
Subject: First model

Posted by [FishFace](#) on Fri, 17 Apr 2009 09:45:41 GMT

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So, I saw all of those wonderful mathematical knotty things and thought I'd try the same:

My inspiration for the shape was the mathematical figure, "Compound of 5 Tetrahedra." It took quite a while faffing around in blender to get that thing right. I had a pretty well-defined picture in my mind already, so the first step I did was create the outline of the shape except, instead of letting the wires follow the tetrahedra, I had them start at the vertex then angle down into the five-pointed star. This produced a messy, angular shape, which I had intended to use as a jump-point to a more pleasant version.

So I rotated the intersections points a bit and put some more resolution in the arms. At this point though, there wasn't the interlocking of adjacent strands you see here. I also had to figure out exactly how I was going to duplicate the single component across the entire model, since there was no way I could work with the whole thing at the same time! In the end I had to use 4 array modifiers, producing 3, 2, 2 and 5 copies each, for a total of 60 copies of the initial piece. After some fiddling I got the merging working nicely and I increased the rotation to obtain the interlocking.

Deciding that using simple subsurf wasn't going to cut it, I replaced the old arm with a new one made of a beveled curve to get a more uniform appearance. After converting it and manually filling in faces/vertex pushing to get it to merge at the intersections, and you have what you see here!

Here is the uploaded model page Initially I tried to upload a 3-level subsurfed model - oops - 600,000 or so triangles >_
< Just 160k with level 2, thankfully.
