3D models of archaeological pieces of the Temple of Diana

Report of the models

Ángel M. Felicísimo y María Eugenia Polo
CMPLab
University Centre of Merida
University of Extremadura

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Temple of Diana, view from the North .

PROJECT SUMMARY

This 3D scanning project was conducted within the framework of the collaborations between the **University Centre of Merida** (through the CMPLab) and **Consortium of the Monumental City of Merida**. In this context, the end-of-degree works, meetings and conferences regarding the documentation and model construction through techniques such as photogrammetry, scanning and construction of virtual objects were performed .

CMPLab is the acronym for Data Capture, Virtual Modelling and Production/Prototyping Laboratory. CMPLab emerged from a project of the Infrastructure and Scientific-Technical Equipment Aid from the Secretary of State for Research and began operating in 2016. This laboratory works on research areas related to the construction of 3D models of archaeological objects, very-high-resolution photography, geophysical prospecting and applications of geomatics to cultural heritage.

In this project, 3D digital models with photogrammetry and structured light scanning techniques were made for a set of 15 archaeological pieces extracted from or related to the Temple of Diana, in Merida. The objective was to contribute to the upcoming commemorative exhibition on this first century construction, one of the most outstanding in Roman Merida.

The following pages are a catalogue of the developed models, accompanied by the necessary information for their visualization in high quality and download in OBJ format.

Temple of Diana, view from the West .

Portrait of Agrippina la Menor

Description: Portrait of Agripina la Menor, made in marble, with a height, width, and depth of 48 cm, 26 cm, and 24 cm, respectively.
Culture: Roman.
Dating: 50-59 A.D.
Place of origin: Temple of Diana, Merida, Spain.
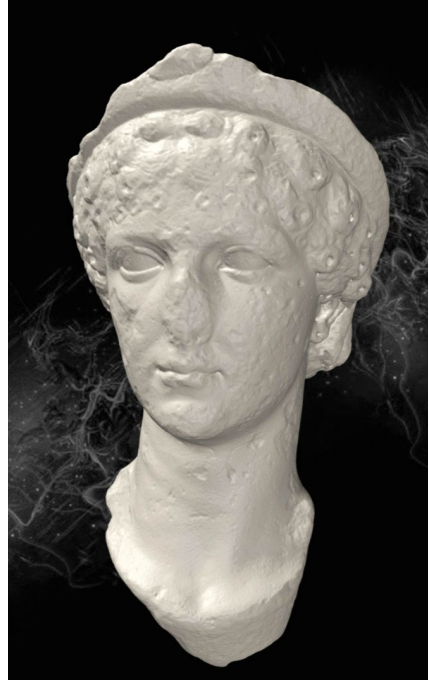Present location: National Archaeological Museum, with inventory number 34433.
More information (CERES file):
https://tinyurl.com/ycpndv5q

Method: 3D scanning through structured light scanner without texture capture.
Scanner model: Go!SCAN 50.
Software: VXModel and Meshlab.

Link to the interactive 3D model
https://skfb.ly/YVXI

MALE TORSO

Description: Male torso with mantle representing a deified or heroic character, approximately 110 cm high and 80 cm wide.
Culture: Roman.
Dating: 41-55 A.D.
Place of origin: Temple of Diana, Merida, Spain.
Present location: Archaeological Museum of Sevilla with inventory number REP00459.
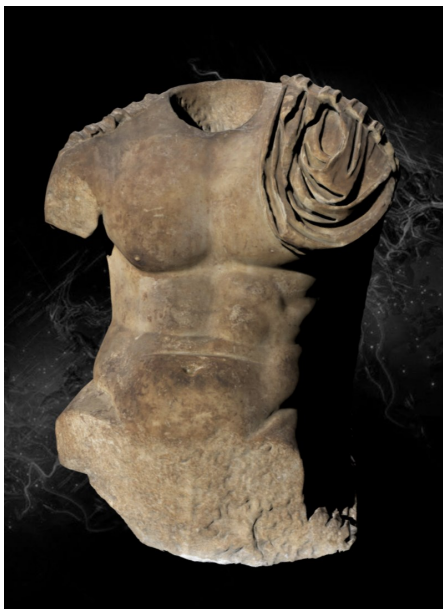More information (CERES file):
https://tinyurl.com/y7q3bjod
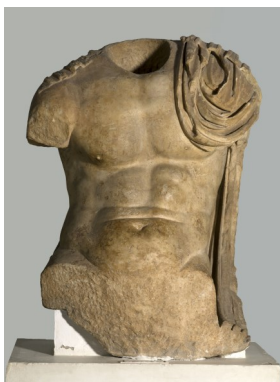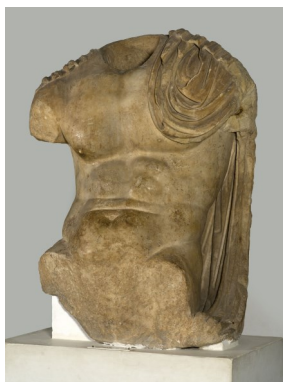Photography:
https://tinyurl.com/y7tsyw8u
Method: 3D scanning through structured light scanner with texture capture.
Scanner model: Go!SCAN 50.
Software: VXModel and Meshlab .

Link to the interactive 3D model https://tinyurl.com/y8qceana

SENATE GENIUS

Title: Senate Genius.
Description: Bronze statue supposed to represent the Genius of the Senate of Rome. The object has a height of 55 cm.
Culture: Roman.
Dating: between 126 to 175 A.D.
Place of origin: Temple of Diana, Merida, Spain.
Present location: National Museum of Roman Art (Merida); inventory CE18438.
More information (CERES file):
https://tinyurl.com/y84t3agy

Method: 3D scanning through structured light scanner with texture capture.
Scanner model: Go!SCAN 20.
Software: VXModel and Meshlab.

Photography: https://flic.kr/p/DJ825A

Link to the interactive 3D model
https://tinyurl.com/ycm7bnm6

BRONZE ROLEO

Title: Roleo with plant motives.
Description: Roleo representing acanthus leaves and a rosette. The object has two holes probably to be fixed to a wall or surface and is 55 cm long.
Culture: Roman.
Dating: 1st century A.D.
Place of origin: Temple of Diana, Merida, Spain.
Present location: National Museum of Roman Art (Merida); inventory CE18524.
More information (CERES file):
https://tinyurl.com/y78rrzgw

Method: 3D scanning through structured light scanner with texture capture.
Scanner model: Go!SCAN 20.
Software: VXModel and Meshlab.

Link to the interactive 3D model
https://tinyurl.com/y78922oj

Pedestal of Trajan Decius

Description: Marble pedestal, approximately 68 cm high, 34 wide and 17 deep, found in the pool of the Temple of Diana, with an inscription of Quintus Herennius Etruscan Messio Decio, nobilissimo Caesari.
Culture: Roman.
Dating: 250-251 A.D.
Place of origin: Temple of Diana, Merida, Spain.
Present location: National Museum of Roman Art (Merida); inventory 6021-151-1.
Method: structured light scanner.
Scanner model: Go!SCAN 50.
Software: VXModel and Meshlab.

Link to the interactive 3D model
https://tinyurl.com/ya3qxf7a

Portrait of Adriano

Description: Marble head representing the Emperor Hadrian, broken at the back.
Culture: Roman.
Dating: first half of the second century A.D.
Place of origin: Temple of Diana, Merida.
Present location: National Museum of Roman Art (Merida); inventory 625-00-1.
Method: structured light scanner.
Scanner model: Go!SCAN 20.
Software: VXModel and Meshlab.

Link to the interactive 3D model
https://skfb.ly/6qMFR

plate by Cornelius Bochus

Description: White marble plate sized 42 ×
27 × 3 cm, engraved with letters sized be-
tween 4 and 5.5 cm.
Culture: Roman.
Dating: first half of the first century A.D.
Place of origin: Municipal forum, where the
Temple of Diana used to be, Merida.
Present location: National Museum of Roman
Art (Merida); inventory 6025-342-38.
More information (article):
https://tinyurl.com/ycmqed2e

Method: structured light scanner.
Scanner model: Go!SCAN 20.
Software: VXModel and Meshlab.

Link to the interactive 3D model
https://skfb.ly/6rNo9

Female head

Head carved in marble, approximately 30 cm
high, with a diameter of 23 cm.
Culture: Roman, 31 to 60 A.D.
Place of origin: Temple of Diana, Merida.
Present location: National Museum of Roman Art
(Merida); inventory CE30540.
More information :
https://tinyurl.com/ybtgh9c9

Method: structured light scanner.
Scanner model: Go!SCAN 20.
Software: VXModel and Meshlab.

Link to the interactive 3D model
https://tinyurl.com/y7l46pgo

Aemilius Aemilianus ara

Description: Marble altar dedicated to Jupiter by Aemilius Aemilianus.
Culture: Roman.
Dating: late 3rd century A.D.
Place of origin: Temple of Diana, Merida.
Present location: National Museum of Roman Art (Merida); inventory 771-00-36.
Photography: https://tinyurl.com/yc48r27b

Method: Photogrammetry.
Camera model: Pentax 645Z with a Pentax lens of 55 mm.
Software: Agisoft Photoscan Standard and MeshLab.

Link to the interactive 3D model
https://skfb.ly/69FqC

Theatre Mask

Description: Fragment of female theatre mask carved in marble, 13 × 8 cm.
Culture: Roman, 2nd century A.D.
Place of origin: Temple of Diana, Merida.
Present location: National Museum of Roman Art (Merida); inventory CE18646.
More information :
https://tinyurl.com/y76cr9ax

Method: structured light scanner.
Scanner model: Go!SCAN 20.
Software: VXModel and Meshlab.

Link to the interactive 3D model
https://tinyurl.com/y8ksrwyj

PORTRAIT FRAGMENT

Portrait fragment carved in marble, with
a height and width of 13 cm and 9 cm,
respectively.
Culture: Roman.
Dating: 11 to 60 A.D.
Place of origin: Temple of Diana, Merida.
Present location: National Museum of Roman Art (Merida); inventory CE18898.
More information:
https://tinyurl.com/y8ozweng

Method: structured light scanner.
Scanner model: Go!SCAN 20.
Software: VXModel and Meshlab.

Link to the interactive 3D model https://tinyurl.com/y9jzk7xu

EMPEROR ON HORSEBACK

Description: Small bronze piece sized approximately 12 cm, showing an emperor on horseback.
Culture: Roman.
Dating: 2nd to 4th centuries A.D.
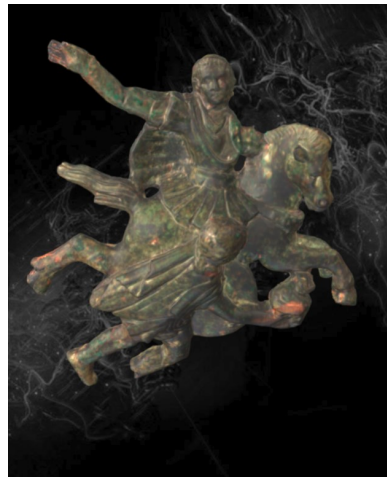Place of origin: Temple of Diana, Merida.
Present location: National Museum of Roman Art
(Merida); inventory 7013-00-4.
Method: structured light scanner.
Scanner model: Go!SCAN 20.
Software: VXModel and Meshlab.
Photography: https://tinyurl.com/yb4sgnj2

Link to the interactive 3D model
https://tinyurl.com/yc2bg5vq

Altar with bucranium I

Description: Cylindrical altar sculpted in marble; 1.4 m high.
Culture: Roman.
Dating: 1st century A.D.
Place of origin: Calle Avalos, Merida.
Present location: National Museum of Roman Art (Merida); inventory DO36838.
More information:
https://tinyurl.com/y9z9ujxz
Photographs:
https://flic.kr/p/22hMyGr
https://flic.kr/p/21cAyYG
Method: Photogrammetry.
Camera model: Nikon D7000 with Tamron lens 18-200 mm.
Software: Agisoft PhotoScan Standard and MeshLab.

Link to the interactive 3D model
https://skfb.ly/6tTJ8

The two cylindrical altars shown in these pages were used, with other pieces from different places in Merida, to form a monolith that held a statue of Santa Eulalia. The objects were placed in the column until they were recovered and restored for the museum in 1997.

ALTAR WITH BUCRANIUM II

Description: Cylindrical altar sculpted in marble; 1.1 m high.
Culture: Roman.
Dating: 1st century A.D.
Place of origin: Calle Avalos, Merida.
Present location: National Museum of Roman Art (Merida); inventory DO36839.
More information:
https://tinyurl.com/yafg48zx
Photographs:
https://flic.kr/p/Hm83hn
https://flic.kr/p/CDg6t2

Method: Photogrammetry.
Camera model: Nikon D7000 with Tamron lens 18-200 mm .
Software: Agisoft PhotoScan Standard and MeshLab.

Link to the interactive 3D model
https://skfb.ly/WxEH

Bronze statue leg

Description: Leg of a life-size male statue in bronze, cast in a hollow; approximately 70 cm long.
Culture: Roman.
Dating: 2nd century A.D.
Place of origin: Calle Avalos, Merida.
Present location: National Museum of Roman Art (Merida); inventory CE18439.
Method: structured light scanner.
Scanner model: Go!SCAN 50.
Software: VXModel and Meshlab.
More information: https://tinyurl.com/ybslqzfg

Link to the interactive 3D model
https://tinyurl.com/y9utkncc

Credits

Ángel M. Felicísimo and María Eugenia Polo
CMPLab - University Centre of Mérida
University of Extremadura
correos: - amfeli@unex.es - mepolo@unex.es

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