

CULTURAL HERITAGE



3D-COFORM

Tools and Expertise for 3D Collection Formation

The goal of the 3D-COFORM project is to advance the state-of-the-art in 3D-digitisation and make 3D-documentation an everyday practical choice for digital documentation in the cultural heritage sector. The project addresses all aspects of 3D-capture, 3D-processing, the semantics of shape, material properties, metadata and provenance, integration with other sources (textual and other media). The technical research program of 3D-COFORM is complemented by research into practical business aspects, such as business models for exploitation of 3D assets, workflow planning and execution for mass digitisation, socio-economic impact assessment. In addition, 3D-COFORM aims to create a Virtual Centre of Competence in 3D digitization. The VCC-3D is intended to act as a catalyst in enhancing the sector's capacity for mass digitization of 3D assets - the tangible artifacts of the physical cultural heritage of the world. The Egyptian participant is involved in the development of 3D-digitalisation capability and integrate 3D into their practices.

- FP7: ICT-2007.4.3 Digital libraries and technology-enhanced learning (ICT-2007.4.3)
- Contract type: Collaborative project (generic)
- Start date: December 2008
- Duration: 48 months
- EC contribution to the project: € 8.45 million

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- Foundation for Research And Technology Hellas (Greece)
- Universita Degli Studi di Firenze (Italy)
- Victoria and Albert Museum (United Kingdom)
- Centre National De La Recherche Scientifique (France)
- PIN S.C.AR.L. - Servizi Didattici e Scientifici per l'Universita di Firenze (Italy)
- University of Glasgow (United Kingdom)
- The Cyprus Research and Educational Foundation (Cyprus)
- Rheinische Friedrich-Wilhelms-Universitaet Bonn (Germany)
- Spheronvr AG (Germany)
- Consiglio Nazionale delle Ricerche (Italy)
- Breuckmann Gmbh (Germany)
- Technische Universitaet Graz (Austria)
- Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung E.V (Germany)
- Katholieke Universiteit Leuven (Belgium)
- Eidgenössische Technische Hochschule Zürich (Switzerland)
- University of East Anglia (United Kingdom)

www.3d-coform.eu

ARCHAEOMAP

Archaeological Management Policies

ARCHAEOMAP's objective is to identify and balance interrelated policies about an integrated coastal zone management of ten archaeological coastal pilot sites in the Mediterranean. The project aims to protect the environmental resources and bio-cultural diversity to support socio-economical development and improve the relationship of Mediterranean people with their marine environment through an interdisciplinary research agenda and capacity building aiming. ARCHAEOMAP takes an active interest in sustainable development, putting the accent on conservation and the rational utilisation of coastal zone resources. With the background of interdisciplinary and interculturality the ARCHAEOMAP International Committee encourages scientific research and the collection of information, without ignoring the traditional knowledge of maritime resource management. The Egyptian participant is involved in the interdisciplinary study at the pilot site in Alexandria, the dissemination of activities in North Africa, and in the project of creating an underwater museum and Archaeological Park.

- FP6: POLICIES-3.6 the protection of cultural heritage and associated conservation strategies
- Contract type: Coordination action
- Start date: November 2007
- Duration: 24 months
- EC contribution to the project: € 480,000

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- Fondazione Athena per lo Sviluppo (Italy)
- Museu d'Arqueologia de Catalunya (Spain)
- Archaeological Museum of Florina (Greece)
- Universita Telematica Internazionale Non Statale Uninettuno (Italy)
- Liaisons Mediterraneeennes (Tunisia)
- Association pour la Sauvegarde du Patrimoine Maritime de Villefranche sur Mer (France)
- Istituto Internazionale Per Gli Studi Dell'uomo Per L'aera Mediterranea (Italy)
- Consorzio Universitario per l'Ateneo della Sicilia Occidentale e il Bacino Del Mediterraneo' (Italy)
- Pro Arsenale Borbonico di Palermo Onlus e Aree Museali Circostanti (Italy)
- United Nations Educational, Scientific and Cultural Organization (France)
- Centre National de la Recherche Scientifique (France)

AUTHENTICO

Authentication Methodologies for Metal Artefacts Based on Material Composition and Manufacturing Techniques

The strategic research objective of AUTHENTICO is the innovative integration of non-invasive techniques for the authentication of metal artifacts (utilitarian and ornamental), based on material composition and description of manufacturing techniques. The project proposed to achieve this goal by exploiting the most advanced analytical techniques and by developing and validating portable instrumentation based on selective composition markers detection and characterization of technological fingerprints. AUTHENTICO takes a multidisciplinary approach involving research centres, academia, museums, conservation services, small and medium enterprises, law enforcement agencies, and civil protection bodies. The project experimented with Integrated Authentication Methodologies (IAM) in pilot studies on real authentication problems, involving conservation and authentication authorities in cooperation with law enforcement agencies to validate the authentication protocols and material investigation techniques. The Egyptian participant is taking the lead in the dissemination activities of the research findings and guidelines of the IAM using IT communication technologies and in different events nationally and internationally. The final workshop of AUTHENTICO was held at the Library of Alexandria in Egypt in November 2009.

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- CSP S.A.S. Di Moretti Massimo E C. (Italy)
- Consiglio Nazionale delle Ricerche (Italy)
- Centre de Recherche et de Restauration des Musees de France (France)
- Society for Development of Scientific Cooperation (Tajikistan)
- University College London (United Kingdom)

- FP6: POLICIES-3.6 The protection of cultural heritage and associated conservation strategies
- Contract type: Specific Targeted Research Project
- Start date: June 2007
- Duration: 30 months
- EC contribution to the project: € 799,049

www.authentico.org

HAMMAM

Aspects and Multidisciplinary Methods of Analysis for the Mediterranean Region

The HAMMAM project studied different scenarios for the adaptive reuse of the hammam (public bath) as a public service center for Mediterranean cities. The goal of HAMMAM was to develop strategies and design new concepts of adapting the old Hammam features to a contemporary Islamic life. In addition, it aimed to assess the possibilities for a joint usage of the hammam by local dwellers and tourists interested not only in architecture, but also in getting to know other life styles. A principal objective of this study was to understand and evaluate the function, the concept, the technology and the rules for the running of a hammam. Furthermore, the project addressed the risk factors arising during the revival process of traditional hammams. The HAMMAM study used a case study approach, which investigated the cultural, economical and technical in 6 specific Hammams in 5 different Mediterranean countries and Turkey. The Egyptian partners focused on the study of two hammams in Cairo, the Hammam al-Tanbali and Hammam Bab al-Bahr.

- FP6: INCO-B.2 Protection and conservation of cultural heritage, INCO-B Mediterranean Partner Countries
- Contract type: Networks of Excellence
- Start date: September 2005
- Duration: 36 months
- EC contribution to the project: € 1.9 million

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- Djillali Liabes University (Algeria)
- Centre National de Recherche en Anthropologie Sociale et Culturelle (Algeria)
- Jean Bouillot Architecte (France)
- Middle East Technical University (Turkey)
- Minotaurus Film S.A.R.L (Luxembourg)
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- Université Mentouri de Constantine, Laboratoire Villes et Patrimoine, Dep.d'Architecture et Urbanism (Algeria)
- North Energy Associates Ltd (United Kingdom)
- University of Natural Resources and Applied Life Sciences, Vienna (Austria)
- Vienna University of Technology (Austria)
- Sans Mimarlik ve Lnsaat Lthalat Lhracat Ticaret Limited Sirketi (Turkey)

INFOMAN

Toward Euro-Mediterranean Memory: Expert Workshop on Information Systems for Arab Manuscripts

The goal of INFOMAN was to overcome the problem of working with Arab manuscripts through the development of a pilot web portal for collections that can accommodate different data base structures into one information system. Such a system would allow the search and retrieval of data from the internet. The project carried out detailed studies to determine the commonalities and differences of manuscript information systems by comparing two systems being developed by the Egyptian Participant. The first system is the publicly owned astrological collection of al Azhar University and the second is a collection from the Algerian city of Adrar. INFOMAN supported the meeting of thirty-four experts in the field of preservation of manuscript collections to evaluate the pilot study and the prototype portal. As a result, a logical framework was identified in order to produce a plan of action. The experts produced a number of recommendations for direction in the area of increasing research and innovation between the EU and Mediterranean partner countries in heritage documentation and preservation.

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- FP6: INCO-2002-B2.1 Materials, artifacts, monuments and sites: new technologies and characterisation, INCO-2002-B2.2 Simulation-recreation-comparative preservation methodology
- Contract type: Specific Support Action
- Start date: July 2006
- Duration: 18 months
- EC contribution to the project: € 70,000

www.infoman.cultnat.org/heba

INFRARTSONIC

Development of a Novel and Integrated Portable non Destructive Analysis System for the Documentation of Artworks

The objective of the INFRARTSONIC project was the development of an integrated non-destructive portable analysis-diagnosis system for the 3D sampling and reconstruction of painted artworks. Such a system would be of a unique and invaluable help to art historians for the documentation of cultural objects in the Mediterranean area. The project proposed to employ and optimize three different methods: 1) acoustic microscopy, 2) VIS-nIR-mIR Spectroscopy and 3) nIR-mIR imaging. INFRARTSONIC worked towards unifying these different technologies into one system that enables the display of the depth profile of the paint layers of an artwork as well as the local distribution of the pigments in each of these paint layers. The Egyptian participant identified the users' technical needs and provided historical documentation of the artworks provided from Egypt that were used in the knowledge base. The final workshop of INFRARTSONIC was held in Cairo in June 2009.

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- Royal Scientific Society (Jordan)
- Consorzio Interuniversitario Nazionale per la Scienza e Tecnologia dei Materiali (Italy)
- Aristotle University of Thessaloniki (Greece)
- Saint John of Damascus Faculty of Theology - University of Balamand (Lebanon)

- FP6: INCO-2003-B2.1 Materials, artifacts, monuments and sites: new technologies and characterisation
- Contract type: Integrated Project
- Start date: January 2006
- Duration: 36 months
- EC contribution to the project: € 1.26 million

www.infrartsonic.org

MEDAL

Mediterranean Conservation Alliance

The MEDAL project had as its primary goal the dissemination of experience gained in national and regional projects that worked towards the identification of reliable conservation methods and exposure conditions for artifacts. A questionnaire was distributed to identify the needs of conservators and information was collected in order to design an Anglo-Arabic website to answer these expectations. One- week workshops were held in Turkey and Syria, dedicated to innovative diagnostic tools, methods and materials for conservation of ancient metal artifacts and storage and exhibition planning. In addition, MEDAL organized a training session on the different methods of conservation. The Egyptian participants were involved in all the work packages of the project and participated in all activities. The final workshop for MEDAL took place in Cairo. Different museums and universities from Europe attended the workshop where different methods for the conservation of ancient metals were demonstrated.

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- Politecnico di Torino (Italy)

- FP6: INCO-2002-B2.1 Materials, artifacts, monuments and sites: new technologies and characterisation
- Contract type: Specific Support Action
- Start date: April 2007
- Duration: 24 months
- EC contribution to the project: € 239,999

www.medal-project.eu

MEDISTONE

Preservation of Ancient MEDiterranean Sites in Terms of Their Ornamental and Building STONE: From Determining Stone Provenance to Proposing Conservation/Restoration Techniques

MEDISTONE focused on identifying different stones used at selected sites and determining their origins in terms of geographic areas and quarry sites. In addition to establishing diagnosis of the state of conservation of the stones at the sites and providing answers to the main problems regarding stone conservation and restoration that are liable to be met at the selected sites, MEDISTONE worked towards the development of techniques for reassembling fractured and fissured stones. The project proposed to take into account the climatic and environmental local specificities, as well as the social-economic context in each Mediterranean partner country. Sixty-seven archaeological samples were collected, described and categorised by the Egyptian participant. These samples revealed that the Pharos lighthouse of Alexandria was composed of granite, greywacke limestone, sandstones, marble and sandstones, found at the basement of Qaitbay fort. These stones were mostly derived from two quarries near Alexandria, as well as Cairo and areas in Upper Egypt.

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- Linke-Grutzner-Dahne + Partner Restauraten und Ingenieure / Pons Asini (Germany)
- Institute of Geology and Mineral Exploration (Greece)
- Lithos S.N.C. (Italy)
- Cicrp Belle de Mai (France)
- Cercle des Partenaires du Patrimoine (France)

- FP6: INCO-2003-B2.1 Materials, artifacts, monuments and sites: new technologies and characterisation
- Contract type: Integrated Project
- Start date: January 2006
- Duration: 42 months
- EC contribution to the project: € 1.04 million

www.pons-asini.de/Restaurierung/medistone/medistone.html

NOESIS

Non-Destructive Image-Based Manuscript Analysis System

The aim of the NOESIS project was to produce non-destructive non-invasive image-based processing techniques to aid the historical analysis and examination of five significant Mediterranean collections of manuscripts hosted by libraries and museums in Egypt, Jordan, Lebanon, Cyprus, and Israel. NOESIS proposed to capture digital images from these locations to derive the computational profiles of the ink and support (paper, papyrus, etc) used. These computational profiles, subsequently supported with historical information, would form a tool which allows in situ non-destructive non-invasive image-based analysis of manuscripts, classification of manuscript ink and supports, authentication and dating of manuscripts from the Mediterranean region. It would also enable the isolation, discrimination and analysis of faded or overlapping writings such as palimpsests. The Egyptian partners conducted a workshop in 2007 on papyrus manuscripts and employed the new device to verify the homogeneity of their inks and supports.

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- Greek Orthodox Metropolia (Jordan)
- Greek Orthodox Patriarchate Of Jerusalem (Israel)
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- Team Progetti S.R.L. (Italy)
- Museum of Kykkos Monastery (Cyprus)

- FP6: INCO-2002-B2.1 Materials, artifacts, monuments and sites: new technologies and characterisation
- Contract type: Specific Targeted Research Project
- Start date: September 2004
- Duration: 36 months
- EC contribution to the project: € 709,850

www.eunoesis.org

OPERHA

Open and Fully Compatible Next Generation of Strengthening System for the Rehabilitation of Mediterranean Cultural Heritage

The overall objective of the OPERHA project was to design, develop, test and validate an adaptable and reversible restoration solution for structural strengthening of historical buildings in Europe and the Mediterranean Area, focusing on the use of the fiber reinforced polymer. Careful attention is to be given in restoration on its impact on the ancient building. The OPERHA consortium proposed to conduct scientific and technological testing and validation at lab scale first, and then apply the results on different real heritage buildings in all around the Mediterranean countries. The selection of buildings was made on the basis of their geographical location, common uses, their material and structural components, seismic and environmental conditions. An adobe brick building in Cairo was included in the study.

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- Ecole D'avignon - Centre de Formation a la Rehabilitation du Patrimoine Architectural (France)
- American University of Beirut (Lebanon)
- University of Patras (Greece)
- Fundacion Santa Maria la Real. C.E.R. (Spain)
- Ministry of Tourism and Antiquities, Department of Antiquities (Jordan)

- FP6: INCO-2003-B2.1 Materials, artifacts, monuments and sites: new technologies and characterisation
- Contract type: Integrated Project
- Start date: January 2006
- Duration: 36 months
- EC contribution to the project: € 1.3 million

www.operha.info

PATINE DU DESERT

Re-Creation of the Patina of Saharan Sandstones,
Carrying Engraved or Painted Work, 15000-Year
Witnesses of Climate Changes

PATINE DU DESERT proposed to recreate in situ and in laboratory the patina of sandstones of the Saharan desert, provide support to the engravings and/or cave paintings, and explore the possibility of an 'image-climate' correlation. The project was composed of two main activities: 1) interpreting and modeling the mechanisms of creation of the patina and surface of sandstone, taking into account the characteristics of the rock and their dependence on the local climate parameters; and 2) proposing an innovative reading of Saharan rupestral art to contribute information on the capacity of ancient people to adapt to climate changes which have occurred in this region for about 15 millennia. Included in the study was the El Beiyed or Moneim Cave in Farafra Oasis, Western Desert, where the traces of pre-dynastic people are found on the walls. The Egyptian participant focused on the study of bedrock from the point of petrology and geochemistry.

- FP6: INCO-B Mediterranean Partner Countries, INCO Specific measures in support of international co-operation, INCO-2002-B2.1 Materials, artifacts, monuments and sites: new technologies and characterisation
- Contract type: Specific Targeted Research Project
- Start date: September 2004
- Duration: 36 months
- EC contribution to the project: € 895,000

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- Centre National de Recherche de Préhistoire d'anthropologie et D'histoire (Algeria)
- Association "les Amis du Tassili" (Algeria)

PAPERTECH

Innovative materials and Technologies for
the Conservation of Paper of Historical,
Artistic and Archaeological Value

The paper conservator is sometimes confronted with the problem of restoring documents that have fungal deterioration. A wide variety of fungi inhabit libraries and archives, and many are resistant to changes in humidity and temperature. The aim of PAPERTECH was to develop innovative diagnostic techniques and protocols in order to evaluate the deterioration degree of paper items of historical and artistic value, and the study of innovative materials and technologies for their conservation. PAPERTECH proposed to use enhanced methods of thermal characterization and new micro-analytical techniques for the identification of inks and additives in the samples. In addition, the project proposed to test new synthetic antifungals and laser cleaning technology and evaluate the effectiveness and the compatibility of the materials and technologies set up by characterizing model-samples treated with the different methodologies. The Egyptian participant explored the use of two new materials (cellulose acetate and chitosan) and different techniques for the conservation process of ancient papers, specifically damaged manuscripts from the central library of Cairo University.

- FP6: INCO-B.2 Protection and conservation of cultural heritage, INCO-2002-B2.1 Materials, artifacts, monuments and sites: new technologies and characterisation
- Contract type: Specific Targeted Innovation Project
- Start date: July 2004
- Duration: 36 months
- EC contribution to the project: € 1.3 million

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- Consiglio Nazionale delle Ricerche (Italy)
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PROHITECH

Seismic Protection of Historical Buildings by Reversible Mixed Technologies

PROHITECH proposed to address the seismic protection of historical and monumental buildings. The project's main objective was to develop sustainable methodologies for the use of reversible mixed technologies in the seismic protection of existing constructions, with particular emphasis to buildings of historical and artistic interest. The project studied the combined use of different materials and techniques yields to optimize the global behaviour under seismic actions. The endpoint of the research was a proposal of codification for the use of such technologies in the seismic protection of existing constructions that corresponds to the most updated codification standards at the European level. The Egyptian partner collected data about the seismic activity in Egypt from 2200 BC to 1900 AD, surveyed the monuments struck by these earthquakes, and explored the traditional and present strengthening techniques applied in Egypt for the monuments' restoration.

- FP6: INCO-2002-B2.1 Materials, artifacts, monuments and sites: new technologies and characterisation, INCO-2002-B2.2 Simulation-re-creation-comparative preservation methodology
- Contract type: Specific Targeted Research Project
- Start date: October 2004
- Duration: 36 months
- EC contribution to the project: € 2.4 million

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- Seconda Università Degli Studi di Napoli (Italy)
- Centre National pour la Recherche Scientifique et Technique (Morocco)
- Instituto Superior Técnico (Portugal)
- National Technical University of Athens (Greece)
- Technion - Israel Institute of Technology (Israel)
- Technical University of Civil Engineering Bucarest (Romania)

www.prohitech.com

PROMET

Developing New Analytical Techniques and Materials for Monitoring and Protecting Metal Artefacts and Monuments from the Mediterranean Region

The goal of PROMET was to establish and promote a preventive strategy designed for the Mediterranean region by developing an approach to monitor and protect metal collections using state of the art portable scientific techniques, new corrosion inhibitors and/or coatings that are safe and effective. Cultural heritage objects made of metals tend to suffer the most in terms of their preservation, partially due to the high relative humidity and sea salt contained in the air. Moreover, many collections in the Mediterranean region are not housed in strict environmentally controlled areas or retreated on a regular basis. The Egyptian partners employed a portable, non-destructive device for investigating metal artifacts, particularly those made of silver. Two workshops and a lecture took place in Egypt presenting the device used for elemental and chemical analysis in different applications, including archeology.

- FP6: INCO-B.2 Protection and conservation of cultural heritage, INCO-2002-B2.1 Materials, artifacts, monuments and sites: new technologies and characterisation
- Contract type: Networks of Excellence
- Start date: November 2004
- Duration: 42 months
- EC contribution to the project: € 2.6 million

www.promet.org.gr

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- National Centre for Scientific Research "Demokritos" (Greece)
- Cercle des Partenaires du Patrimoine Laboratoire de Recherche des Monuments Historiques (France)
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QUARRYSCAPES

Conservation of Ancient Stone Quarry Landscapes in the Eastern Mediterranean

The QUARRYSCAPES project aimed to enhance the cultural heritage management of ancient quarry landscapes through the development of methodology and conservation models that can be effectively implemented for a range of cultural contexts. The project proposed to develop scientific and practical methodologies for the documentation, characterisation and conservation of ancient quarry landscapes, raise awareness of the significance and vulnerability of such sites and contribute to legal protection measures and sustainable management of ancient quarry landscapes. The Egyptian partners addressed the development of theoretical and practical methods pertaining to the major steps in the process of conservation. Their activities focused on the Gebel Qatrani area, where the old basalt mines had destructive effects on the site. Guidelines for site management and future protection of the site were produced in cooperation with the Egyptian Antiquities Information System at the Supreme Council for Antiquities and, consequently, the site is now properly mapped and registered in their database. Furthermore, a study of the socio-economic factors surrounding the general aspects of heritage protection and possible benefits to local stakeholders was carried out.

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List of Partners

- Yarmouk University (Jordan)
- Katholieke Universiteit Leuven (Belgium)
- Università luav di Venezia (Italy)
- Middle East Technical University (Turkey)
- University College London (United Kingdom)

- FP6: INCO-2003-B2.1 Materials, artifacts, monuments and sites: new technologies and characterization, INCO-2003-B2.3 Risk assessment and preventive conservation
- Contract type: Specific Targeted Research Project
- Start date: November 2005
- Duration: 36 months
- EC contribution to the project: € 999,998

www.quarryscapes.no

SHADUF

Traditional Water Techniques: Cultural Heritage for a Sustainable Future

The SHADUF project studied a variety of water systems, such as the foggaras, the qanats, the khattaras (drainage tunnels), and the shadufs (wells with a balance bar) that have played an important role in the harmonious management of the Mediterranean landscape. The Egyptian partner was in charge of research related to river management and water catchment techniques in Egypt, where a survey of all the different traditional and historical water harvesting method was carried out with a focus on the ancient water works in the Fayoum oasis. The Egyptian participants confirmed archaeologically the legend of the construction of a reservoir and water works by the kings of the Middle Kingdom and succeeded in discovering the location of a reservoir mentioned by Herodotus (Moeris Lake). The impact of climate change on the Middle Kingdom dams and on later developments in Fayoum was examined with important implications for our current understanding of climate change and its consequences.

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- Sidata Information and Communication Systems (West Bank And Gaza Strip)
- Via Maris Inc (West Bank And Gaza Strip)
- Universite Moulay Ismail (Morocco)
- Sarl Societe Sud Timmi (Algeria)
- Ipogea P.S.C. (Italy)
- Petra National Trust (Jordan)
- National Agricultural Research Foundation (Greece)

- FP6: INCO-2002-B2.2 Simulation-re-creation-comparative preservation methodology
- Contract Type: Specific Targeted Innovation Project
- Start Date: July 2004
- Duration: 36 months
- EC Contribution to the project: € 1.11 million

www.shaduf-eu.org

WIND-CHIME

Wide-Range Non-Intrusive Devices toward Conservation of Historical Monuments in the Mediterranean Area

WIND-CHIME focused on the development of a sustainable and cost-effective retrofit technology, which would allow non-intrusive rehabilitation of historical monuments in the Mediterranean area. Following the main results achieved on a theoretical and experimental ground within a 5th EU Framework programme project, the project proposed to enlarge the geographical area of intervention of the present cooperative effort and to translate the design features arisen from the ongoing project into devices to be actually implemented in some specific cases. More superficially, WIND-CHIME suggested to utilize shape memory alloy (SMA) pre-stressed devices to fasten cracked brick. The validation of the device was pursued through case studies located in the historical areas of the Mediterranean partners. The Egyptian participant focused on slender structures, such as minarets and bell-towers.

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- Jordan University of Science and Technology (Jordan)
- Ethnikon Metsovion Polytechnion (Greece)
- Institut National de la Meteorologie (Tunisia)
- Institut National du Patrimoine (Tunisia)
- Ecole Polytechnique de Tunisie (Tunisia)
- Siart - Sistemi Informativi per l'Analisi del Rischio Territoriale ed Ambientale S.R.L. (Italy)
- Themos Demetriou - Civil Engineer (Cyprus)
- Universite de Tlemcen (Algeria)
- Sintef - Stiftelsen for Industriell og Teknisk Forskning Ved Norges Tekniske Hoegskole AS (Norway)

- FP6: INCO-2002-B2.2 Simulation-re-creation-comparative preservation methodology
- Contract type: Integrated Project
- Start date: June 2004
- Duration: 36 months
- EC contribution to the project: € 780,000

www.dipmec.unipv.it/research/wind-chime

