



Pixelated Realities is a public non-profit organization founded in February 2016. Our main goal is to promote digital methods for cultural heritage restoration and reconstruction as well as for urban planning and revitalization.

We share our expertise in

3D SCANING

Using digital photogrammetry, laser scanning and supercomputing technologies we are able to obtain high quality 3D models of the real world object.

RESTORATION & RECONSTRUCTION

We develop cloud storage of 3D scans and models ready for modern digital production of damaged objects.

REVITALIZATION

With 3D models of abandoned urban areas we help architects and urbanists develop their projects of revitalization, municipalities and investors via public presentation in VR.

VIRTUAL REALITY

Virtual reality erases the boundaries, creating the right conditions for immersion in virtual worlds.
We are trying to achieve that the transmitted information is perceived by the user as their own organic experience.

GAME DEVELOPMENT

The development of modern games requires a wide range of skills, combining our many years of experience and fresh ideas, we carry out a full cycle of video game development.

AUGMENTED REALITY

Using the AR technologies and 3D scanning, we can implement a real world 3D object to a digital world or vice versa.

3D SCANNING

PHOTOGRAMMETRY

With a series of photographs we compute a 3d model of a target object.

To reconstruct huge locations or building roof tops we use drone to get aerial data.

LASER LIDAR 3D SCANNING

Laser is used for “under mm precision” of point cloud is crucial for a project.

Our service is powered by Leica Geosystems technology.

DEPTH SENSORS

It's the most straightforward method to reconstruct objects, but has limitations in environment and precision.

We use intel realsense and structure sensor for iPad.



Small Scale Assets Production

100 up to 500 photos per project

Photo material processing/High Poly mesh generation 1 day (overnight)

Shrub has 8k polygon LOD0 mesh.
It can be optimized to fit
your needs or poly budgets.

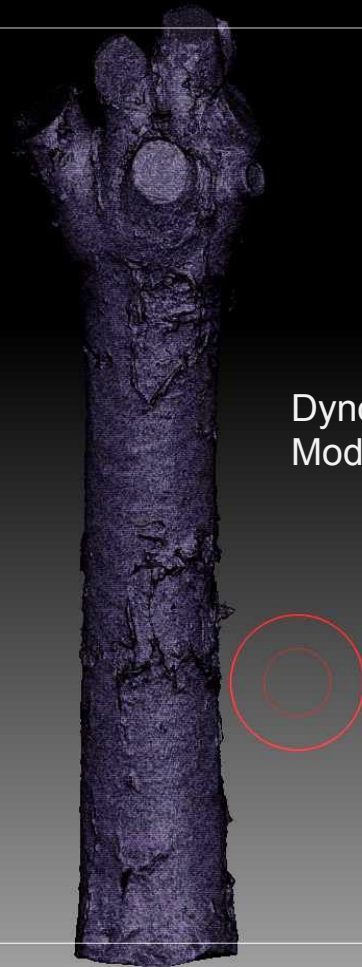


Scan cleaning/Semi auto retop

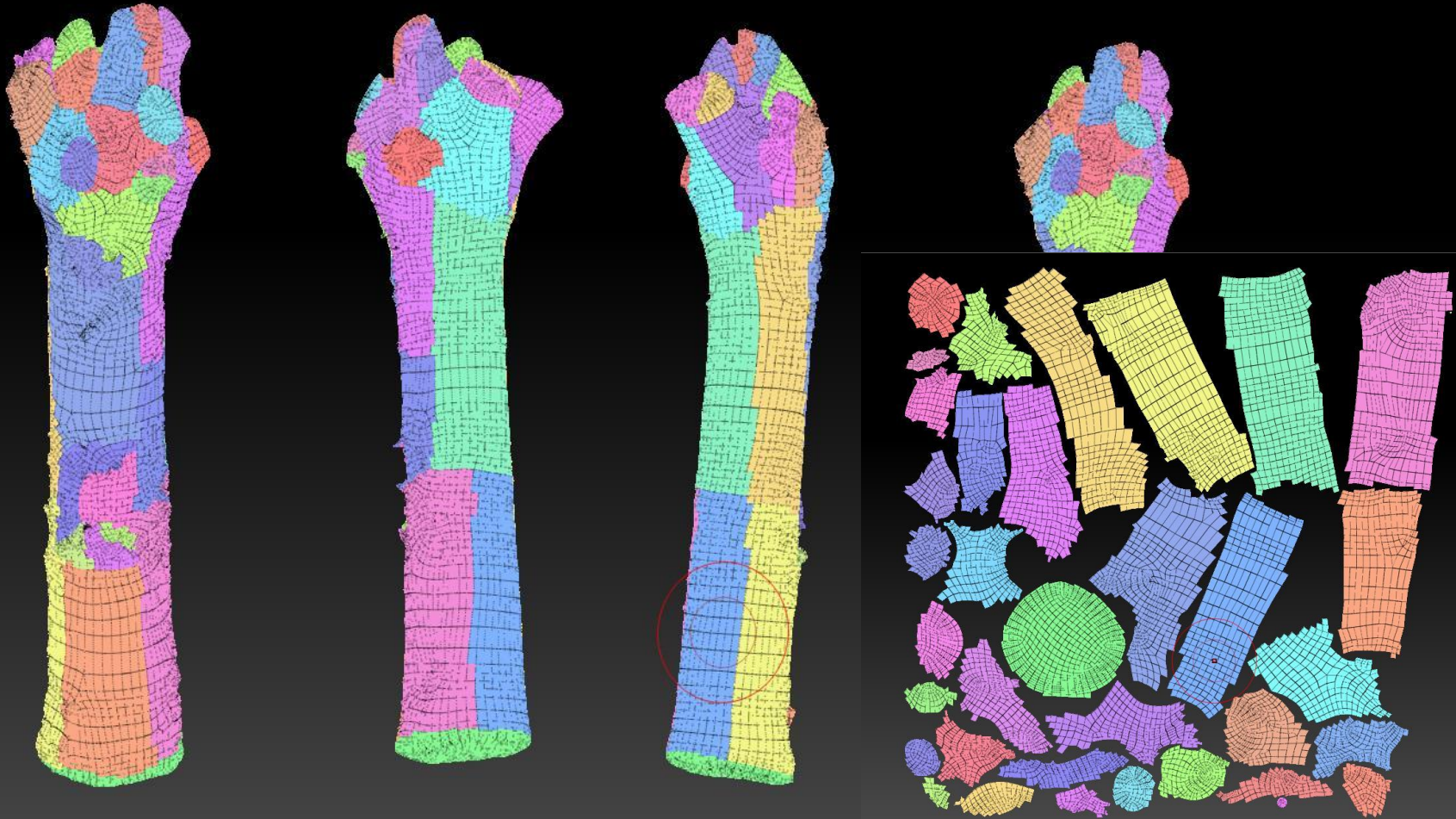
Raw 3d scan



Dynomeshed
Model 5mil tris



Remeshed unwrapped model with semiautomatic Polygroups approach



Sketchfab screenshot

Textured (diffuse only)

It takes up to four days total to create a game ready asset.

Photo material processing/High Poly mesh generation
1 day (overnight)

Semi auto retop/UVW mapping 1day

Texturing albedo (normal, spec, height if needed) 1day

Setup/Fixing issues 1day

The price can vary from project to project, depending on the complexity of the object and the amount of additional manual work.



Average Scale Assets Production

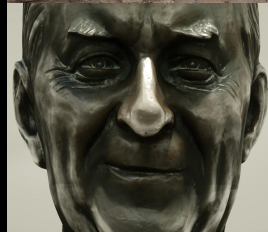
500 up to 1000 photos

Interiors/Exteriors

Sculptures/Monuments

Vehicles

... what ever.





A close-up photograph of the bronze statue of Duke de Richelieu. The statue's face is the central focus, showing detailed features like the eyes, nose, and lips. The bronze has a greenish patina. The background is blurred, showing a city street with buildings and a cloudy sky. A semi-transparent grey box with white text is overlaid on the left side of the image.

Photo of Duke de
Richelieu monument in
Odessa.



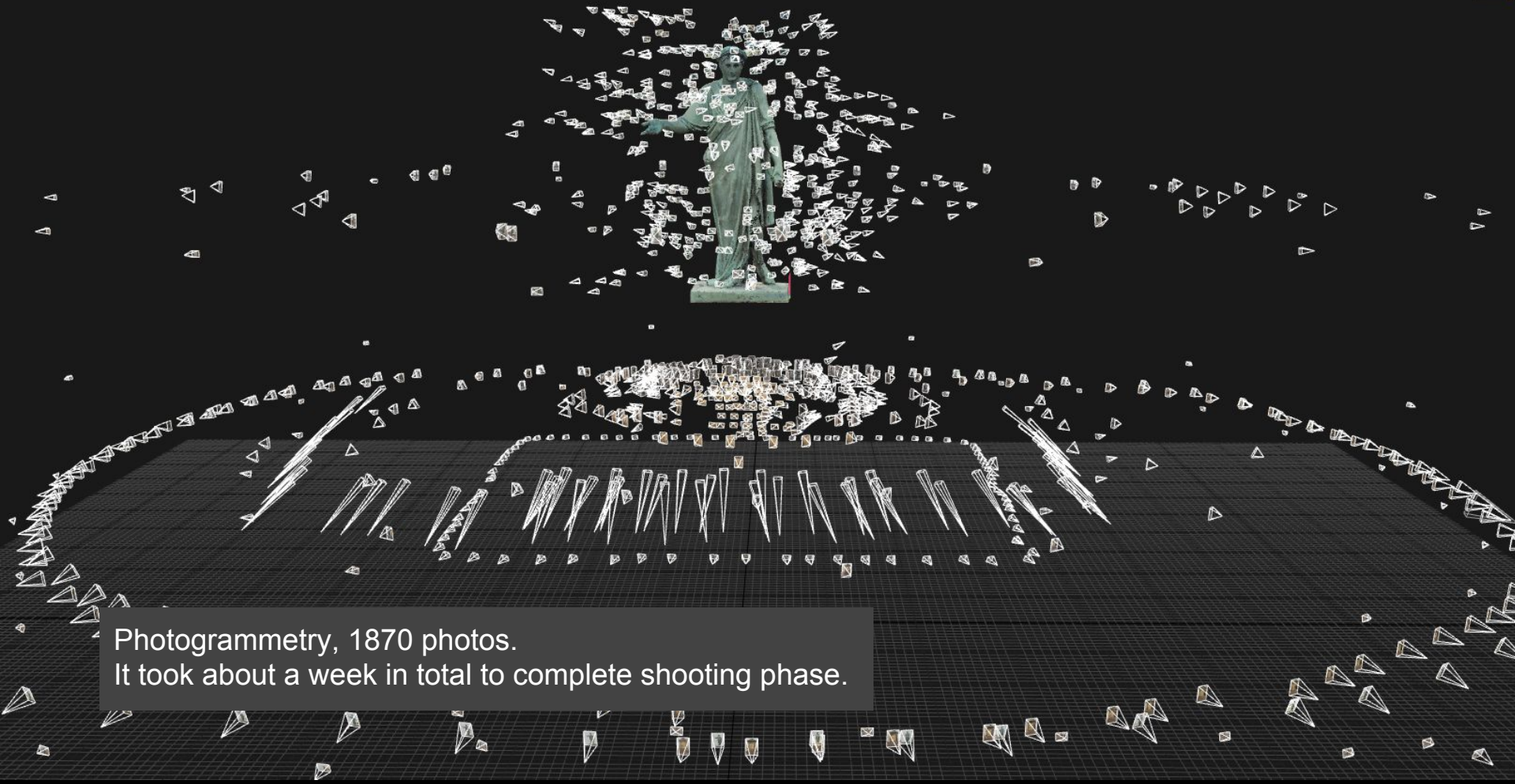
Photogrammetry,
880 Millions polygons mesh.

It took about five days in total
to complete reconstruction of
monument itself.

Photogrammetry, textured mesh.

It's a 8k diffuse texture for
production purposes.

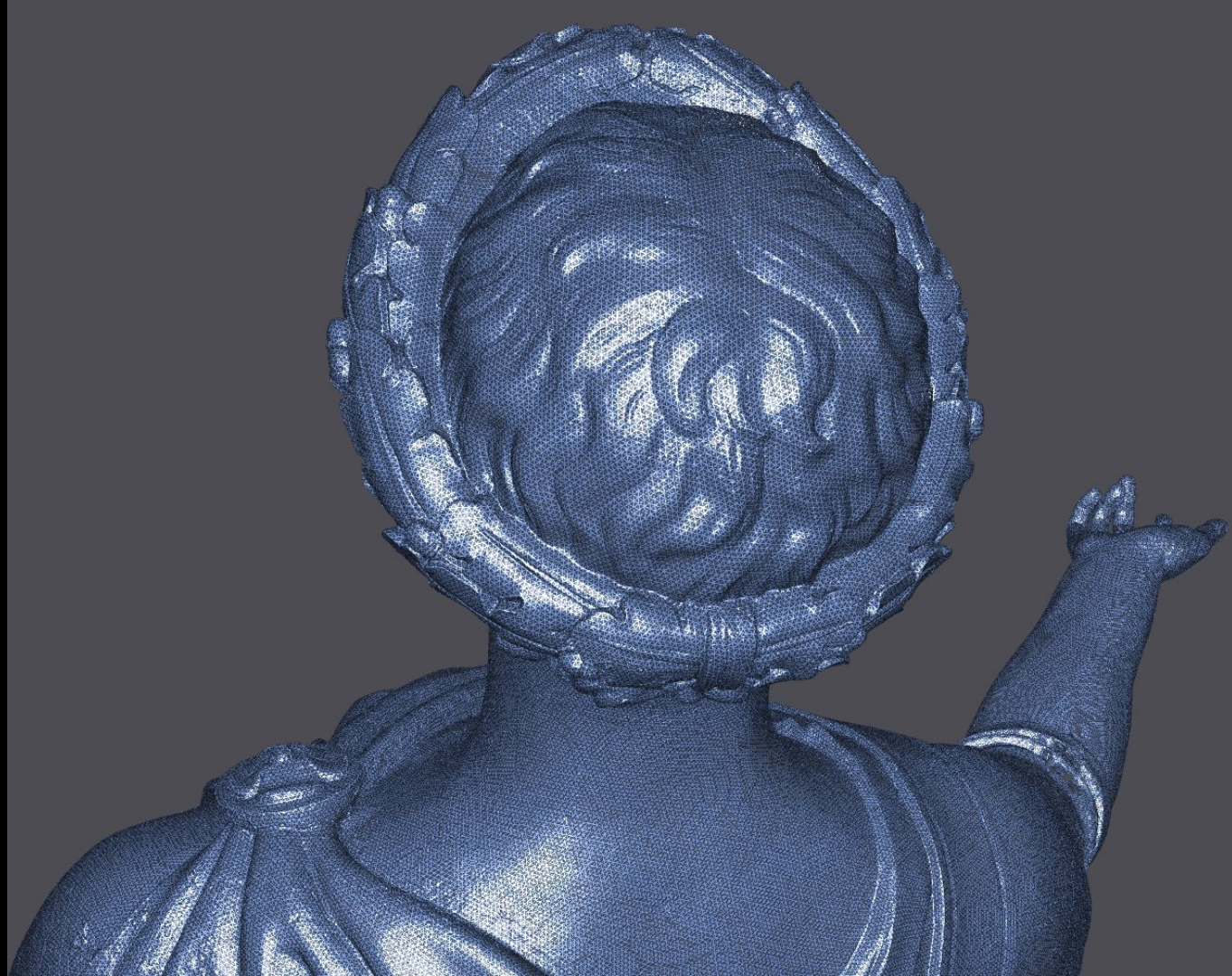




Photogrammetry, 1870 photos.
It took about a week in total to complete shooting phase.

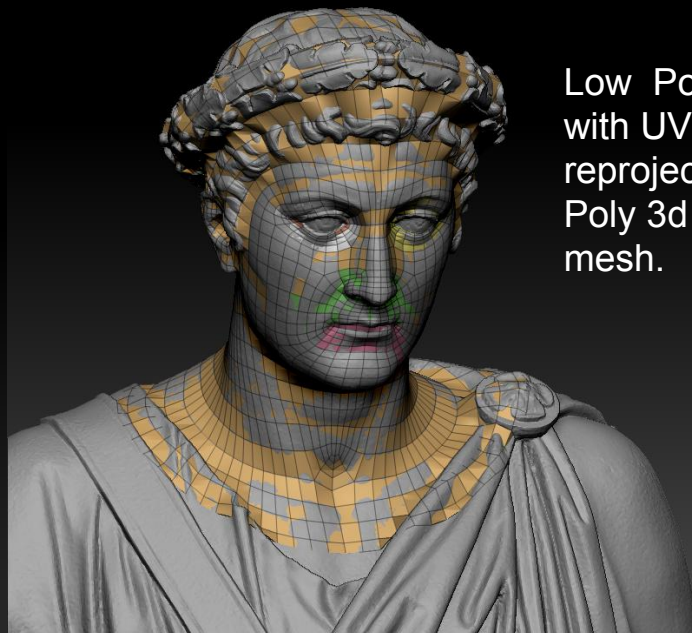








Low Poly
Wrapped and
reprojected.
It's time to bake
normal map ect.



Low Poly Base Mesh
with UVW mapping
reprojected on High
Poly 3d Scanned
mesh.

Base mesh reprojection process allows us to get
Animation ready asset and cut production time
dramatically.

Sketchfab screenshot

Textured (diffuse only)

Photo material processing/High Poly mesh generation

1 week

Semi auto retopo/UVW mapping/texturing/setup

2 days

You can Check this model at

sketchfab.com/pixelatedrealities



Large Scale Assets Production

1000 up to 5000 photos

Cultural heritage digitizing





ДЕТАЛИ

ФІГУРА САНДВИЧЕВ



















LOVE
H+B
KOE

LOVE
H+B
KOE

ДИАЛОГ
ОКА + Биме
+ ДИНАТА + КОРА
+ НАСТЯ + А...
ОЛ + А...А

LOVE
H + B
LOVE

DO...
B...
LEE BDI





**Metro Project is about to implement VR
in navigation and info graphics reserch**



Metro Project. Hreschatic Station. Kiev.





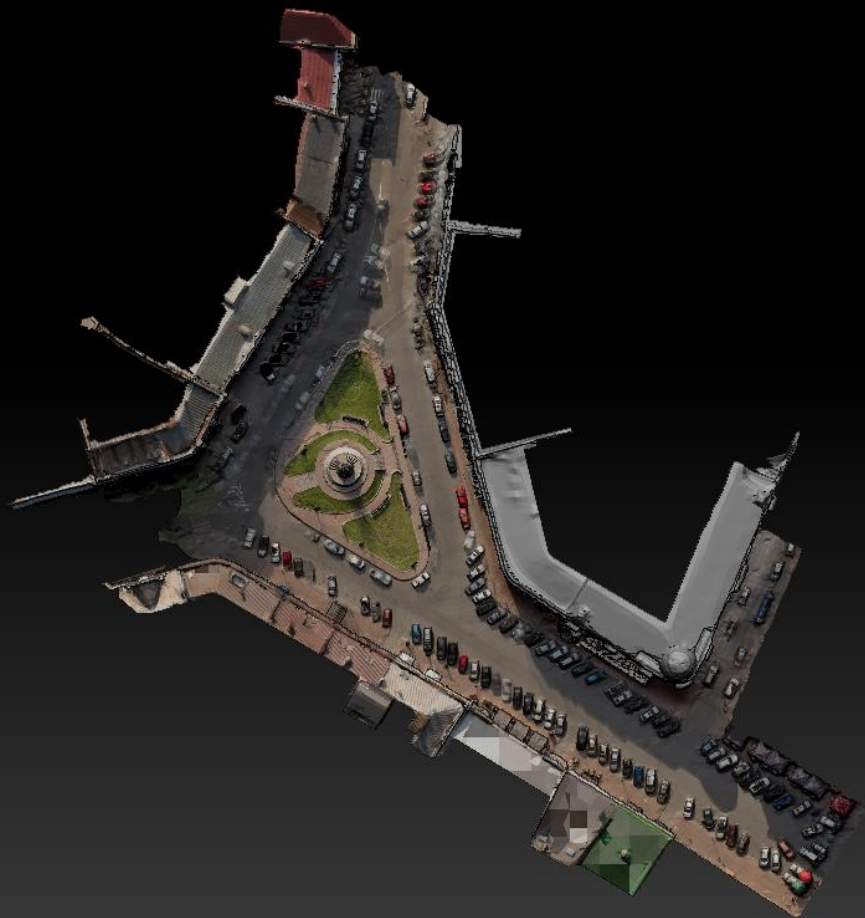




Aerial Photogrammetry









One camera human Scanning



Raw 3dscan





Additional solutions

Virtual reality

Retopology

Animations

Infographics

Audio and video add ons inside photogrammetry

Interactive and Gamification

Augmented Reality apps



First VR prototype

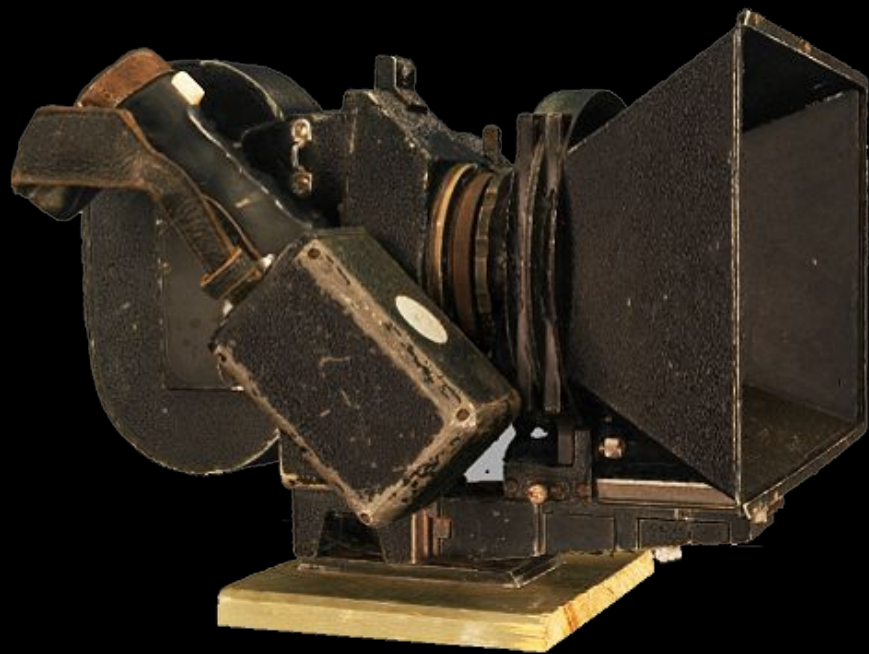


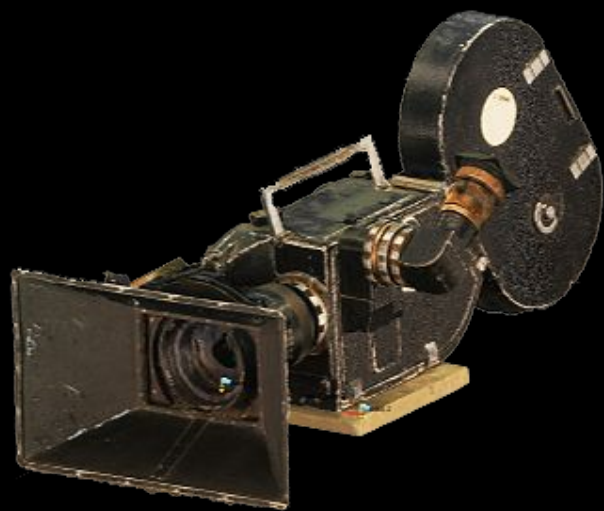
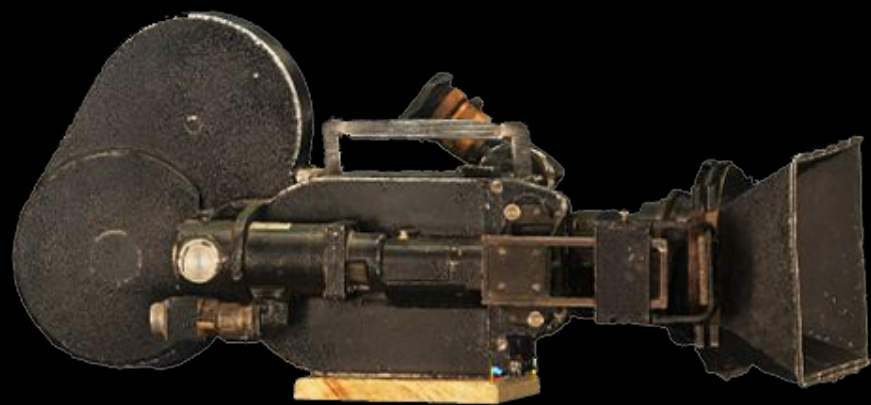
Add and settings game mechanics
elements



Add lighting

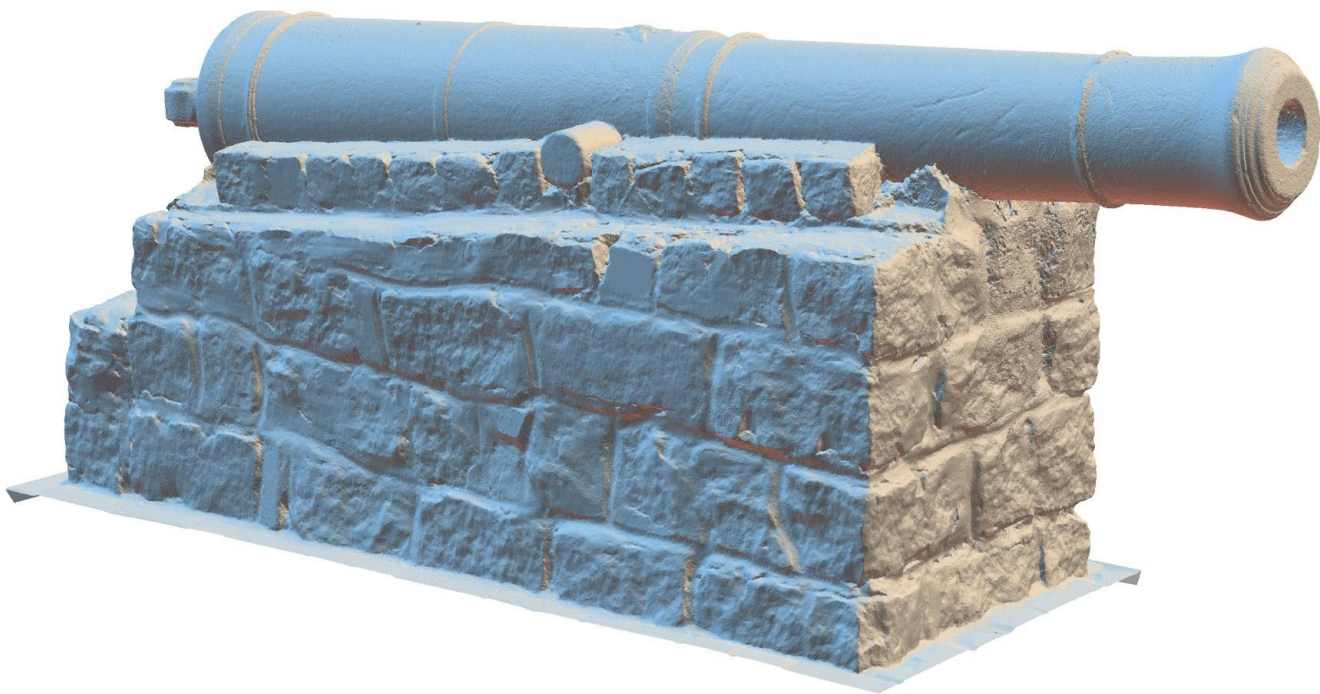


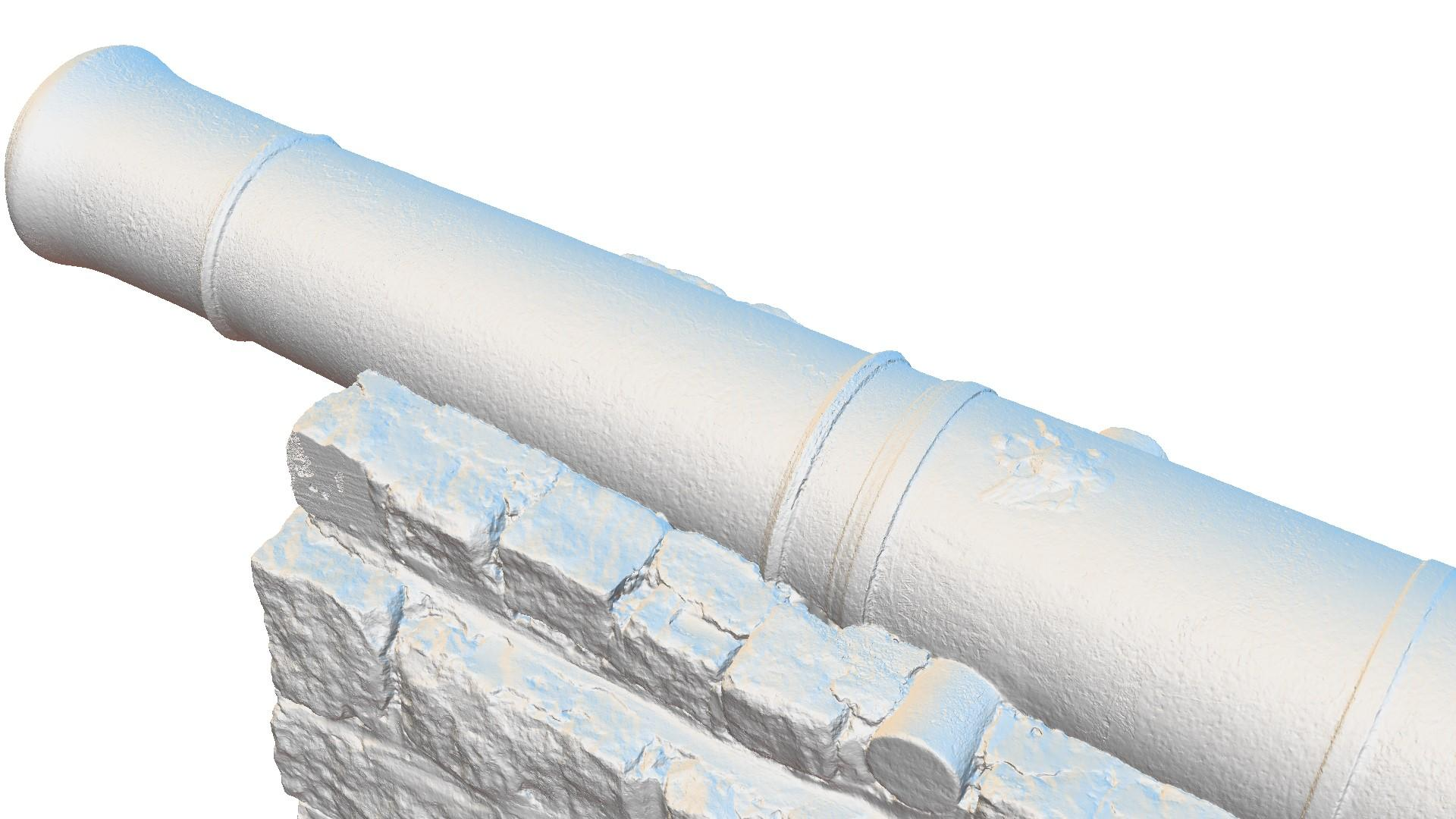




























Август
12.04.2014

2014
2014

Н.С.Т.А
12.04.2014

12.05.2014
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Мурда

См. в кн. Слов.
Лит. в кн. Слов.
См. в кн. Слов.

В КА
+
НОРА
10.03.15

Всучама паер
10.3.15

Romzes Roma
07.03.15

9.3.15 18.6.15
07.03.15