3D Printed Marching Cubes

Tech ID: 33668 / UC Case 2020-688-0

BRIEF DESCRIPTION

Researchers have translated a medical computational procedure into creating interactive 3D printed construction units.

FULL DESCRIPTION

Researchers at UCI have developed an algorithm to create tangible, interactive art and educational units. By translating the algorithm into 3D printed units and providing assembly instructions through a custom script, participants can physically build and explore complex structures, engaging directly with the logic of computational design

SUGGESTED USES

- Educational tools for schools and universities in art, design, and computer science.
- Interactive installations for museums, galleries, and public spaces.
- Therapeutic and recreational activities in various settings.
- Prototyping and model-making in architecture and design.

ADVANTAGES

- Transforms abstract digital processes into hands-on, educational experiences.
- Encourages collaborative creation, blending art, technology, and education.
- Offers a unique approach to understanding and visualizing 3D data.
- Flexible and intuitive design surpassing traditional construction toys in creativity and interactivity

STATE OF DEVELOPMENT

Prototype developed

RELATED MATERIALS

- Pixels in the Material World: Making Marching Cubes (PDF)
- YouTube: 3D Printed Marching Cubes by Jesse Colin Jackson

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OTHER INFORMATION

CATEGORIZED AS

- **Materials & Chemicals**
  - Other

RELATED CASES

2020-688-0

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