Spline Modeling Tutorial

By

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In this tutorial we will first look at some examples of the
what is possible to with spline modeling. Then we will
build a simple catamaran using splines to build the pontoons.
Spline Modeling is widely used in the automotive industry.
Splines are a great way to model objects with intricate curves.
Now lets build a catamaran.
To begin click on the create tab.
Then click on the point tab.
Right click to create points.

These points will make up the bottom hull of the pontoon.
With points selected in order
Click on the Make Curve drop down tab and create an Open Curve

After curve is made make some minor adjustment to make it smoother and center it.
On different layer repeat process creating the Outer curve and the center curve of the pontoon.

Move and adjust them after the curves are made.
Create points to make a side curve for pontoon
Remember to use the same amount of points for each curve. In this case I've made six.
Follow the same procedures to create the curves for Outside bottom, top and inside seams.

Shape your curves create the form of the object.
Paste all curves onto one layer and weld points.
Choose these curves to mirror across the Y axis.
The mirror tool is located under the Multiply tab.

Mirror here.
Repeat this process

Selecting these curves

And mirror along this axis in this window
Weld points at intersecting curves.
Go to polygon mode select curves in a clockwise manner each section at a time. Always select so that the center seam is chosen last.

After selecting three curves in each section go to the Multiply tab click on the drop down Patches tab and select Make Spline Patch.
Choose the amount you want for the perpendicular and parallel. I choose six for the perpendicular because I had six points in each curve. I always do it this and it always works.

N.B. It's easier to select curves in the perspective window. If you keep selecting unwanted polys - don't fret. Just deselect after.
After you’ve done all the sections
Hit f to flip the normals.
Then hit tab. If you see this
Don’t worry. Simply zoom in and weld.
Voila!
Now just a little tinkering and I'll have a full-fledged Catamaran.
The pontoons make up a basic catamaran.
Now let's send it over to layout, add Skytracer and a simple water texture and do a quick render.
Now for a slightly more complex render we’ll add reflection and transparency.
Porsche by Leon “Majestic” Gaiazov
found at http://www.3dm-mc.com/features.php?id=20

Porsche Carrera convertible by Patric Michi  found at
http://kresby.grafika.cz/data/media/21/porsche_Carrera_G
T.jpg_middle.jpg

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