Intro. To Architectural Scripting

Workshop Description

As CAD systems started to offer Scripting abilities, Design processes took a different path, one where designers not only can automate modeling operations, but also devise rules, and embed logic in their exploration of form.

This workshop is built around the concept of calculating/computing design. Participants will learn how to think in algorithmic terms, and express their design ideas in procedures.

We will cover basics of programming and build our skills through an array of short exercises of various levels. So if you have no programming experience, this is the place to start.

The main vehicle for the workshop will be RhinoScript. Rhinoscript proved to be the best platform out there to explore design-programming for beginners and experts.

Workshop details

Friday (June 12th) to Sunday (June 14th) 2009

Friday 2pm - 6pm
Saturday & 10am - 2pm

Fees

Professional : $500.
Students (with Verification]: $350.

Sign up for this workshop and get 20% off the "3D Sketching With Bonzai 3D" workshop from June 19th to June 21st.

Participants can download a free version of Rhino and Rhinoscript. RhinoScripting runs on Windows XP and Vista, (running Windows via Bootcamp, Parallels or Fusion works fine).

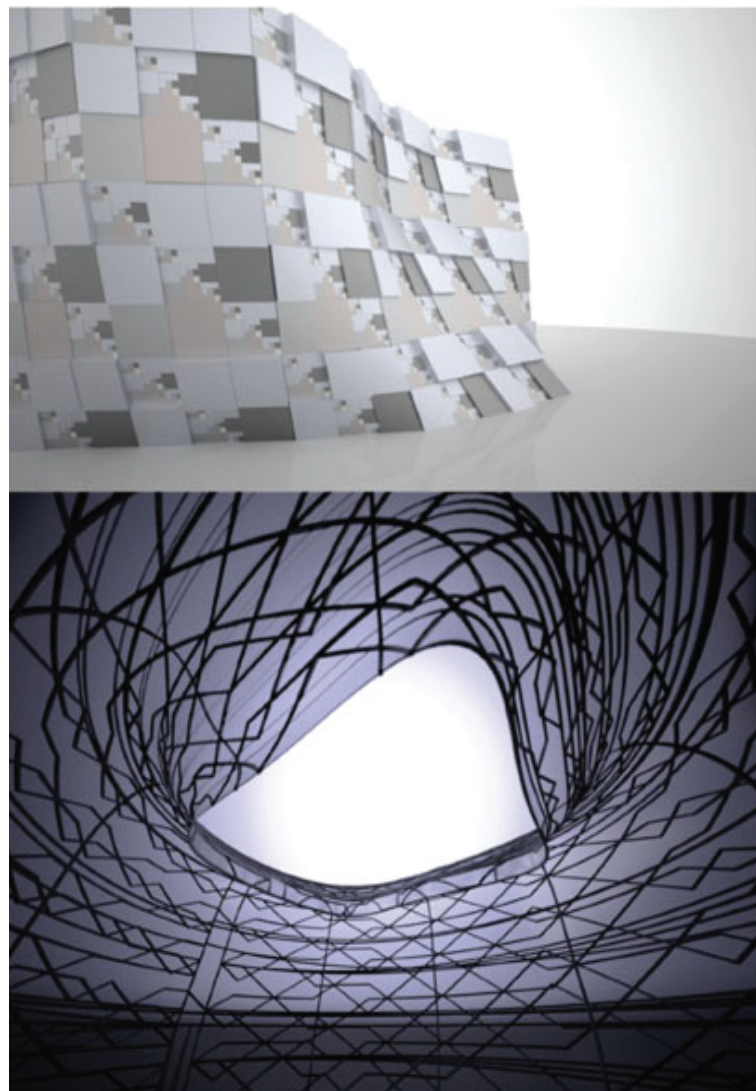Participants will have to bring their own laptops.

Instructor Background

Maher is a PhD researcher and a class instructor at Georgia Institute of Technology, Design Computing group. He received a Master of Science in Design and Computation from the Massachusetts Institute of Technology (MIT) in 2007. Maher taught Rhinoscripting at Georgia Tech's College of Architecture in collaboration with Rajaa Isaa, a Rhino programming developer.

Location and address

www.shelter.ae

Exit on the fourth intersection on sheikh zayed road heading towards alkhail road. On the second traffic light take a left. The shelter is the first building on the right.

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Workshop goals and expectations:

- Automation of modeing operations.
- Integration of scripting into the design process.
- Explore alternative design approaches.

Curriculum:

Day 1: Intro to rhino and rhino script environments:

    Part 1: Basics:

        Rhinoceros 3d:
- Interface.

        Monkey script editor:
- Interface.

        Rhino script plug• in:
- Navigating rhinoscript help.

        What can we script?
- Objects construction methods.
- Transformations.
- Data exchange (import, export).
- Math functions.
- User interface for input.

    Part 2: What is a script?
- Script structure.
- Subroutines and functions.
- Data types.
- Data structures.
- Your first script!

Day 2: Intro to basic geometry concepts and pseudo code:

    Part 1: Geometric spaces and topologies
- Points, curves, surfaces and solids.
- Smooth and polygonal objects.
- NURBS.
- The story of uv and xyz.
- Let's make our first pseudo code.

    Part 2: Let's build the pseudo code into a script:
- Version one: basic algorithm.
- Version two: add parameters.
- Version three: subs and functions.
- Version four: data input methods.

Day 3: Basic programming concepts:

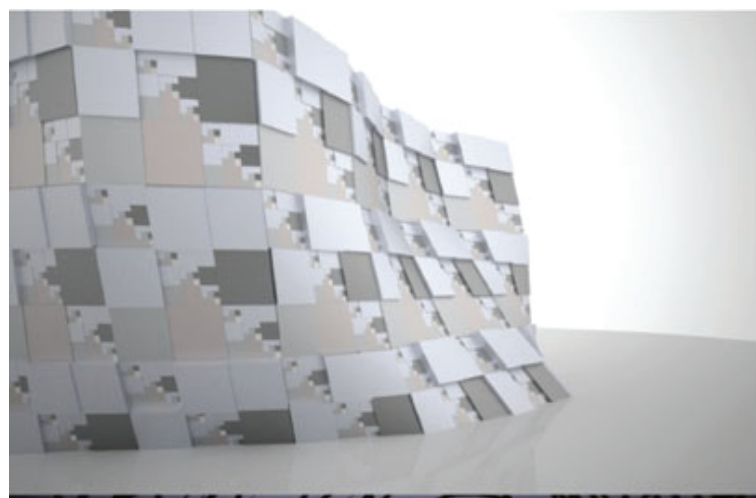   Part 1: Designing via iteration
- Examples on iteration in design.
- Tiling surfaces.

    Part 2: Designing via recursion
- Examples on recursion in design.
- Cracking algorithm.

    What is next?
- Current scripting implementations in design.
- Current research directions.

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