CAR-STYLING DESIGN

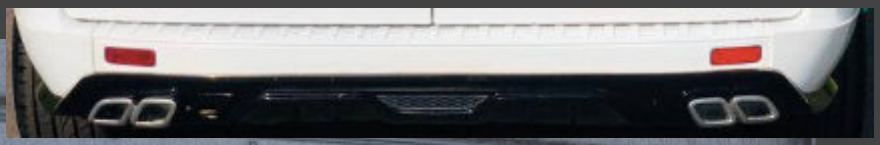
body kit creation (designing over 100 parts which are available on the market):

Designing new products, design sketches, 3d scanning, 3d modeling over 3d scans, preparing for 3d printing and CNC milling, rendering
Below you can see my designed 3d models, prepared 3d scans and a real final product photos on a real cars (made from my design files).

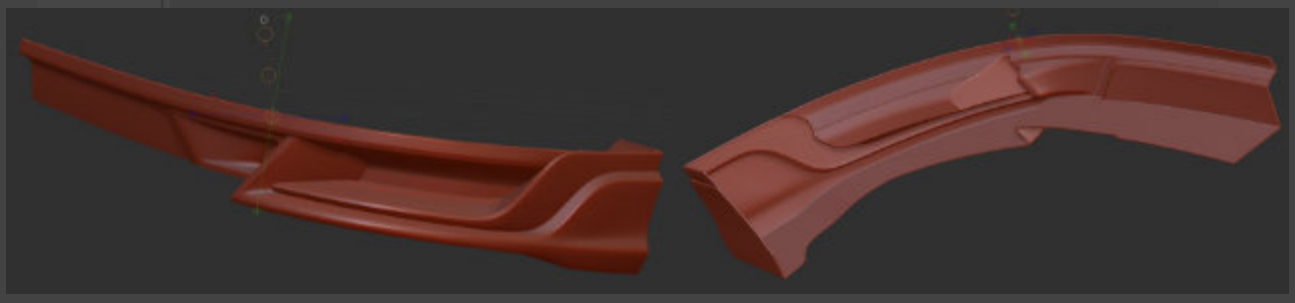
Final part after production.

Final part after production.

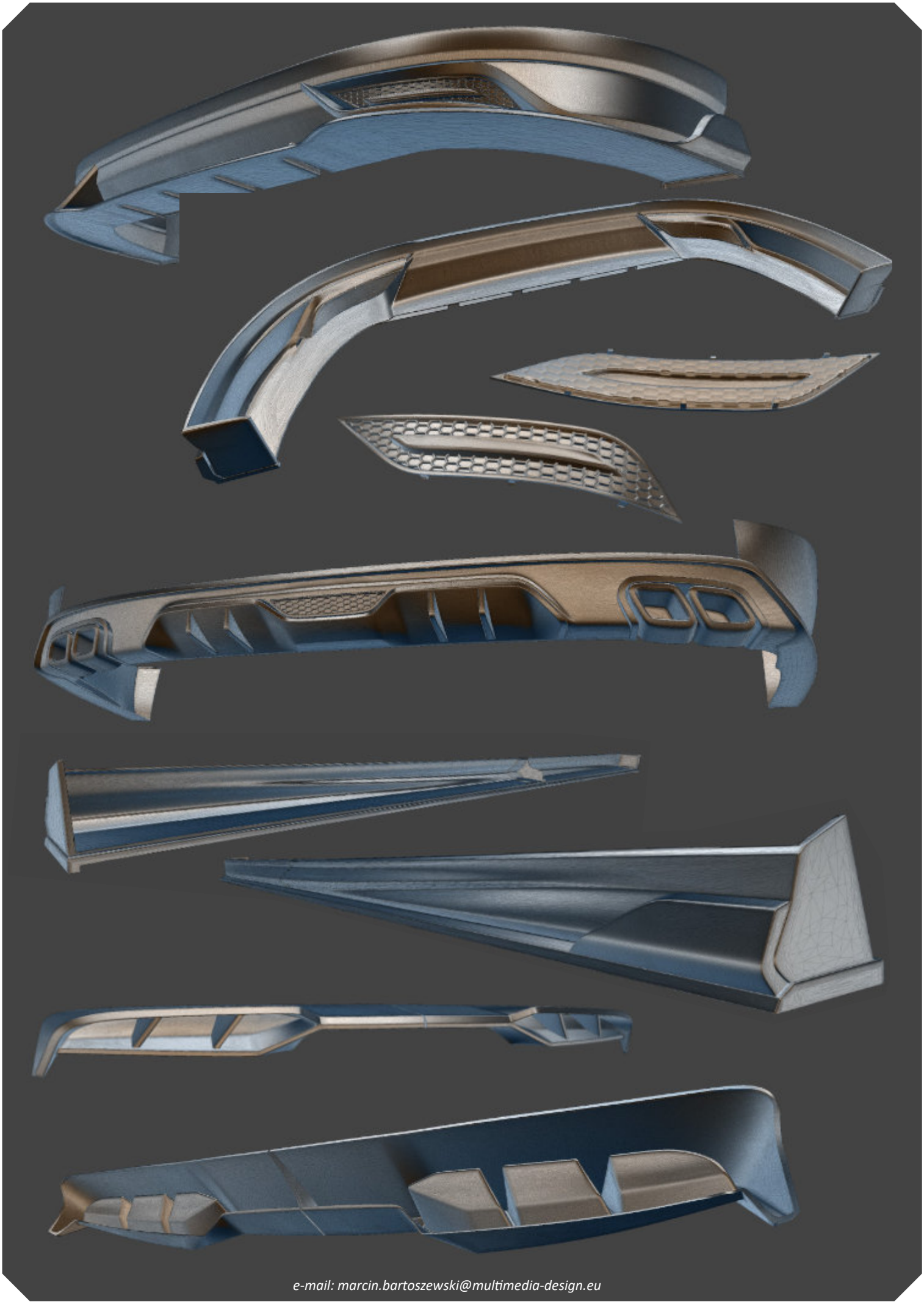
Final part after production.



e-mail: marcin.bartoszewski@multimedia-design.eu



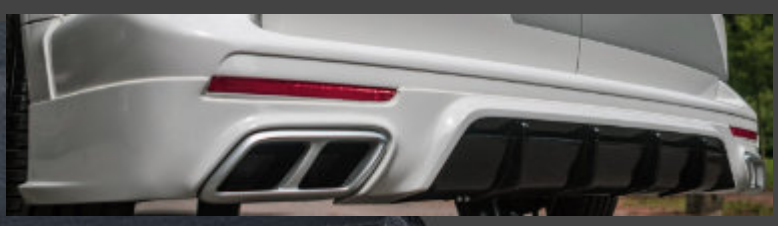
e-mail: marcin.bartoszewski@multimedia-design.eu



e-mail: marcin.bartoszewski@multimedia-design.eu

Final part after production.

Final part after production.



Final part after production.

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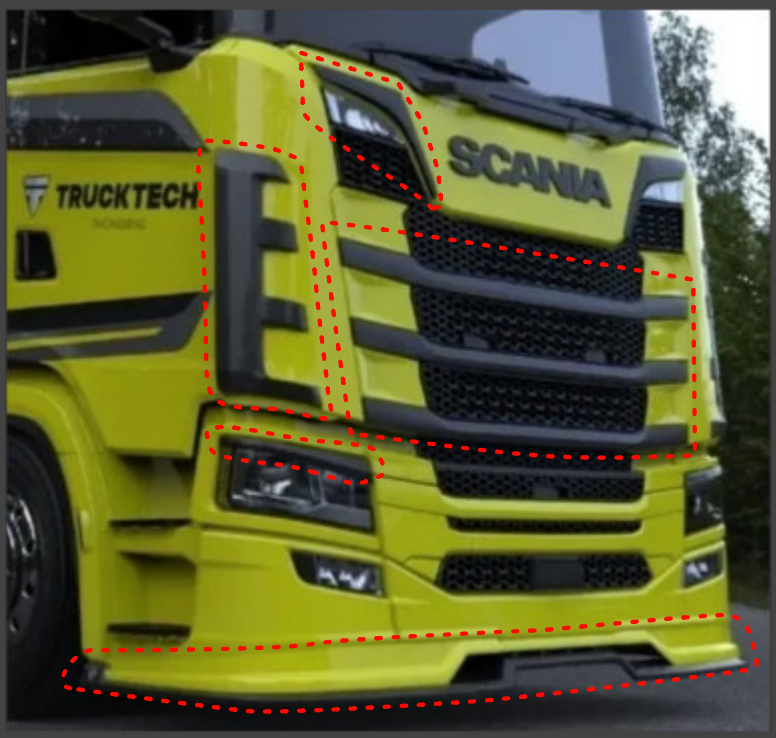
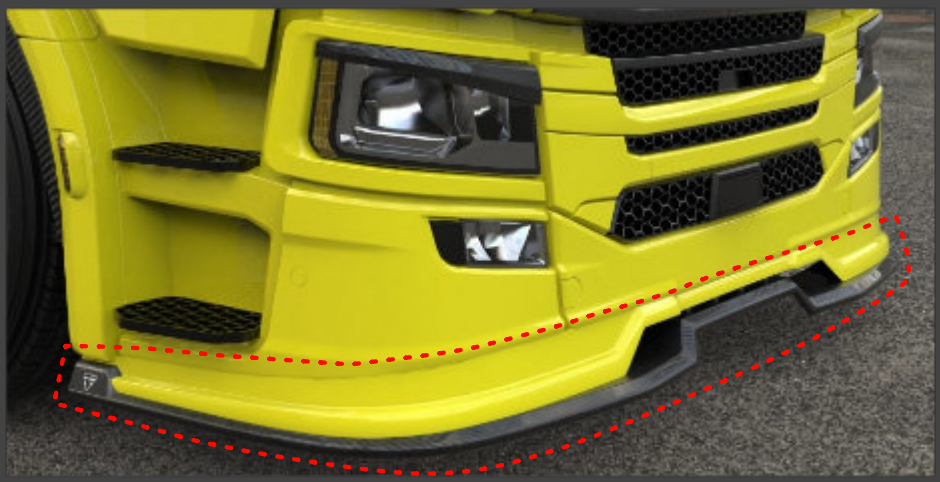
BODY KIT SET FOR SCANIA TRUCKS

Preparation of body kit set for Scania Truck

Preparing CAD files for 3d printing- carbon fibre mould preparation.



Test print made for fitment checking



Test print made for fitment checking

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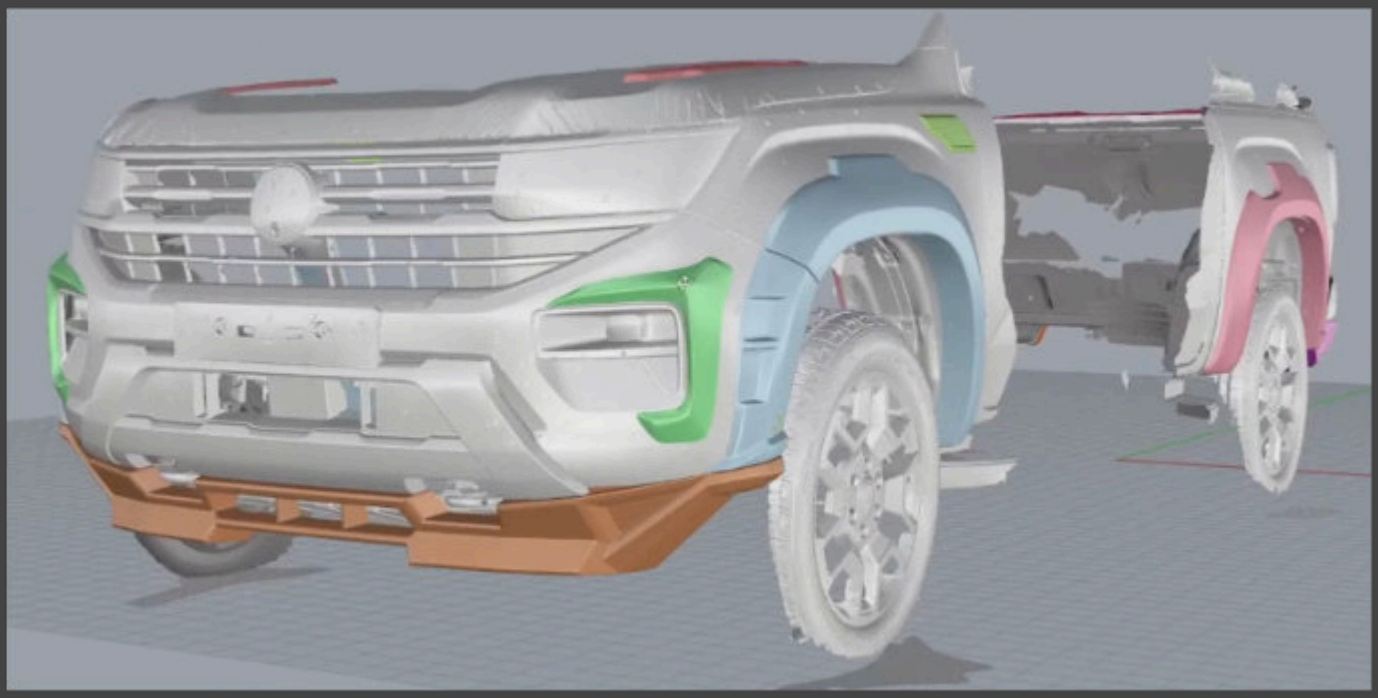
BODY KIT SET FOR VW AMAROK

Preparation of body kit set for VW Amarok

Preparing CAD files for 3d printing- carbon fibre mould preparation. Draft angles, correct thickness, B-side for glue tape, mounting holes, parking sensor brackets. I prepared also that 3d scan with using Einstar 3d scanner plus RaptorX (I own both).



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WINDOW CARBON LOUVRE DESIGN FOR PORSCHE 911 CARRERA

CAD modeling over 3d scanned area based on old Porsche 356SL shapes idea
as a tribute to legendary Le Mans race where that car won

Preparing CAD files for 3d printing of carbon fibre cloth mould. It was prepared for US collector who has both those car and present them side to side (to show past 356SL near new 911 Carrera Le Mans Edition.

You can watch my part on the car in that movie here: https://www.youtube.com/watch?v=UVStSZO2laQ&t=35s

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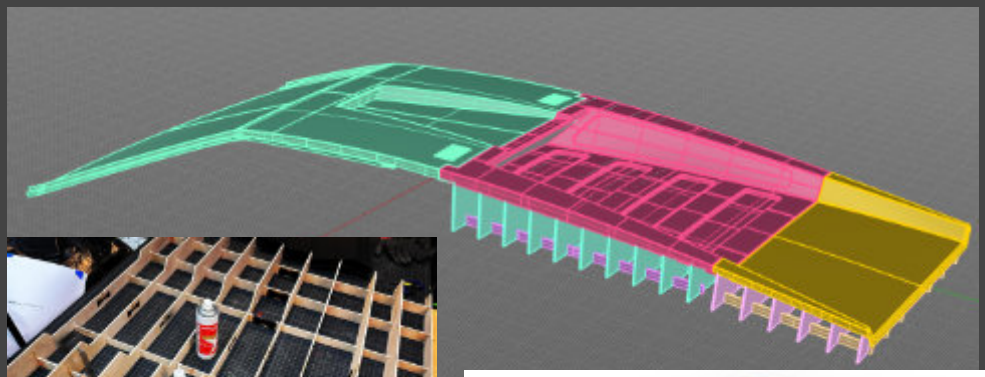
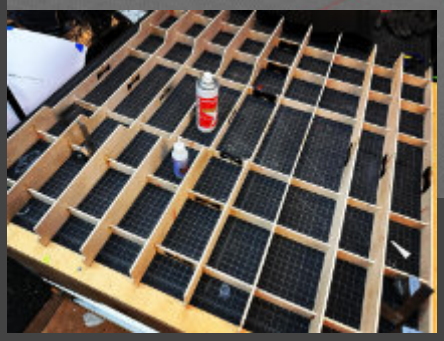
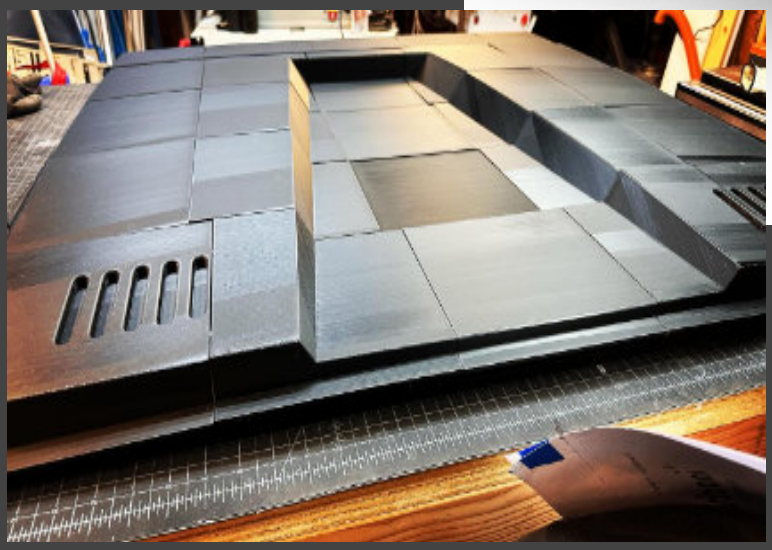
ROOF DESIGN FOR COUNTACH REPLICA ROOF SWAP

Modeling (Rhino CAD) the roof and engine cover for Lamborghini Countach Periscopio replica (roof swap):

Preparing CAD files over 3d scanned replica with making digital changes based on photos of unique Periscopio model (3d printing, moulding)







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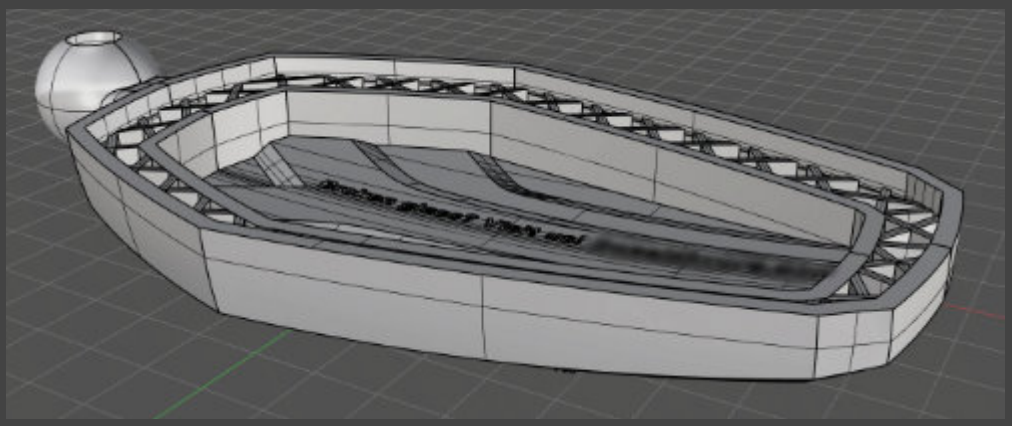
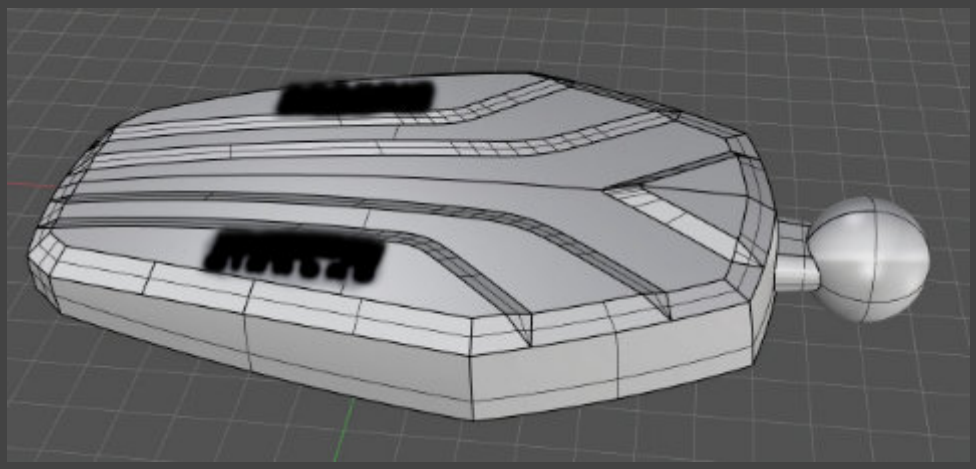
MOTORCYCLE MIRROR DESIGN

Modeling mirror prototype (Rhino CAD) for plastic injection:

preparing CAD files of product ready for moulding and mass production

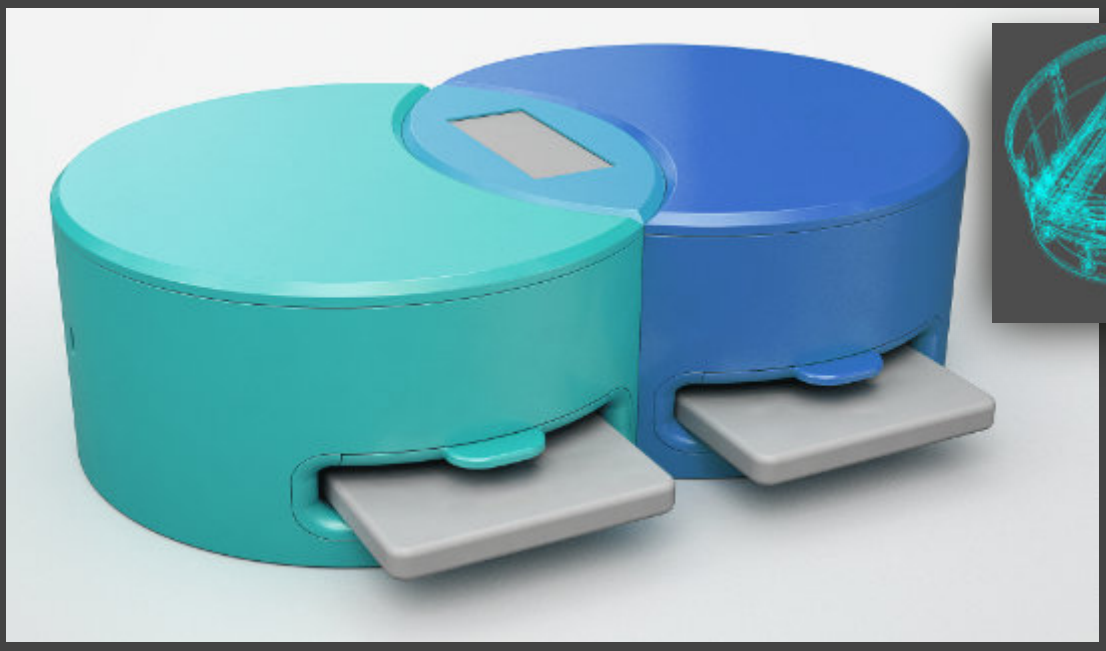


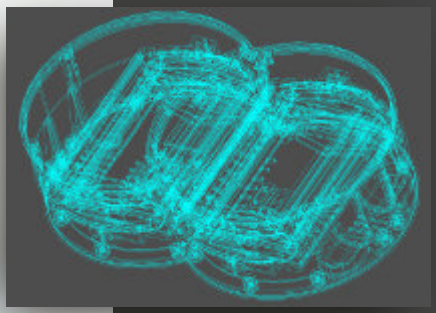


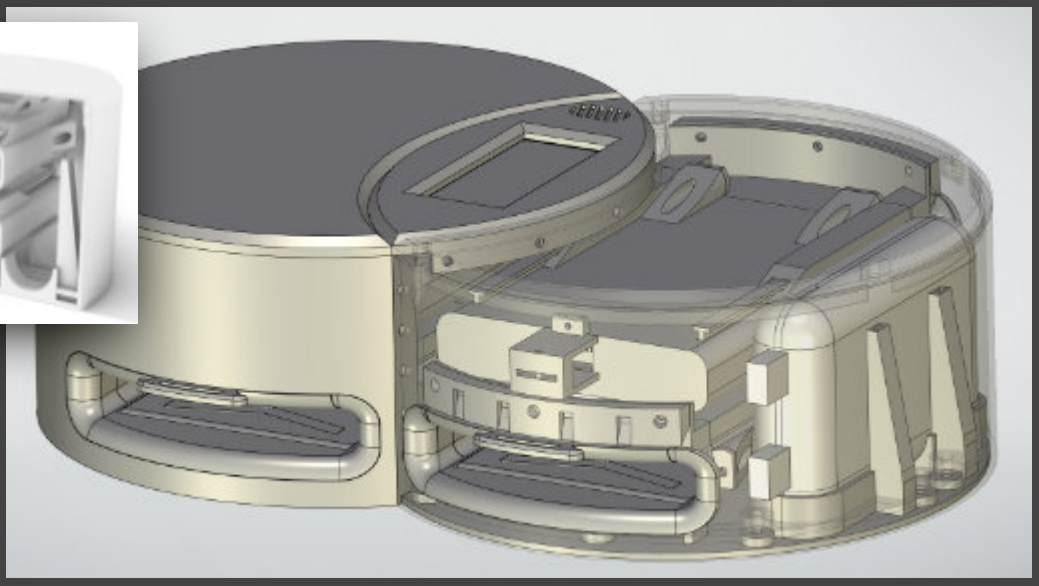
ELECTRONIC DEVICE - PROTOTYPE DESIGN

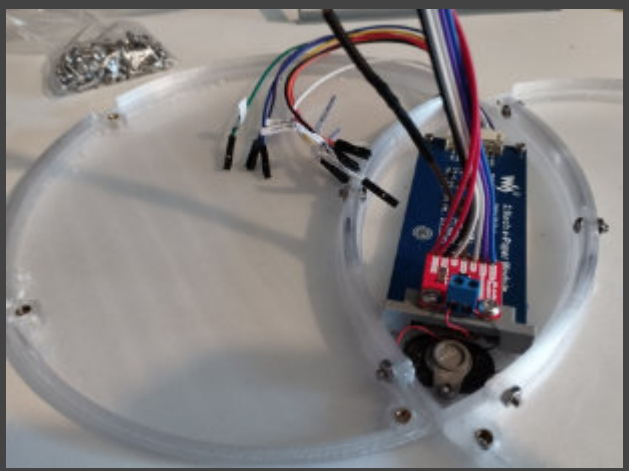
Parametric design of an electronic device for 3d printing purposes (Parasolid):

designing an outer shell of the device and plan of electronic modules placement inside the hull. Designing, 3D printing and rendering.









I printed prototype with my personal Prusa MK3S 3d printer machine. All was matched with prepared electronic parts.

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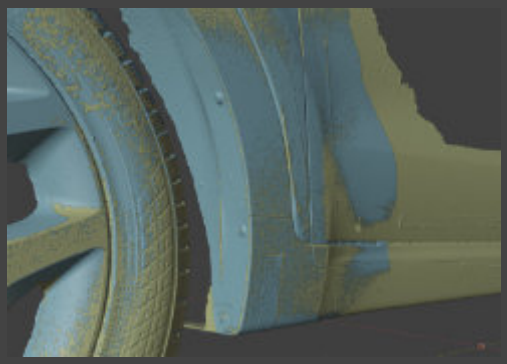
3D SCANNING

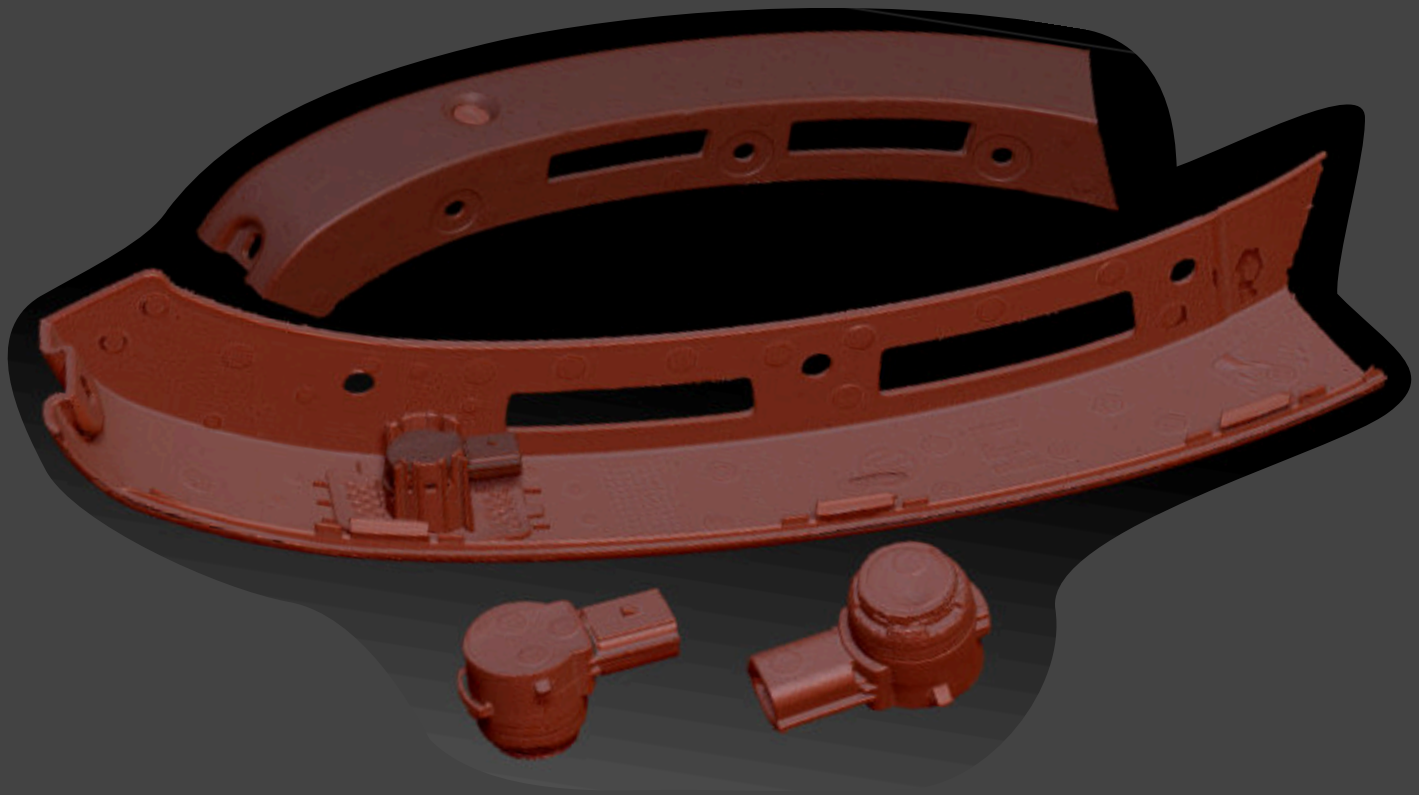
making photogrametry scans, structured light scans and laser scans:

The shapes I scan are often areas where the final product designed by me should fit.

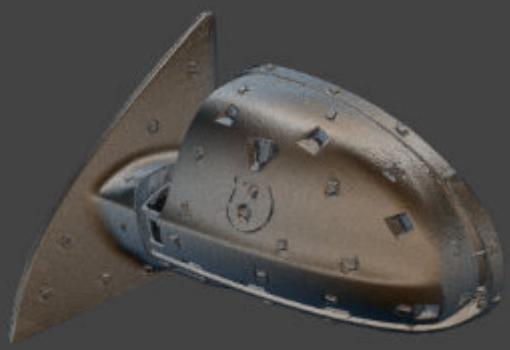
I own/use 3d scanners like: David SLS-2, Range Vision SLS (self-built), Shining Einstar, Creality RaptorX, DSLR for photogrammetry



KIA Sportage Einstar scan. You can see that scan in web browser here (WebGL): https://skfb.ly/o5HGr
You can watch me during scanning with using EINSTAR scanner here: https://youtu.be/watch?v=3v48SyyfKv4



VW RaptorX laser scan. I did a few separate scans which helped me align the parking sensor into housing for the design of my custom wheel arch extension with the parking sensor angled in the same way as in the original wheel arch. RaptorX allows you to scan a whole car with lower quality and small parts with superior quality. Both scan qualities can be easily matched into one complete scan as shown above.



SLS 3D scan of the car mirror prepared for cap design work

You may see that SLS 3d scan inside your web browser here (WebGL): https://skfb.ly/6R88z

Making polygonal retopo over SLS scan of shoe (hobby project)

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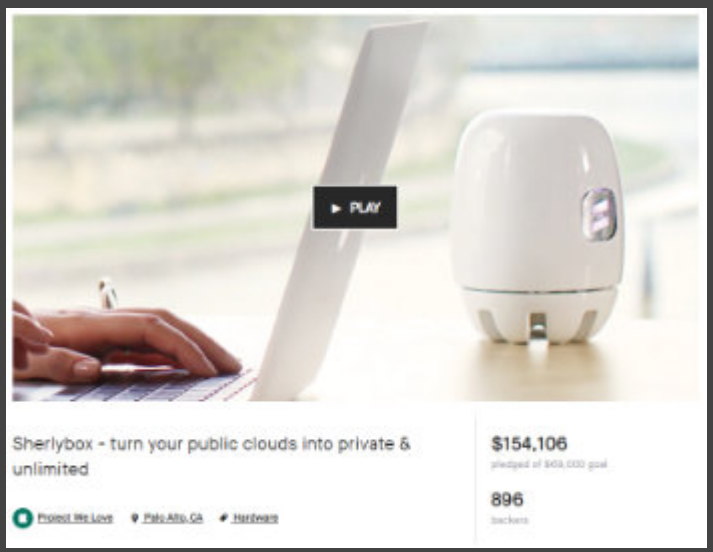
ELECTRONIC DEVICE - PROTOTYPE DESIGN

design of an electronic device for KICKSTARTER campaign:

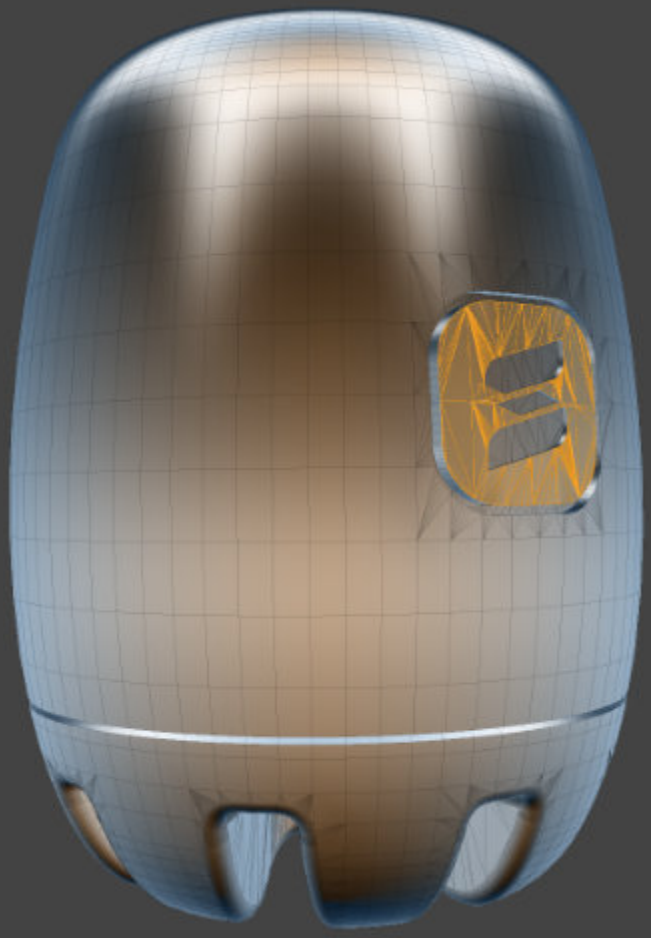
designing an outer shell of the device which had to cover the PCB board, memory and LED switch,
rendering illustration of the product (pre-production shots). The product changed a bit after the campaign but the early-stage prototype has been based on my design.

rendered illustration

my rendered illustration as the landing page



real prototype built for Kickstarter campaign based on my design



You may see that 3d model inside your web browser here (WebGL): https://skfb.ly/6QyxW

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JEWELRY PRODUCT DESIGN

Design golden pendant product and first item test production:

3d sculpting of lion`s head based on reference photos, preparing STL mesh for 3d printing (lost wax moulding), hollowing for cutting costs

3d sculpted prototype of golden pendant

You may see that 3d model inside your web browser here (WebGL): https://skfb.ly/6QKIB

This is how my project of a prototype sculpture of a jewelery product presented itself after casting in bronze covered with a thin layer of gold (i.materialise.com).

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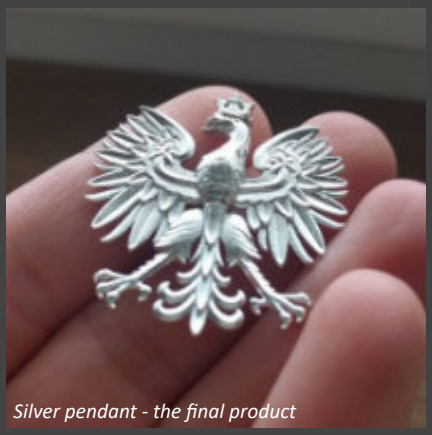
JEWELRY PRODUCT DESIGN

making silver pendant product and selling single use license for the multimedia show:

3d modeling of Coat of Arms of Poland based on gov sketches (commercial reproduction), 3d printing (silver casting - lost wax), 3d rendering

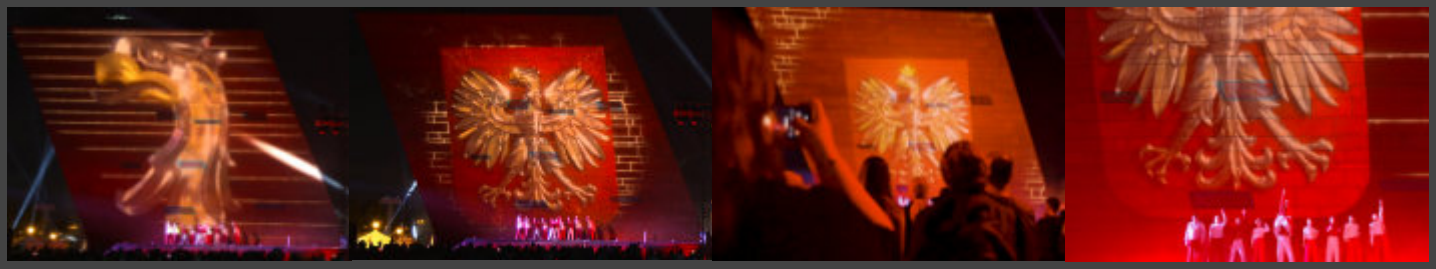
WebGL render

Silver pendant



Silver pendant - the final product

You may see that 3d model inside your web browser here (WebGL): https://skfb.ly/6KoPo



My 3d model (Coat of Arms of Poland) has been used in the multimedia presentation on the walls of the Museum of the Second World War in Gdansk ("Poland: First to Fight" show - 80th Anniversary of World War II).

You can watch that movie here: https://vimeo.com/390945811/#t=22m36s

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HERALDIC PRODUCT DESIGN

making 3d printed template for bronze casting - relief creation:

3d modeling based on sketches. 3d modeling, 3d printing (bronze casting - template pressed in foundry sand), WebGL preview

3d printed and CNC milled foundry template

you may see that 3d model inside your web browser here (WebGL): https://skfb.ly/6Qyvn

HP Multi Jet Fusion 3d print - part of the foundry template

Bronze relief made from 3d printed template - the final product

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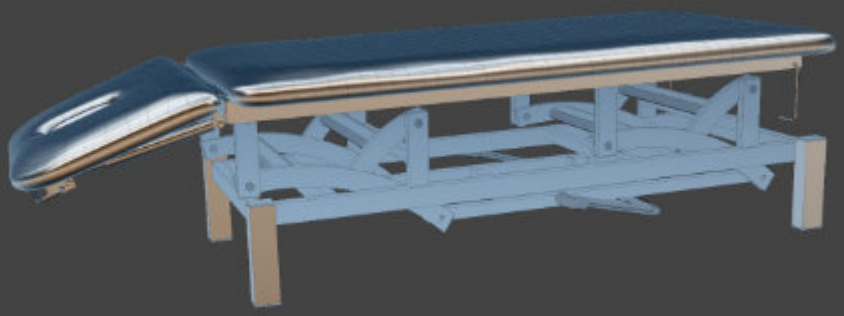
MEDICAL EQUIPMENT ILLUSTRATIONS

rendering several dozen of product shots based on production CAD files:

converting CAD geometry into polygonal geometry, creating 3d scene and lighting, making UVs and materials, rendering illustrations with passes



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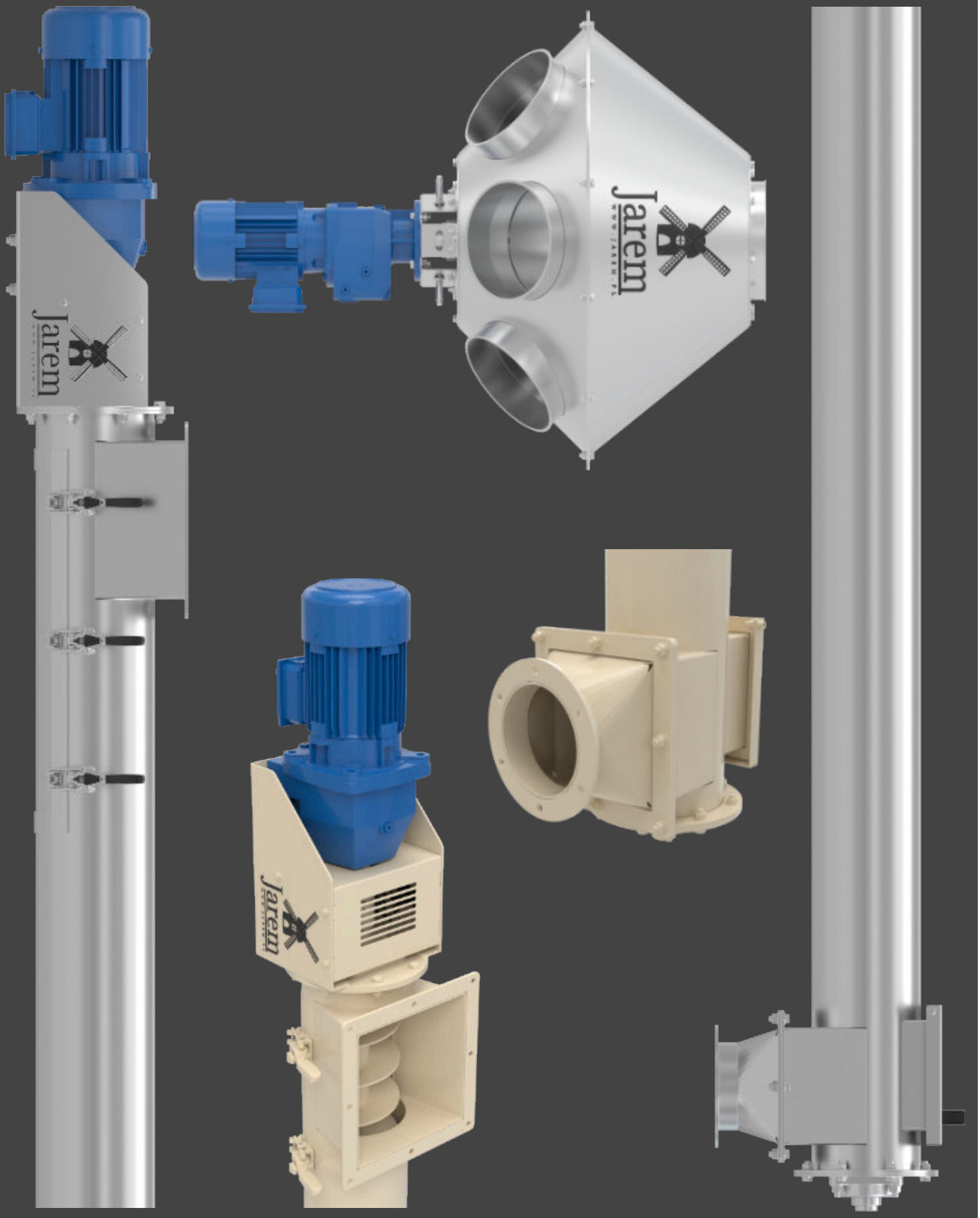
ILLUSTRATIONS OF EQUIPMENT FOR THE MILL

rendering product illustrations from production CAD files:

converting CAD files into polygonal meshes, creating a scene and lighting, creating materials, rendering illustrations.



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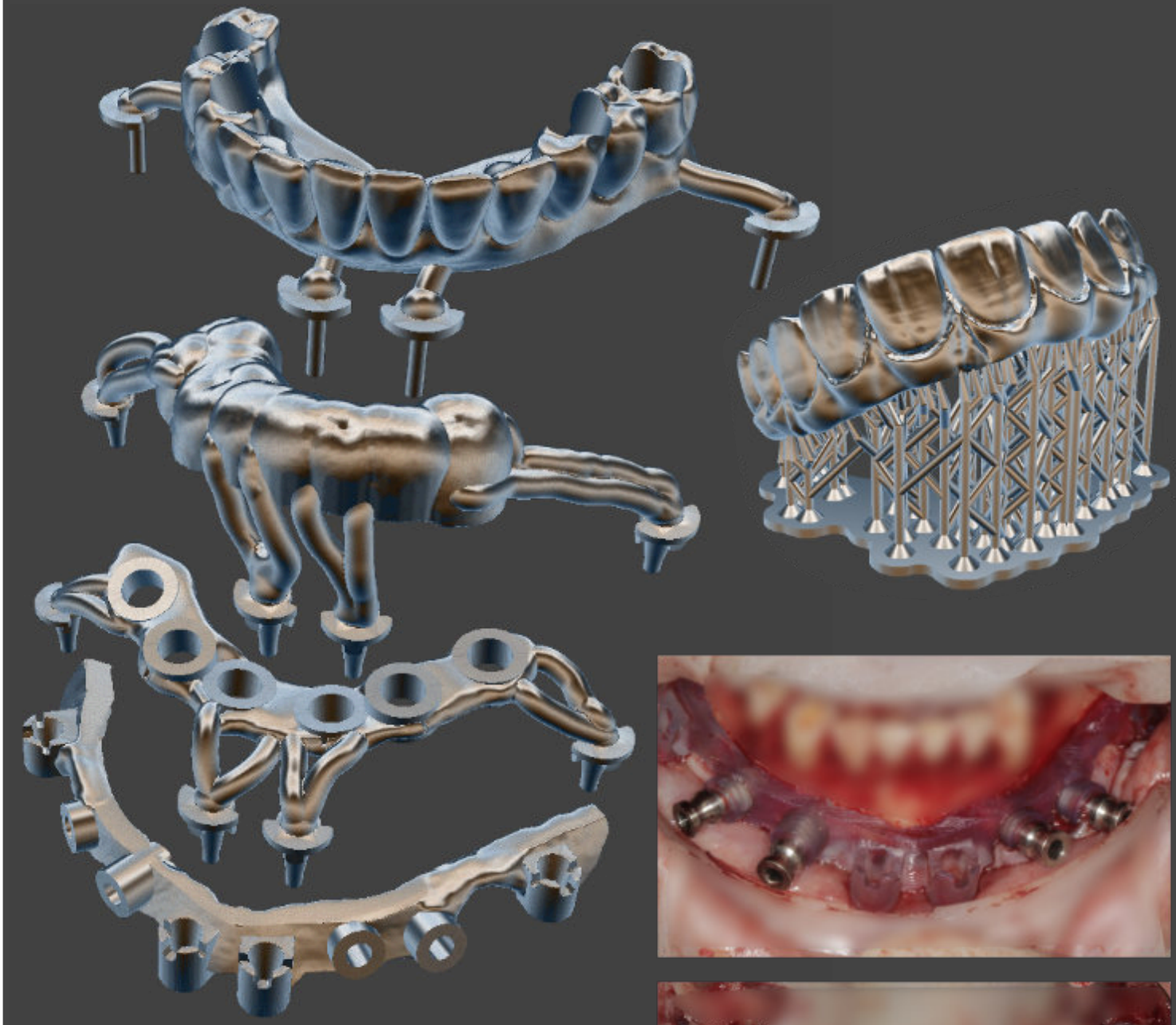
DESIGN 3D PRINTED ALIGNERS FOR DENTAL SURGERIES

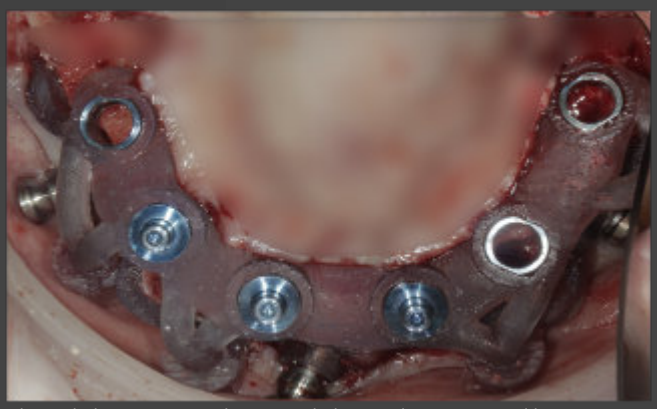
Design 8 sets of 3d printed helping tools for dental surgery purposes (dental implants).
My 3d printed tools helped during 8 surgeries (3d printed in medical resin):

bone mesh extracted from CT medical scan by Doctor. I`ve sculpted it in Zbrush as preparation for building aligners.
After that, I designed some aligners which were connected to each other after resin printing (two different resins materials - shrinkage problem and rescale for the perfect fit).



Above you can see aligners which I designed using Modo, Zbrush and Rhino. This was a remote job. I was in Poland (my current location). Surgery and the printer were in Australia (it was surgery place).

On the right side, you can see my models used during real dental surgery. All fitted perfectly and patients are fine.



Photos belongs to Australian Dental Clinic and was prepared by Doctor during dental surgery.

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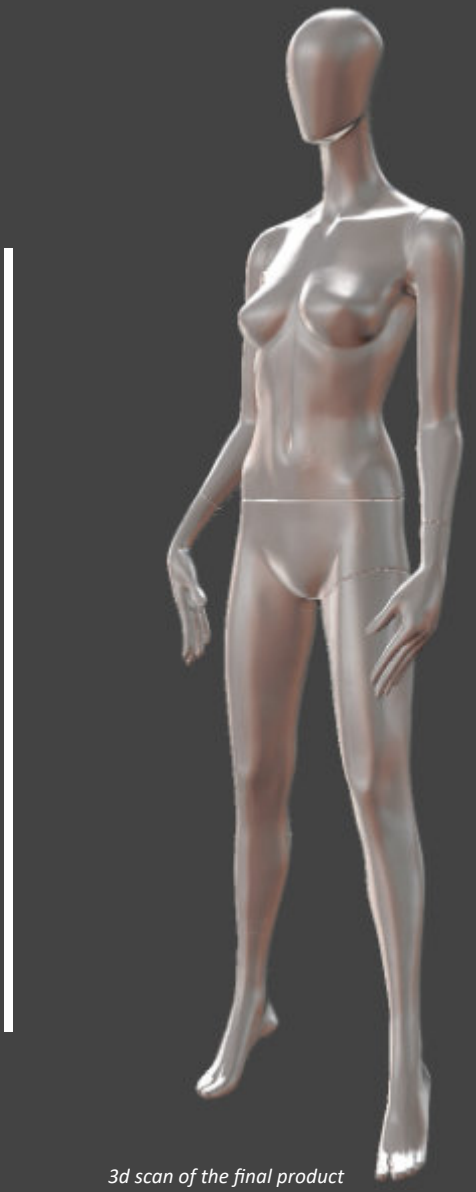
WINDOW MANNEQUIN DESIGN

designing over 40 mannequins for well-known brand stores:

3d scanning, posing into desired poses, 3d sculpting of anatomy details, prepare prototypes for 3d printing

pre-production models sculpted in Zbrush



3d scan of the final product after mass production

3d printed prototypes (I prepared my meshes for 3d printing as multiple parts - slicing, hollowing and making joints)

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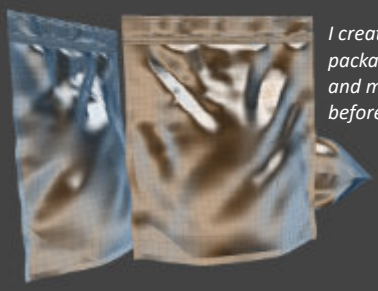
DOYPACK PACKAGE DESIGN

design package layout for whole product series - new brand creation:

logotype design, package layout design, 3d modeling of doypack package (interactive proof of concept for making creative decisions), converting the layout to flexographic matrices separation (white color coating on metalized film, color layer, matt lacquers coating).

logotype designed in Adobe Illustrator

my package layout design after conversion to flexographic matrices separation (I have also DTP knowledge)



I created a 3d model of doypack package to feel layout better and make better creative decisions before we started printing packages

I designed plastic jar package layout also with keeping brand consistency

you can buy it in local stores all over the world

You may see that 3d model inside your web browser here (WebGL): https://skfb.ly/6QwES

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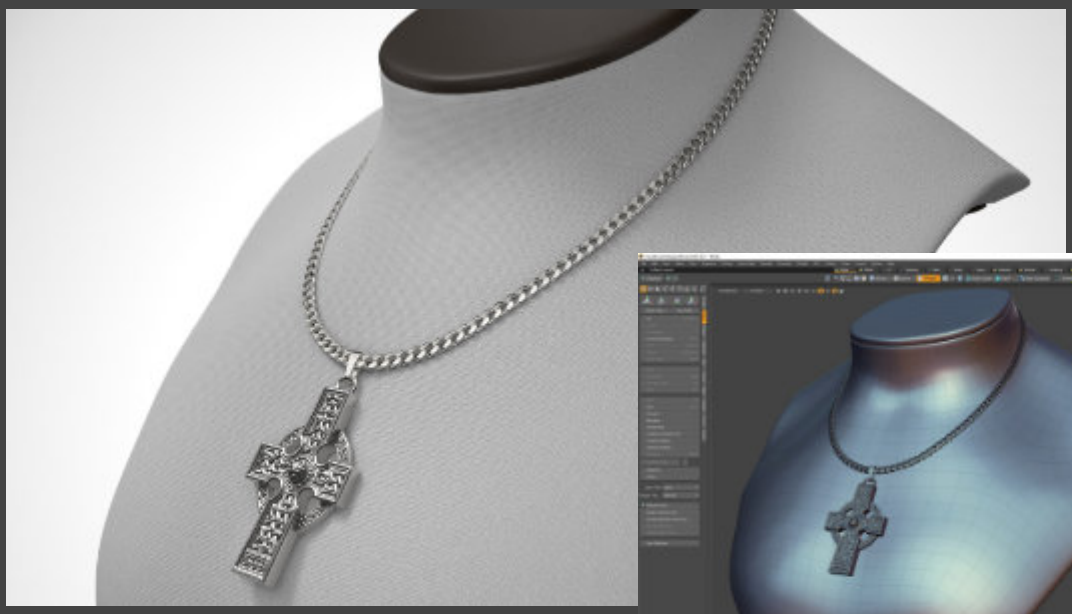
DIGITAL RENOVATION OF A DESTROYED MONUMENT

An attempt to preserve historic shapes from oblivion:

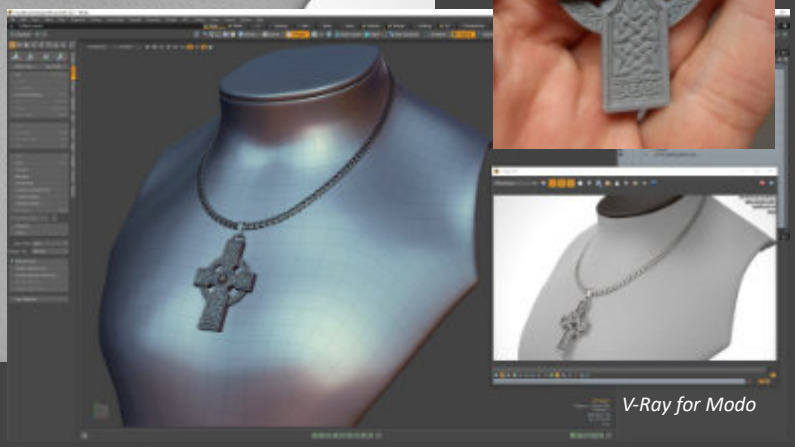
Performing a photogrammetric scan based on photos obtained from England, renovation of 3d model in Zbrush, Illustration rendered in V-Ray for Modo renderer.

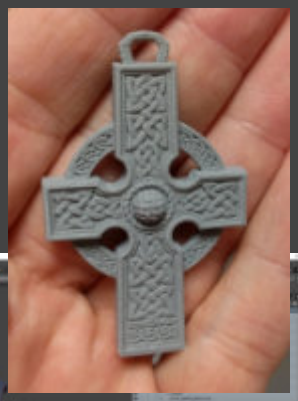
The monument has been destroyed by vandals, was photographed in England and sent to me to Poland as digital data set. I`ve made photogrammetry scan from photo data set. I`ve repaired cracks and filled breaking area to recover previous shape. Model was hollowed and changed into pendant (3d printing and silver metal casting).

I've added also an ear and hollowed it out to have lower weight (cheaper production).



In the Modo (V-Ray) program, I made a product visualization, and on my Prusa 3d printer I printed a prototype in 1: 1 scale, to check how the product will look after casting.





V-Ray for Modo

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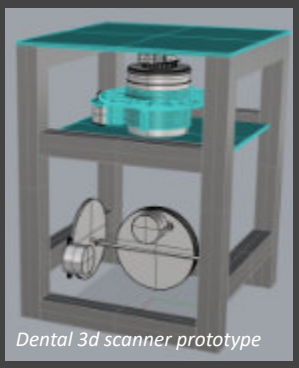
OWN DENTAL 3D SCANNER INVENTION (PERSONAL R&D)

In spare time I design, build and test my own affordable 3d scanner product for dental purposes:

My wife is dental prosthetic and because of that from a long time I watch that industry carefully trying to find solution for affordable dental scanner product. I try to build it in on open source hardware and software with using PRO industrial optics.

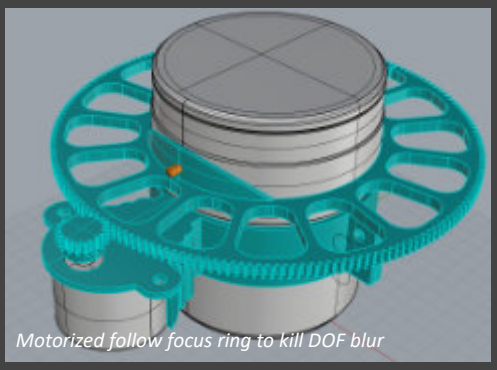
I have plans also include cross polarization to decrease some highlights and improve quality of scan.



Dental 3d scanner prototype

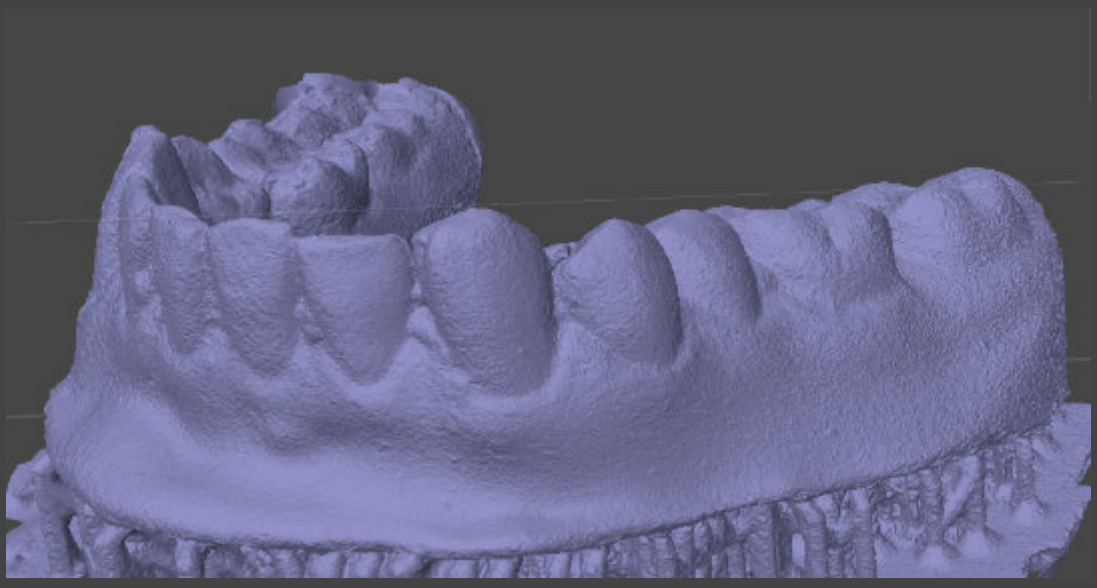
Prototype for testing image quality and software settings.

Main frame of dental scanner

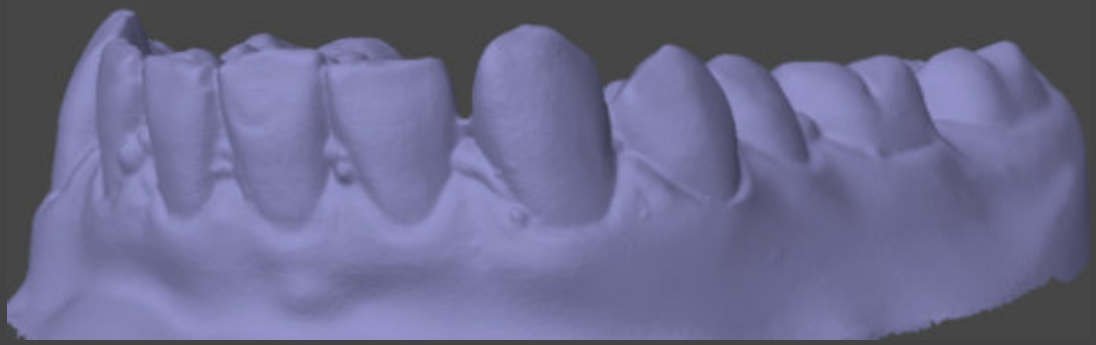


Motorized follow focus ring to kill DOF blur

Motorized follow focus (3d printed)



3d scan of dental model made on my designed scanner (this was R&D test only on prototype I still have space for improve)

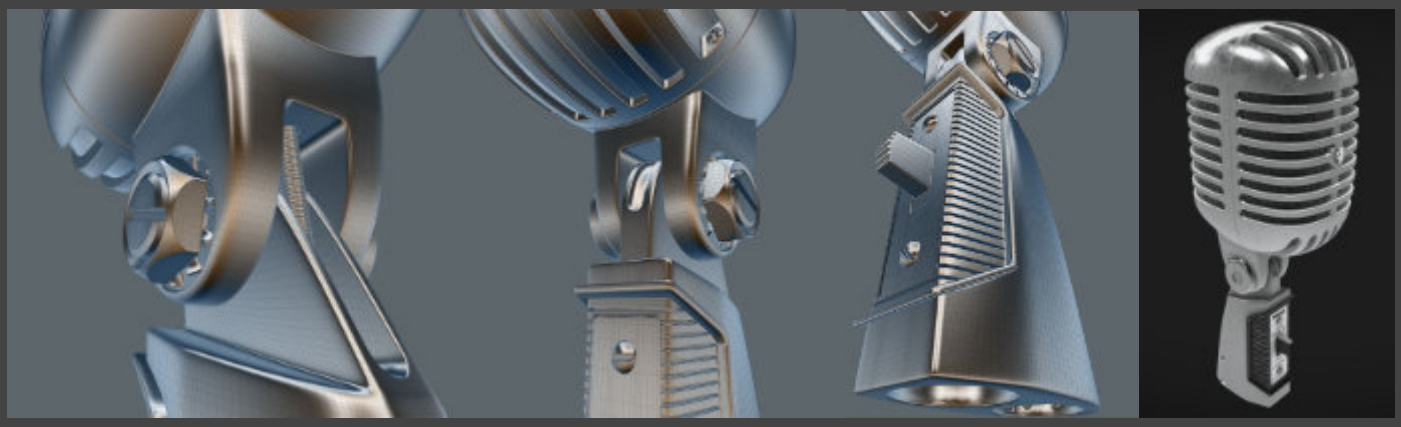


This is same model scanned on very expensive Zirkon-Zahn dental scanner to compare quality (this is my target).

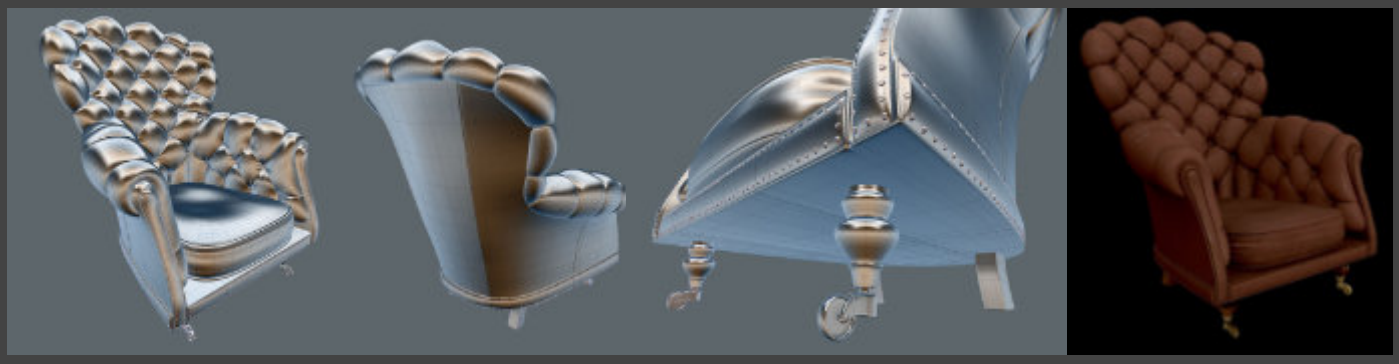
MANY OTHER 3D PROJECTS

Which I make on my spare time to develop myself further:

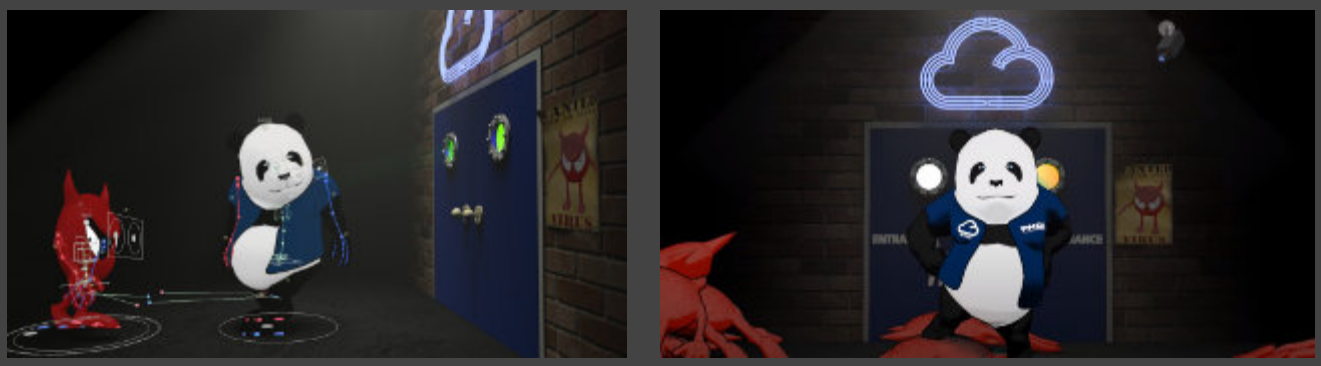
with using Modo, Zbrush, MoI3d, Rhino, Octane Render, V-Ray, Houdini, Blender, Marmoset Toolbag, Substance Painter, Substance Designer, Affinity Photo/Designer/Publisher, Photoshop/Illustrator/After Effects (I own/rent all needed commercial licenses).



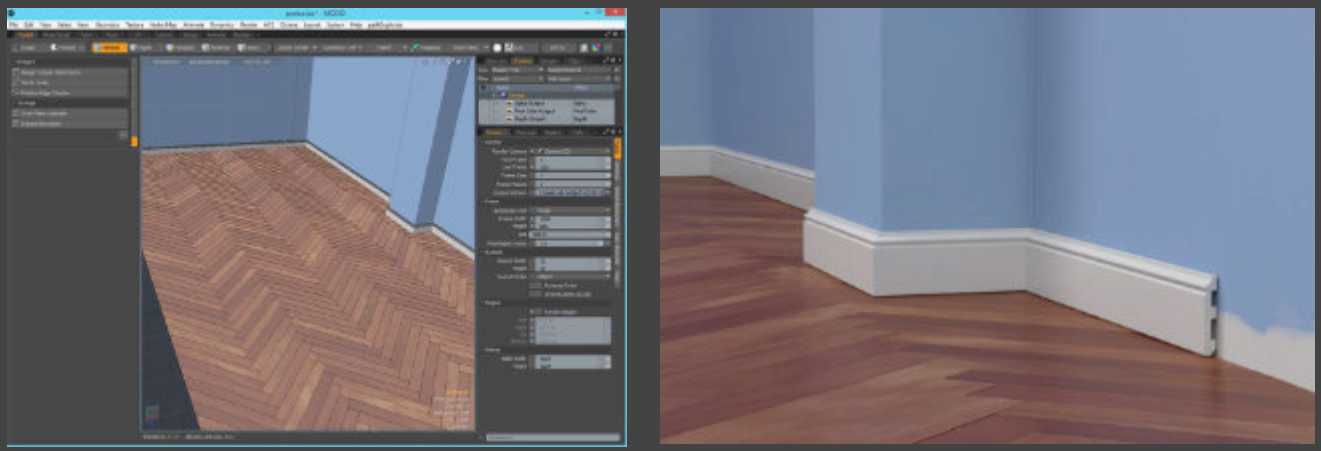
You may see that 3d scan inside your web browser here (WebGL): https://skfb.ly/67tAS



You may see that 3d scan inside your web browser here (WebGL): https://skfb.ly/67woH



You may see that 3d animation inside your web browser here: https://youtu.be/Cnlv-JrcQIs



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