

Boneplicator

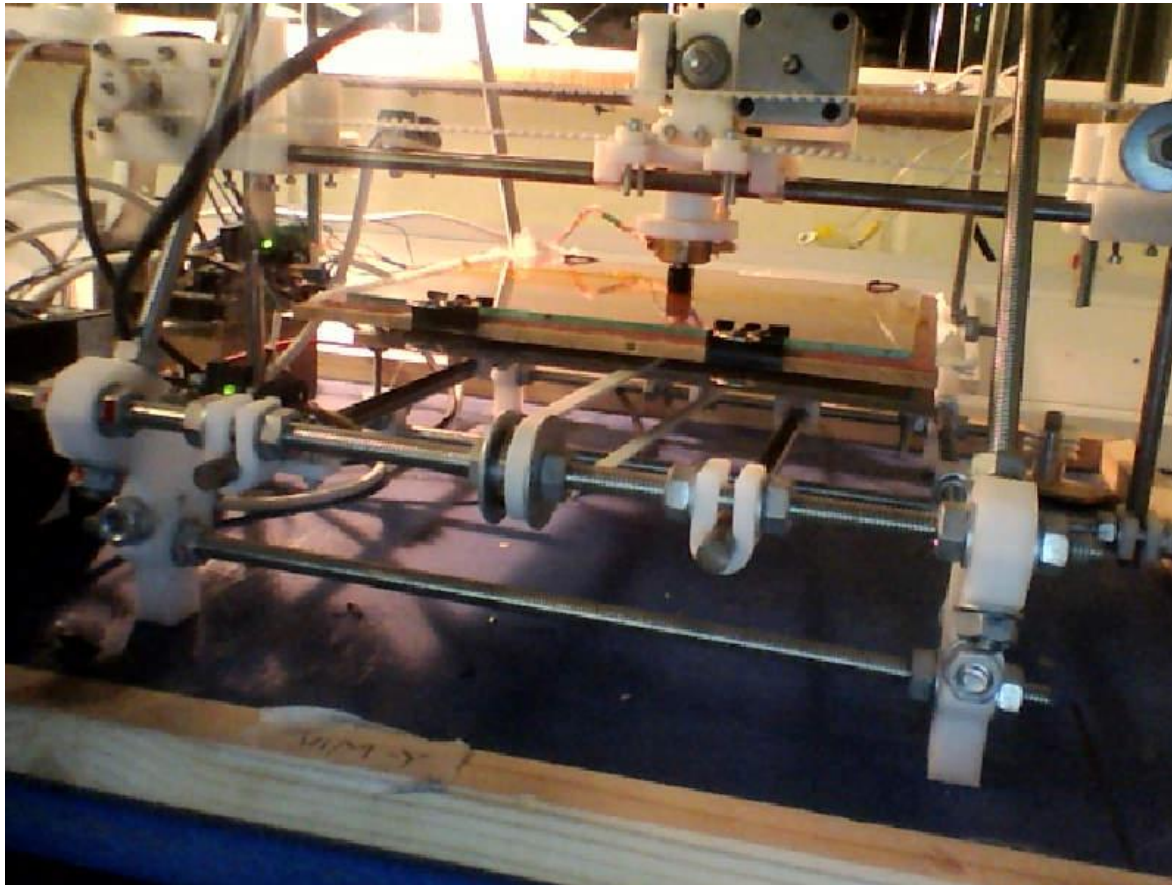
is.gd/boneplicator

About us

Veselin Vankov --- Front end

Harry Rickards --- Back end/Front end

Our RepRap



3D printed bone

<http://www.telegraph.co.uk/technology/news/9066721/3D-printer-builds-new-jaw-bone-for-transplant.html>



Only one problem



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How will our product help?

- Open source
- Uses Blender, Slic3r and 3D Slicer, which are also open source.
- Allows people to contribute more, as they don't have to purchase overly-expensive programs.



- Still at a very, very early stage...
- Although a titanium-printing RepRap is currently being worked on

Present

Can create a 3D model bone from any CT/MRI
Sophisticated enough so that you can print your own bones out of plastic for educational purposes (patient and doctor).

Large database that you can play with and practice your modeling skills.

http://www.ebay.co.uk/itm/Life-size-human-skeleton-anatomy-175-cm-movable-tripod-ideal-for-students-/221156552554?pt=UK_BOI_Medical_Lab_Equipment_Medical_Equipment_Instruments_ET&hash=item337df52f6a Cheapest for £100 pounds!

With a 3D printer: much cheaper.

Easy to use

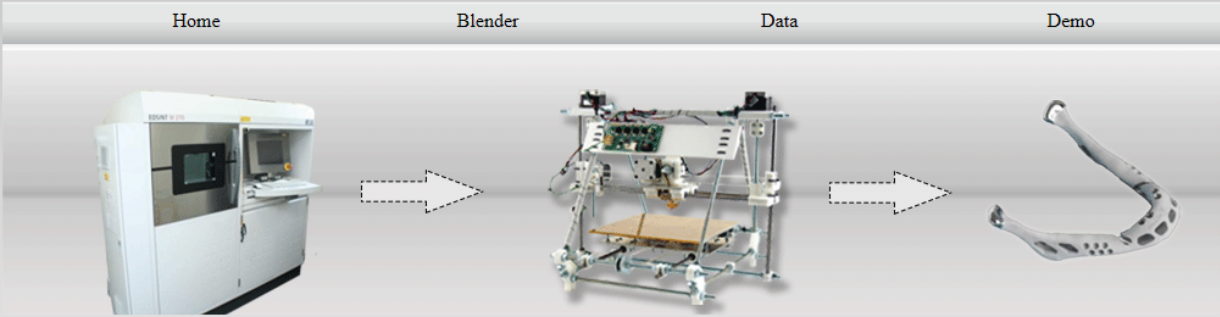
1. Browse data
2. Download file
3. Open Blender
4. Import==>
Wavefront(.obj)
5. Edit
6. Convert to g-code
7. Print!

1. Go to demo
2. Choose required
file
3. Export as g-code
4. Print!

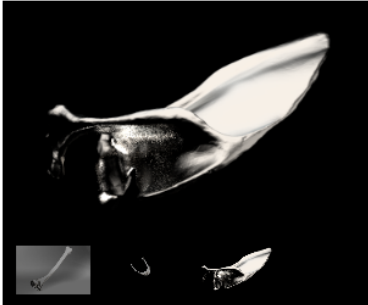
Demo

BONEPLICATOR

Home Blender Data Demo



The diagram illustrates the process of 3D printing a bone model. It starts with a 3D printer on the left, followed by a 3D printed part in the middle, and a 3D model of a bone on the right. Dashed arrows indicate the flow from the printer to the printed part, and from the printed part to the 3D model.



A 3D model of a bone, showing its complex structure and shape. The model is rendered in a dark, metallic-like finish.

3D Printing is expanding fast. **The models printed** are becoming more and more sophisticated as time go by. But although the majority of the models are open source, the hardware is still expensive. This means that not a lot of people can gain access to it. However, nothing is stopping us from "playing" with the available software.

We believe that 3D printing will play a vital part in the future of medicine and healthcare. However, we can't rely on a few developers writing the software. They need the community to engage and help, so we as a society can benefit as soon as possible from this amazing technology.

Boneplicator aims to get people from all over the world developing their ideas and expanding our database.

Made by Harry Rickard and Veselin Vankov for Wellcome Trust@Rewired State

The end

Any questions, please ask.

The image datasets used in this experiment were from the Laboratory of Human Anatomy and Embryology, University of Brussels (ULB), Belgium. BodyParts3D, Japan Alike 2.1 display database integration center licensed under CC © Life Science.

Made by Harry Rickards and Veselin Vankov