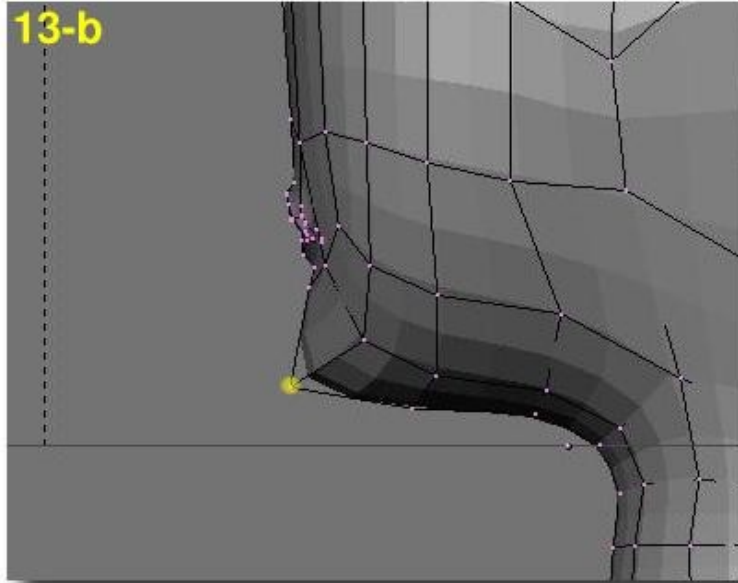
Here we go for what is, IMHO, the hardest part of face modeling, but also the most fun, thanks to the SubSurf tools featured in Blender. It's just about your own modeling talent, right now! Do multiple saves of your work, and don't forget that you can undo all the changes you made to your model since the last time you exited and then reentered the edit mode (TAB-TAB) with the U-KEY. Some tips:

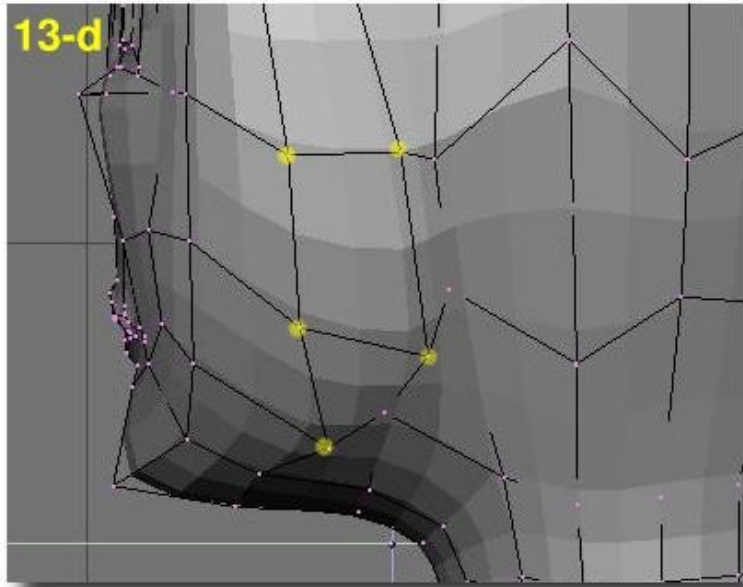
- Consider the fact that you should not be too symmetrical in the way you move the vertice. This way, you will get more "natural" shapes.
- Again, the magnet tool (O-KEY) could prove useful, but I prefer rather NOT use it at this step.
- By pressing the SubSurf button while working in edit mode, you will have a better glimpse of what you are doing!
- Don't bother getting right now a perfect face shape, you can work on details later!

Here we go:

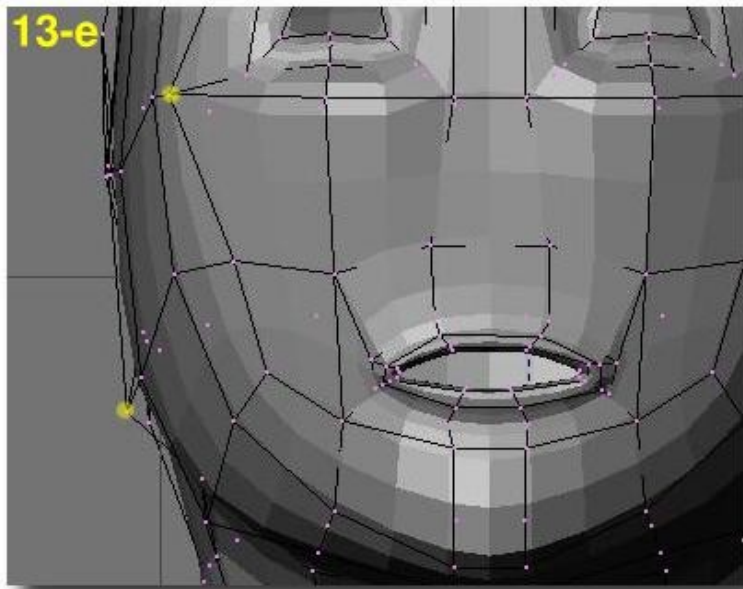
In side view, re-arrange vertices in the area of the ears (a) and work on the chin (b). Rearrange slightly the cheeks (c). Rearrange vertice in order to shape the jaws (d).

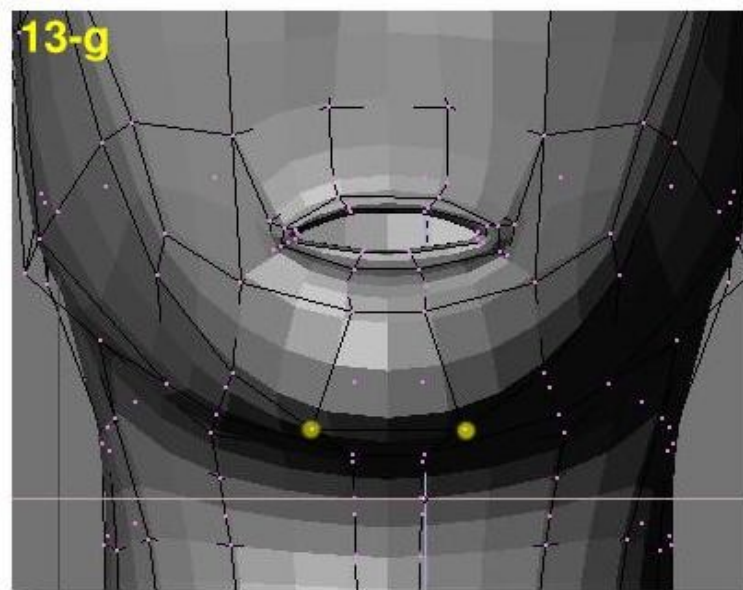
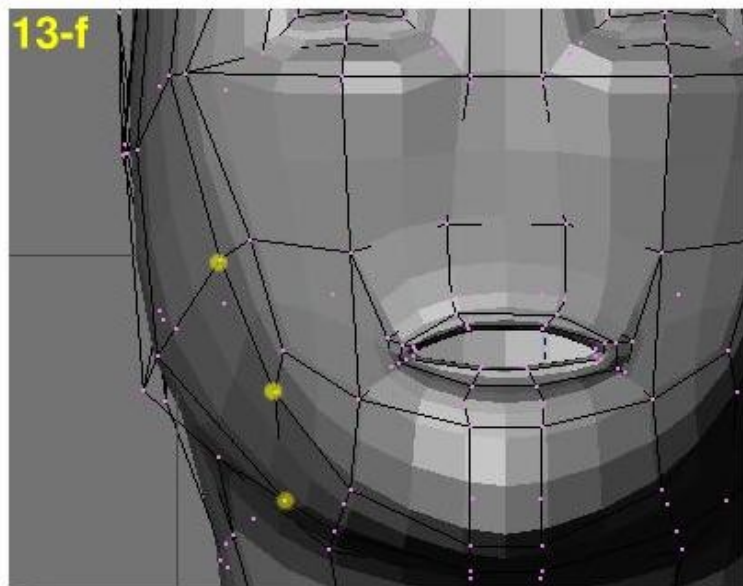






In face view, work a little more on the cheeks (e), the jaws (f) and the chin (g).



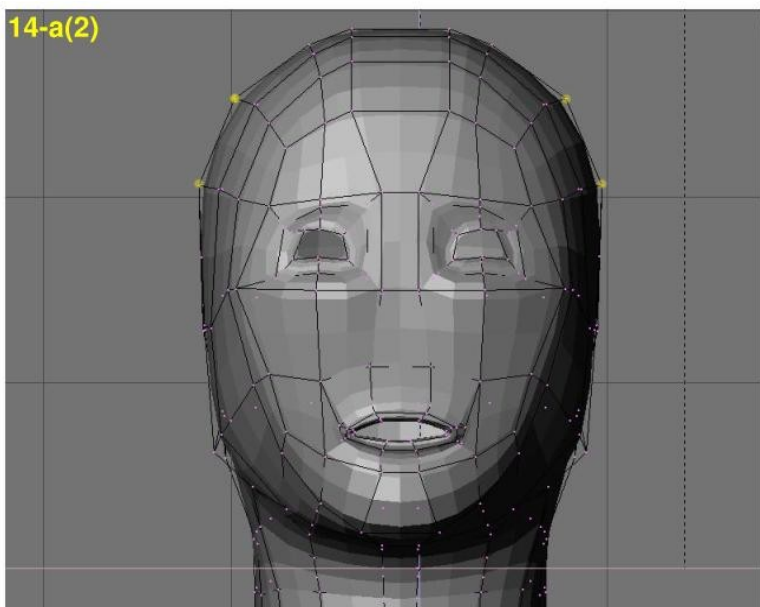
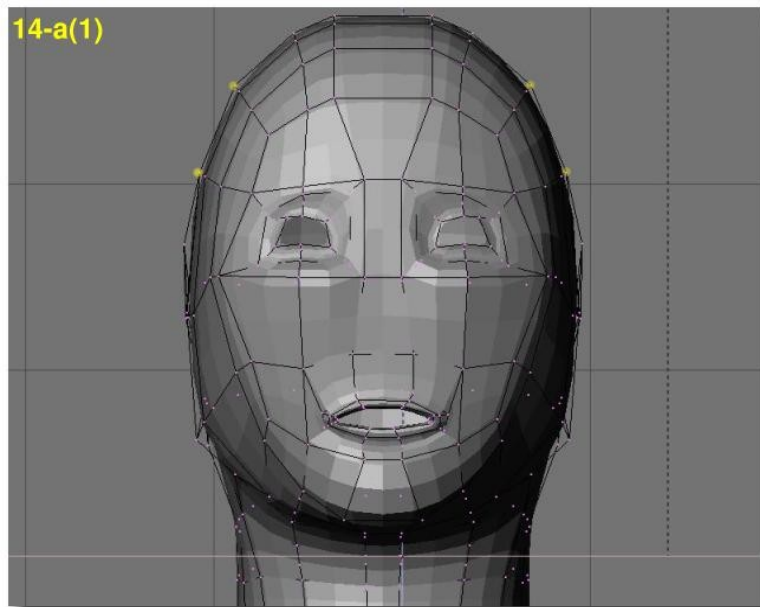


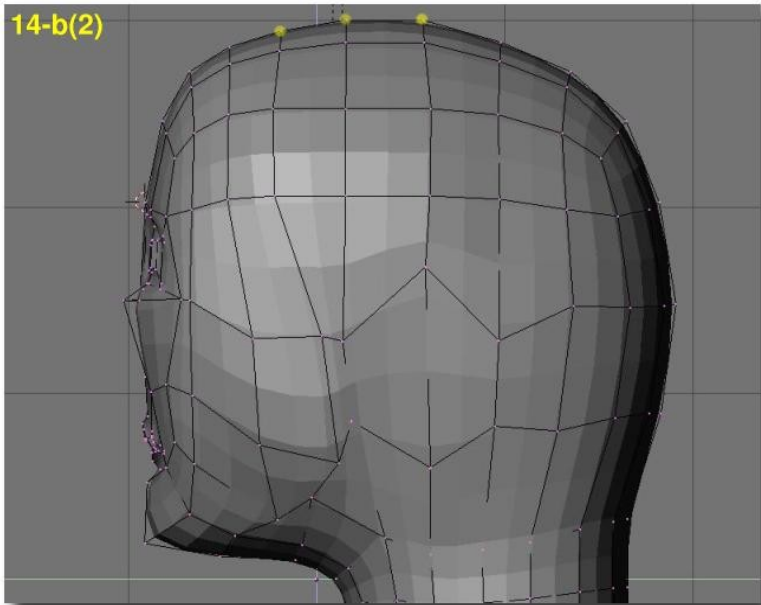
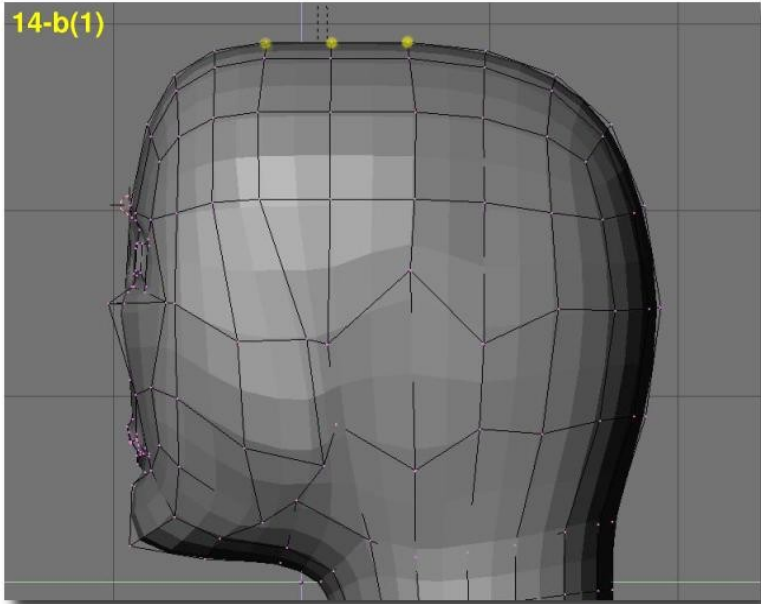


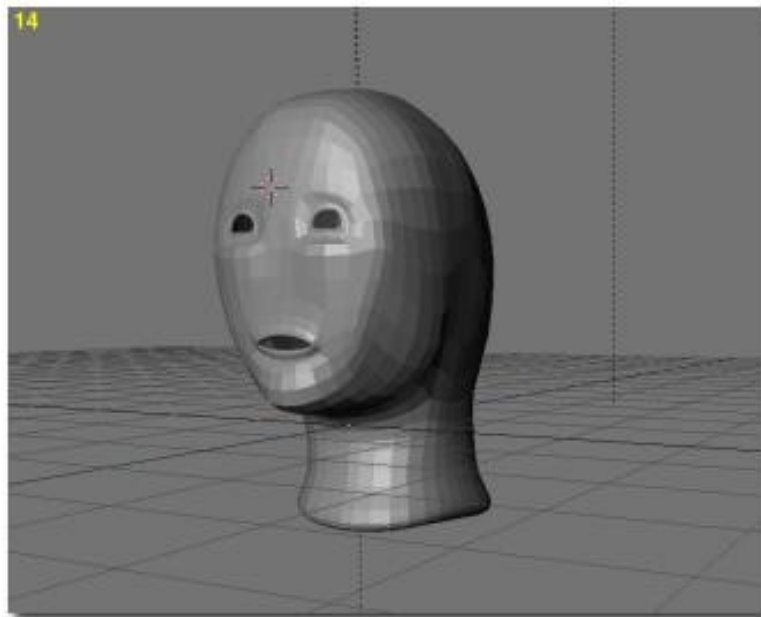
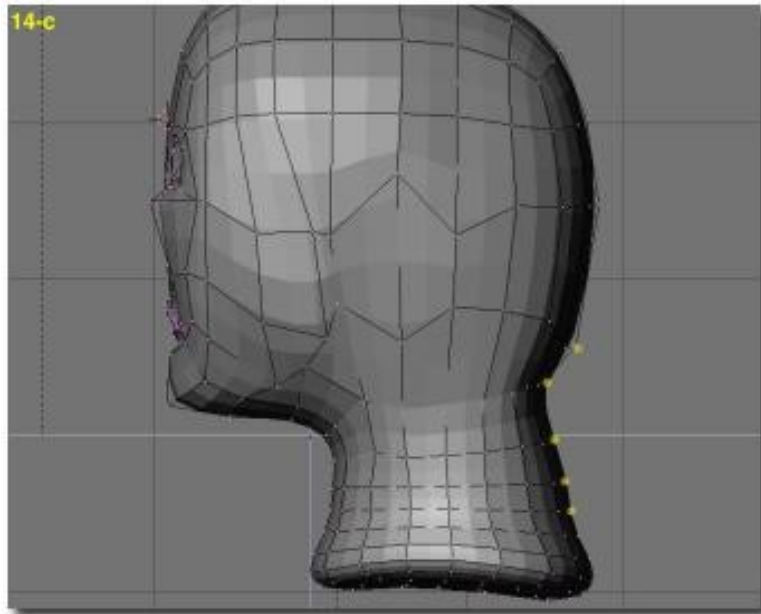
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Step 14

Let's work now on the shape of the head. In front view, give it a more natural shape (a). Give it more roundness in side view (b) and in top view. Adjust the neck and the back of the head in side view (c).







For the moment, we have a rather cool E.T. or toon-like face, haven't we? It lacks yet some features so let's move to the next step.

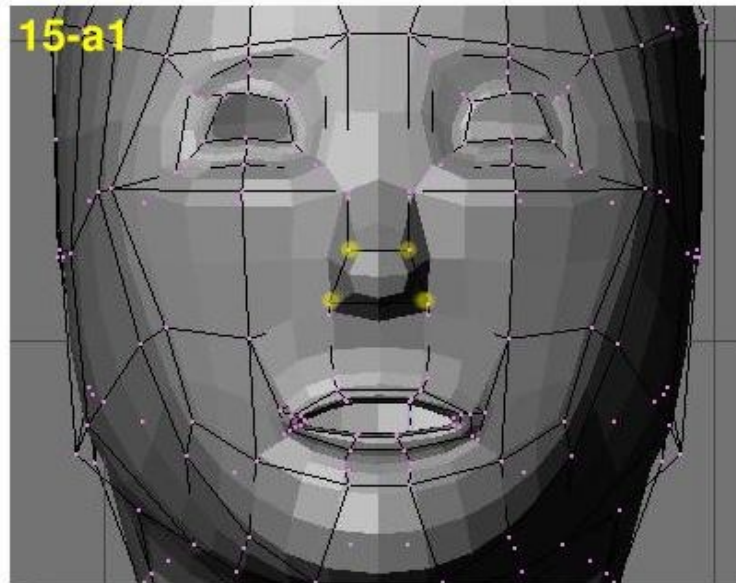


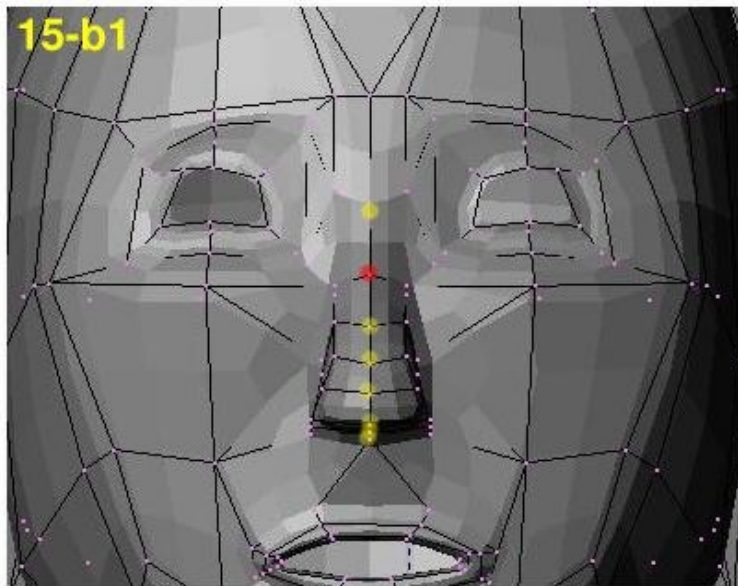
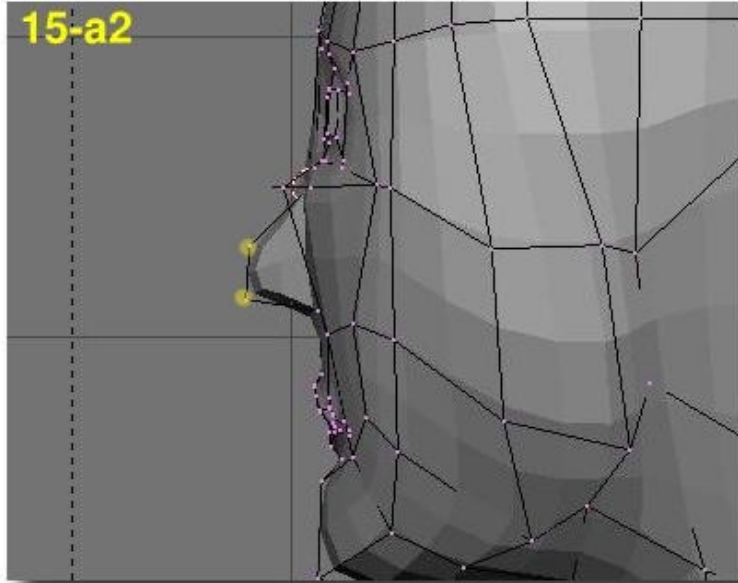
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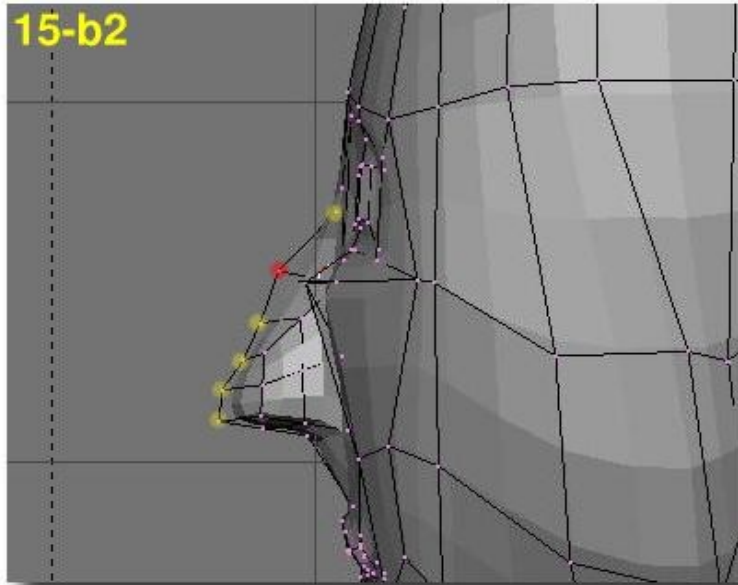
CHAPTER FOUR - MODELLING THE NOSE

Step 15

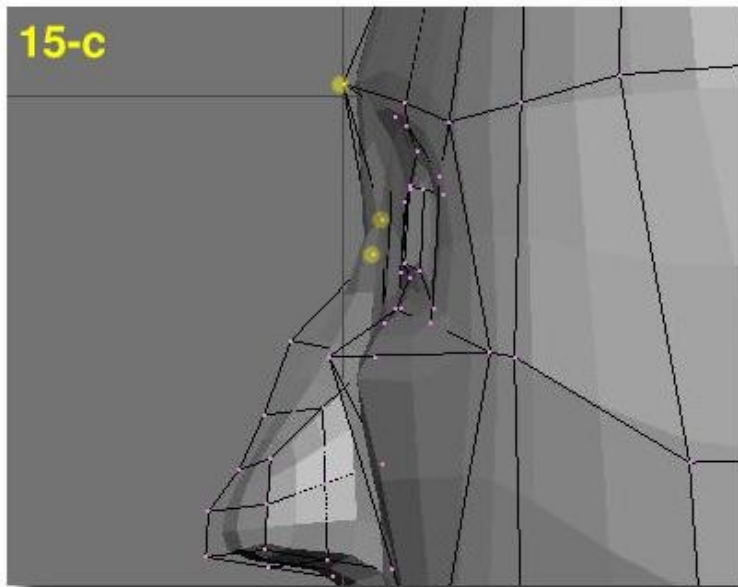
In order to model the nose, select the four middle vertices and extrude (E-KEY) them forward. Rearrange them slightly but don't get into fine details yet (a). Then select all the vertices from the nose area, and then subdivide them once (W-KEY). Select the middle column, and grab it forward (b). The red dotted vertex should be pulled forward slightly more than others. Your nose is quite good looking right now!

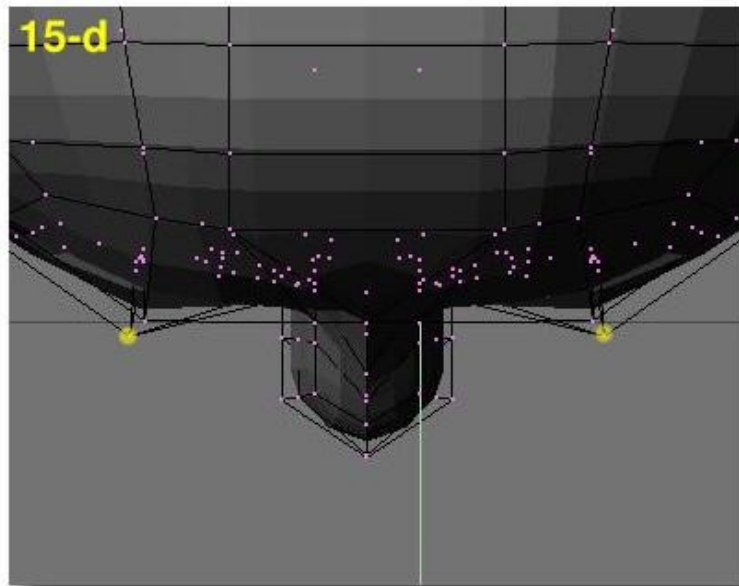




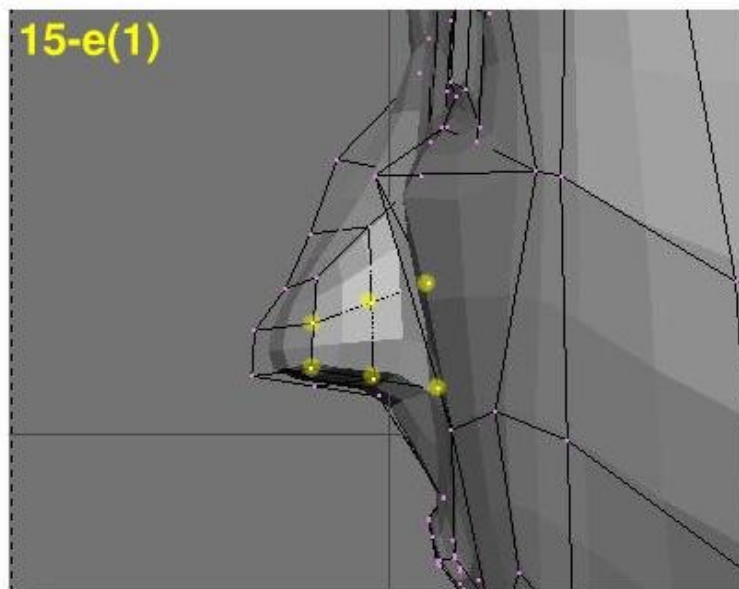


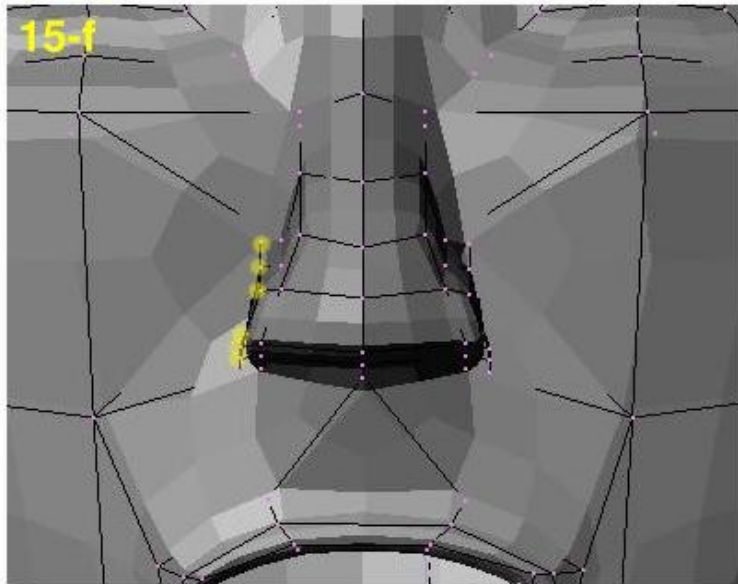
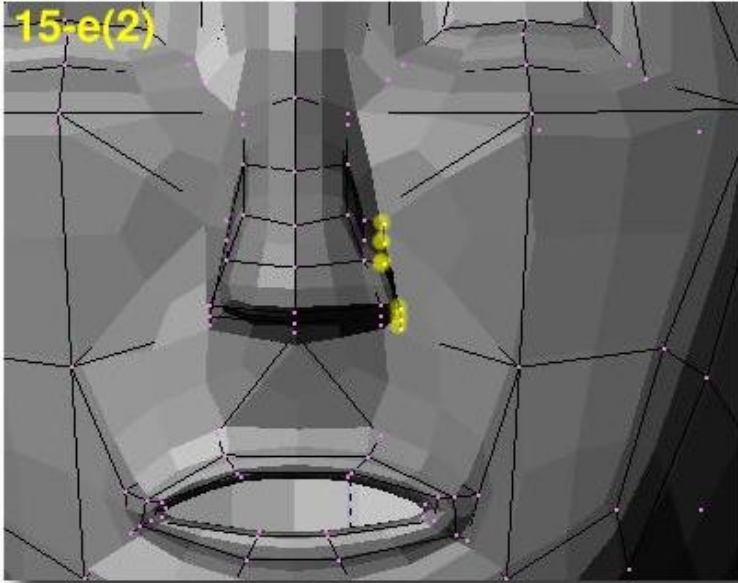
Let's re-work the connection of the nose with the forehead (c) in the side view and the eyebrows area (d) in the top view.

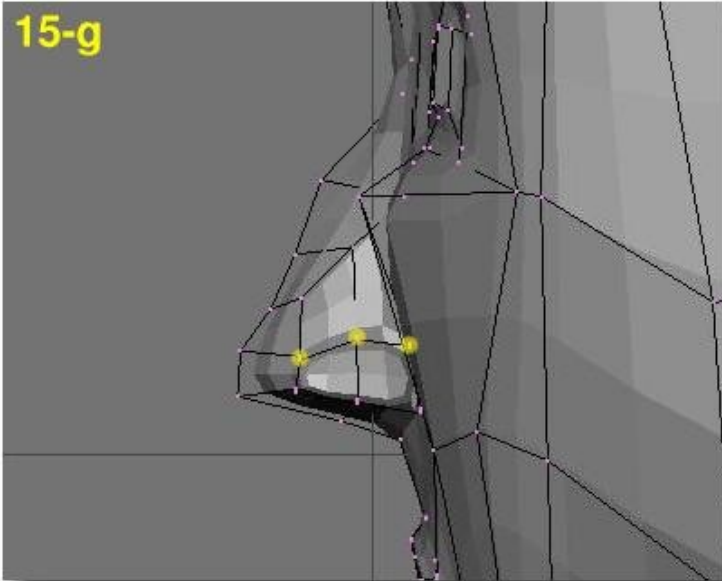




Now we should pay attention to the nostrils. Select the six vertices making the nostril on one nose-side, and extrude them (e). Repeat the same operation on the other side of the nose (f) and then reshape the nostrils in side view (g).







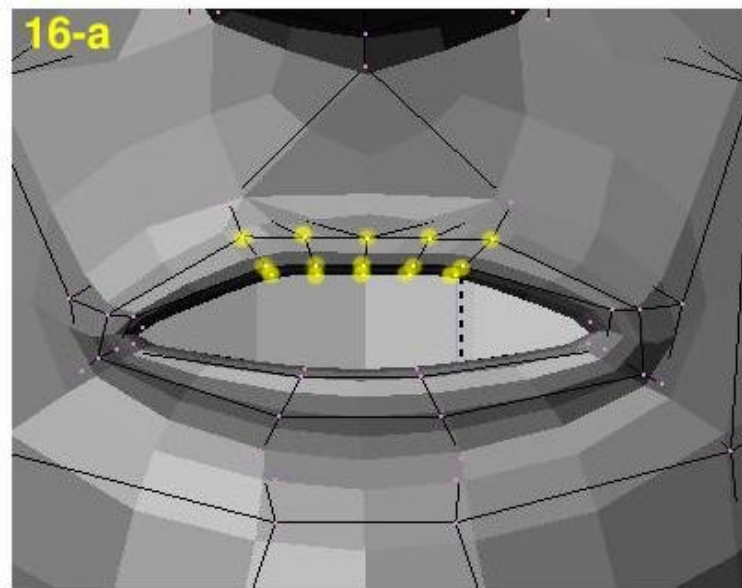


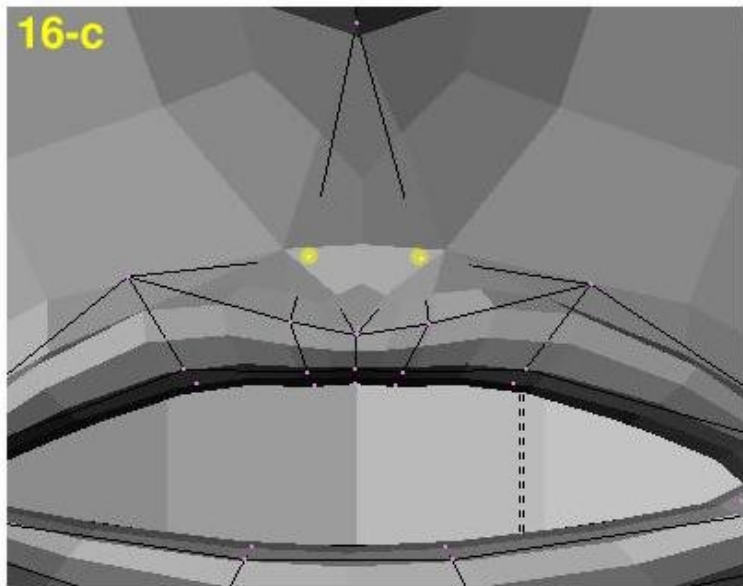
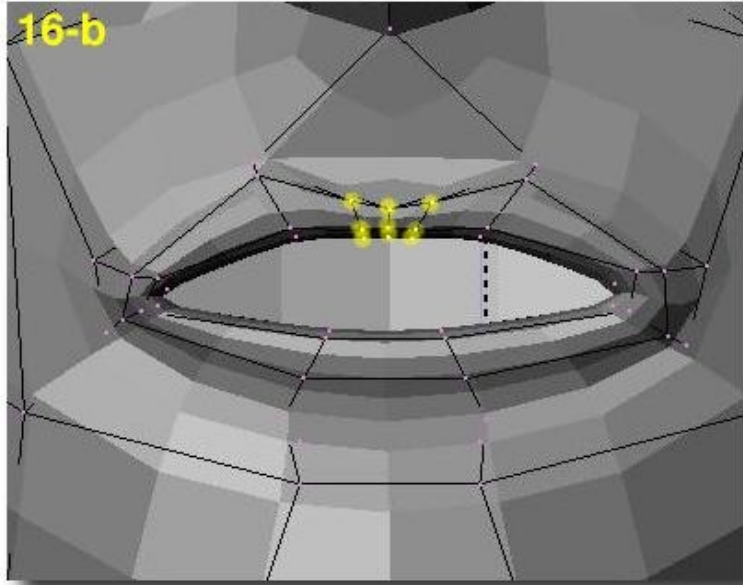
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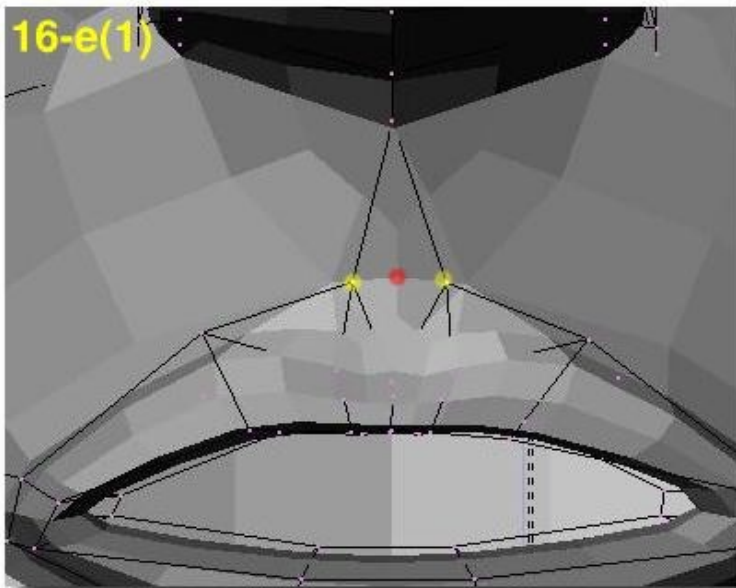
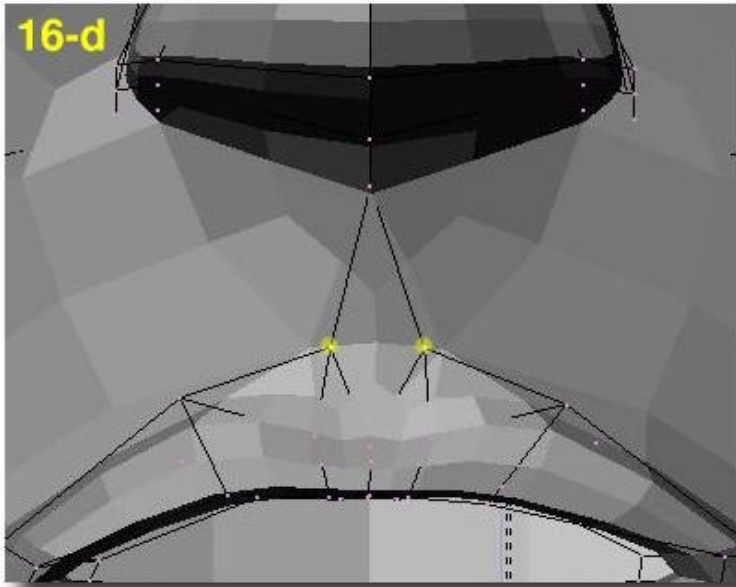
CHAPTER FIVE – WORKING OUT THE DETAILS

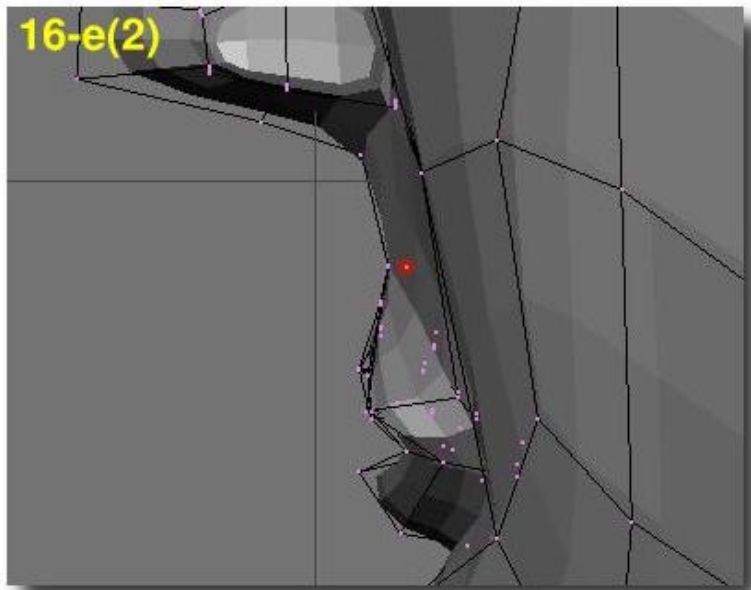
Step 16

We will work now on the lips, because they look real poor for the moment. First of all, select the four middle vertices of the upper lip. Subdivide—beauty them twice (a). Re-arrange the vertices (b), (c) and (d). Select the two middle vertices of the mouth dimple and subdivide once (e1). Pull the new vertex (showed in red) slightly inside the head (e2).











USING SUBSURF FOR HEAD MODELING

By *Olivier Saraja*

LinuxGraphic.org

Introduction — 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 →

C O N C L U S I O N

You still have to reoder vertice in order for them to follow facial muscle flows and to heighten some basic features you want (high cheeks, broad forehead, slight nose, thin chin etc.) but you now have a basic head that can be worked as well for toon-like faces as for realistic human faces. The only point I did not develop here is the modelling of ears, which is a very difficult subject for me by now. Perhaps I'll write something about this later! I hope you enjoyed this tutorial!