3D-COFORM: Making 3D documentation an everyday choice for the Cultural Heritage sector

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Introduction

- Integrated Project:
  - Funded by European Community's Seventh Framework Programme (FP7/2007-2013) under agreement 231809

- EU funding period:
  - 01-12-2008 / 30-11-2012

- Total budget:
  - 8M Euros
The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 231809.
Objectives

To advance the state-of-the-art in 3D-digitization and to establish 3D-documentation an affordable, practical and effective everyday choice for long term documentation of tangible cultural heritage.
How: technical research

- 3D-capture
- 3D-processing
- the semantics of shape
- material properties
- metadata and provenance
- integration with other sources
- dissemination to the public and professional alike

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How: business aspects

- business models for exploitation of 3D assets
- workflow planning and execution for mass digitization
- socio-economic impact assessment
- the creation of a Virtual Centre of Competence in 3D digitization
- setup of one or more demonstrator activities involving real exhibition
Consortium

• 14 partners to form a world class team on 3D technologies
• an equally prestigious group of Cultural Heritage organizations:
  • C2RMF, the research arm of the French Ministry of Culture
  • CULTNAT, the digitization body for cultural and natural heritage funded by the Egyptian Government
• Victoria and Albert Museum as a full partner
• collaborations with:
  • the Louvre, the Florentine Museums authority, the Museum of the Imperial Forums in Rome, UNESCO World Heritage Sites in Cyprus and the Staatliche Museen zu Berlin.

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3D acquisition

- Already existent technologies to be improved:
  - Web based reconstruction (photogrammetry)
  - Laser scanner acquisition
  - Structured light acquisition
  - In-hand scanner

- New technologies:
  - Dome, portable dome
  - Bidirectional Texture Function
3D artefacts processing and analysing

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Archaeological site documentation

- 3D data acquisition – integration of different techniques
  - Ard3D, photogrammetry
  - Laser scanning, TOF
  - Spheron

- 3D-COFORM repository
  - 3D digital library
  - Provenance and long term data preservation
  - Multi-lingual aspects

- 3D reconstruction
  - Meshlab

- 3D representation for research versus public outreach
  - Story telling
  - Evolution of a multi-stratified site
  - Implementation of London Charter principles
  - Re-contextualization of finds

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Website: http://www.3d-coform.eu

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