



Computational Geometry and Ontologies for Cultural Heritage 3D Digital Libraries

What are the future alternatives for Europeana?

Chairs: Ewald Quak and Marinos Ioannides

Date: 30th of October 2012, 10:30 - 17:30

In recent years, the use of approaches based on 3D geometry has seen rapid progress in many different areas from digital factories of the future to car, flight and surgical training simulators to 3D maps, 3D TV/Cinema and games but also in cultural heritage applications. In general, the handling of 3D data poses different challenges but also provides new, exciting and innovative opportunities compared to more established media like texts, images or sound. The goal of this workshop is to present a selection of recent advances, some of which are already used in the cultural heritage domain while others have a high potential for it. The topics are presented with the goal to take into account how these 3D technologies could be used in Digital Libraries for Cultural Heritage (like Europeana, www.europeana.eu), where they could open up far-reaching new opportunities for re-use. Consequently, the workshop will be concluded by a panel discussion including both 3D experts as well as representatives from Digital Libraries and Cultural Heritage Management Systems on 3D potential and future directions.

Short introductions:

The state of the art and the 21st century challenges on 3D Multimedia Digital Libraries
(such as Europeana, Memory of the World)
Marinos Ioannides, Cyprus University of Technology

A research road map for 3D knowledge technology in the cultural heritage domain
Ewald Quak, Tallinn University of Technology, Tallinn, Estonia

Presentations:

1. The Potential of 3D Internet in the Cultural Heritage Domain
Dieter Fellner and Andre Stork, Fraunhofer Institute for Computer Graphics, Germany
2. CARARE Experience and Lesson learned
Kate Fernie, MDR Partners, UK
3. Embedding 3D Documentation in Institutional Practice
David Arnold, Brighton University, UK



4. 3D Modelling, Image manipulation, Data management, Archiving and Backup in the Movies
Neil Dodgson, University of Cambridge, UK
5. Illustration and Analysis of Complex Archaeological Artifacts
Ayellet Tal, TECHNION, Haifa, Israel
6. Geometric Issues in Reconstruction of Virtual Heritage involving Large Populations
Daniel Thalmann, EPFL, Switzerland
7. LR B-splines: New Spline Technology for Compact Representation of Measured Shape
Tor Dokken, SINTEF Applied Mathematics, Oslo, Norway
8. Shape Analysis and Semantic Annotation
Michela Spagnuolo, CNR-IMATI, Genova, Italy
9. 3D Models and 3D Reproduction in Cultural Heritage
Patrick Callet ECP, Ecole Centrale Paris, France
10. Geometry vs Semantics: open issues on 3D reconstruction of architectural elements
Livio de Luca, CNRS-MAP, Marseille, France