Parametric Places: Data Making + Public Space /// AAA /// Winter 2015

Instructor: Philip Speranza, Assistant Professor

Exercise 01 Description /// Organizational Systems: Unit + Grid, 2D and 3D Module Tiling
This exercise begins to explore analog parametric procedures to later model block and grid tiling for the Eixample and 22@. We will begin by designing patterns in two dimensions, using analog digital software such as Rhino and then Illustrator to draw. These patterns consist of a base module and then a logic for how they are replicated, *or tile*. In addition to a pattern of four to five *tiles*, you will diagram the series (see example). First consider lines and then one highlight color layer. Use *Lecture 02b* to explore folding, rotating and moving. Consider **assymetry** in the block unit. Attempt to reproduce Cerda's block tiling examples as shown in Lecture 02 and then explore other variations as follows:

Urban design criteria within the block may include: passages, corners, patios, heights, setbacks. open space, use
Urban design criteria within right-of-way may include: sidewalks, benches, traffic lanes, transit, bike share, vegatation

Parameters
The diagrams created as part of this assignment will be based on the Plan Cerda example for this assignment. Drafting should be done in Rhino 3D, use Make2D to export it, with line weight (and optional color) added in Adobe Illustrator.
// We can do 3D tiling in Rhino before going to Grasshopper- in class on Tueday or as homework.

Deliverables
11" x 17" drawings including both your sequential diagrams and your 9" x 9" tiling pattern:
[1], 2D Rhino, rules and tiling
[1], 3D Rhino, rules and tiling
[1], 3D Grasshopper, rules and tiling (2D or 3D)

Programs
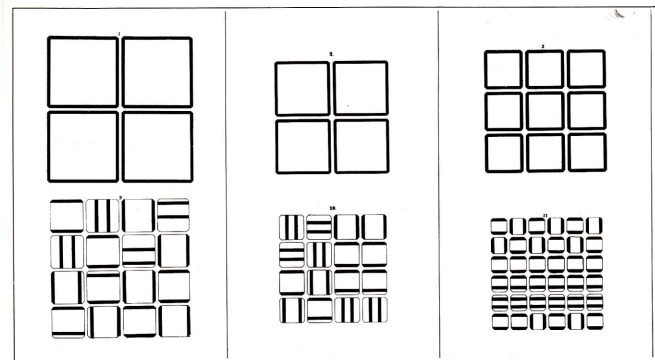Rhinoceros 3D, Adobe Illustrator, Grasshopper

Learning Objectives
•To learn how to create parameters via singular
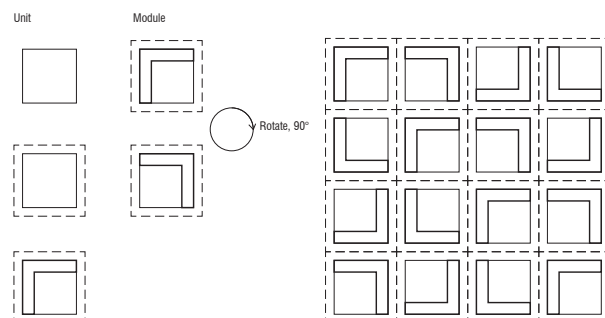2D, 3D drawings in Rhino and later in Grasshopper.

Tutorials:
•Rhino
      Rhinoceros 1
      Rhinoceros 2
      Rhinoceros 3
•Grasshopper
      Grasshopper 1
      Grasshopper 2 Introduction and Image Sampler
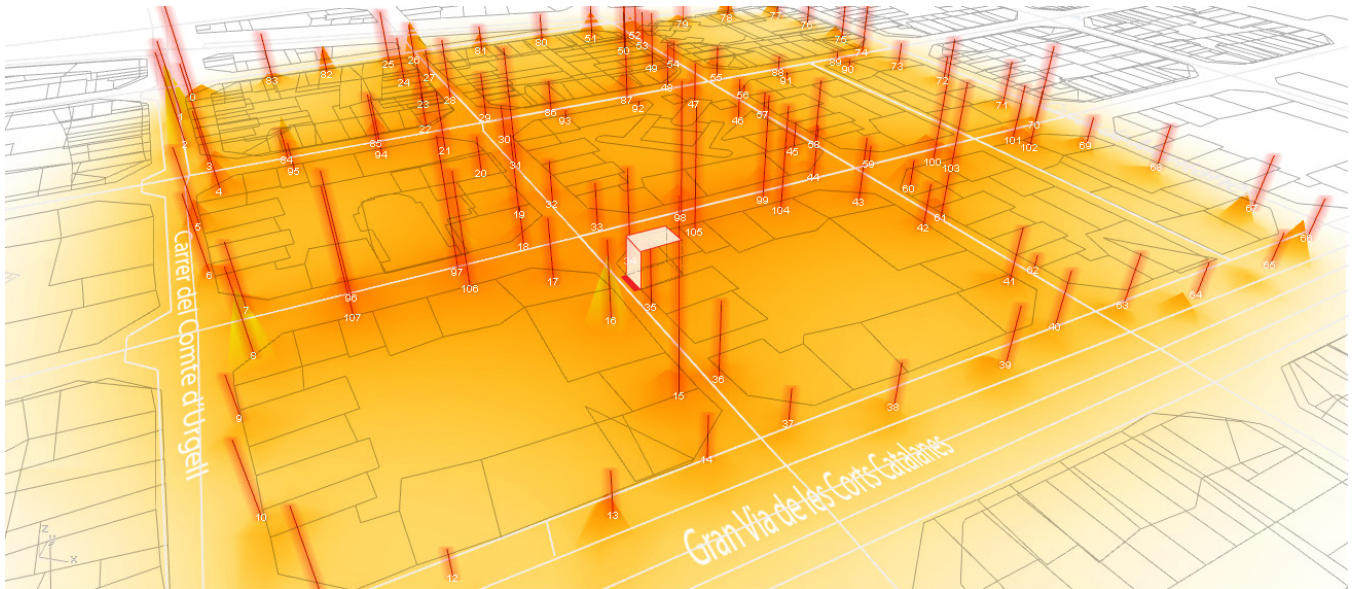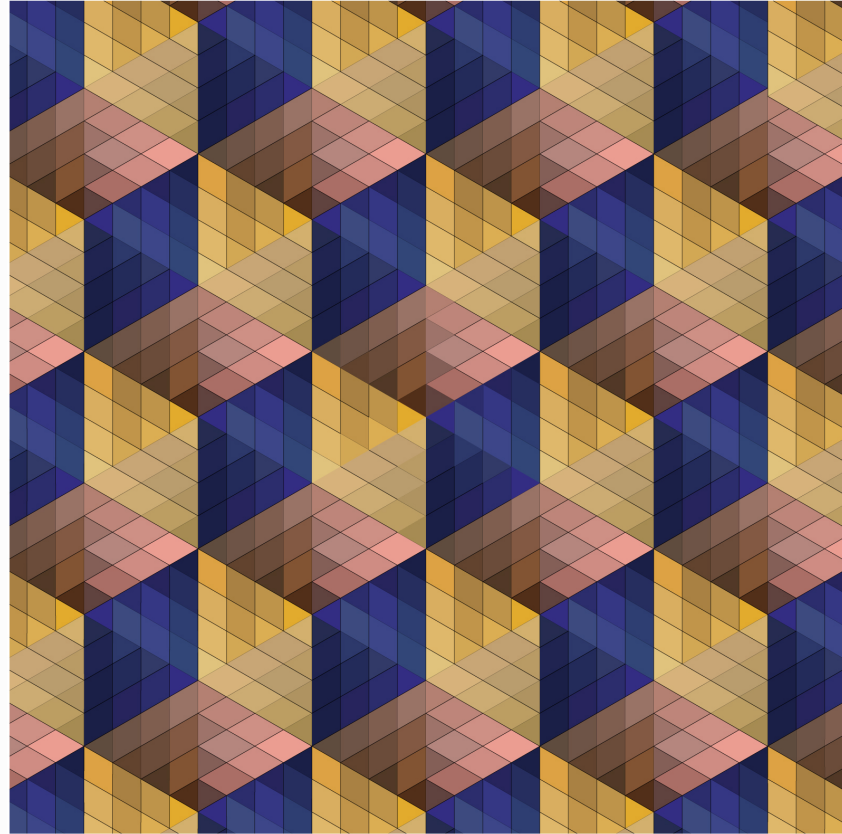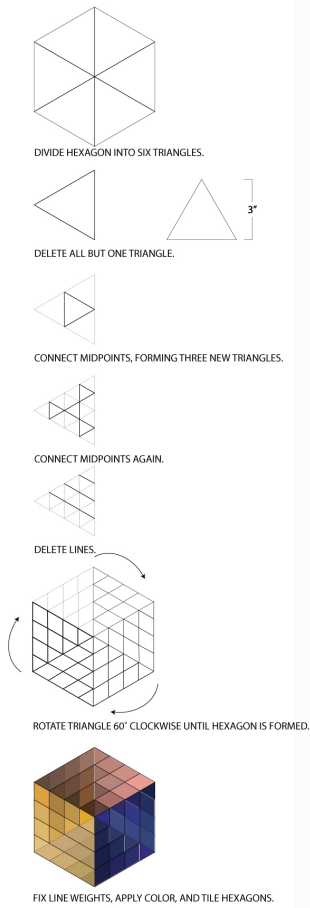   Grasshopper 3a Point Attractor

Schedule:
Assigned: Thursday, January 08
Due: Tuesday, January 13 (printed for pinup)
Digital Posting Due: Tuesday, January 13

7. Diferentes tipos de manzana deducidos de la fórmula de Cerdà para definir el modelo de 113 x 113 m. *(TCC, 185*

Unit   Module   Rotate, 90°

DIVIDE HEXAGON INTO SIX TRIANGLES.

DELETE ALL BUT ONE TRIANGLE.

3"

CONNECT MIDPOINTS, FORMING THREE NEW TRIANGLES.

CONNECT MIDPOINTS AGAIN.

DELETE LINES.

ROTATE TRIANGLE 60° CLOCKWISE UNTIL HEXAGON IS FORMED.

FIX LINE WEIGHTS, APPLY COLOR, AND TILE HEXAGONS.

Suspended Particles and Urban Design Criteria: High Resolution Measurement of Respiratory Health and Geospatial information for Newborns and Young Children in Barcelona and Portland

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