Immersive City Scripts

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

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3D Point Clouds to Mesh
Virtual reality is an artificial environment, which is presented using immersive technology.
Immersion $\Rightarrow$ Presence

Place Illusion + Plausibility Illusion + Social Presence

M. Slater. Place illusion and plausibility can lead to realistic behaviour in IVEs. Phil. Trans. of the RS Biological Science, 364(1535), 2009
“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
The *realness* of MR:
real-time rendering ⊙ real space ⊙ real interaction
Tiyatro

Hellenistik Dönem'de yapılan tiyatronun (yaklaşık 5300 kişilik) verini Roma Döneminde yaklaşık 15000 kişilik ve 40 m. yükseklikteki üç katlı antiks tiyatro aldı. Tiyatro, zamanla topraka doymuş olan liman köşesinin kısmen yanmışdır. Sahne binasına altı yapı parçaları, tiyatro önündeki alandadır.

Theater

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

Theatre

The Hellenistic theatre (about 5300 seats) was later replaced in Roman times by a monumental building with three galleries (seats: 15000, height: 40 m).
The theatre was located at the shore of the meanwhile silted harbour bay.
The remains of the stage building are stored in front of the theatre.
The city area of ancient Miletos stretched up to Kalabaktepe.
Inscriptions

Examples from plateia at Miletus

I. Milet 208
I. Milet 233
I. Milet 247

Inscriptions

Examples
3D Data Acquisition
Different Scales

Site
Theater
Inscriptions
MiniAR Wunderland, 2019
360 Video Prototype
3D Point Clouds to 3D Meshes
Semantic 3D Point Clouds

Preprocessing

RGB mesh
Composite mesh

Mesh view generation

Image pairs

Semantic labeling

Semantized images

Back projection and accumulation

Semantized point cloud

A. Boulcha: SnapNe, Computers & Graphics, 2018
Inscriptions
Examples from plateia at Miletus
I.Milet 208
I.Milet 233
I.Milet 247
I.Milet 268
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!

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