

The goal of this project is to have you use subdivision surfaces to model your own hand. Specifically, you should model your hand in a splayed-out, flat position (no fists, curled fingers, etc.). Your model must:

- Be one subdivision surface, unless you decide to model the nails separately,
- Be built to actual size,
- Be built with a reasonably-sized control mesh. In other words, let the subdivision process give your model smoothness – don't force it to be smooth through high point/face density.

Some tips:

- Start again with a ruler. Trace your hand in a repeatable, fully-open position so you have something easier to measure than your hand itself.
- Decide what features you're going to model (like knuckles, tendons, etc.) and what features you aren't (I recommend skipping veins, hairs, etc.). Based on the features you want, explore what kind of control mesh is required to create these features.
- Sketch out some control mesh ideas to solve the branching problem where fingers meet the hand. How many points/faces do you need?
- **Rough-in** the model using box and other low-poly primitives. Try to make a hand out of four-sided boxes (a french-fry hand) and see what it looks like as a subdivision mesh.
- Try to build one finger first and use scaled copies of it for the other fingers.
- Turn off **cache** and **guide** display and turn on **smooth shaded** mode. Spin your model around in the perspective view and see how the light plays on it. Figure out where it looks incorrect and try to solve those problems through a process of refinement.
- Try refining by **pulling points**, namely, moving individual points of the control mesh. You will see that just a few points makes a big difference in the shape of your model!
- Save your work often, and make sure you use different file names so you can return to an earlier version if you need to.
- Use the layering and hiding capabilities of Modeler to help you work on small sections at a time.

Subdivision surfaces are tolerant of non-planar polygons, so you should feel free to pull points as you see fit. They do not work with anything but three- and four-point polygons, so stick with your triangles and quads.

I will try to **merge points** on your model so avoid unnecessary point repetition. It WILL have a visible effect on your surface (much more so than repeated points in a polygonal model).

**DUE Thursday February 28<sup>nd</sup> at the beginning of class**

Put your models in the **Hands Go Here** folder on e-work.

For **Tuesday**, read LW C 7 (skip weight maps), and the two articles linked on the web page ([helios.hampshire.edu/~chpCCS](http://helios.hampshire.edu/~chpCCS)). One by Bay Raitt and one called Subdivision Modeling Tips.