

Seamless Joints © Chris Tyler



The problem of joining two half-objects and making the joint seamless keeps coming up amongst TrueSpace artists and some good fixes have appeared on the TSML. One of the techniques for solving this is presented here, step by step for your edification. For this tutorial, a human head is used, but this can just as easily apply to a car, a torso, or anything you want to model only half of and copy and join to have perfect symmetry and save time.

Most of the primitives and other semi-complicated models will allow you to model half- then copy and mirror and Boolean join perfectly....I have done car bodies and other models that way, I prefer to do it that way when I'm able. But this technique is for when, no matter what you do, your object just won't Boolean join and then leaves that messed up seam down the middle.

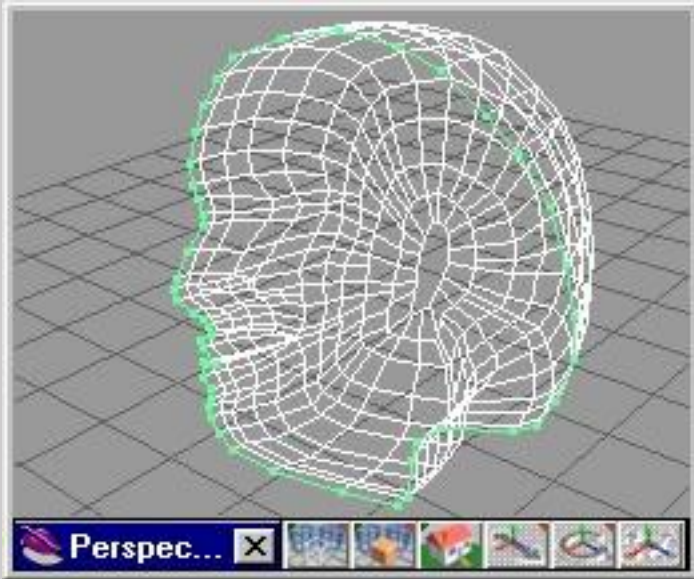
Keep in mind that joining this way will not allow Boolean tools or ThermoClay to be used later, so do all your modeling to the first half before going through all this.

Let me begin by saying that there are many ways to model something. This is just one way to get a complicated model. It is time consuming and you need to get comfortable with using the various viewing windows in TS. Also, remember, men and woman have different structural features (Thank God, ;-) and you need to be aware of this from the start.



Take a look at the image above. You just begin by selecting the polygon tool and making a silhouette of the head you want. After you have your first face, sweep it, and make your first sweep almost exactly the same as the first face, (hereafter called the "profile polygon") The reason for this will be apparent later, but it keeps the area flat for any Boolean processes and makes a smooth transition between halves.

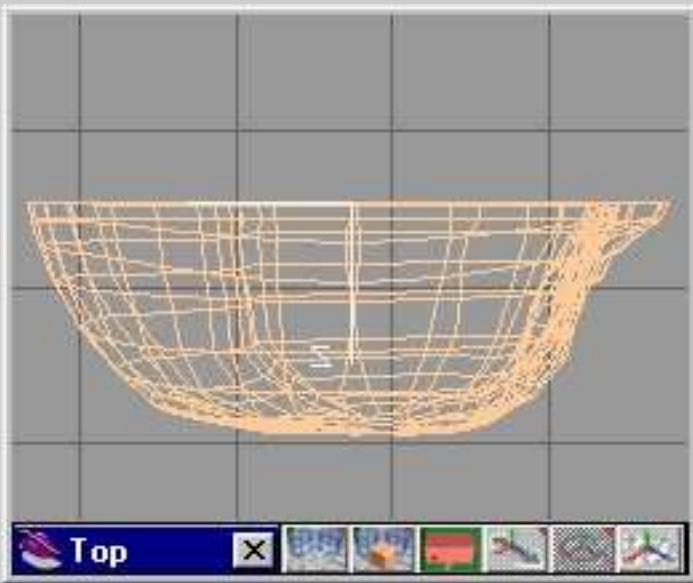
Note: You can keep track of each sweep and the point editing results by having the smaller view windows in 3DR and leaving the mainscreen in wireframe as the view above shows.



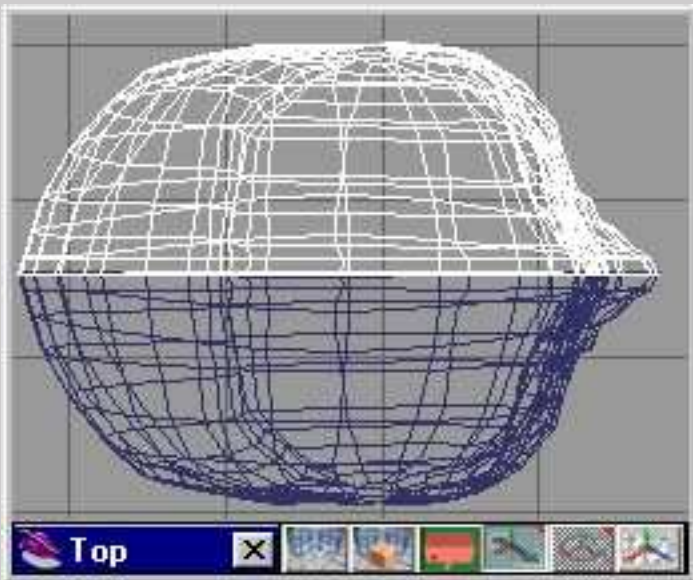
When you are happy with your results, check your profile polygon to see if it is perfectly "flat" (you may have moved some of the vertices when point editing...) If it is not flat, select a cube primitive, make it larger than the head. Slightly overlap the flat face of the cube with the profile polygon side of the head. Boolean remove the cube from the head to get a perfectly flat face. Now, turn the model around and select the profile polygon with the "select face" point editing tool. Then use the delete face tool and remove that face. Now your model is no longer a solid. If you want to see something neat, render it out before you turn around, you will see the face in reverse, a wonderful effect useful for other applications.




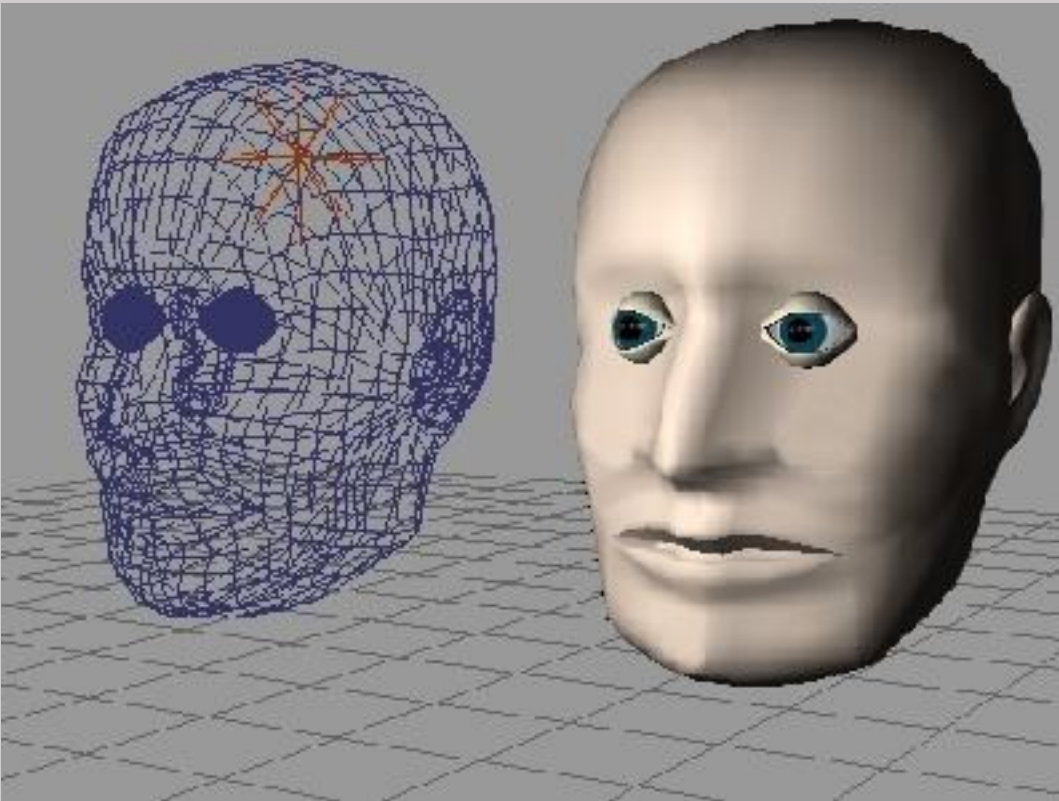
- delete face tool



Now that you have done that, set your axis. Use the center axis tool, look at the center (back to front) number in your object info box. Keeping that number constant, move the axis to the very edge of the flat face. **IMPORTANT:** This must be perfect!

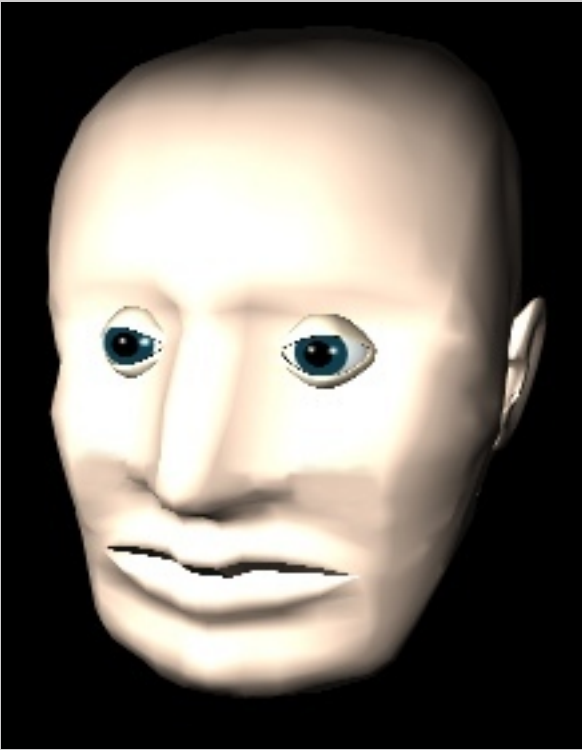


Next, just copy the first half using the copy command or Ctrl-C. Use the mirror tool  to flip it into perfect alignment. Use a close-up Top view and recheck your numbers to make sure the alignment is perfect. Use the glue tool to glue the two halves together.



Render and check your work out. This example was textured with just a simple color for this tutorial and smooth shaded. If you find any little imperfections then try just using the paint face tool and facet shade, using the exact color, the face in question, you will be surprised how well this works to clean the model up.

TrueSpace offers so many tools with so many options that you may find many techniques that will accomplish the same task. I think that's a huge plus for the artist. Experiment with every step of this process and see what you can discover as well.



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