VORONOI

Yong Ju Lee

Alesha Quam

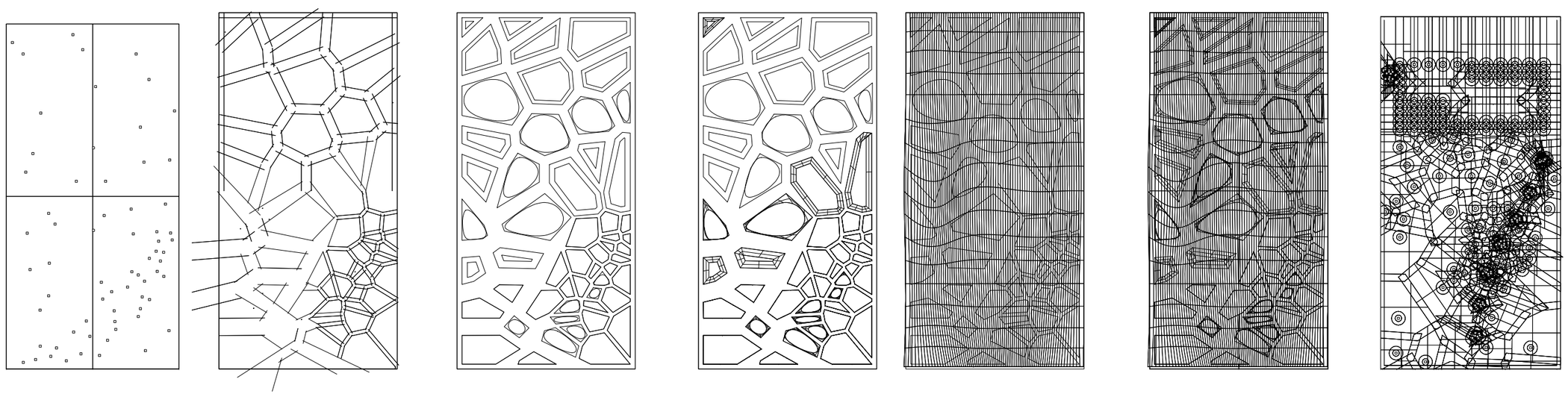
PatternRedux:Summer2011

FUNCTION: EXTRUDE: APPLY: SURFACE: NATURE: PATTERN: RANDOM: VORONI: EXTRUDE: MILL: REVEAL

RHINO: GRASSHOPPER:

Voronoi diagram is a special kind of decomposition of a metric space determined by distances to a specified discrete set of objects in the space by a discrete set of points. In the simplest case, there are a given a set of points in the plane, which are the Voronoi sites. Each site has a Voronoi cell consisting of all points closer to s than to any other site. The segments of the Voronoi diagram are all the points in the plane that are equidistant to the two nearest sites. The Voronoi nodes are the points equidistant to three [or more] sites.

This design transforms a desgin process in to form. From starting out with a gengeral concept and idea and then applying those ideas into a surface that can be manipulated. This grasshopper definition follows a few steps that I have learned over the semester and applied them into something that then could be milled out on the CNC machine. The definition was created by starting out with a bunch of points on a XY plane that also incorporated a line attractor. I then applied the voronoi battery to the collection of points. From here I developed a surface that could be applied to any form. From another section in the definition I used a set of functions that transformed into a surface that was more unique and interesting than a planar flat surface. I then combined the two basic definitions into one that developed into a three dimensional surface with some extrusion comands.



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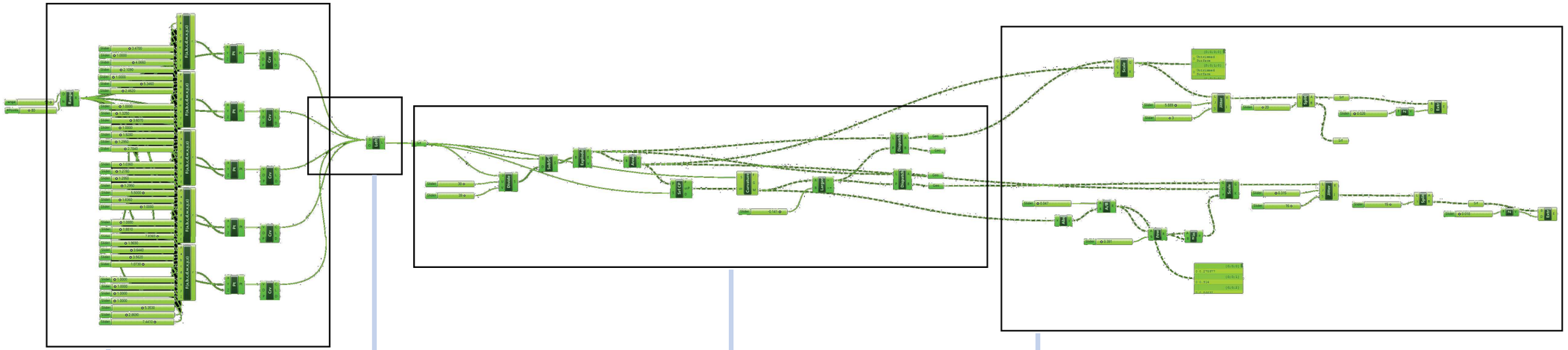
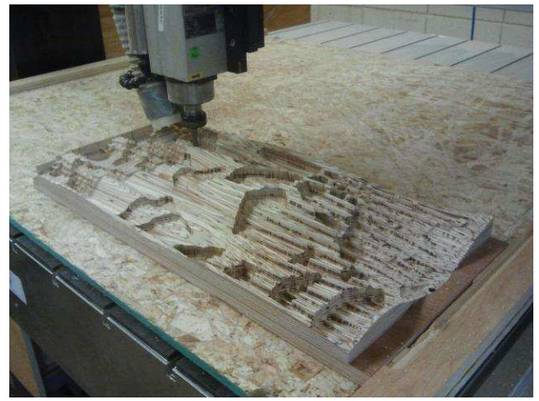


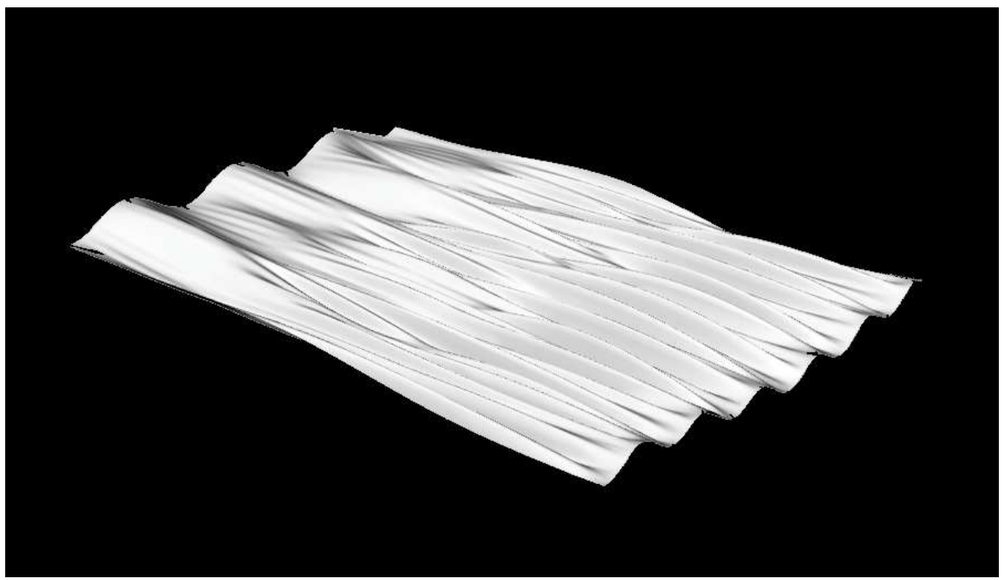
COSINE FUNCTIONS TO CREATE AN ORGANIC SURFACE

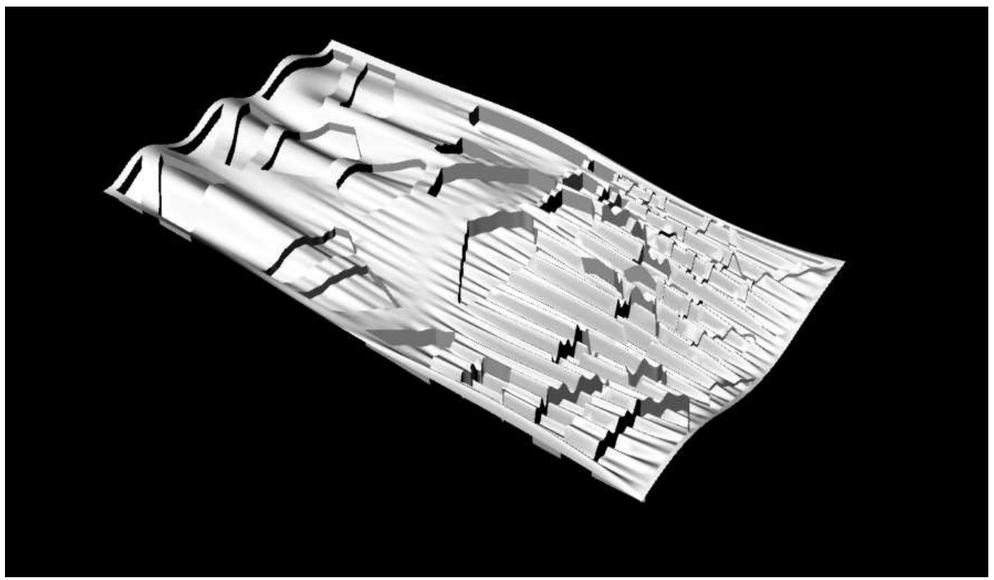
VORONOI SURFACE

COLLECTION OF POINT W/ A LINE ATTRACTOR

EXTRUDED + APPLIED TO THE ORIGIONAL FUNCTION SURFACE







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