

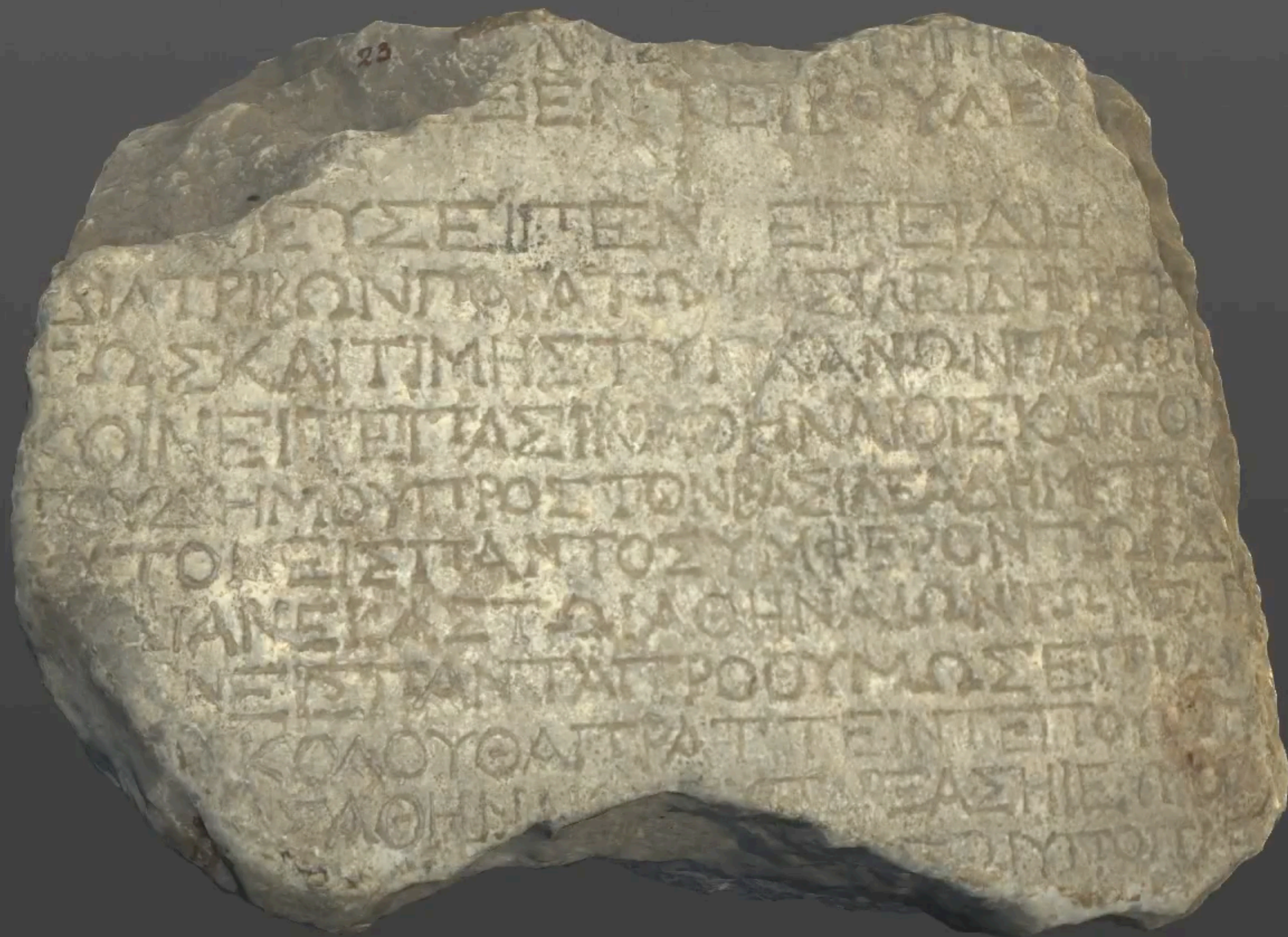
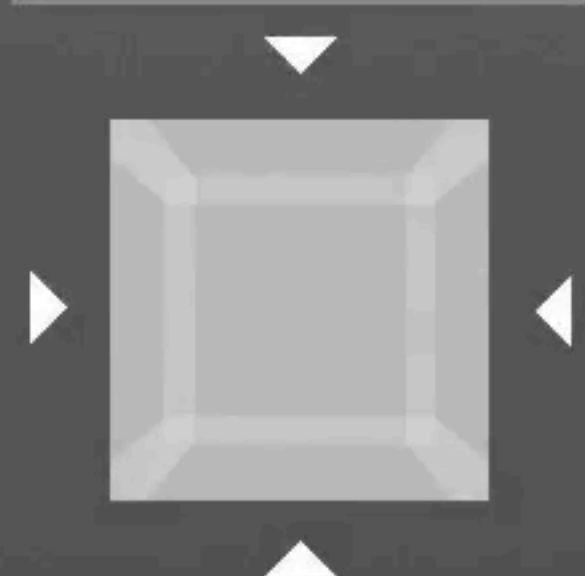


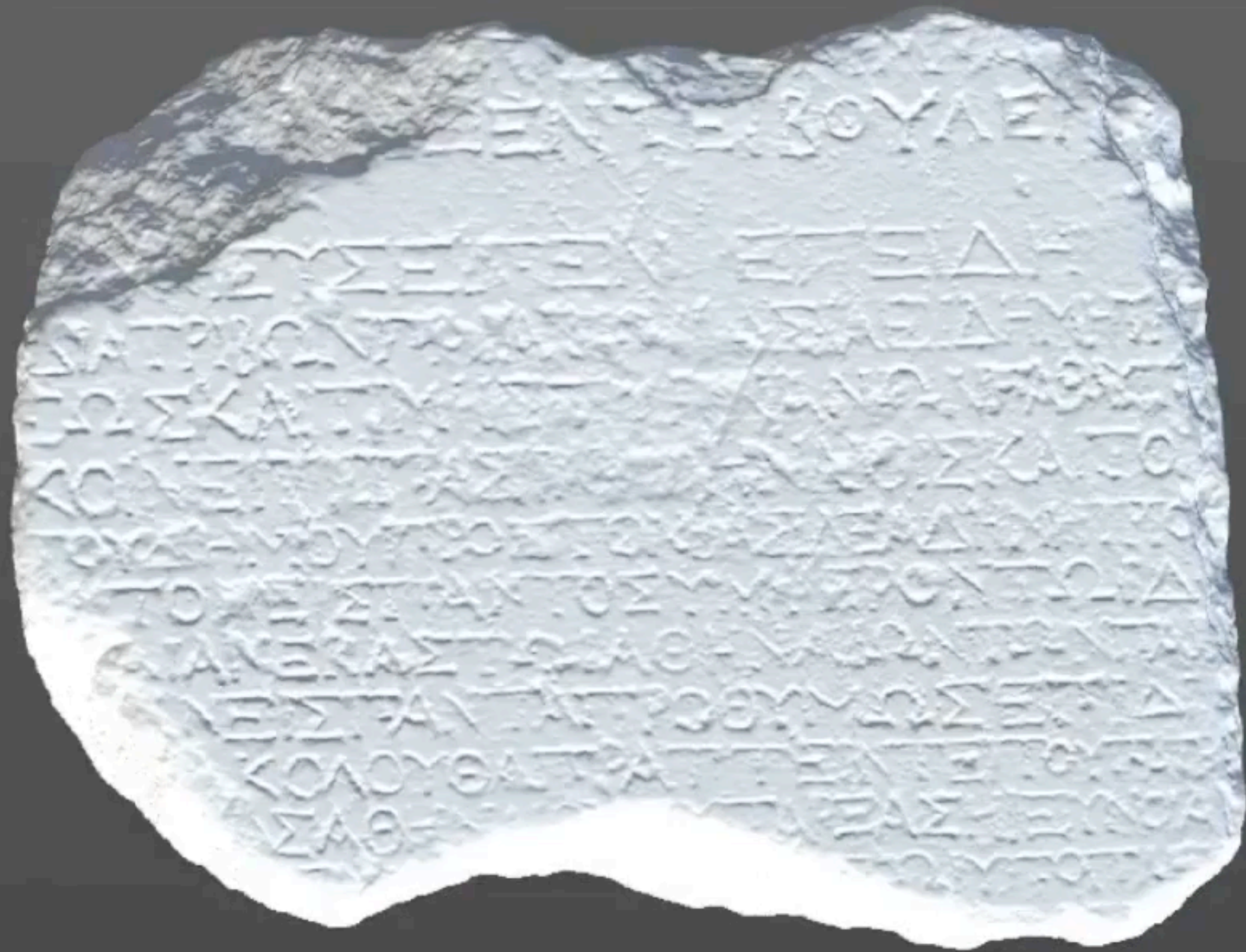
Immersive City Scripts

*Inscriptions & Construction of
Social Spaces in Miletus (Asia Minor)*

Prof. Dr. Frank Steinicke

Human-computer Interaction, Universität Hamburg





Virtual Reality

A person wearing a VR headset is seated on a modern chair in a room with large glass windows. The room has a minimalist design with a tiled floor and a dark wall. The person is looking out the window, which shows a view of a modern building and greenery. The overall atmosphere is calm and futuristic.

Virtual reality is an artificial environment, which is presented using immersive technology

Immersion $\Rightarrow$ Presence

Place Illusion + *Plausibility Illusion* + *Social Presence*



SIGGRAPH 2018
FRANK
STEINICKE
UNIVERSITY OF CALIFORNIA

MEN

WEST ENG

HARVARD



*“With appropriate programming such a display could literally be
the Wonderland into which Alice walked.”*

I.E. Sutherland: Head-mounted 3D display, Fall Joint Computer Conference, 1968



Mixed Reality (MR)

Reality-Virtuality Continuum

Physical
Reality (PR)



Augmented
Reality (AR)



Augmented
Virtuality (AV)



Virtual
Reality (VR)



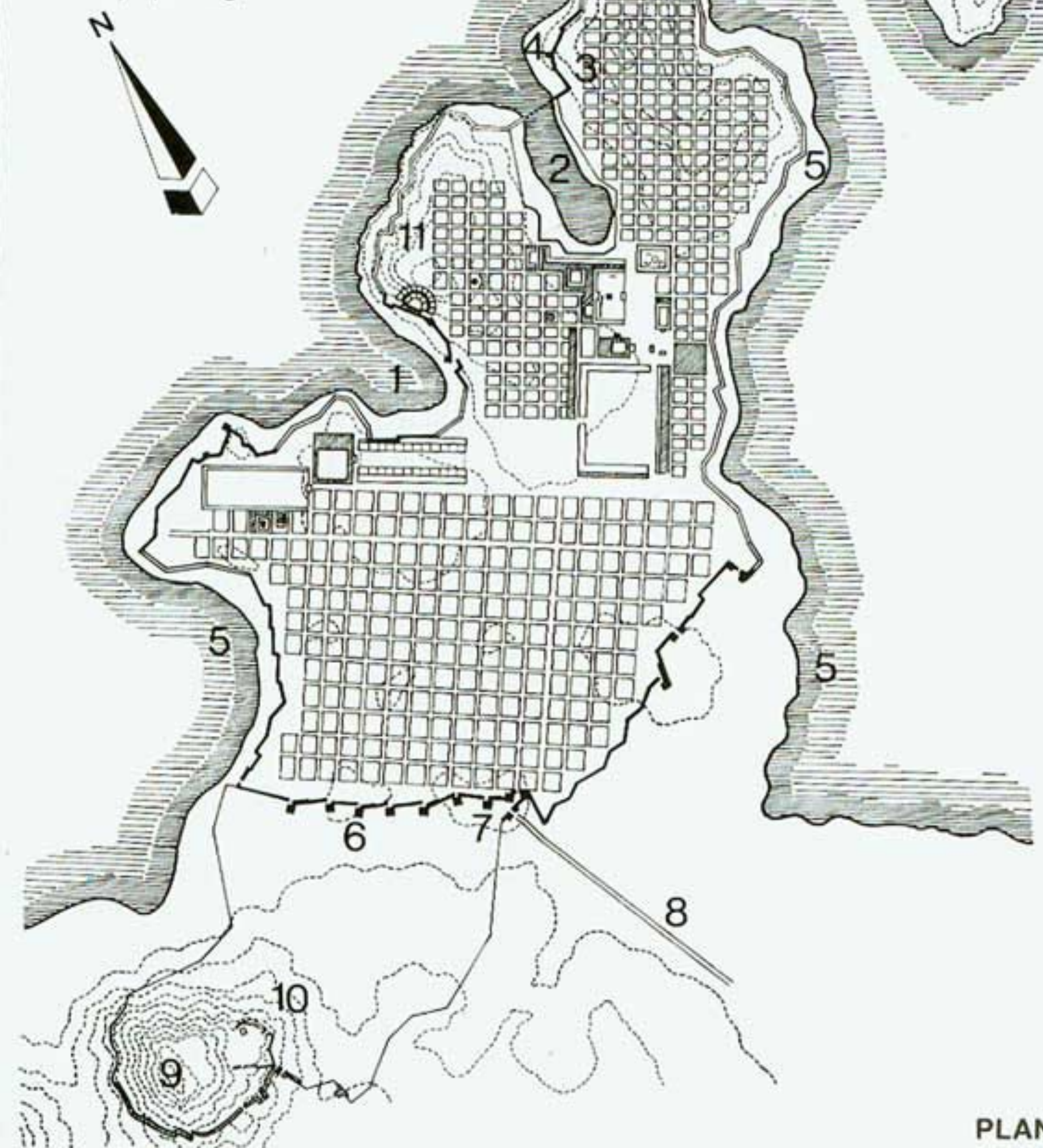
The *realness* of MR:

real-time rendering ⇨ real space ⇨ real interaction

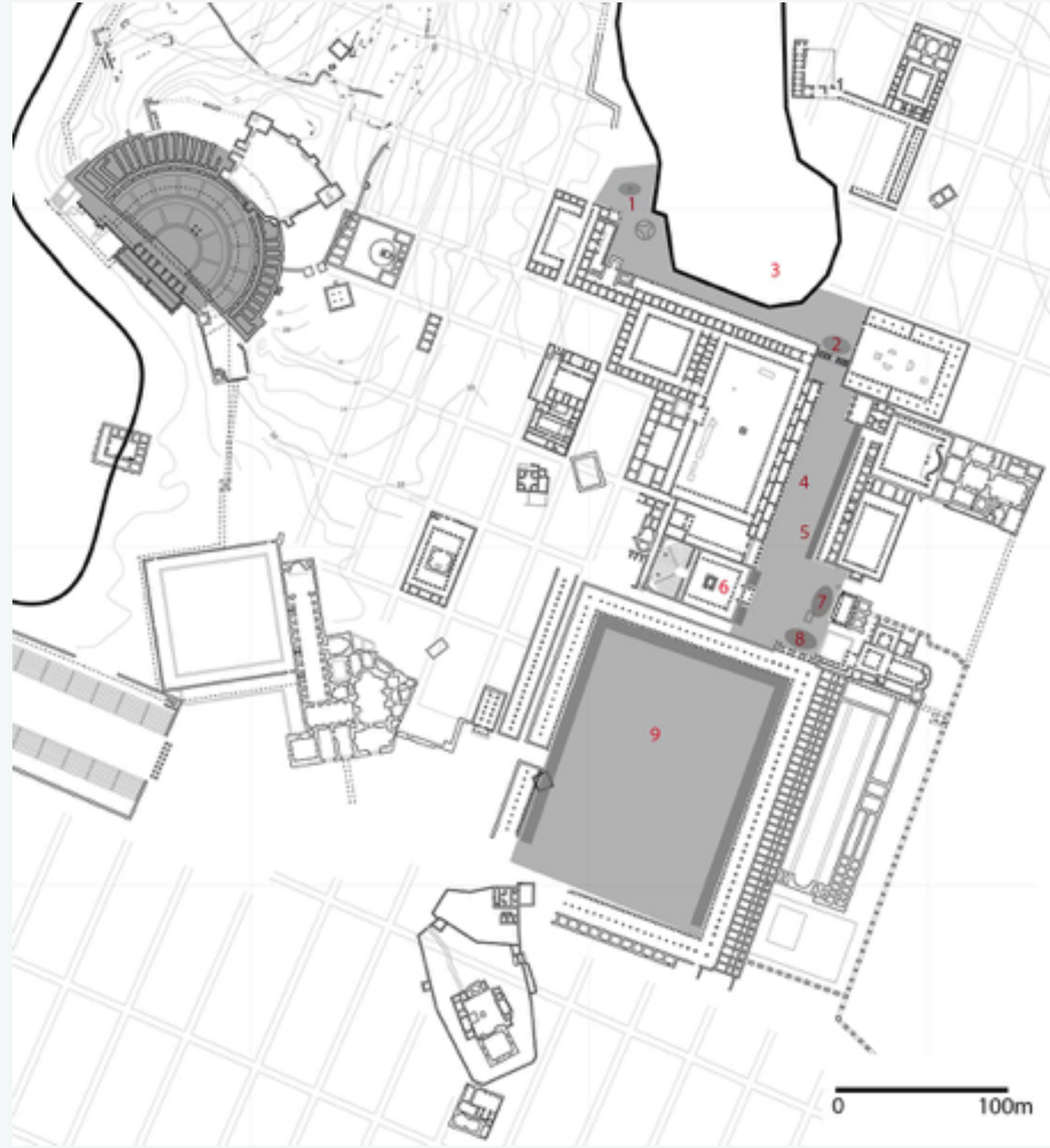


Miletos Halbinsel, allgemeine Ansicht, hellenistisch

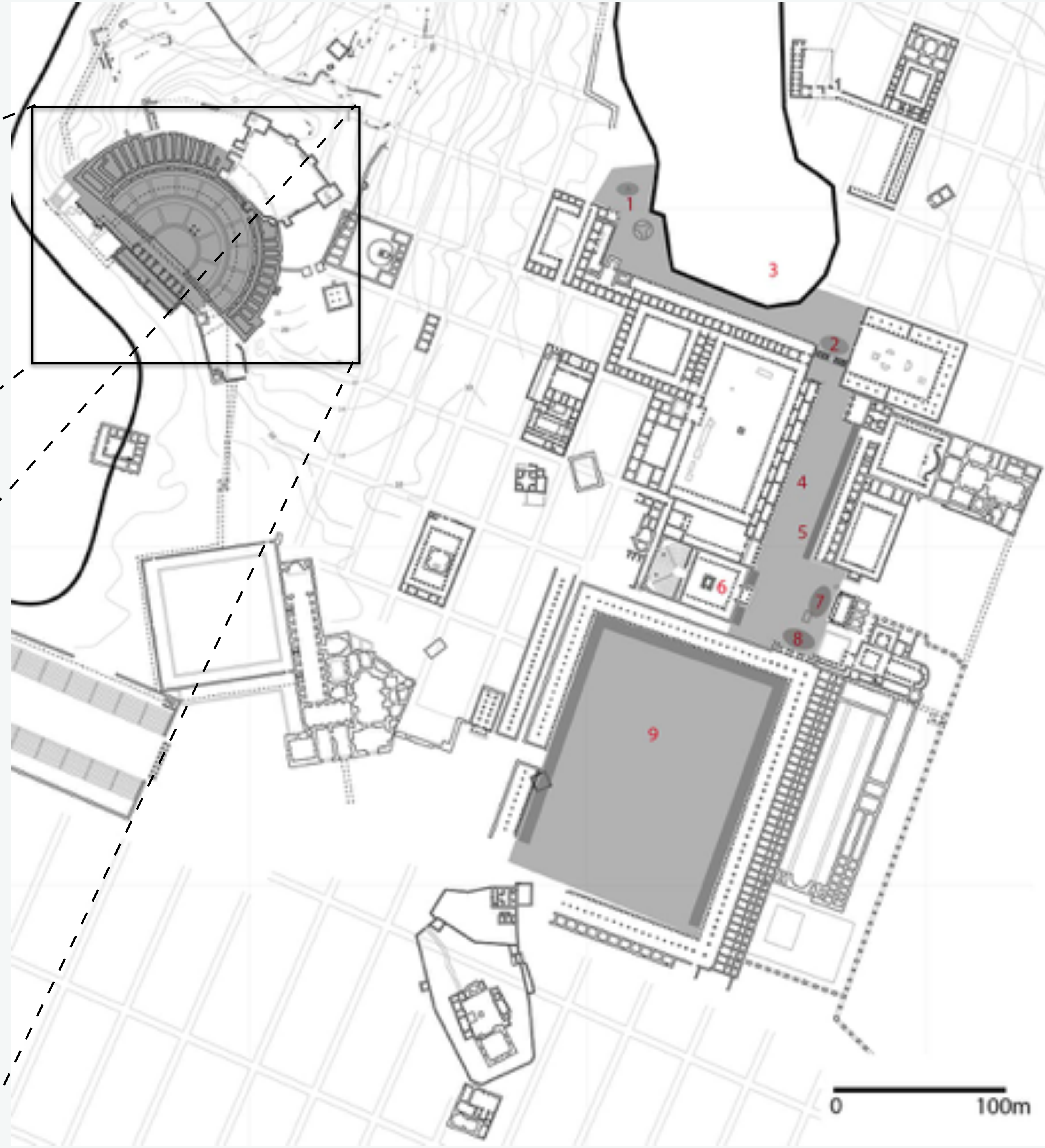
- 1 Theaterhafen
- 2 Löwenhafen
- 3-4 Löwenstatuen,
- 5 Stadtmauern,
- 6 Türme
- 7 Heiliges Tor
- 8 Heilige Strasse (Miletos-Didyma)
- 9 Kalabak-Hügel
- 10 Nekropole
- 11 Kale Hügel
- 12 Humeytepe Hügel



PLAN II



0 100m

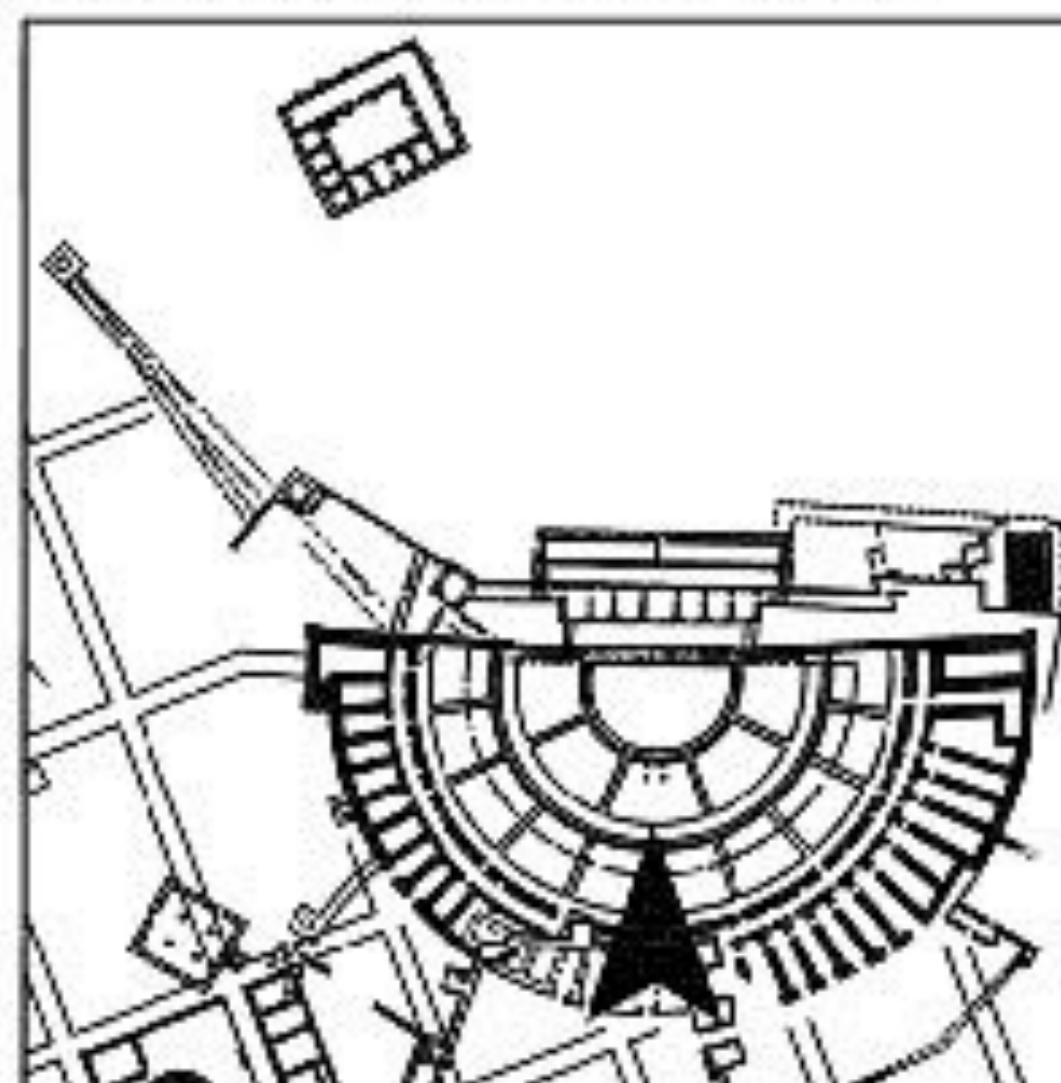


TİYATRO

Hellenistik Dönem'de yapılan tiyatronun (yaklaşık 5300 kişilik) yerini Roma Döneminde yaklaşık 15000 kişilik ve 40m. yükseklikteki üç katlı anıtsal tiyatro aldı. Tiyatro, zamanla toprakla dolmuş olan liman körfezinin hemen yanındadır. Sahne binasına alt yapı parçaları, tiyatro önündeki alandadır.



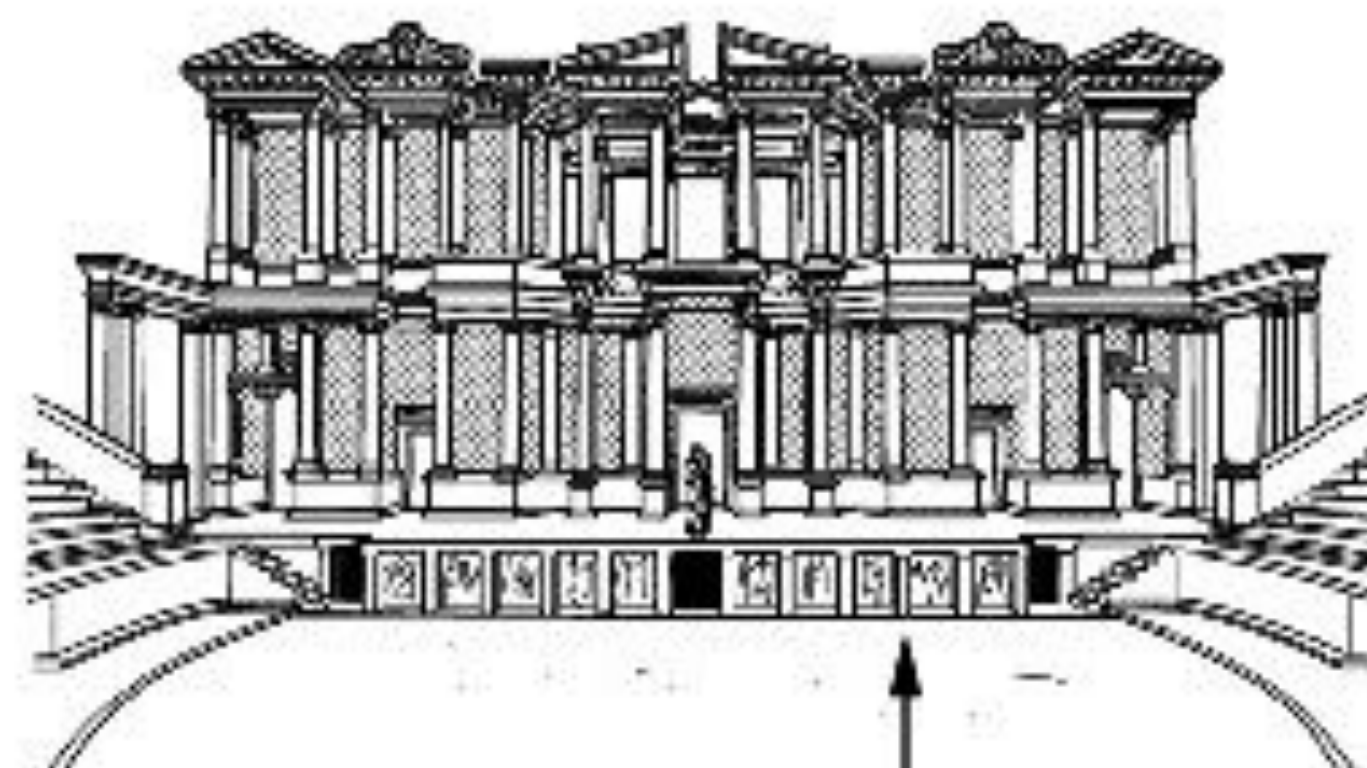
TİYATRO LİMANI
THEATERHAFEN
THEATRE-BAY



SELÇUKLU KERVANSARAYI
SELDŞUKISCHE KARAWANSEREI
SELJUK KARAWANSERAI

THEATER

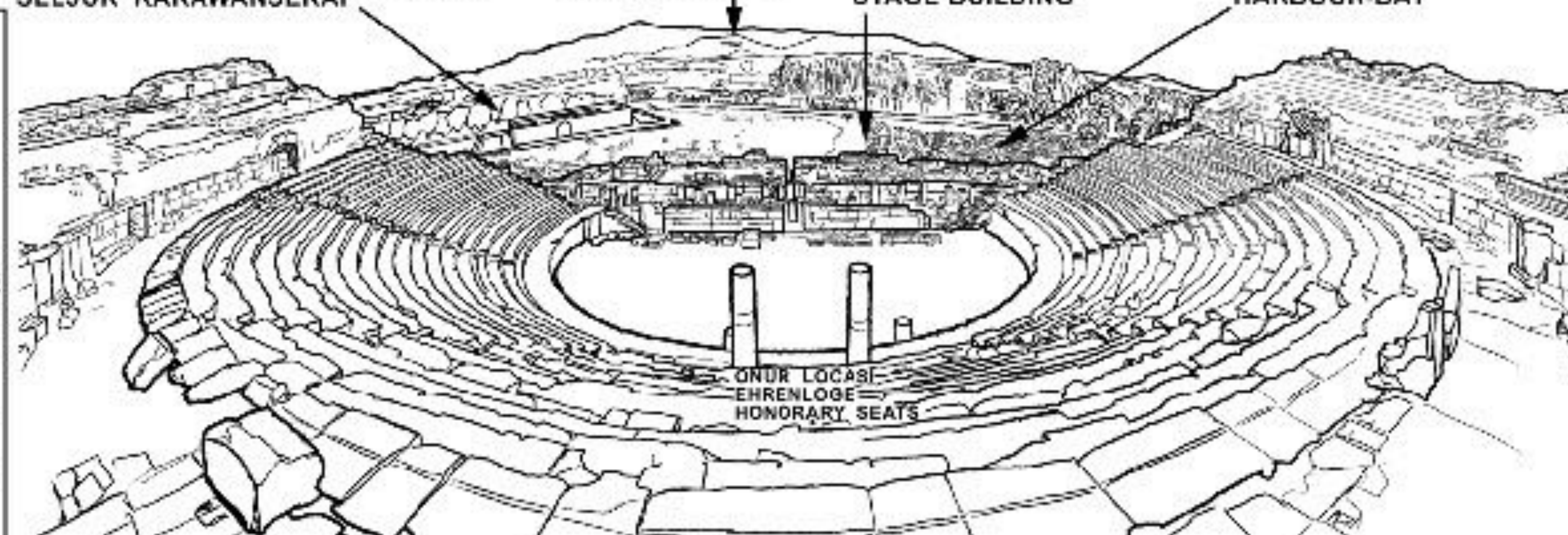
Das hellenistische Theater (ca. 5300 Plätze) wurde in röm. Zeit durch ein monumentales Theater mit drei Rängen (ca. 15000 Plätze) ersetzt (Höhe 40m). Das Theater befand sich direkt am Rande der versandeten Hafenbucht. Die Reste des Bühnengebäudes sind vor dem Theater aufgestellt. Das Stadtgebiet Miletos erstreckte sich in der Antike bis zum Kalabaktepe.



KALABAKTEPE

SAHNE BİNASI
BÜHNENGEBAUDE
STAGE BUILDING

LİMAN KÖRFEZİ
HAFENBUCHT
HARBOUR-BAY

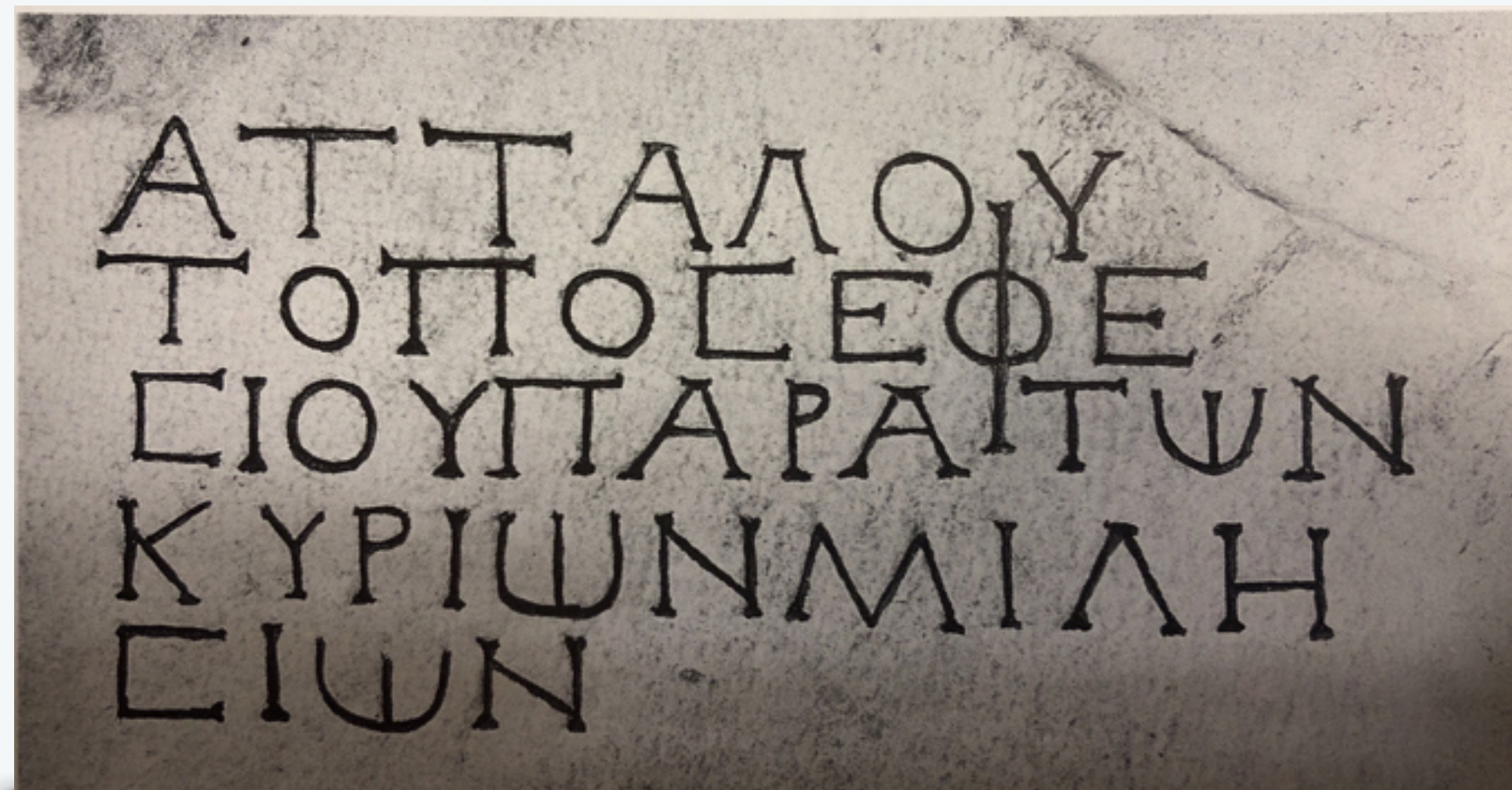


ONUR LÜKASI
EHRENLOGE
HONORARY SEATS

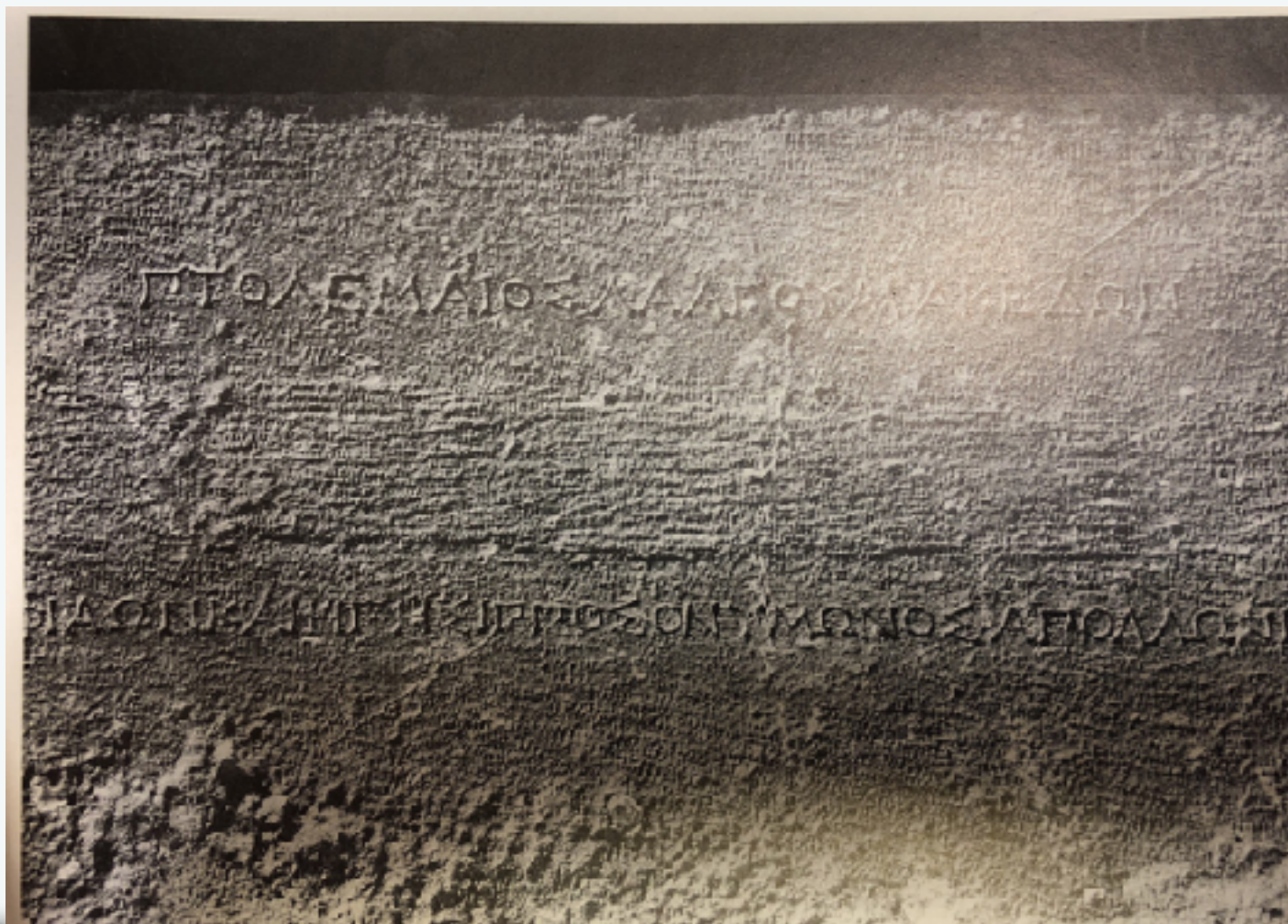


Inscriptions

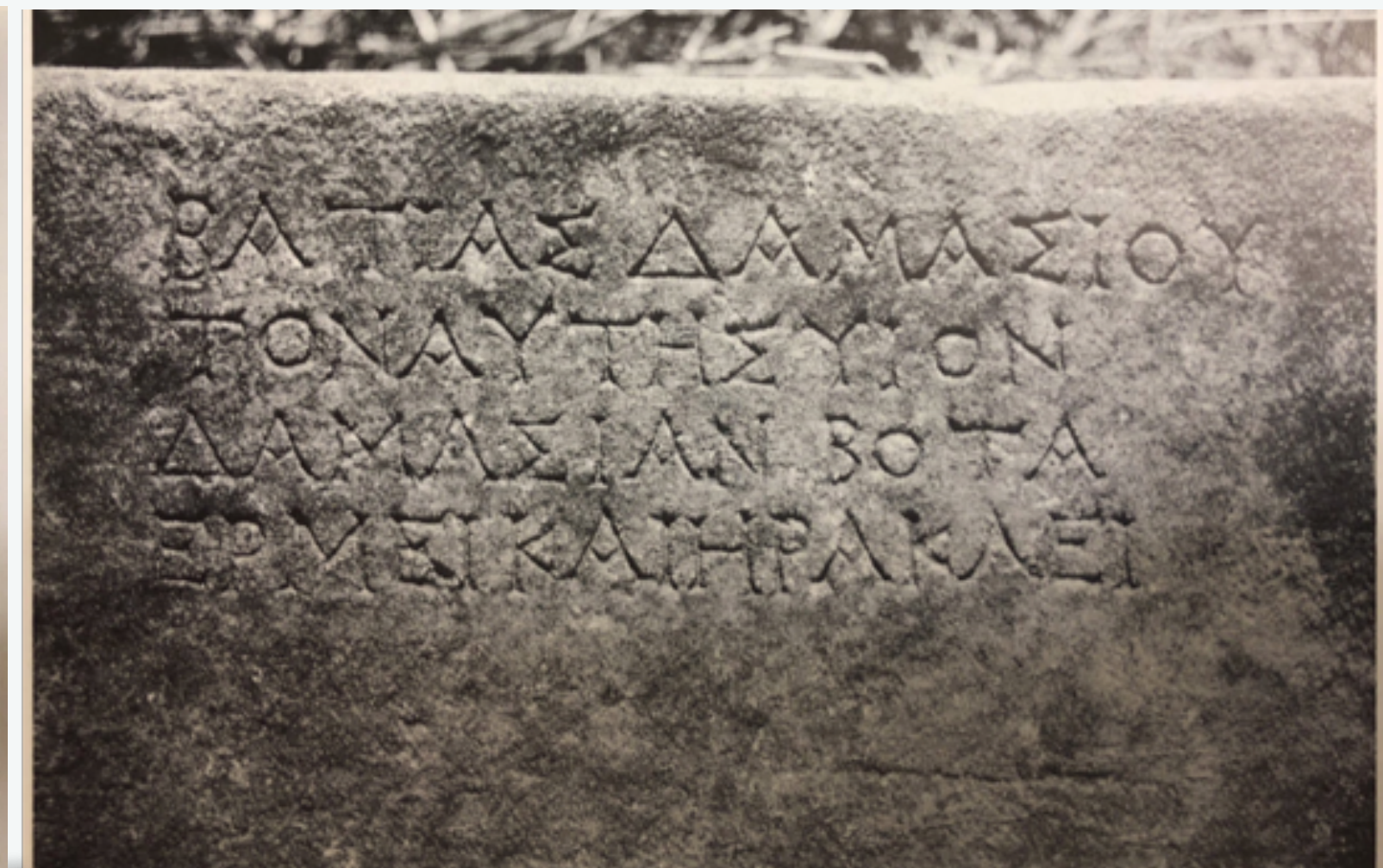
Examples from plateia at Miletus



I.Milet 208



I.Milet 233



I.Milet 247

Inscriptions

Examples





claire paul
photograph

3D Data Acquisition

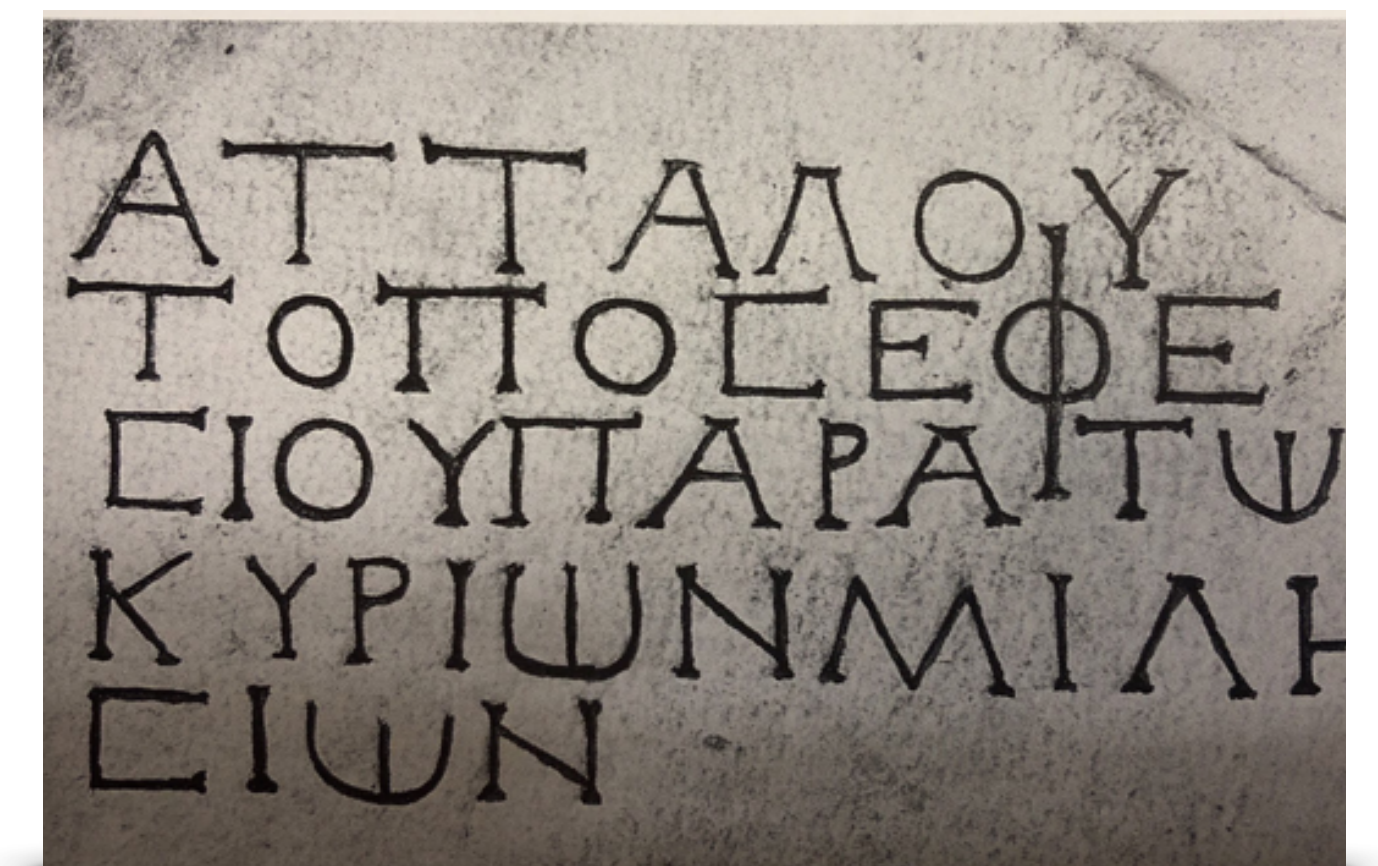
Different Scales



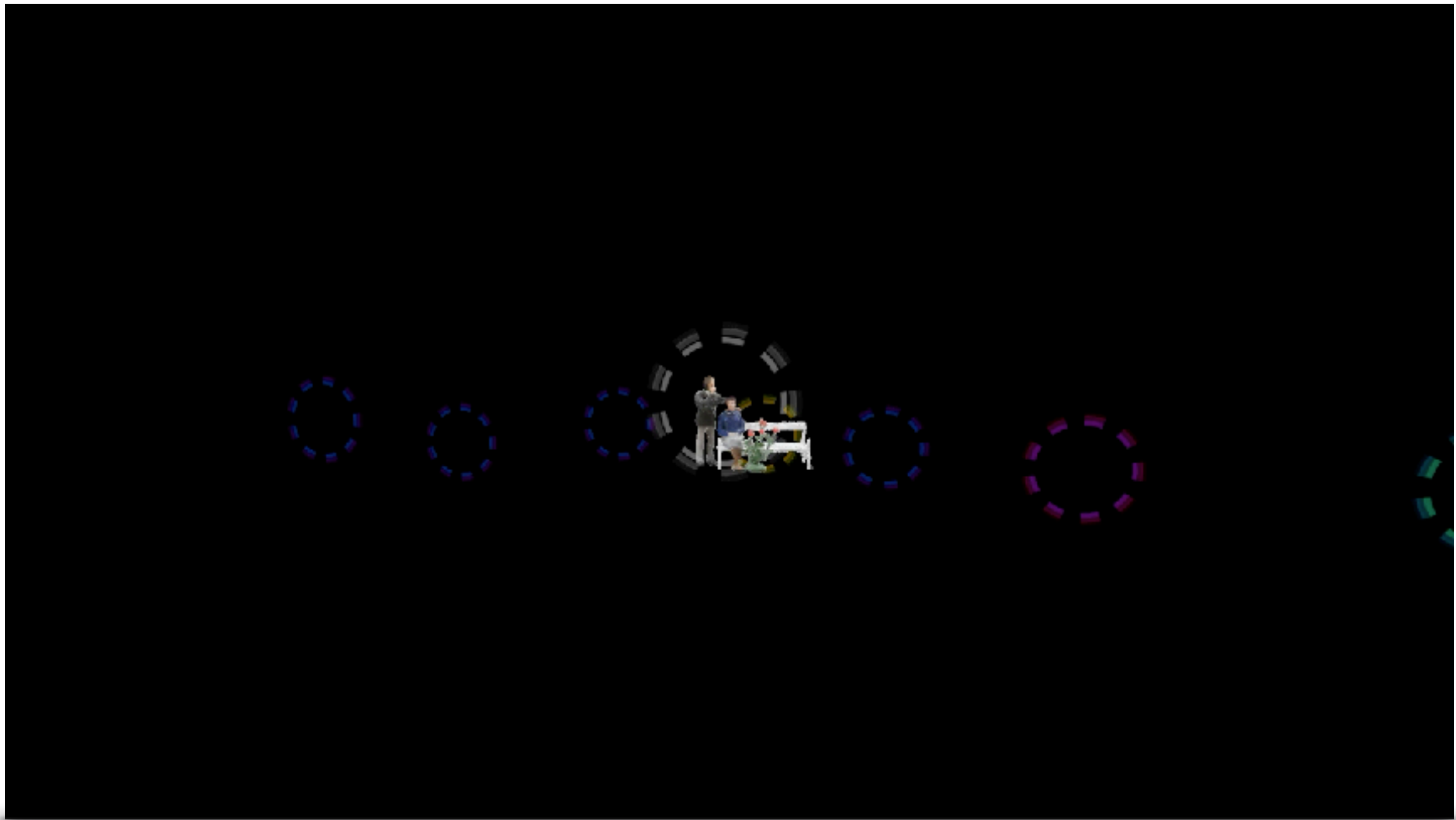
Site



Theater



Inscriptions



3DF ZEPHYR



Lidar - UAV



Tls



Cameras



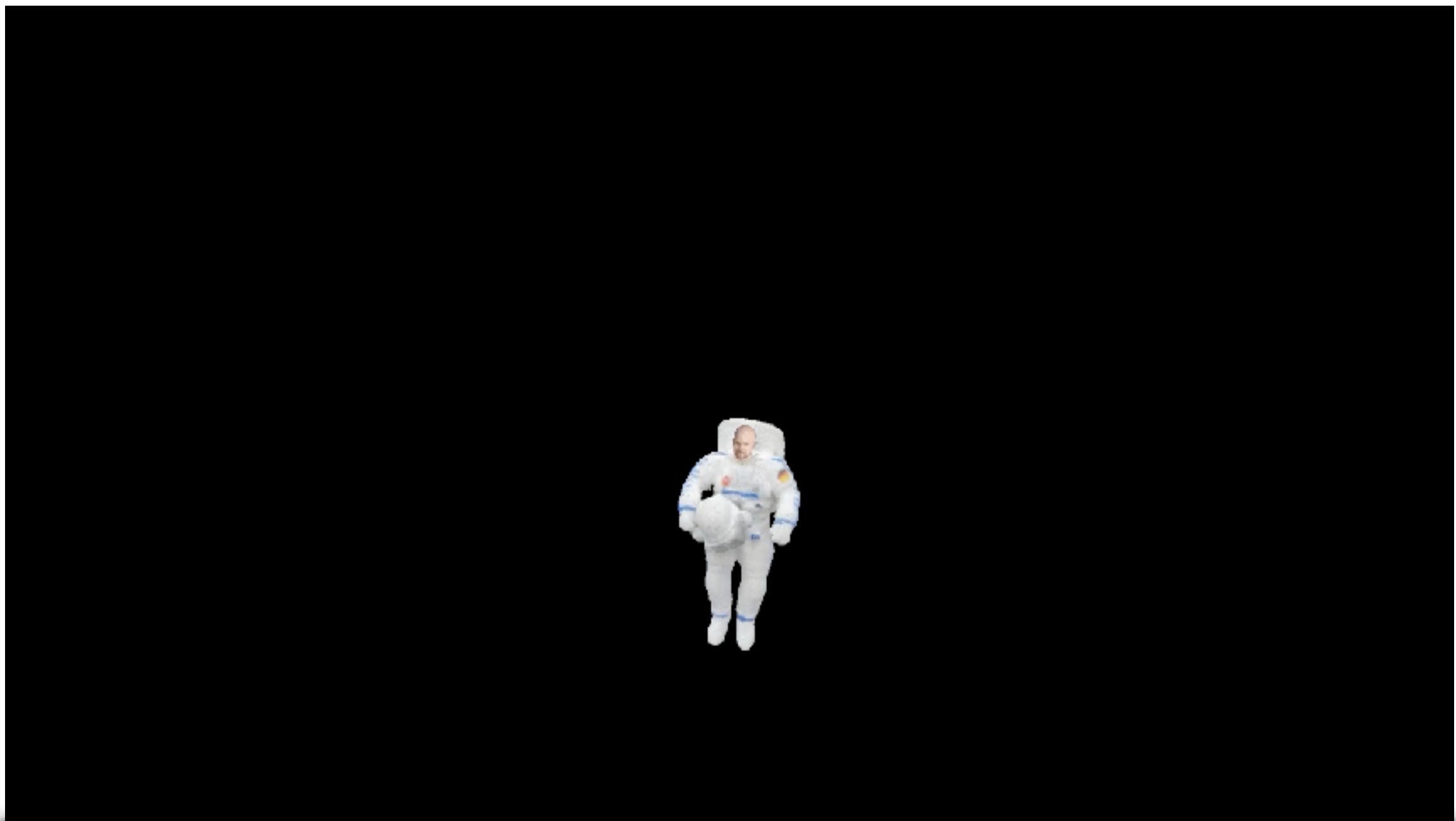
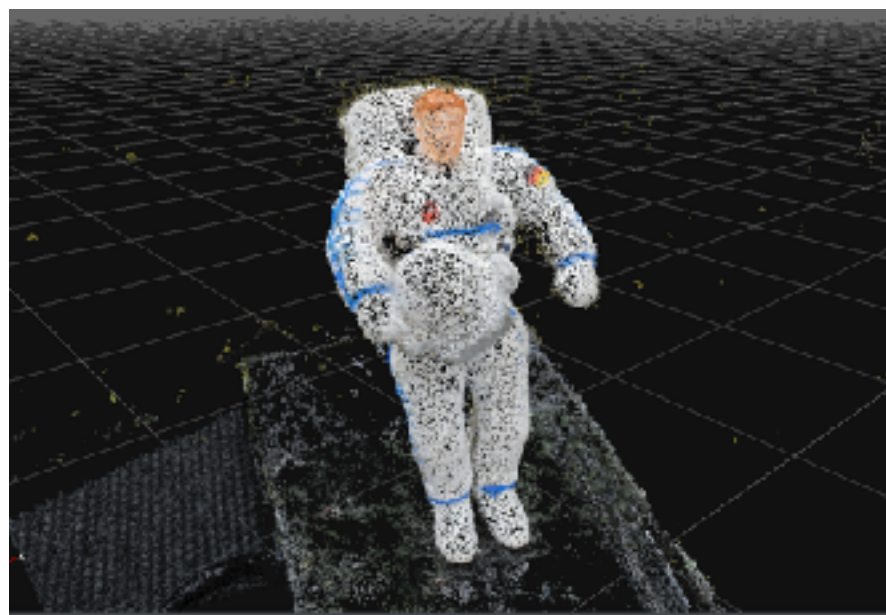
Videos



Multiband



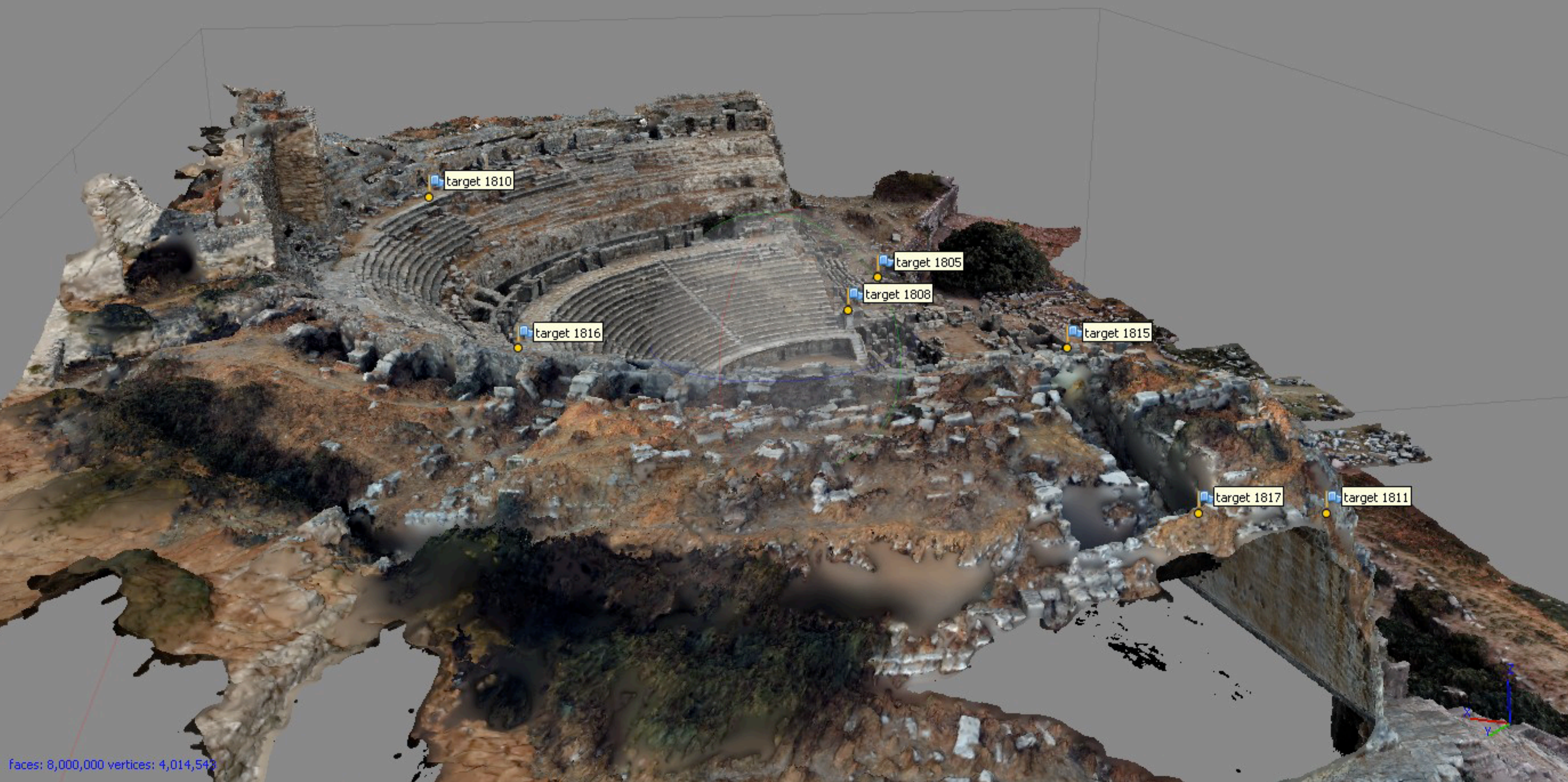
Spherical



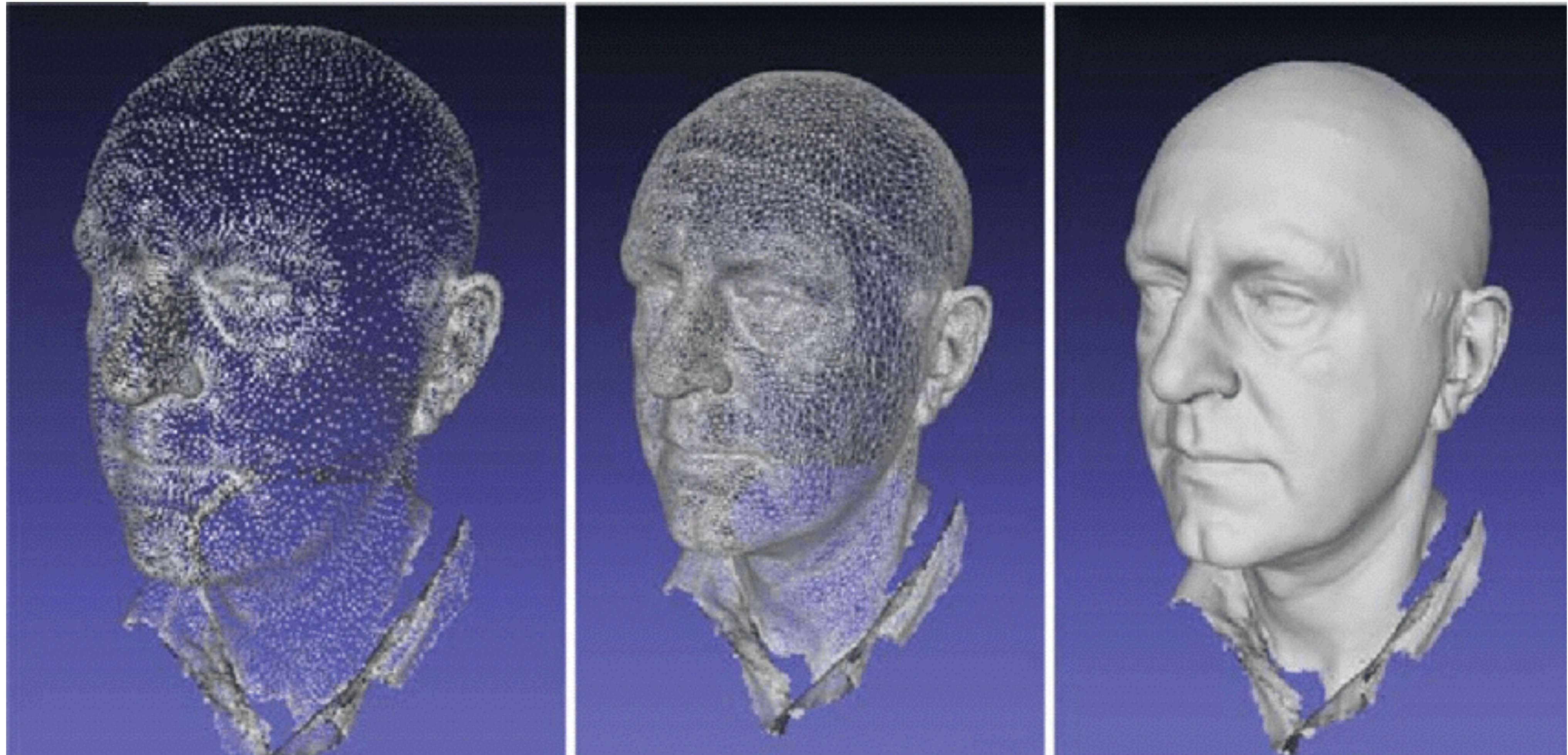
MiniAR Wunderland, 2019

360 Video Prototype

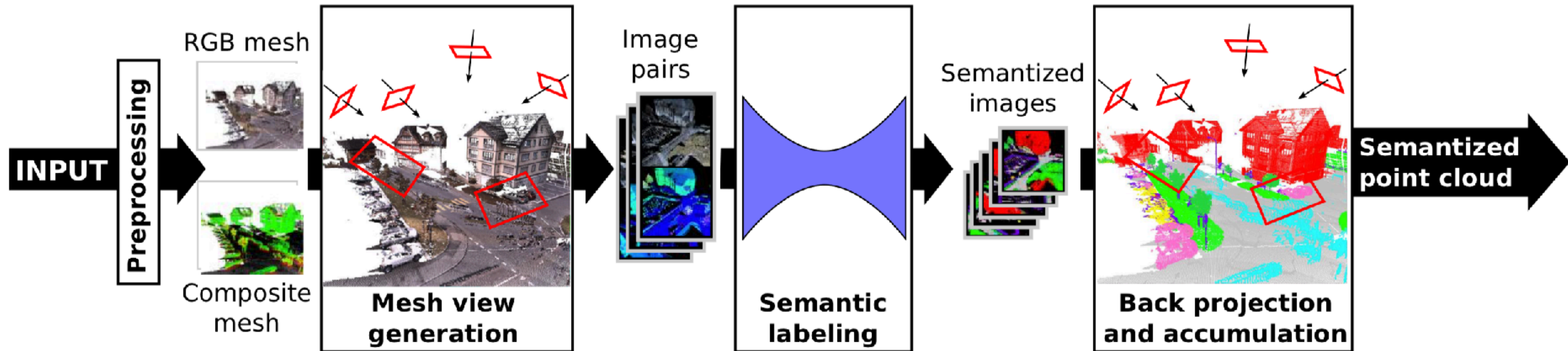




3D Point Clouds to 3D Meshes



Semantic 3D Point Clouds





ΤΟ ΠΟΣΥΡΡΗΓΜΑ

ΤΗ ΚΙΟΡΗ

3D User Interface Requirements

- Digital recording of inscriptions
- Annotations of virtual inscriptions
- Spatio-temporal visualization of inscriptions
- Virtual completion of theatre
- Simulation of agents in theatre
- ...



Thank you!



human-computer interaction



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youtube.com/user/uhhhci



hci.informatik.uni-hamburg.de