Parametric Methods

Introduction

An attempt to explain the technology of Parametric Design with the help of some examples.

Work flow

1. Design

2. Parametric Modeling
   - To build the history tree
   - Connecting components
   - To modify the parameters

3. Formfinding

4. Rendering

5. Digital Fabrication
Parametric Methods  (For Structural Engineering and Supporting Structures)

1. Definition Grid

2. Definition Distance

3. Several solutions

Parameter: UV-Coordinate

Parameter: Distance

Parameter: Fillet
Parametric Methods (For Skyscraper and Industrial Design)

1. Definition Height, Width and Length

2. Several solutions

3. Several solutions

Parameter: Geometry
Parametric Methods (For Landscape)

1

Several solutions

Parameter: Image

2

Several solutions

3

Several solutions
Parametric Methods (For Facade Paneling and Industrial Design)

1. Several solutions

2. Note:
   Transform simple and complex shape (Box Morphing).

3. Several solutions
Parametric Methods (For Structural Engineering and Facade Paneling)

1. Definition Trigonometry and Rotation

2. Parameter: Folding

3. Several solutions

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Resource

Websites

Grasshopper - Generative Modeling for Rhino
http://www.grasshopper3d.com/
*With many thanks for: David Rutton, Jonas Bredel, Dan Piker und Hans Sachs*

LIFT architects
http://www.liftarchitects.com/

EcoLogicStudio - Claudia Pasquero and Marco Poletto
http://www.ecologicstudio.com/

Giulio Piacentino
http://www.giuliopiacentino.com/

Manual

LIFT architects - Andy Payne
The Grasshopper Primer - Second Edition

Mohamad Khabazi
Algoritmic Modelling with Grasshopper

Frikearq - Guillermo Ramírez und Miguel Vidal
Manual bàsico de Grasshopper