3D Printing: A Medium for Artists to Communicate Their Works

Raise3D Case Study
https://www.raise3d.com/case/3d-printing-a-medium-for-artists-to-communicate-their-works

"Frank" is a series of polymorphic works of art created by Luiz Gustavo Paffaro, who used 3D printing in the early stages of his process to transform clay sculptures. Working with Raise3D's Pro2 Plus printer, he turned his ideas into reality, and magnified them several times, giving clay sculptures new textures and shapes.

The Artwork's Origin

The "Frank" is a series of sculptures created using 3D printing, providing opportunities for exploring new challenges for Paffaro. In choosing 3D printing as a medium for creating the "Frank", Paffaro used state-of-the-art technology to make an artistic transformation of the creature created by Dr. Frankenstein's unorthodox scientific experiments in Shelley's novel, "Frankenstein". The initial clay sculpture shaping process involved talent, patient observation, and creation. The sculpture is about 15 centimeters high, and it took Paffaro about 15 days to sculpt it.

"Frank" from Paffaro Studio

Deconstructing and Remodeling

Reverse engineering process at UP3D

3D printing is a valuable tool for an artist to deconstruct a sculpture and then reshape it. To extract Frank's shape data, Luiz Gustavo Paffaro, with the assistance of Raise3D's Brazilian distributor UP3D, used a 3D scanner to digitize the shape of the entire sculpture and obtain complete data, then refine the details of the model using a computer.

Using Raise3D's slicing software, ideaMaker, UP3D engineers converted the digital version of the sculpture into a slicing file that the 3D printer can recognize. ideaMaker has built-in parameter templates for different printing materials, so even users who have no experience with 3D printing can still adjust the parameters of the model.

The Texture function built into ideaMaker allowed Paffaro to apply various textures to the model's surface. Paffaro added a marble texture to the model, resulting in a different texture in relation to the original clay sculpture. Paffaro stated "It's amazing how 3D printing imitates marble. I was impressed when I saw the final model. With this piece, UP3D convinced me that the entire process works perfectly!"

Reverse engineering process at UP3D

Printing and Reproducing

Printing large model "Frank" with the Pro2 Plus printer.

For artists, 3D printing has become a unique tool to expand their creative power. This time, Paffaro made use of Raise3D's Pro2 Plus professional 3D printer to recreate the Frank work with new materials. The Pro2 Plus's 305 x 305 x 605 mm (12 x 12 x 23.8 inches) print volume can accommodate oversized sculptures.

After more than 200 hours of printing, the model sheds the icy clay look and achieves a breezy texture and fine marble finish. As a professional-grade 3D printer, the Pro2 Plus printer has unparalleled high print resolution and positioning accuracy. The smallest nozzle diameter of this dual extruder 3D printer is 0.2mm, and the smallest print layer height is only 0.01mm, which perfectly produces the Frank's folds and hairlines. With features and capabilities as those found the Pro2 Plus printer, artists can incorporate 3D printing into their process to produce high quality work.

Media and Dialogue

Printing large model "Frank" with the Pro2 Plus printer.

3D printing can be used as a new artistic medium, enabling artwork to acquire a post-industrial aesthetic. For artists, the biggest advantage of 3D printing is to create an "idea-object" dialogue channel. 3D printing saves artists the process of repeated modeling, allowing them to get their own materialized ideas in just a few hours. This is not possible with any subtractive manufacturing technology.

Raise3D's range of 3D printers provides higher precision, a larger printing size, and support services, allowing artists without a technical background to easily use 3D printing technology. 3D printer technology can be used as another method for art creation, allowing artists to work through limitations and obstacles with quality results.

To learn more about Luiz Gustavo Paffaro's work, please visit https://www.paffaro.com/.

The case is created and shared by Raise3D's Reseller, UP3D company in Brazil.

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Do you have a great 3D printing success story and think it would be cool to be featured on www.raise3d.com, we would love to learn more! Write to us at inquiry@raise3d.com

For more information about Raise3D printers and services, browse our website, or schedule a demo with one of our 3D printing experts.