Self Assembly of Building Scale Elements

Design Studio, NC tools & New Design Languages

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THE CENTER FOR BITS AND ATOMS

21 Century of Architecture

Architects will design and build Non Euclidian Space

[Change the way architects are taught – Studio]

[Change Tools – NC]

[Embedded knowledge or rule into building components]

20 Century

Euclidian Design

Lever House – NYC 1952

1. Mass manufacturing
2. Multiple components of the same size or geometry
3. Relationship of drawings to manual construction
4. Adjustments can be made during construction

21 Century

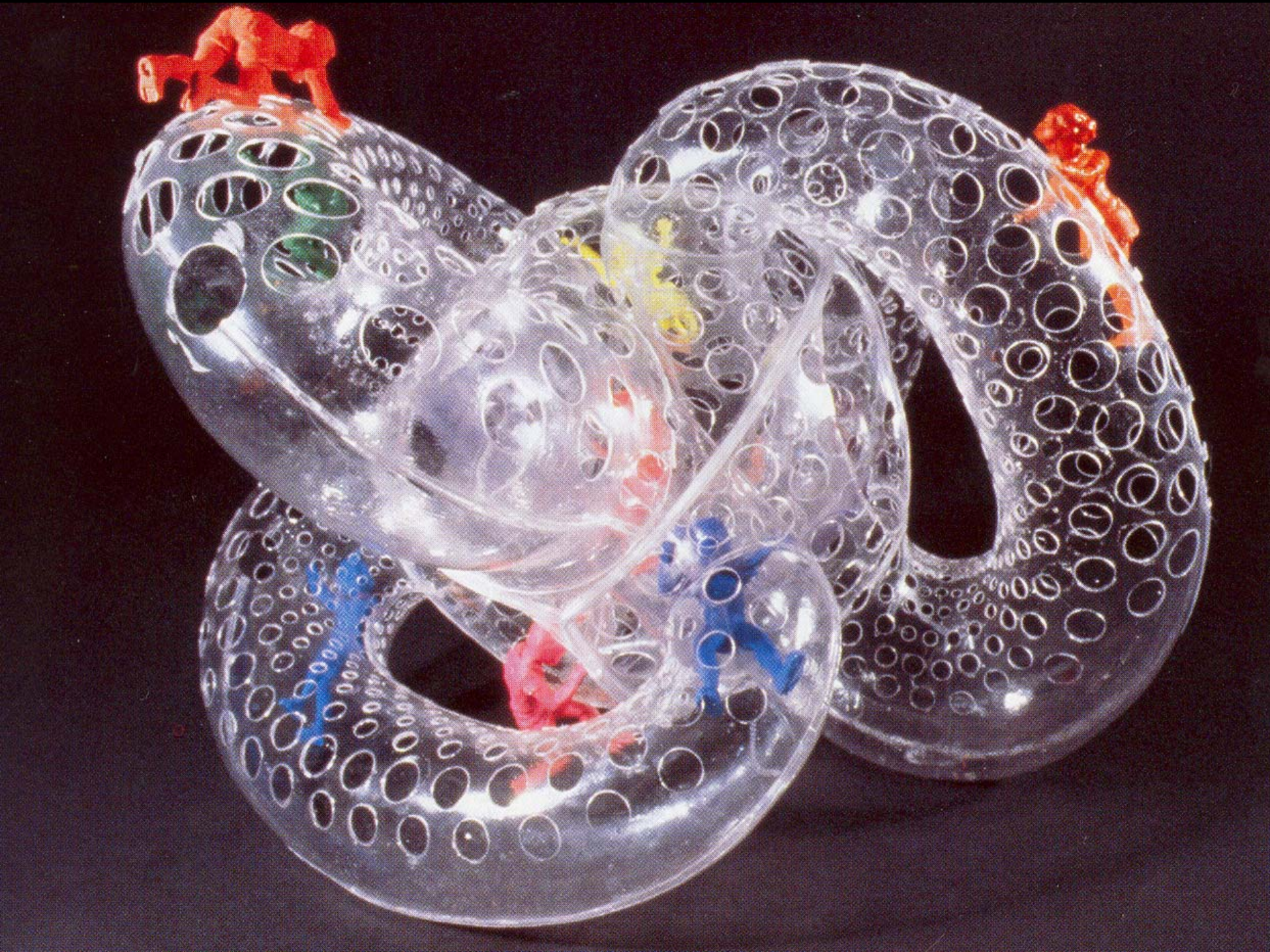
Non - Euclidian Design

Frank Gehry
Stata Center

1. High Cost

2. Precise Machinery to Build/Construct

3. **Precise Machinery to Design**



A

[New Design Studio]

Computation and Precise Tools

90s

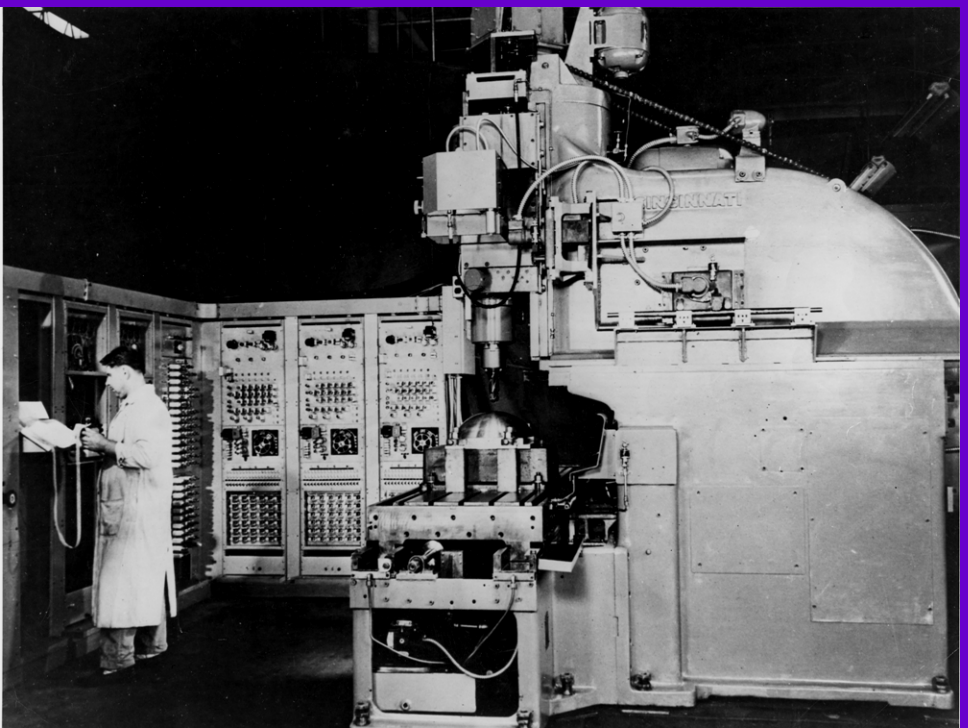
William Mitchell

B

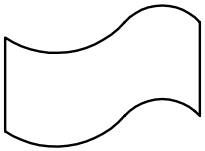
[Numerically Controlled Machinery (NC)]

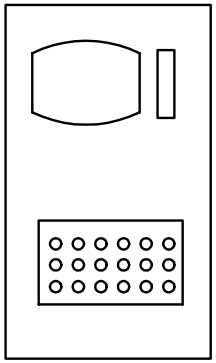
00s

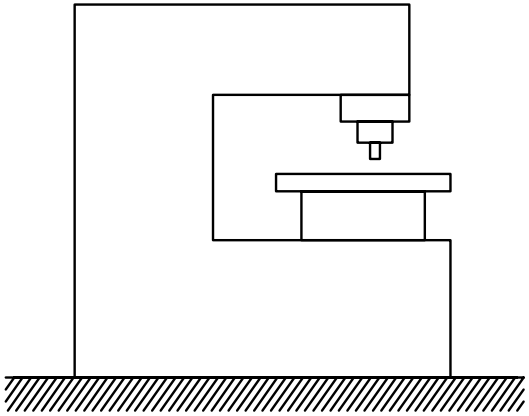
MIT Servo Lab – 1952



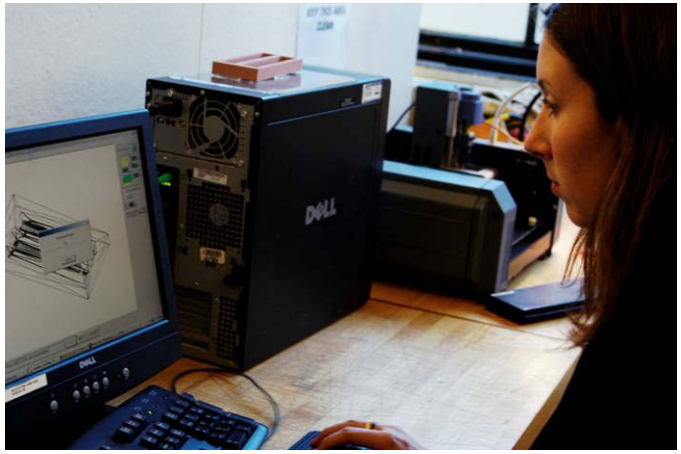
Computer
Aided Design
Project
1963 - MIT







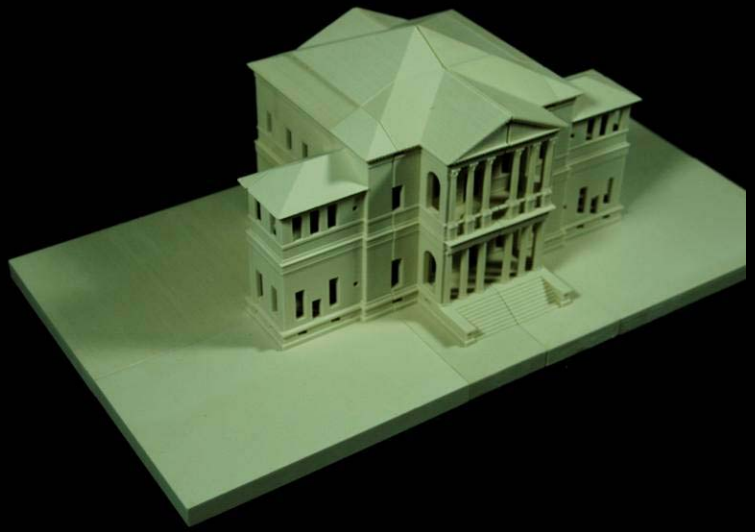
Program *Machine Control Unit* *Processing Equipment*

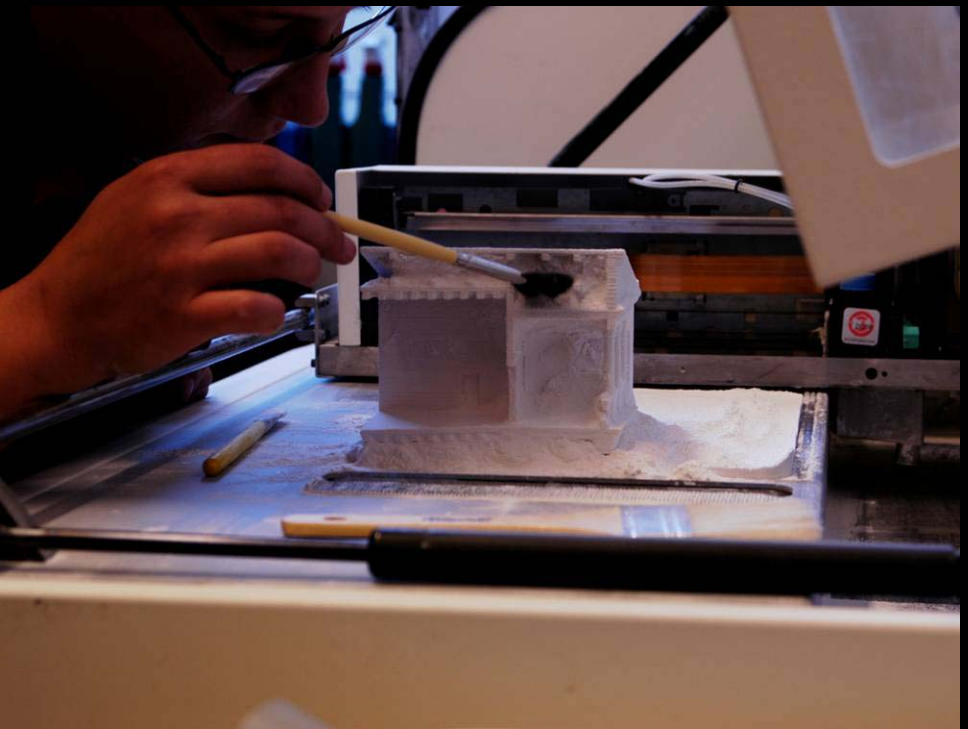


CAD

COMPUTER

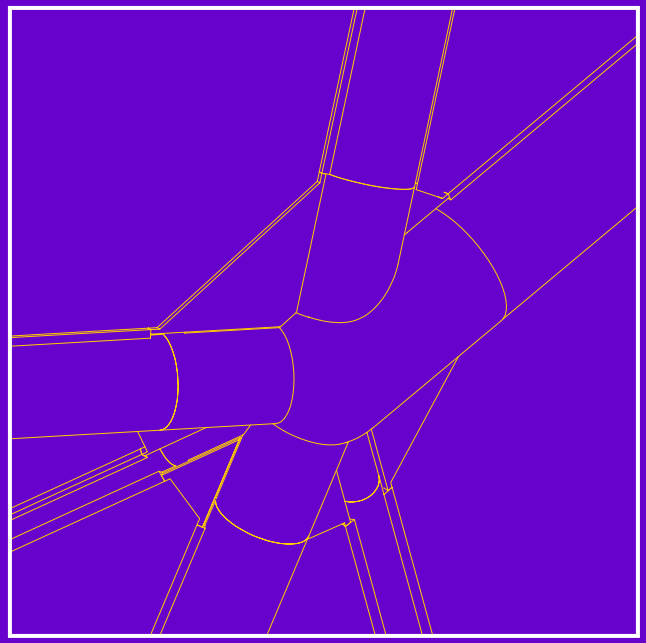
NC



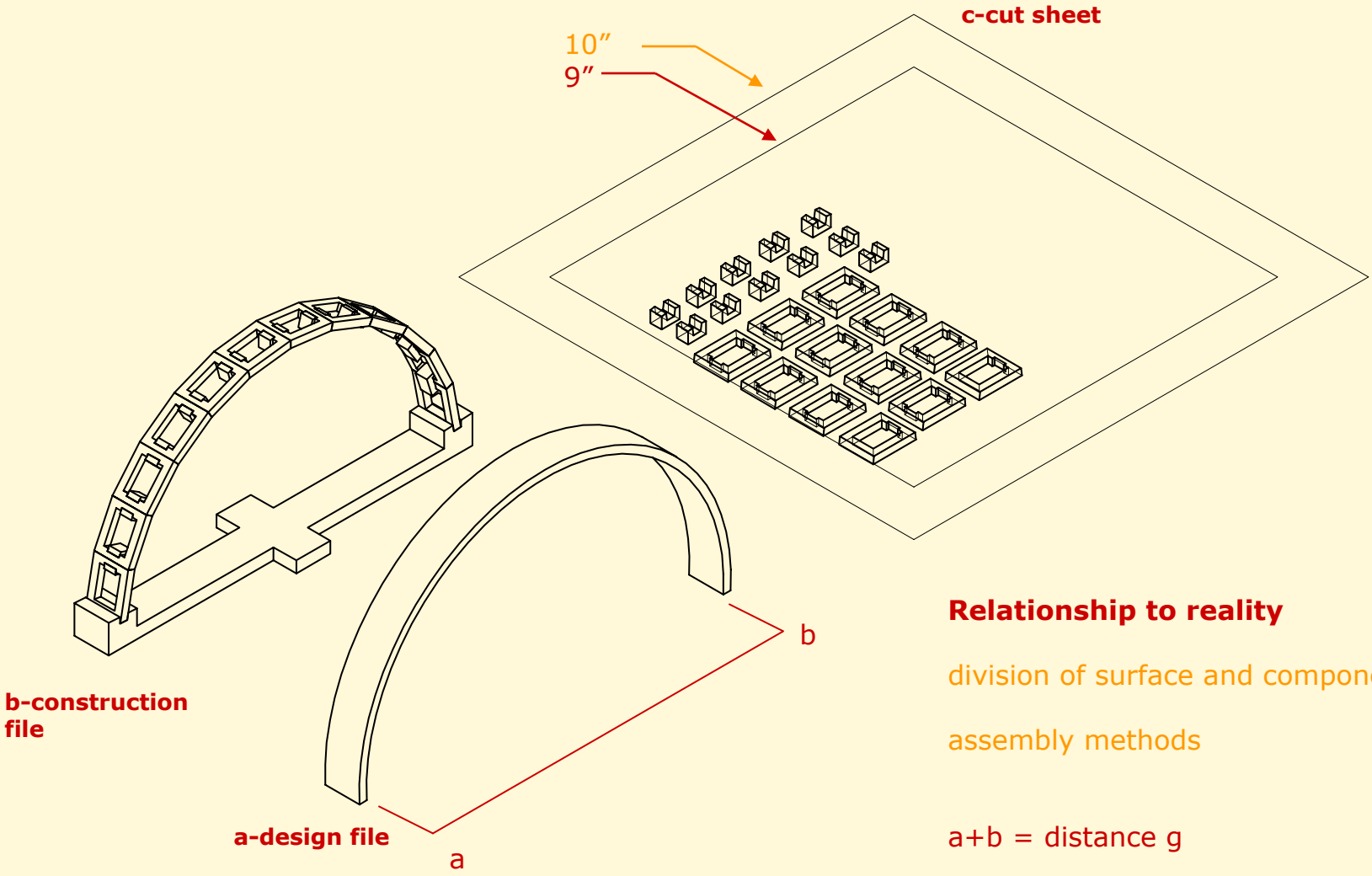


C

[Embedded knowledge or rule into building components]



Self Assembling Building Components



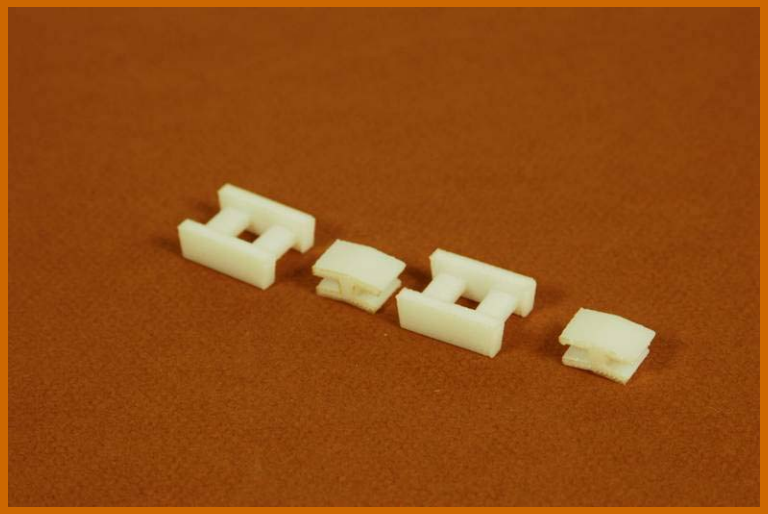
Relationship to reality

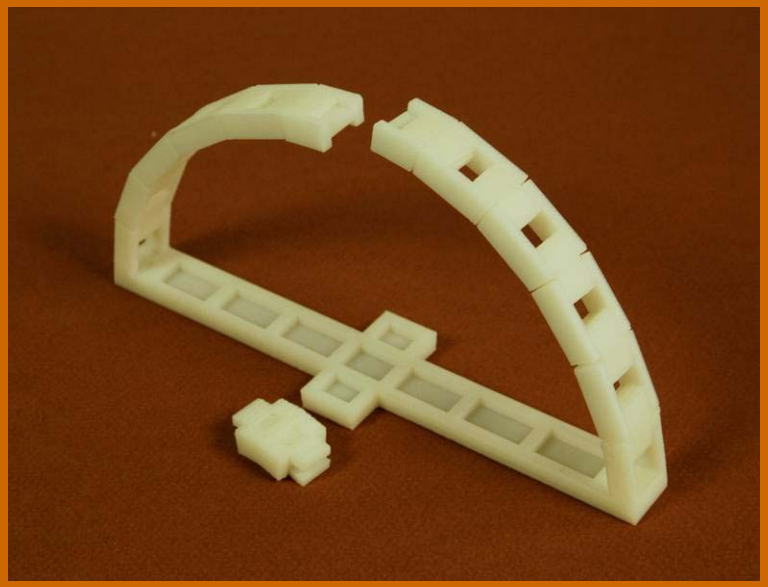
division of surface and components

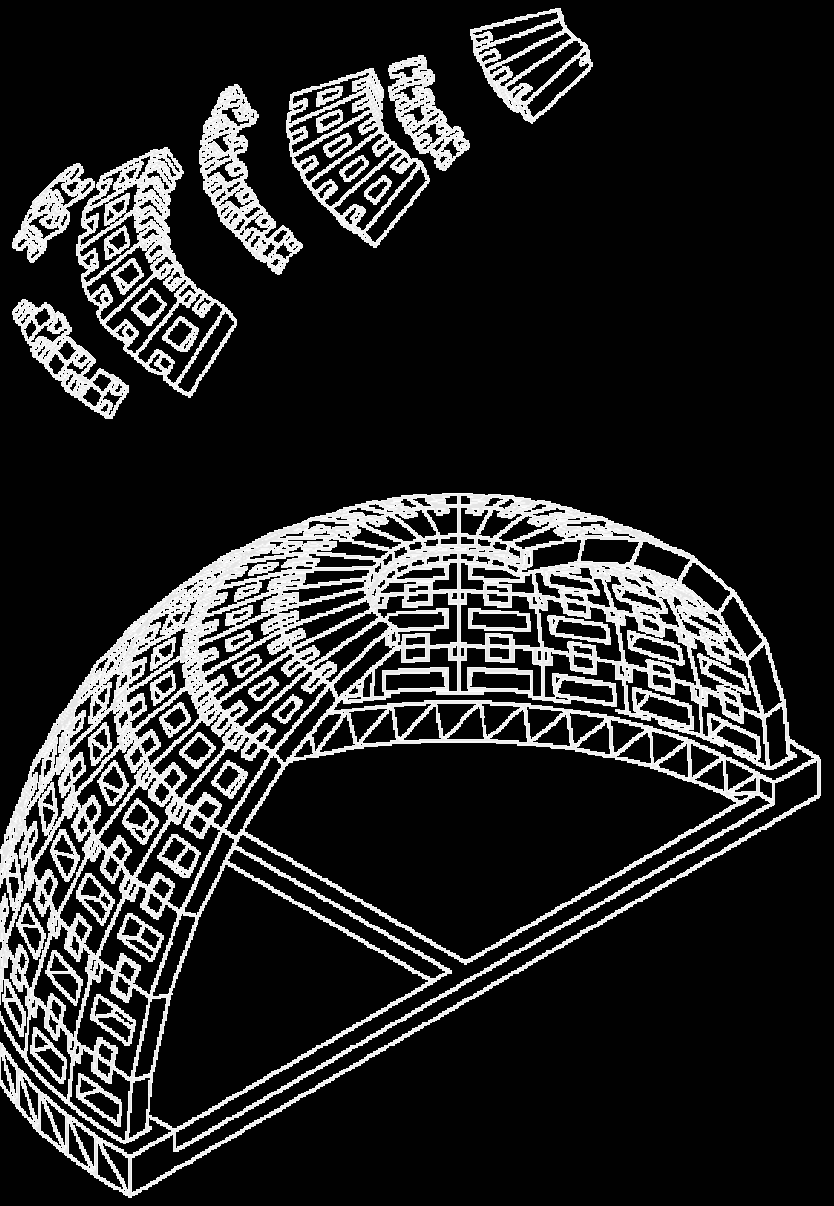
assembly methods

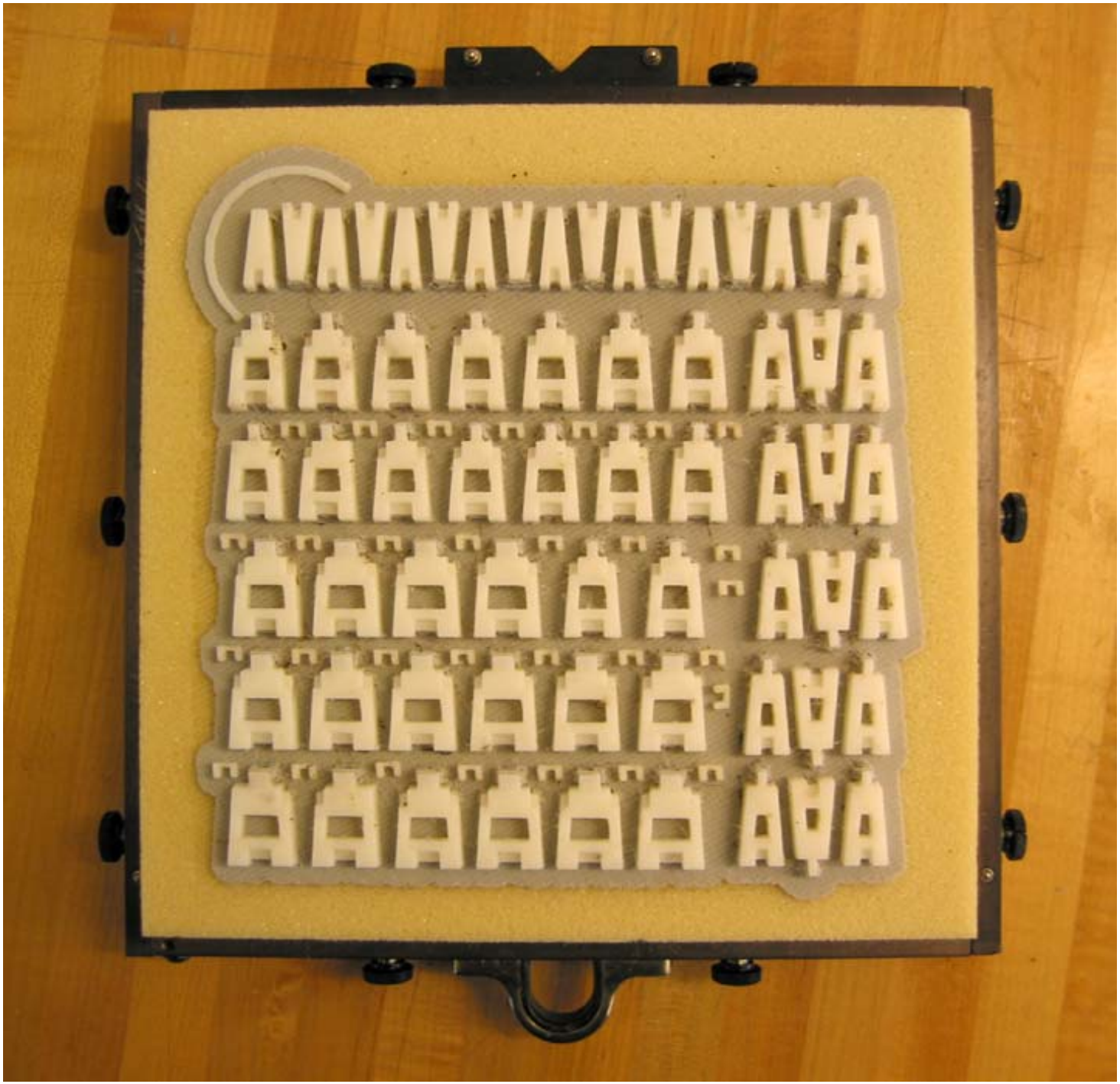
a+b = distance g

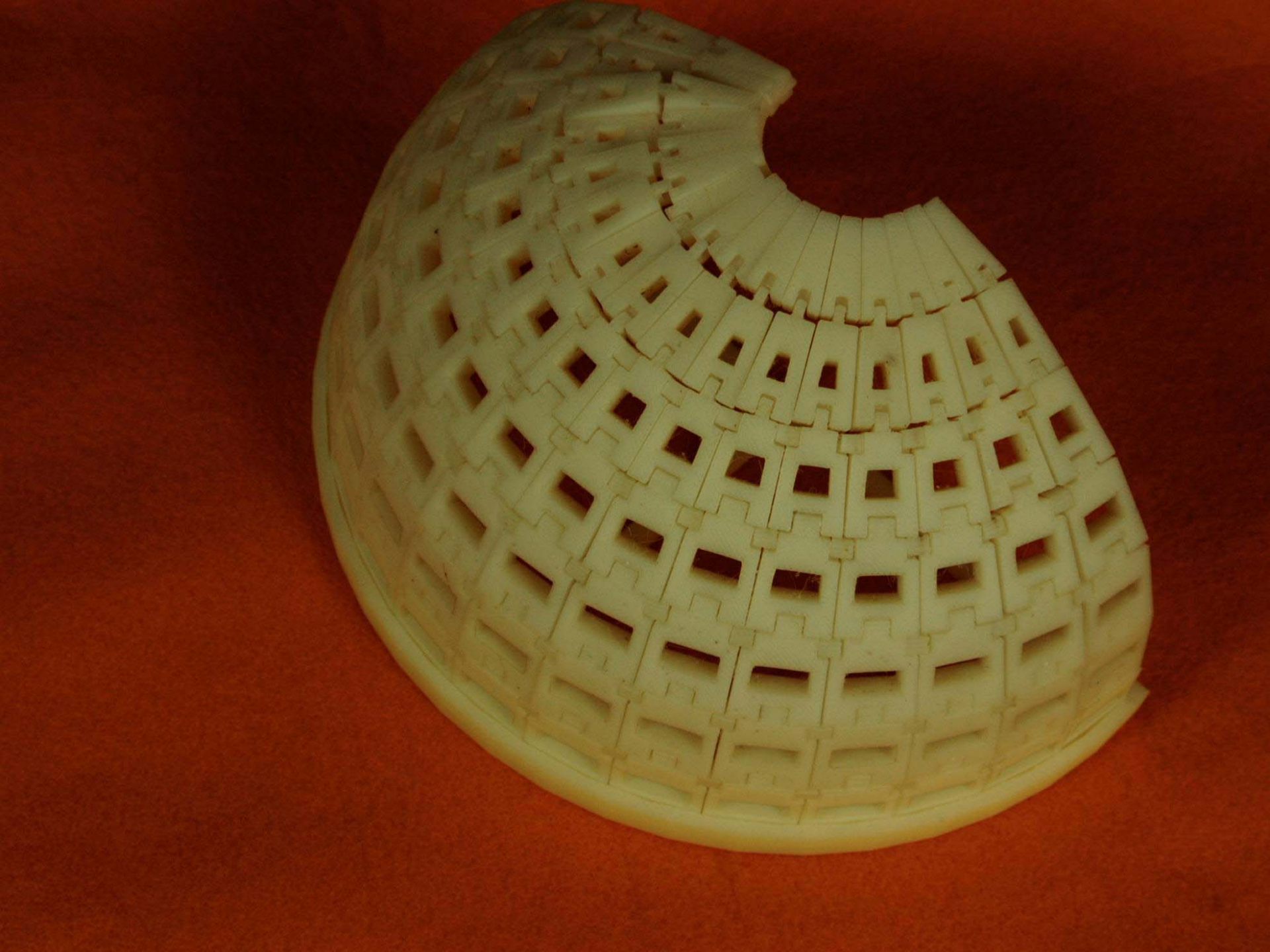
g(x) = real distance





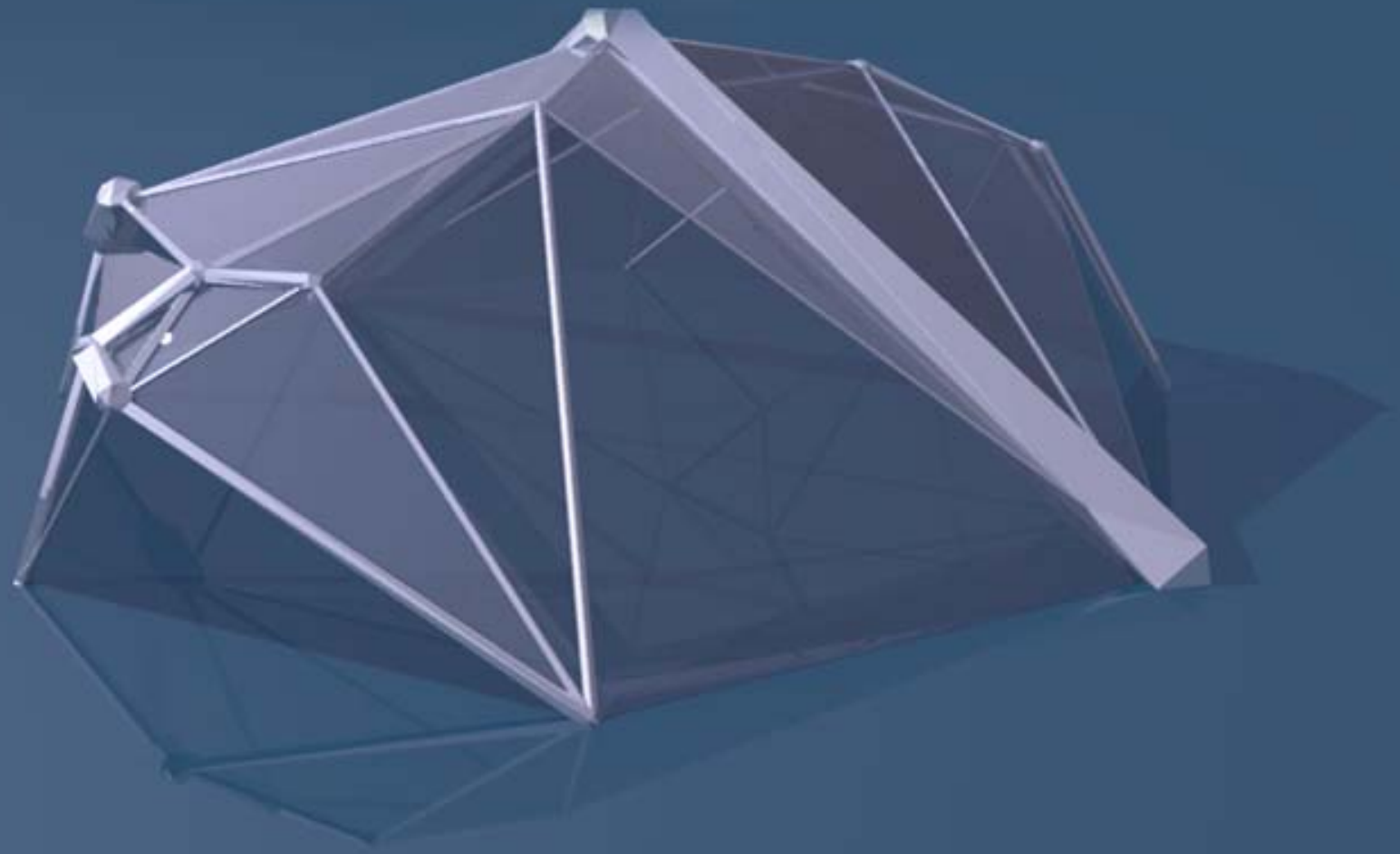


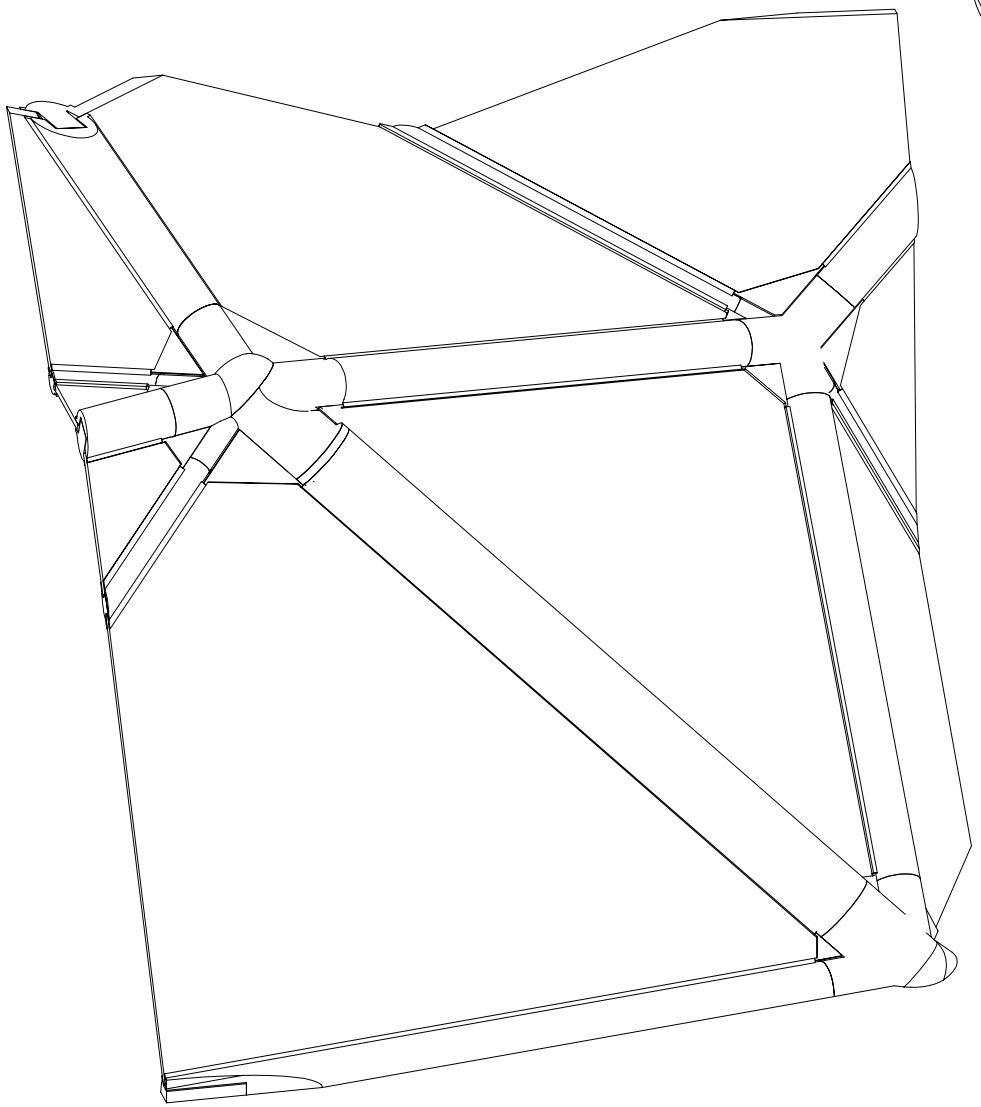


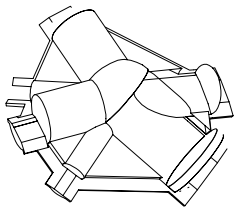


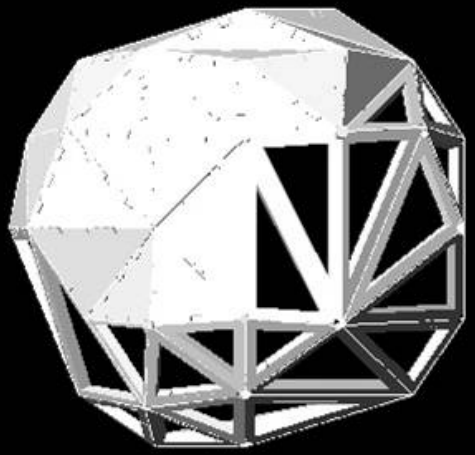
Eif Form – Kristi Shea

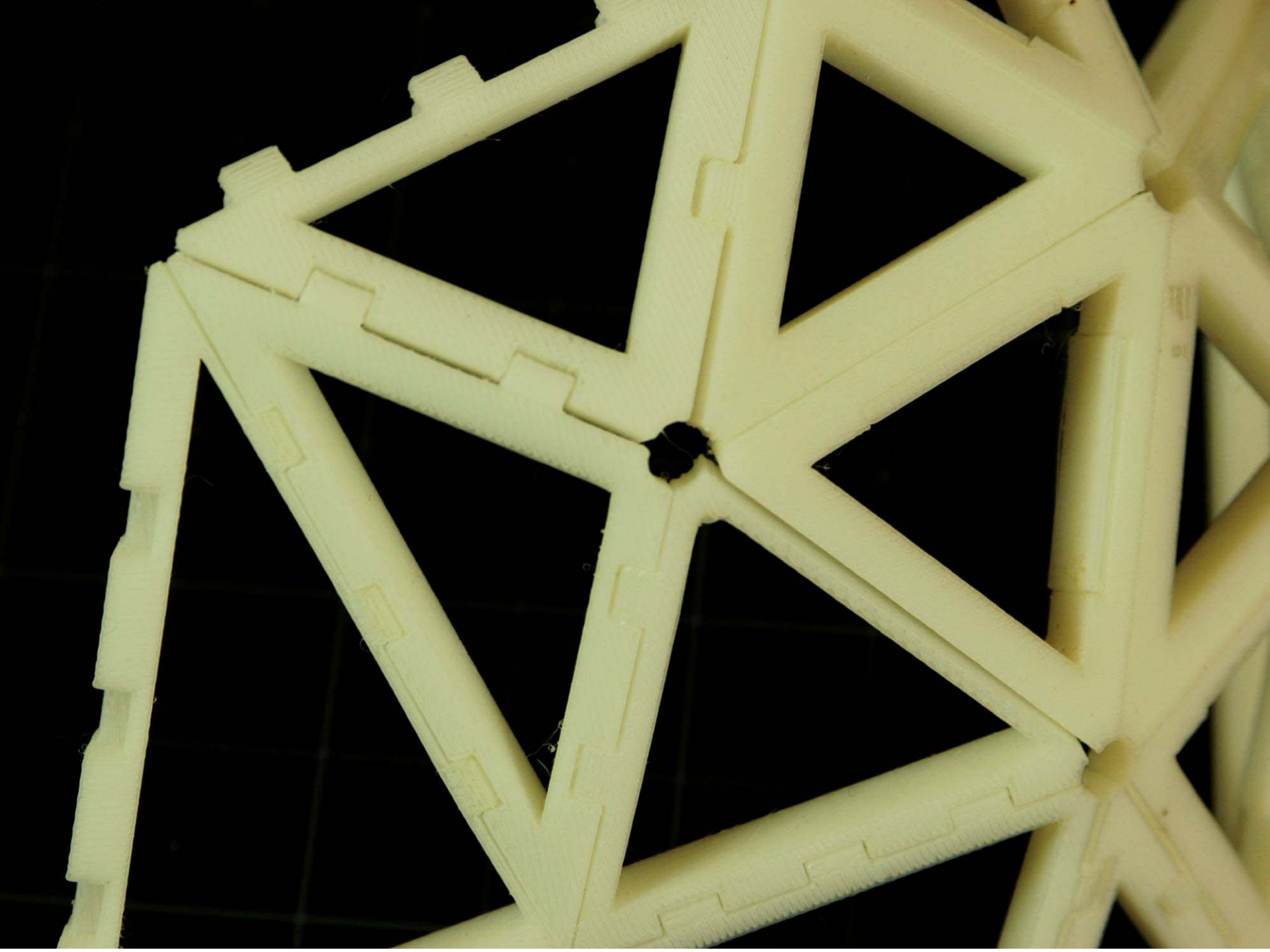
[All Nodes are different]

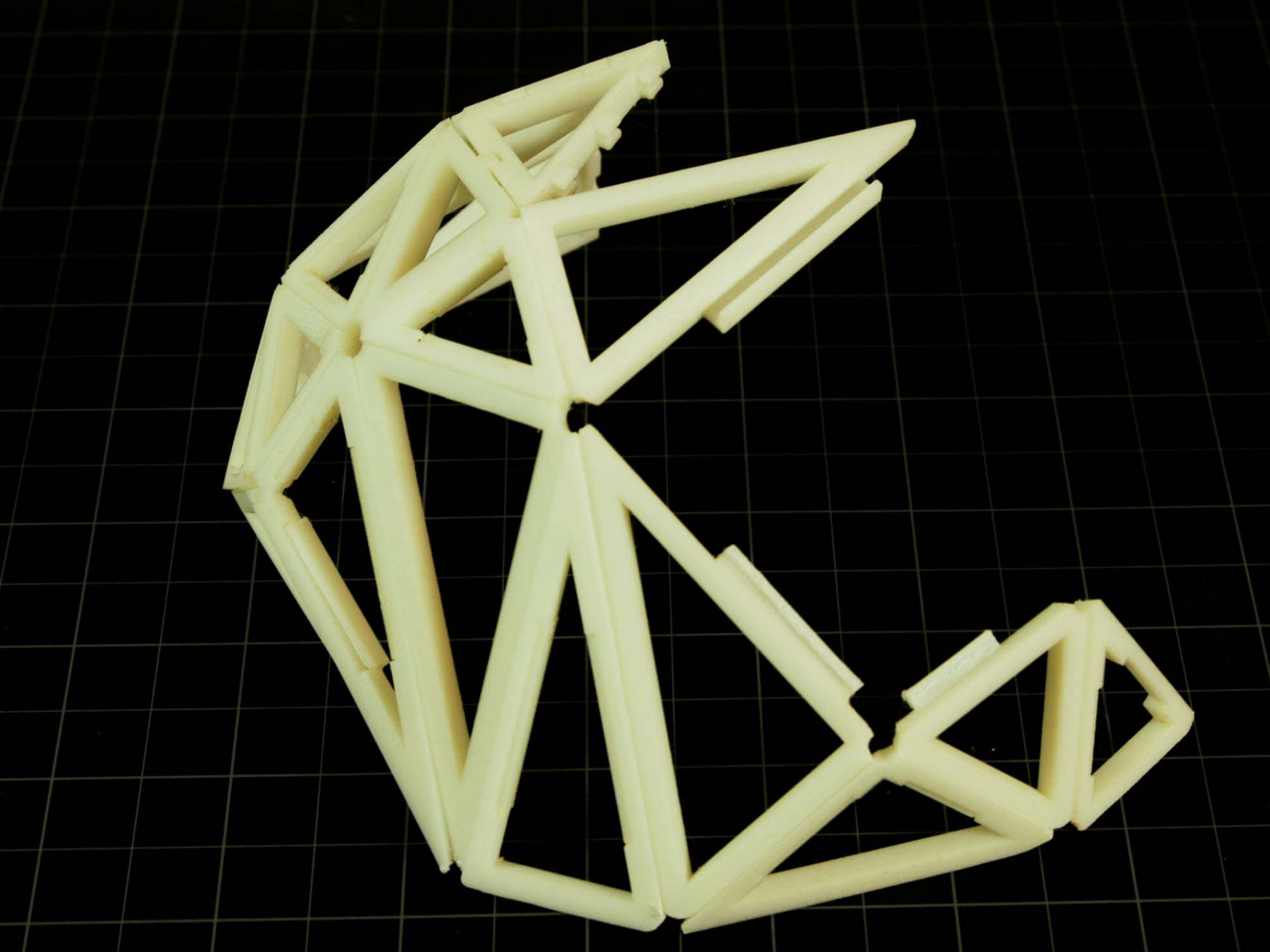


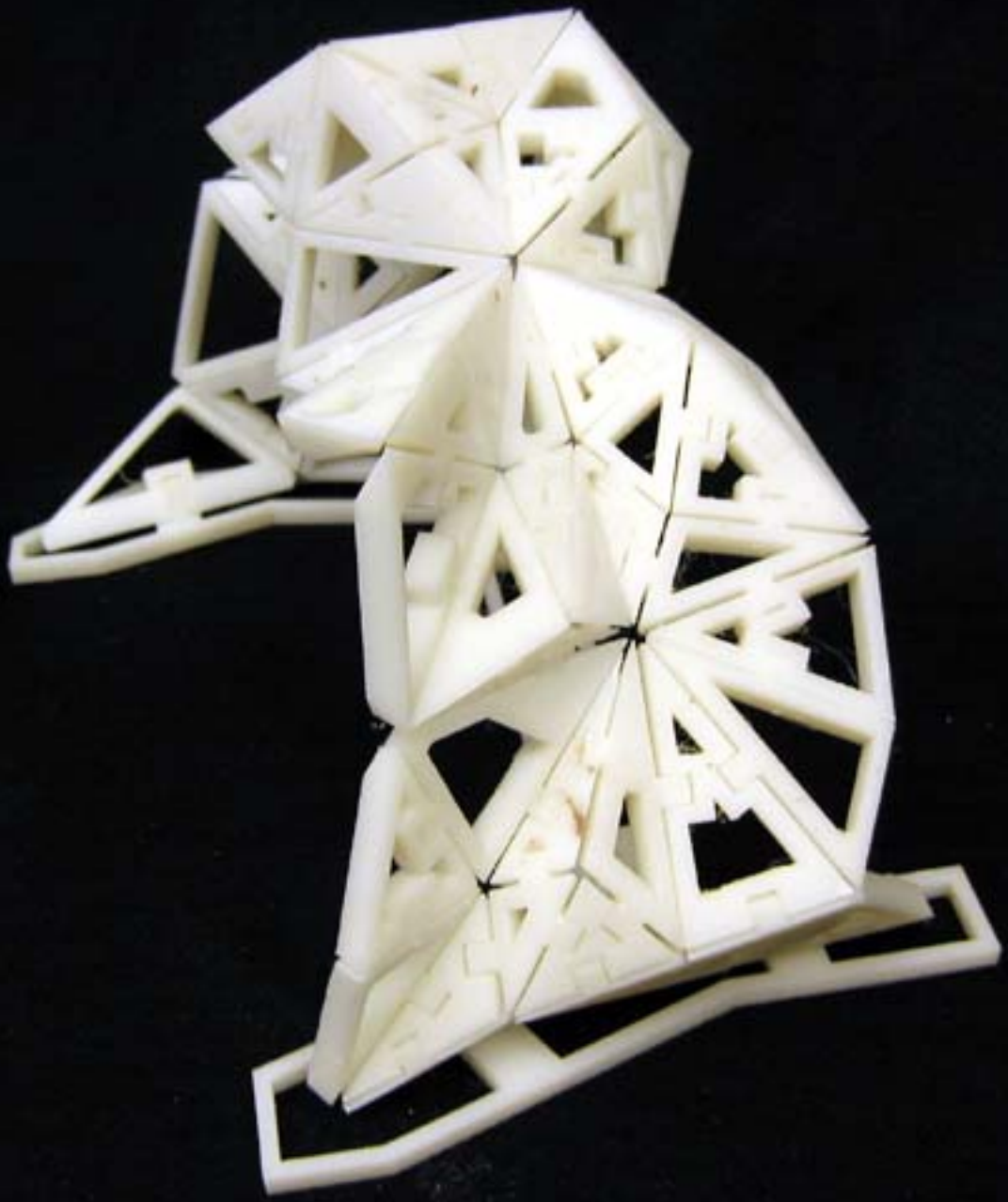


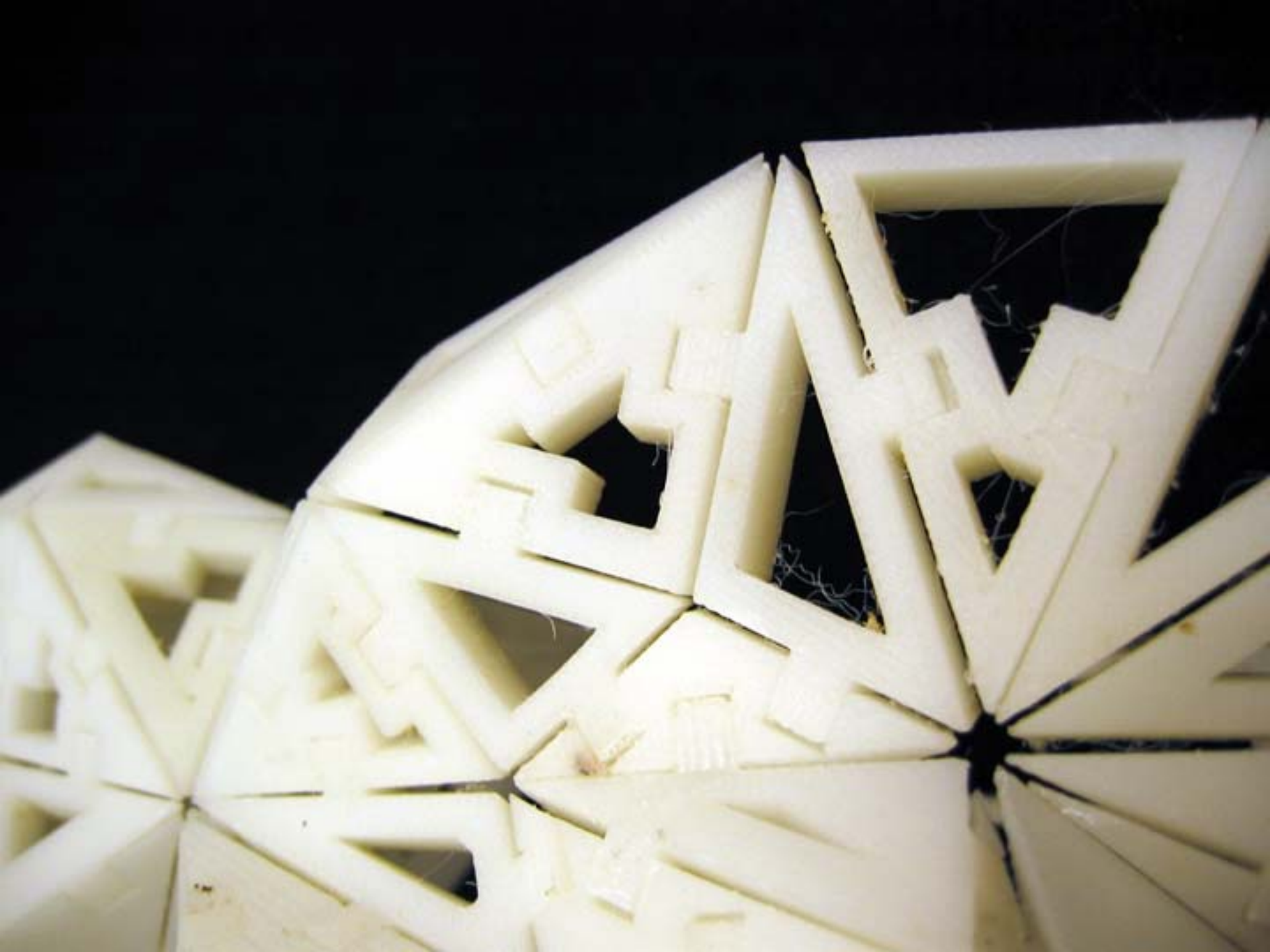






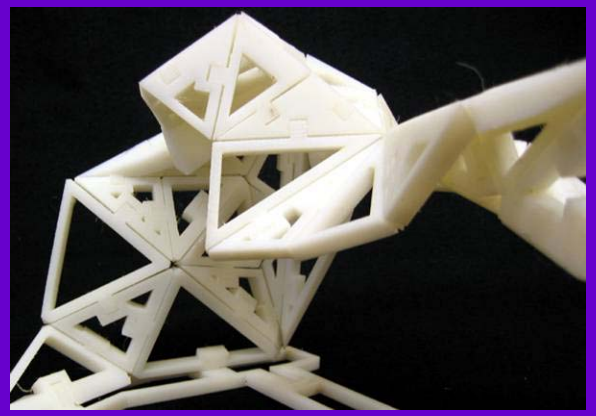






21 Century of Architecture

Using Precise Tools
Non – Euclidian Design can happen in the Studio



[Studio] [NC] [Embedded Knowledge]