MODULAR SYSTEM OF SENSORS FOR MONITORING OF MUSEUMS' INTERNAL ENVIRONMENT

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Abstract:

The paper outlines basic concepts of the system for indoor climate monitoring being currently developed in a four-year project. The project concentrates on building system of sensors, the related infrastructure for communication between these sensors and the server for centralized data storage and processing. The components of the planned system are highly modular for adjustment to specific requirements of given collection. The project's aim is to provide basis for remote monitoring of indoor climate and environment of exhibitions and depositories of museums, galleries, archives, etc. situated in historical buildings like castles, chateaus, town halls, where the protection of the building limits measures for indoor climate optimization. Finally the expected outcomes envisage the development of specialized sensors mainly for pest control and development of portable version of data sensing units for supervision of environmental parameters of collection during transport.

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RESONANCE IN DETERMINING THE AGE OF PAINTS

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Abstract:

The age of paint is one of important forensic problems since a number of forgeries of artistic paints permanently increases. There are many attempts in solving this problem. One of ideas is accelerated drying of paint. This work is devoted to that problem.
We start from the fact that all paints contain some per cent of molecules H_2O and that their humidity decreases in time. The humidity level is one of the criterions for determining of paint age. Accelerated decrease of humidity can be realised by resonance effect, since resonant energy is proportional to the square of time. The molecules H_2O are strong dipoles and therefore they can go over to resonance state, both by mechanical as well as electrical resonators.
In the first part of this work we shall shortly expose elements of mechanical and electrical resonance.

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NEOLITHIC SETTLEMENT IN BYLANY: TAKING A NEW LOOK AT OLD DIGS

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Abstract:

The aim of the project is to apply 3D scanning technology to create a virtual museum providing a picture of the Neolithic culture, based on the example of the settlement in Bylany (Czech Republic), dating from the 5th – 6th millennium B.C. The main parameter of the applied research is to set up a methodology for recording and presenting archaeological finds digitally. The basic technology is optical 3D scanning of artefacts that exactly reflect the 3D surface geometry and will bring new presentation possibilities. Acquired digital records can also serve as well as for research and educational purposes on all academic levels. The project's most important output consists in a virtual museum on the web of the Neolithic settlement area. Moreover, the open library of 3D scans will integrate a thematic GIS map of the Bylany site and its virtual model showing different forms of the immovable heritage (i.e., houses, circle enclosures and villages).

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MEDIEVAL GRAVE FRESCOES IN THESOUTHERN NETHERLANDS AND BRUGGE

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Abstract:

Written to accompany a longer study, this short paper firstly highlights the uniqueness of medieval grave wall paintings in the south of The Netherlands and Brugge, Belgium; and secondly suggests mostly preventative conservation methods to aid the on going protection of these frescoes. Though graves are scattered, this study focuses on graves from three nearby but very different locations, Brugge, Aardenburg, and Middelburg. Graves share stylistic and motif similarities that result in the need for scholars to group these graves together as a type, in a way that was not done previously, as one by one the graves were accidentally found since the 1950s. Despite how these graves have been subjected to drastically different environments in previous decades, the problem of their conservation needs to be addressed using co-operation between the various regions rather than individually. The Saint Salvator Church in Brugge has already taken action recently, securing protection for the four painted graves with regulated air-conditioning under air-tight glass floor displays. The time is right to encourage appropriate action for other comparable graves nearby.

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HOW DOES DIGITAL PROGRAMS HELP TO UNDERSTAND URBAN EVOLUTION THE STUDY CASE OF A PORTUGUESE MEDITERRANEAN VILLAGE

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Abstract:

The cultural heritage of fisherman's town of Fuseta, on the southern Portugal, is an interesting example of Mediterranean vernacular architecture. Totally built in just one-step at the turn of the 19th to 20th century, the historic centre presents a homogeneous urban fabric characterized by a typology of house covered by vaults' terraces and pyramidal roofs strategically located. Nowadays, the urban network extrapolates the original historic centre to the involving areas, with a demarcated rural structure.
This paper aims to reflect about the contribution of space syntax descriptive model, an alpha numeric's calculation software (Depthmap Software), based on visual and spatial networks' analysis, to the study of the urban evolution.
The almost inexistence of bibliography related to the urban history of this territory, enforces the use of alternative methods to increase the architectural morphology's theories and other theoretical approaches focused on the reading of urban territories.
The Depthmap modelling of the town's digital cartographic allowed the production of a maps that expresses parameters and urban concepts universally defined. The main question consists in how deep this new urban modelling information is and how useful are these maps or they just show evidences.
In conclusion, the appliance of the Depth map Software on the study of the Fuseta's urbanism permitted to do a reliable parallel between the unknown urban characteristics of the 20th century beginning with the well-known structure of today, at same level of measurements, detailing, information and parameterization.

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'IREP EN KEMET' PROJECT: CREATING THE CORPUS OF WINE IN ANCIENT EGYPT

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Abstract:

Presented are the research objectives of the project 'Irep en Kemet', *Wine of Ancient Egypt*, and the content of the website. This research project aims at documenting the complete corpus of wine in ancient Egypt and analysing the data (iconography, textual sources and artefacts) to unveil the importance of the ancient Egyptian wine culture legacy in the Mediterranean region. At this stage, a bibliographical researchable database relevant to wine, viticulture and winemaking in the ancient Egypt has been completed, a scene-detail database for the viticulture and winemaking scenes in the Egyptian tombs has been recorded, and the collected data will be studied and analysed. Our main goal is to provide scholars with a complete, comprehensive archaeological and bibliographical database for the scenes of viticulture and winemaking depicted in the Egyptian tombs throughout the ancient Egyptian history. The project's website (under construction) will include all the collected data, the study and analysis, as well as the results of our research.

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PROTECTION OF CULTURAL HERITAGE OBJECTS WITH MULTIFUNCTIONAL ADVANCED MATERIALS

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Abstract:

The FP7 funded project HEROMAT started in November 2011 and will last for 48 months. The aim of the project is to develop innovative and environmental friendly materials that have chemical and mechanical properties tailored with respect to the protection of immovable cultural heritage assets. Through knowledge exchange among members of the international team of the experts the multidisciplinary research will offer new solutions for protection and consolidation of cultural heritage objects by the development of innovative protective materials: self-cleaning coatings, anti-microbial coatings and consolidants with or without hydrophobic properties, which will be effective for different categories of cultural heritage objects. This project aims to contribute to an efficient and long-lasting solution for the prevention of degradation, keeping the authenticity, functionality and the aesthetic appearance of the cultural assets and remaining their socio-economic benefits. The Pan-European project team coming from Serbia, Slovenia, Italy, UK and Russia, cross-links the experts and focus their work on the restoration and consolidation of two selected historical objects, one located in urban (Bač Fortress, Serbia) and the other in rural (Manor in Dornava, Slovenia) environment, both having continental climate. The targeted surfaces are inorganic mineral substrates of cultural heritage objects: stone, brick, mortar, render and color finishing layers.

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INVESTIGATIONS ON A BULL'S HEAD FROM PYRGOS/MAVRORAKI (LM) TO DESIGN THE BIODIVERSITY OF CYPRUS IN EARLY-MIDDLE BRONZE AGE.

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Abstract:

The site of Pyrgos-Mavroraki near Limassol in Cyprus, destroyed by an earthquake in 1900-1850 B.C., is situated in an elevated position in the center of a vast settlement of the ancient and Middle Bronze Age before the Calcolitic period. The unchanged position of the structures and the finds, that remained unknown for 4000 years near the homonym village, offers a unique opportunity to carry out sedimentological, paleopalinolocical and archeobotanic investigations on totally uncontaminated materials. The results of the sedimentological and paleopalynology investigations and the characterization of other plants micro remains found in the samples from the bull's head SL (PY 09 D.10 B) make it possible to formulate some considerations on the vegetation in the ancient landscape.

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TOWARDS A EUROPEAN COLLABORATIVE DATA INFRASTRUCTURE

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Abstract:

The EUDAT project is a pan-European data initiative that started in October 2011. The project brings together a unique consortium of 25 partners–including research communities, national data and high performance computing (HPC) centres, technology providers, and funding agencies–from 13 countries. EUDAT aims to build a sustainable cross-disciplinary and cross-national data infrastructure that provides a set of shared services for accessing and preserving research data. The design and deployment of these services is being coordinated by multi-disciplinary task forces comprising representatives from research communities and data centres. This short paper presents the achievements of the project during its first year and describes the services that have been chosen to meet the requirements of the initial research communities involved in the project.

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CLEANING PICTORIAL HERITAGE: MANAGEMENT AND DISSEMINATION OF CLEANING RECORDS AND STRATIGRAPHIC DATA

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Abstract:

At present, the process of documentation can be considered the cornerstone of the different tasks within the field of conservation and restoration of cultural heritage. However, this is not the case with cleaning. Despite its importance in the conservation of pictorial heritage, little effort has been made to improve the management and dissemination of information. Cleaning is one of the most usual procedures, yet, at the same time, it is also one of the most problematic and controversial. Therefore, it would be very useful that the information generated by cleaning could be widely disseminated and serve as reference for researchers and conservators around the world. When a conservator carries out a cleaning operation on a painting, two kinds of interrelated data are produced: stratigraphic data and cleaning records. Stratigraphic data are those concerning the configuration and composition of the stratigraphic structure on which the cleaning is carried out. Cleaning records gather together data concerning the actual cleaning process. All this information is key for conservators when working on other paintings. The information published is usually insufficient to understand how the intervention was carried out, so there is a need for standardized systems which allow a great deal of information to be gathered and disseminated with ease. This paper explains a selection of proposals, some of which are already in use, and others which are being developed: stratigraphic unit recording sheets, solubility test recording sheets and stratigraphic diagrams.

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OPEN ACCESS TO SCIENTIFIC RESULTS AND DATA. EUROPEAN UNION'S EFFORTS THROUGH OPENAIRE AND OPENAIREPLUS FP7 PROJECTS: CYPRIOT PARTICIPATION

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Abstract:

The paper presents the introduction of Open Access movement in the Academic environment,pros and cons of the adoption of OA by Universities and how the European Union is enforcing the use of Open Access. The ways of implementing OA, the policies of publishers and journals regarding the deposits of publications and the RoMEO and Juliet projects are also referred in an effort to give an overview of the conditions in exploiting Open Access, either as authors, publishers or end users. The adoption of Berlin declaration on Open Access to Knowledge in the Sciences and Humanitiesby the Senate of the University of Cyprus is commented in the paper. Furthermore an analysis of the projects OpenAIRE and OpenAIREplus in which the University of Cyprus Library is involved is provided.

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ANALYSIS OF QUINTILI'S VILLA BRONZES WITH SPECTROSCOPIQUES TECNIQUES

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Abstract:

The aim of this work is the characterization with different diagnostic tests of some bronze artefacts recovered from an excavation carried out at Quintili's Villa, (located in the south of Rome). The work aim is the study of sample alloys with two different investigations: first an analysis of the alloy, implemented through the electronic spectroscopy, to discriminate the bronze alloy morphology and its elemental composition; second a surface analysis, carried out by molecular spectroscopy, to identify the alteration products (such as bronze disease). Two diagnostic techniques are used for the alloy analysis: scanning electron microscopy *SEM* connected to the EDX spectroscopy (to study the morphology and alloy composition) and Auger Electron Spectroscopy *AES* (to identify the oxidation state of each element). For the altered surface analysis we used IR and Raman spectroscopy. The studies listed above were performed through two cycles: a first cycle performed on the "*as received"* samples, still covered by a thin layer of excavated soil and a second cycle on treated samples with dilute sulphuric acid (10%). Treatment with H_2SO_4 was used to remove some products of the bronze alloy alteration and the surface soil layer.

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PRELIMINARY IDEAS FOR A PROJECT ON CULTURAL HERITAGE:"HEVA"- DIGITAL RESOURCES OPTIMIZATION FOR THE ENHANCEMENT OF CULTURAL HERITAGE

Fernández Martín, J.J.[a], GarcíaFernández, J. [a], Delgado del Hoyo, F.J. [b], Finat Codes, J.[b]

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Abstract:

The Cultural Heritage documentation by itself is meaningless if it does not allow to create wealth and provide values to society. In the last years, the number of digital contents related to cultural heritage resources is growing in a way that it very difficult to search reliable information. Thanks to Internet they can be easily published and distributed but there are three main problems: 1) the quality of the resources is not well evaluated or tagged; 2) the resources are fragmented across several non-linked repositories; 3) most of the resources are not adapted to different kinds of devices and users. These problems are more remarkable in point clouds and three dimensional models digitalized at high resolution, to achieve a higher level of detail because they are too heavy for visualization, transmission and representation.
The present statement of intentions aims to develop a project –HEVA: HEritageVAlue– for creating an effective methodology to simplify and improve the exploitation and transmission of cultural heritage documentation in the three most relevant fields: culture, education and economy. The main goal of the project is to reformulate the objective of cultural heritage documentation from a sustainable perspective, linking the efforts to the achievements and optimizing the processes. At the same time, the project will create synergies between multiple agents involved in documentation, allowing an intelligent diffusion of cultural heritage such that heritage can reach interested people, people who really want to be reached.

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PRELIMINARY IDEAS FOR A PROJECT ON CULTURAL HERITAGE:"HEVA"- DIGITAL RESOURCES OPTIMIZATION FOR THE ENHANCEMENT OF CULTURAL HERITAGE

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Abstract:

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A PHOTOGRAMMETRIC ANALYSIS OF CUNEIFORM TABLETS FOR THE PURPOSE OF DIGITAL RECONSTRUCTION

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Abstract:

Despite the advances made in the recording and cataloguing of cuneiform tablets, there is still much work to be done in the field of cuneiform reconstruction. The processes employed to rebuild cuneiform fragments still rely on glue and putty, with manual matching of fragments from catalogues or individual collections. The reconstruction process is hindered by inadequate information about the size and shape of fragments, and the inaccessibility of the original fragments makes finding information difficult in some collections. Most catalogue data associated with cuneiform tablets concerns the content of the text, and not the physical appearance of complete or fragmented tablets. This paper shows how photogrammetric analysis of cuneiform tablets can be used to retrieve physical information directly from source materials without the risk of human error. An initial scan of 8000 images from the CDLI database has already revealed interesting new information about the tablets held in cuneiform archives, and offered new avenues for research within the cuneiform reconstruction process.

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THE MUSEUM ENVIRONMENT: A COMPLEX COMMUNITY OF OBJECTS, PEOPLE AND DEVICES

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Abstract:

The beginning of the 21st century is an exciting time for museums in terms of new, engaging and interactive exhibits. Current technological developments offer museums ideal opportunities to meet the increasing expectations of their visitors, many of whom are the younger generation growing up in the digital age. With a multitude of devices and objects as well as people incorporated into an ever-growing network of interconnected systems, new patterns, forms of interactions and social relations will emerge. In order to engage visitors, museums are adopting new technologies which come with many possibilities, but also have their individual challenges and limitations. Museums should start looking at the unification of many such technologies in order to capture visitor attention, engage visitor interaction and facilitate social activities, since the large quantity of digital input and output capabilities of these technologies are hidden potentials. However, unless specifically designed for, many of these capabilities remain hidden and technologies remain oblivious of each other's features. Making them aware of each other's capabilities opens the channels for new synergy and engaging experiences for museum visitors. This paper proposes a framework which uniquely identifies a community of people, artefacts and devices within the museum environment and provides the means to discover, and make use of the technological properties of each element, treating them as an interacting ecosystem of complex adaptive systems and networks in physical spaces.

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COMPUTER VISION TOOLS FOR 3D MODELLING IN ARCHAEOLOGY

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Abstract:

In archaeological Cultural Heritage study the 3D modelling has become a very useful process to obtain indispensable data for documentation and visualization. Nowadays the continuous request to achieve photorealistic 3D models has been leading to test different techniques and methodologies able to speeding up both data acquisition and data processing phase. There are many examples of surveys conducted with the use of range-based and image-based techniques, but, in the last few years, the scientific research has been increasingly moving towards the automatic procedures using Computer Vision approach to reduce time during data processing. Computer Vision approach offers a great opportunity for archaeological survey since it can be very easily used by existing Computer Vision interfaces such as3D web services and open source or low cost software. The aim of this work is to evaluate the performance offered by Computer Vision interfaces for 3D survey of archaeological ruins using some 3D web-service tools and a low cost software like PhotoScan package. Some tests have been performed to analyze the geometric accuracy of 3D models obtained by 3D web-service tools and PhotoScan package through the comparison with a 3D model achieved by laser scanning survey.

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UAV SYSTEMS FOR PHOTOGRAMMETRIC DATA ACQUISITION OF ARCHAEOLOGICAL SITES

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Abstract:

The use of UAV systems for surveying archaeological sites is becoming progressively more common due to the considerable potential in terms of rapidity of survey, costs and accuracy. The paper presents the first results of the photogrammetric survey of the archaeological site of Himera in Sicily (Italy) using by UAV systems. A complete documentation of the site through the production of a DSM and an ortho image were carried out. The research further evaluated twodifferent image processing workflows: a typical photogrammetric approach and a computer vision approach. An ortho imageof the archaeological site with a very high resolution was obtained.

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* Corresponding author.
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REDISCOVERY OF THE COURTYARD, AS A MAJOR INTANGIBLE CULTURAL HERITAGE

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Abstract:

The radical and huge scale changes in the island of Cyprus, especially of the last century resulted to a significant disruption with the social and cultural heritage. The paper will focus on the Courtyards as indispensable part of the intangible cultural heritage which carries invaluable 'wisdoms' stemming out form the rich history of the island, the climatic and topographical conditions, but decapitated due to the modernization brought by the British colonization and the well rooted enforcement of the urban regulations of the young government. More specifically it will concentrate on ways and mechanisms of not only how to revive this intangible architectural quality, but rather to evolve it in order to generate new spatial typologies responding to the social and cultural changes in relation to their new organizational and functional requirements.

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THE "TERME DEL CORALLO" IN LIVORNO, ITALY, A CONTRIBUTION TO TRY GOING BEHIND THE ABANDON

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Abstract:

In Livorno, along the Mediterranean sea, in Italy, there is a terrific case of abandon, a historical monument made of fine art element is left to the complete decay. The name of the place is "Terme del Corallo" and at its beginning it was a bath area exploiting the salt waters. After its first abandon, no serious efforts were done in years to come behind this situation, the poor and slow moves towards the restoration were stopped and slowed down by inefficiencies and infinite political times. The monument is now on the edge of its collapse, showing a full failure of cultural preservation. According to this visible shame, a compact, almost viral, approach was started one year ago, entering the area in official (and less official) moments, a photogrammetric, photographical and direct survey was taken to document the condition of this monument. The further research was aimed to integrate and enhance the existing (poor) survey drawings and developing a restoration hypothesis to recover to a solid, realistic and effective life the whole monument. This paper will present the work made and the procedures, processing and results came out from this direct approach to this badly abandoned monument. The aim is to put in evidence this wrong situation, and to promote a sensitization about the correct choice to be taken for this monument before this rare artistic place from the XX Century will get completely lost.

EASING THE CREATION OF MAPPINGS BETWEEN METADATA FORMATS

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Abstract:

Being able to exchange metadata is the key to ensuring access to collections, establishing interoperability among collections, and between different types of cultural heritage institutions, such as across libraries, museums and audio-visual archives. Motivated by two use cases, one for audio-visual archives and one for museums and general archives, we present an approach for automating mapping between different metadata formats. The mapping approach uses an intermediate ontology and formalises the relations to each of the metadata formats supported. An intuitive web-based configuration user interface is provided in order to build and customise mappings. Based on the two use cases, we discuss two ways of applying the mapping approach: as a web service, which can be included in processes of an audio-visual archive's preservation system and integrating of the generated mapping instructions into collection management applications for museums and archives. The proposed approach reduces the effort for defining metadata conversions. It thus allows overcoming interoperability issues between cultural heritage institutions and facilitates content provision to portals like Europeana and Archives Portal Europe.

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DIGITAL ARCHIVE SYSTEMS USING CMS AND GALLERY TOOLS – IMPLEMENTATION OF ANTHROPOLOGICAL MUSEUM –

Kawano

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Abstract:

Recently, we have good opportunities to integrate various digital collections and archive systems using loosely coupled and meaningfully connected hyperlinks from various viewpoints of cultural, social and technical aspects. In this paper, from technical view points, we present our implementation of digital anthropological museum using CMSs (Contents Management System) and gallery tools. Firstly, we have a brief comparison of digital archive software's including popular CMSs. Recent years, Museums, Libraries and Archives (MLA) are making efforts to provide various digital collections and born-digital information by using digital archive systems. For example, major national libraries and long-term preserving organisations, such as IIPC (International Internet Preservation Consortium), gather and preserve huge amount of web pages, and curate them using web curator tools. Secondary, we propose a metadata schema for digital collections in "*the Anthropological Museum of Nanzan University*", which is based on the guideline of museum objects. Our proposed schema based on XML metadata formats like URI/RDF/MODS. Finally, we show the system architecture of digital anthropological museum and implementation of three different prototype systems based on different CMSs add-on modules and other related software's. From 2005 to 2012, we have 1776 digital collections with 74 metadata attributes and 40,000 ethnographic photographs without metadata, at present we store 277 digital contents having detail values into our prototype of digital museum system. Using interfaces of prototype systems, we also introduce workflows of museum collections including content rights management.

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NANOMATCH: A EUROPEAN PROJECT TO DEVELOP CONSOLIDANTS THROUGH THE SYNTHESIS OF NEW INORGANIC NANO MATERIALS FOR THE CONSERVATION OF BUILT HERITAGE

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Abstract:

The problem of deterioration of historical building materials, namely stone, wood and glass has become more and more urgent. Climate changes have increased the impact of natural decay whilst socio-economic requirements claim a more sustainable use of existing built heritage. The EU project NANOMATCH addresses this problem through the development of a family of innovative materials. These are specifically designed for the consolidation requirements of historical substrates and for the production of high performance products to fill the gap in the market dedicated to the conservation of built heritage.
Metal-alkoxide precursors will be synthesized and their properties will be tuned based on the substrate characteristics of respectively stone, wood, glass to fulfil specific functionalities. The consolidation effects will be first evaluated through lab experimentation and subsequently the most suitable metal alkoxides will be tested in different European sites to evaluate also the environmental effects on their performance This will lead to a new generation of nano-products specifically tailored for historic materials in a context of climate change, emerging from the most recent and advanced research in the fields of conservation science and nanotechnologies. The development of suitable products for the treatment of historical materials will finally stop the inappropriate use of several commercial products, especially polymers. These have shown in recent years detrimental effects due to their fast deterioration and have also hampered the treated material as well.
Central to the project is the synthesis of molecular precursors, nano-coating deposition and assessment of their conservation properties leading to the production of innovative products for the market of conservation in replacement of unfit traditional ones. The basis for their production and market introduction will be developed within the project.

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HOW TO BUILD A DAM AND SAVE CULTURAL HERITAGE

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Abstract:

The impact of each dam on cultural heritage is enormous, affecting hundreds or even thousands of sites. Dams are required, however, to offset water shortages and provide electricity for a rising global population. This short paper describes the initial outcomes of a new project, the aim of which is the production of a practical set of guidelines for cultural heritage management before and after dam construction, aimed at developers, foreign contractors, and policy-makers.

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CULTURAL ROUTES AS A SOURCE FOR NEW KIND OF TOURISM DEVELOPMENT: EVIDENCE FROM THE COUNCIL OF EUROPE'S PROGRAMME

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Abstract:

Europe offers a wide variety of cultural itineraries that, crossing several regions or countries, provide a living example of the rich and impressive European common heritage. For more than two decades 24 of such itineraries have been jointly collaborating under the Council of Europe's (CoE) Cultural Routes Programme aimed to preserve the diversity of European culture and heritage, and to promote understanding of Europe's history. Today, when cultural heritage is more and more often viewed as a new form of good - cultural good, - methods of heritage management are changing to incorporate new elements, which could help local communities to draw more obvious benefits from their cultural legacy while preserving and maintaining its uniqueness. Often these elements come from tourism: a new kind of tourism, which is respectful of the environment, of the natural and cultural heritage and of the local traditions. This article offers an overview of the *Study on the CoE Cultural Routes Impact on Tourism SMEs* (Khovanova et al., 2011) that demonstrated how the need for implementing sustainable tourism management practices is growing within the CoE cultural routes. One of the breaking findings of the *Study* was that, even though founded on social and cultural principles, CoE routes today serve as a source of innovation, small business creation, local income generation, and cultural tourism products development. These potentials are now been reinforced by building in sustainable tourism elements in cultural routes management practices, and by bringing the benefits of ICT and digitalization, following the *Study* recommendations. The findings of the *Study* could also help cultural heritage managers and policy makers around the globe to better understand tourism potential of cultural heritage sites, while encouraging respectful and sustainable management approaches.

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3DPUBLISH: A WEB-BASED SOLUTION FOR BUILDING DYNAMIC 3D VIRTUAL MUSEUMS

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Abstract:

Today museums around the world offer their content through two basic methods: a simple view of their artworks through a content viewer, or through a custom designed 2D or 3D virtual exhibition in which the pieces and the scene are static. This paper describes a 3DPublish tool which represents an alternative to these two static solutions thereby giving the possibility to dynamically manage a 3D virtual scenario (real or imaginary) and the artwork that composes it. This gives the user a most realistic experience through different exhibitions, using various added value methods like storytelling or virtual tours. 3DPublish will facilitate the museum curator's daily tasks and will improve the final results for 3D virtual museum exhibitions. This application was created as part of the Tourspheres project, which challenge is to explore new measurement systems to reach a more valuable tourist behavior comprehension. But after the experience (presented in this paper as a case study) of creating a custom development for an exhibition for the Kubo Galleryin San Sebastian (SPAIN), the work focused on Abstracting all processes to package the 3DPublish tool with the aim that it becomes a commercial solution.

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THE POLYCHROME SYNOPIA OF ROMAN MOSAIC AT LOD (ISRAEL): PIGMENTS CHARACTERIZATION AND MICROSTRATIGRAPHIC STUDY

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Abstract:

This paper presents the results of the archaeometric study on the pigments and the painting techniques used to produce the polichromesynopia found under the *tesserae* of the Roman mosaic at Lod (Israel). The red, yellow, green and black paints, laying on the *sovranucleus* of the preparation mortar under the mosaic, were studied by polarised light microscopy on disperse pigments (PLM), reflected light microscopy (RLM), scanning electron microscopy (SEM) and X-ray powder diffraction. The palette comprises red and yellow ochre, cinnabar, green earth and carbon black. The microstratigraphic analysis shows the presence of a carbonation layer including the pigment particles on the top of the mortars, indicating that the pigments were laid on a fresh mortar, according to a *fresco* technique.

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DAMAGE ASSESSMENT AND CHEMICAL CHARECTERIZATION OF GLASS OBJECTS EXCAVATED FROM GADARA, NORTHERN JORDAN

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Abstract:

During the excavation works carried out by the Department of Antiquities, at the archaeological site of Umm Qais/Gadara, Northern Jordan, from January 6 to February19, 2009, a considerable collection of glass objects of different typologies and colors were uncovered in a Roman cemetery. These glasses were characterized chemically by using X-ray fluorescence spectroscopy (XRF) and examined by scanning electron microscopy (SEM). The results indicated that these glasses are of soda-lime–silica type and correspond to the previously defined Levantine I glass group, and dated back to the Roman period (1st-4th Century AD). Furthermore, SEM investigation revealed that those glasses are completely corroded, and subjected to intensive deterioration. Therefore the preservation of those deteriorated glasses was important because of their archaeological and technological interests.

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HISTORICAL AND MATERIAL APPROACH TO THE PAINTINGS AT THE PORTUGAL NATIONAL LIBRARY: CONTRIBUTIONS TO THE HISTORY OF CONSERVATION AND RESTORATION OF EASEL PAINTING IN THE 19th CENTURY

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Abstract:

There are in the National Library of Portugal (BNP) about fifty paintings from extinct convents, mainly portraits executed between the sixteenth and nineteenth centuries, which are hung in rooms and along corridors, far from the eyes of the public and simultaneously protected of recent conservation and restoration interventions. These paintings, with little artistic interest, are, however, individual cases for the study of conservation and restoration interventions made in the nineteenth century. The data obtained will contribute to the history of paintings restoration, in terms of its practical aspect (about materials and techniques used), that is still to be written in Portugal.
Our research, which began in January 2011 and will predictably end in December 2013, has been oriented by three complementary lines of action, with an interdisciplinary methodological base: the exploitation of the BNP's precious and unpublished documental archive; the assessment to the conservation status of the paintings and identification of restoration works; and the material study of the works, from physical and chemical methods of examination and analysis, in order to deepen our technical knowledge about the restoration of easel painting in the nineteenth century.
Through historical documents we could identify periods of restoration, restorers and materials used. The observation of paintings allowed selecting a set of twenty-seven pieces that showed old restorations, made in the nineteenth or early twentieth century. In addition it's very important to use examination methods and laboratory analysis to characterise the restoration works and the materials used.

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A DYNAMIC ONLINE INTERFACE REPRESENTING A POLYVALENT CULTURAL IDENTITY: THE CASE OF CRETE

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Abstract:

Conceptual models offer the ability to capture several concepts, and more importantly their often complicated relationships, in one single view. When applying this method in order to represent a geographical region's past, this would mean an emphasis on the dynamic structure of the cultural phenomena represented and not on a formalistic evolutionary catalogue of data and de-contextualized information. Especially when dealing with complex and deep hierarchies or intangible notions, a conceptual model can offer an additional level of perceptual understanding. We use the Conceptual Modeling Language (ConML) in our proposed application for the presentation of the main monuments of Crete as a tool for organizing, manipulating, and communicating the large amounts of data such a project entails. Conceptualization and Abstraction of information through different levels of detail allows the application to be light and easy to use. Moreover, the ability to switch between different historical periods offers a comparative study of the monuments evolution in time. Thus, we aim at a dynamic representation from the user of Crete's, an island characterized by the Mediterranean's rich and polyvalent historical development, culture.

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MEMORI PROJECT:EVALUATION OF DAMAGE TO EXPOSED ORGANIC-BASED HERITAGE MATERIALS AND NANOFORART : EVALUATION OF NANOPARTICLE-BASED CONSERVATION TREATMENT

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Abstract:

This paper presents preliminary studies and work in progress in the framework of two FP7 projects: MEMORI (Measurement, Effect Assessment and Mitigation of Pollutant Impact on Movable Cultural Assets – Innovative Research for Market Transfer) and NANOFORART (Nano-materials for the conservation and preservation of movable and immovable artworks). One of the aims of the MEMORI project is the determination of threshold levels of damage to exposed organic-based heritage objects as little is known about the impact of organic compounds, especially volatile organic acids, on organic-based cultural objects. In the previous PROPAINT project (Protection of Paintings during Exhibition, Storage Transit) it was recently demonstrated that levels of volatile organic compounds (VOCs) were often much higher in the micro-climate frames used to protect paintings than recommended levels. In this paper, examples will be given of changes observed in varnished strips exposed at selected sites. Studies on the effect on collagen-based materials will also be presented. Techniques used in both projects include Dynamic Mechanical Analysis (DMA), micro-thermal analysis (μ-TA), and atomic force microscopy (AFM). The NANOFORART project explores the effects of using nanoparticle-based conservation treatment on cellulosic and collagen-based cultural materials. It builds on previous work performed on deacidification of canvas paintings using conventional materials. For collagen-based materials, no previous conservation treatment using nanoparticles has been performed on historical parchment or leather objects. Preliminary work is directed at understanding the type of nanoparticles to use to improve the physicochemical state of collagen-based objects.

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ASSESSMENT OF LICHENS' METABOLIC AND DEGRADATION PRODUCTS AT DORNAVA MANOR

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Abstract:

Five major types of lichen were discovered in the investigated specimens from Dornava Manor. All these lichens and/or their combinations are considered common lichenous overgrowth for the region and its climate. For all of the positively identified lichen species, it is common that they are found on a wide variety of calciferous or base-rich substrata, incl. mortar, brick, roofing tiles, walls, also in large urban areas (are not particularly disturbed by pollution/eutrophication), therefore preferring neutral to basic environment. They are well adapted to sunlight (from scarce direct solar irradiation to sites with very high direct solar irradiation) and can tolerate low water accessibility.
In some of the lichens parietin, an orange organic pigment, was found, indicating the sun exposed areas. Additionally, carotenoids and pulvinic acid derivatives were identified, from which the metabolic pathway of lichens can be determined. These products can also represent biomarkers that can be linked to the survival strategies of lichen communities in stressed environmental habitats.
For many of the investigated samples the lichens' degradation products like oxalates were identified, mainly calcium oxalate Weddellite, while the ammonium oxalate Oxammite is also possible.

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AN INTERDISCIPLINARY APPROACH TO THE PRESERVATION OF THE GAIOLA ARCHAEOLOGICAL UNDERWATER PARK AND THE POSILLIPO COASTLINE, BAY OF NAPLES (SOUTHERN ITALY)

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Abstract:

The aim of this paper is to present ten years of underwater archaeology investigations in the Marine Protected Area "Gaiola Underwater Park" in Naples, Southern Italy since its institution in 2002. These results are at the basis of a development plan that is now the basis for new researches aimed to create a model of enhancement for the underwater archaeological heritage in the Mediterranean context. The project is developed by an interdisciplinary group of young researchers so that all the issues correlate to the marine environment can be taken in account.

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DEVELOPMENT OF TOOLS AND TECHNIQUES TO SURVEY, ASSESS, STABILISE, MONITOR AND PRESERVE UNDERWATER ARCHAEOLOGICAL SITES: SASMAP.

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Abstract:

Development of Tools and Techniques to **S**urvey, **A**ssess, **S**tabilise, **M**onitor and **P**reserve Underwater Archaeological Sites (SASMAP) is an EC funded project, with the purpose to develop new technologies and best practices in order to locate, assess and manage Europe's underwater cultural heritage in a more effective way than is possible today. SASMAP will take holistic- and process- based approaches to investigate underwater environments and the archaeological sites contained therein. SASMAP will benefit the management of underwater cultural heritage in Europe and in the rest of the world by providing valuable tools to plan the preservation of offshore archaeological sites and their contents in accordance with both the Treaty of Valletta (1992) and research driven investigations.
The need for SASMAP is based on the results from previous and current EU initiatives, the networks resulting from these projects and on-going research at the consortium's institutions. Within SASMAP a holistic approach will be taken to locating, assessing, monitoring and safeguarding underwater cultural heritage. This will involve developing and utilising tools and technologies to allow "down-scaling" from the large scale regional level, moving on to the local site level and finally to the individual components of a site. Results obtained from the down-scaling approach at the proposed study areas will show the effectiveness of such an approach for locating and detailed mapping of archaeological sites and their preservation potential. The end results of this approach will be used to develop a plan for assessing archaeological sites in European waters. From a management point of view this is an up-scaling approach to planning (bottom up). All information and experiences obtained during the course of the project will be utilised to enhance and develop existing legislation and best practice for mapping and preserving Europe's underwater and coastal heritage. The project started in September 2012 and the aim of the paper is to give a brief introduction to the project.

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HERITAGE AND SUSTAINABLE DEVELOPMENT IN BEIRUT: A NEW ECOLOGY FOR THE CITY

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Abstract:

The objective of this reflection is to consider heritage as a model for sustainable development, whereby its appreciation contributes to the well-being of the city's citizens that we call Ecocity. The development challenges of Beirut, a city that is being reconstructed at an astounding speed after a civil war that modified a number of social values, highlights the objective: to create a link between heritage conservation, which considers the built environment and its functions, and sustainable development. In fragile urban environments such as Beirut, heritage must be considered as an inheritance to be at once preserved and encouraged to thrive. The city is at once a material and immaterial space which benefits from a global vision. The Ecocity is then the result of a balance, ever unstable, between the built environment and human requirements that alter over time. However this socio-economic evolution should not be considered in a negative light, as a healthy city is dependent on diversity and a respect for the balance between the built environment and its inhabitants. In fact, built heritage has always been diverse, however it has always found resolution by weaving together the lifestyles of its inhabitants with the local culture. These reflections have the capacity to pave the way for a reinterpretation of heritage conservation as a dynamic activity and viewing sustainable development as a contribution to growth of Ecocities.

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A COMPARISON BETWEEN SYNTHETIC SPACE ANALYSIS AND INTANGIBLE HERITAGE INVESTIGATION IN URBAN CONSERVATION

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Abstract:

Currently, the rising awareness to intangible heritage conservation of historic regions, has become a progressively concerned topic in the international level. In the protection process of the current historic cities authorities, until now, the tangible culture heritage, built environment and historic buildings in old districts are the concentrated matter, while the safeguarding intangible cultural heritage has seldom been performed intentionally. This paper aims to accentuate the significant role of the intangible heritage in the urban renewal policies of old historic districts. It is undertakes the conservation and urban renewal activities of Mosul Old City (MOC) as a case study, and it is explains that there are broad distinctions in various aspects between space structural analysis and intangible elements investigation, which designates that the intangible elements do not correlate to material or synthetic items within the urban fabric in the same high grade that is associated to the inhabitants memory of the historic area. It emphasizes on how it is essential to be aware to the preservation of intangible heritage besides the tangible heritage in the urban renewal policies.

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A COMPLETE MORPHOLOGICAL STUDY OF THE RIGHT HAND OF BRONZO "A" DI RIACE

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Abstract:

The Riace Bronzes represent one of the most important masterpieces of Magna Graecia archaeology, and of the whole world artistic heritage. The Bronzes, other than for their exquisite workmanship, are also interesting for the mysteries which surround their history. The countless hypotheses about their identity, origin and authors are supported by many studies of historical and iconographic nature. This paper describes a complete morphological study of the Riace Bronzes in order to provide to the archaeologists some objective data about the shape of the most interesting and controversial part of the Bronzes: the right hand of Bronzo "A". This study aims to provide a series of geometrical data which could help to identify the object that the A Bronze was gripping. This questions is, in fact, one of the fundamental steps for the individuation of the Bronze A's identity.

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AN INTEGRATED METHODOLOGY FOR THE DIGITIZATION, SURVEY AND VISUALIZATION OF SANTA MARIA PATIRION'S CHURCH

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Abstract:

In this paper we present a methodology for the digitization, the survey and the visualization of a 3D model built from a large scale object that combines the use of different hardware, software and geometric data. The results are a detailed virtual model used for the documentation of the preservation status of the artefact and a simplified 3D model for the navigation with an immersive stereoscopic visualization system.

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INFLUENCEOFENVIRONMENTALCONDITIONS AND APPLICATION OF CLEANING METHODS AGAINST BIODETERIORATION OF MARBLE MONUMENTS

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Abstract:

The aim of this paper is the study of the effect of the environmental factors to the deterioration of marble monuments and the selection of a suitable and effective cleaning method. One of the main deterioration problems of the monuments is biodeterioration. It was obvious the presence of thick layers of biological patina, covering all almost surfaces of these. The growth of microorganisms, bacteria and plants is enhanced from the particular environmental conditions, that combine increased moisture, insolation and temperature, an area full of plants and trees and can cause extensive chemical and mechanical decay of the monuments. The growth of microorganisms, bacteria, plants and lichens was observed and determined. The influence of specific weathering agents and factors to the behavior of the materials was examined.The chemical composition of bulk precipitation and also the physicochemical characteristics of the surface and underground water were investigated. The environmental conditions and the growth of physical microorganisms on the surface of the materials led to loss of the structural cohesion and the surface instability of the building materials. A series of various mechanical and chemical cleaning methods were tested in the laboratory containing the use of distilled water, micros and blast, organic solvents, absorbing clays, NH_4HCO_3 solution, biocides (desogen, hydrogen peroxide). In situ tests were carried out with satisfactory results in the monuments when a method of combination of hydrogen peroxide solutions, EDTA, NH_4HCO_3 solution and organic solvent was applied in various steps on the monument surface.

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LASER SCANNING AND INFRA-RED THERMOGRAPHIC PROSPECTING FOR DIAGNOSTIC MAPPING AND RESTORATION PROJECTS: THE CASE THE PAINTED TOMBS AT CYRENE (LIBYA)

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Abstract:

The team of Chieti University is involved in a GIS project of the monumental rupestrian necropolis of the Greco-Roman site of Cyrene (Libya). Because of the large number and of the monumentality of the tombs and of the rocky sanctuaries, the team is composed of a large number of scholars and technicians, including archaeologists, topographers, geologists, anthropologists, biologists, natural scientists, restorers and architects, working together and using different technologies, both for mapping and for projecting restoration and valorisation of these splendid but almost unknown monuments. In order to explain the methodologies and the technologies in use for this project, the Painted tombs of the northern and southern necropolis are presented in this paper, as examples of the technical protocols and of the multidisciplinary approach converging into a multilayer GIS project.

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DIVERSITY AND TAXONOMY IN CULTURAL HERITAGE

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Abstract:

The discipline of Cultural Heritage meets nowadays an excellent ongoing development. Moreover, the field of Cultural Heritage Preservation meets analogous development too. Thus the necessity of well-organized taxonomy and classification seems to be an outstanding significant topic. The scope of this paper regards such taxonomy; more precisely, it proposes this kind of taxonomy. The final products of this paper are the *Diagram of Cultural Heritage & its Preservation* and the *Universal Cultural Heritage & Preservation Classification* ($_{U}CH\&P_{C}$). The herein proposed Cultural Taxonomy is expected to offer additive features of significant value (as for instance order, efficacy, clarification, simplicity, supervision etc.) distributed all over the individual fields of Cultural Heritage. The products of this paper are the innovative outcomes of a multifaceted research endeavor.

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INTANGIBLE CULTURAL HERITAGE IN THE PACIFIC ISLANDS: WHY EUROPE SHOULD LISTEN IN

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Abstract:

Pacific Island countries (PICs) are developing countries representing one of the culturally richest and most diverse regions worldwide. A decade ago, the realization evolved at international level that intangible cultural heritage (ICH) represents a development tool with an inherent commercial value. Regional initiatives are currently trying to balance objectives of development and protection of ICH with the need for commercial exploitation and effects of commodification. Yet, the same cannot be said about the Economic Partnership Agreement (EPA) between PICs and the EU. The article advocates that current EU efforts in supporting regional and national processes meant to establish a preliminary level of legal protection for Pacific ICH are insufficient and inappropriate to the 'living' character of ICH. It promotes a more context-oriented design of intellectual property rights (IPR) provisions in EU policy instruments aimed at sustainable development of the Pacific region.

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EVALUATION OF THE ENVRIONMENTAL FEATURES OF VERNACULAR ARCHITECTURE. A CASE STUDY IN CYPRUS

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Abstract:

Traditional settlements are by definition sustainable in relation to their environmental context and available resources. This paper investigates the environmental behaviour of vernacular architecture and the identification of the different factors that contribute to a pleasant environment and thermal comfort within traditional buildings and their surroundings. This investigation is part of an extended ongoing research programme which is the first research programme regarding the vernacular architecture of Cyprus that includes *in situ* measurements of temperature, humidity and ventilation using data loggers and weather stations. The results indicate the bioclimatic design elements of Cyprus' vernacular architecture and more specifically the passive strategies for heating (solar gains, thermal mass, thermal inertia), cooling (sun-shading, ventilation) and optimization of environmental microclimatic conditions (planting, evaporation). The analysis shows a relatively stable indoor temperature regardless of the fluctuation of outdoor temperature due to the considerable thermal mass of the structure. The data also indicates that the internal temperature reaches a maximum value later in the day compared with the external environment. This is related to the thermal inertia of the building's envelope that delays the heat transfer from the external environment to the internal space. Through this research the great significance of the internal courtyard was underlined, which serves as a microclimate regulator, keeping the temperature at higher levels than the external environment during the winter period. Taking into consideration the sustainability of vernacular architecture, the essential skills for environmentally-friendly approaches to the built environment can be developed, which will benefit society as a whole.

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GREEN INFRASTRUCTURE EMBODY AN EXCEPTIONAL SPIRITUAL RELATIONSHIP OF PEOPLE WITH NATURE: CULTURAL LANDSCAPE, IMPLICATION FOR SUSTAINABLE DEVELOPMENT

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Abstract:

The major implications of this study is to identify a way to improve the physical condition of greenway corridors in urban areas to better serve the multi-objectives of greenways for sustainable communities, based on a literature review and case study. Pedios River has been introduced, because of several factors; it is geographically representative of the region and one of the main natural land marks in Lefkosia capital city of Cyprus. This paper demonstrates that cultural landscapes are part of the city's wealth and producing healthy ecosystem as city's brand, with a proper designed green infrastructure planning, conservation and preservation, promote place identity in identified markets. Nearly all major cities have been built along river corridors. River corridors are being focused on as important natural networks as well as cultural and recreational resources. Lefkosia Creek passes through historical old city of Lefkosia and another historic site so it provide historical heritage and protect cultural values. It can work as recreational, educational corridor with attraction of the cultural, historical fabrics as well as ecologically significant corridors. This research paper presents the guidance report and how to develop the methodological work linked with green infrastructure to promote place identity by emphasis on conservation and preservation green infrastructure as cultural landscape as implications for sustainable development.

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JORDAN CONSERVATION of CULTURAL HERITAGE in ERA

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Abstract:

The Jordan Conservation of Cultural Heritage in ERA – JOCHERA project is aiming at overall reinforcement of University of Jordan (UJ), Hamdi Mango Center for Scientific Research (HMCSR) in Jordan cooperation capacities for cultural heritage protection research in the context of the European Research Area and development to the Conservation centre of excellence to respond to Jordan's socio-economic needs. The JOCHERA impact will be increased capacities of the UJ in terms of (i) better research and innovation management, (ii) improved international Science & Technology cooperation and participation in FP7, (iii) enhanced cultural heritage protection research capacities, and (v) defined strategic development framework in order to increase UJ visibility and scope. Likewise, JOCHERA will increase research and innovation linkages within Jordan in particular with SMEs, enable better opportunities to young researchers and enhance EU-JO RTD cooperation landscape. The project duration is 24 months, started in 1st December 2011 and will end in 31 November 2013.

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GIS AND 3D MODELS AS SUPPORT TO DOCUMENTATION AND PLANNING OF THE BAKU HISTORICAL CENTRE (REPUBLIC OF AZERBAIJAN)

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Abstract:

The walled city of Baku, Icherisheher has been described as one of the best examples of a city that has retained its historical stratigraphy in over a thousand years, where the different influences and its evolution in time may be appreciated. In realising the Master Plan of the historical city, many problems were solved with different information technologies (GIS, DEM, DTM, etc.) for the survey and data mapping management during all the phases of the project. Initially the analysis was addressed to systematic reading of the documents collected during the iconographic study, verifying the process of deterioration that the historic city had suffered during various periods from the Khans to the Tsarist domain and from the Republic of Azerbaijan to the Soviet period through to its independence. The entire central part of the historic city was analysed, including not only on its special architectural and urban monuments, but even minor buildings, which are in part still intact, used as a basis for a digital map created in order to focus on Baku's historical evolution. A three-dimensional model of the historic centre of Baku was then produced as a basis not only for virtual navigation in real time, but as additional support for planning studies and to better understand the principles of various design choices. The request to produce a model in VRML format addressed the choice of better modelling methods. The combination of these different technologies and their application in the analysis of historical cities led to further considerations on data acquisition systems, standardization of formats, the use of survey instruments and the use of different software, etc., all fundamental elements to the define their correct use.

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THE PORTICO OF THE CHURCH OF ST. FRANCIS IN URBINO: A DIGITAL MAP FOR MONUMENTS

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Abstract:

This paper describes the preliminary study for restoration works on the portico of the Church of St. Francis in Urbino. The aim of this study is to develop models used for restoration works on the surfaces of the portico, based on prior a architectural survey using different methodologies. The research project was carried out in 2 phases: during the first phase quantitative data were obtained by means of formal-geometric surveys and during the second phase qualitative data were obtained by developing models. Results were diversified according to needs and the methods used in order to create a "digital map of the monument" in its context. In the last phase, the various methodologies were analysed and compared in order to evaluate their accuracy, convenience (in terms of times and costs) and application limits.

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IMMERSIVE CULTURAL EXPERIENCE THROUGH INNOVATIVE MULTIMEDIA APPLICATIONS: THE HISTORY OF MONSERRATE PALACE IN SINTRA (PORTUGAL) PRESENTED BY VIRTUAL AGENTS

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Abstract:

We are currently in the process of making a series of interconnected multimedia applications, in order to value and enliven the monuments of Sintra, Portugal - classified by Unesco as World Heritage site in 1995. This national project, *FalaComigo*(Talk2Me), aspires to present new contents, not only to scholars but also to an unlimited number of visitors, and thus achieve a social, cultural, educational and civic mission. As an interdisciplinary project, the historians generate the content, while the engineers and technicians design content-driven multimedia applications. In this phase, our case study is the Monserrate Palace, a revivalist building of the 19th century. These applications profoundly rely on a balance between renewed heritage contents, a rigorous scientific approach and stunning designs. We encounter innovative multimodal ways of visitor-application interaction, mainly with the addition of virtual agents that works as guide assistants with educational purposes.

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A FRAMEWORK FOR CLASSIFYING INTERACTIONS IN CULTURAL HERITAGE INFORMATION SYSTEMS

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Abstract:

With the mass digitization of cultural heritage and the increase of people accessing the digitized memory objects, it becomes crucial to develop meaningful interaction patterns in cultural heritage information systems. This explorative study is based on an investigation of 50 websites from the cultural heritage domain. It derives a framework for classifying user interactions with digital cultural heritage. The framework has two dimensions; the first one is a classification of the interactions and the second one describes their degree of complexity. The strength of this framework is the ability to compare complexity, scope and purpose of interactions across different websites while offering a meaningful vocabulary for discussing different interaction features.

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ROUTE OF THE WORLD HERITAGE MONASTERIES IN PORTUGAL AND A DIGITAL TOURISTIC PLATFORM

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Abstract:

We present the ongoing project *Route of the World Heritage Monasteries in Portugal* and emphasize the planned Digital Touristic Platform. It's been created a partnership between local authorities where those monasteries are located and with higher education institutions and the National Management Institute of Heritage. It is been financed by European funds over 14,4M€. We describe the strategic plan, the key actions and the model of governance. The role of the Information and Communication Technologies (ICT) on growth and on employment related to cultural heritage and tourism is then approached referring to e-business and digital platforms particularly. We present the results and some new start-up projects as a result of the created synergies. The importance of Heritage Economics with the use of ICT as well as the lessons learned so far are analyzed.

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ISSUES TO BE ADDRESSED FOR TRANSFORMING A DIGITAL LIBRARY APPLICATION FOR EXPERTS INTO ONE FOR FINAL USERS

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Abstract:

This paper reports on the effort we made in adapting and opening a specialist tool, focused on illumination and designed purposely for scholars and researchers, in order to be suitable also for the general public. We describe the ongoing process we are conducting: the adaptation and the improvement of the IPSA digital archive using the results we collected after several sessions of user interviews, following suggestions of both scholars and simple users. We discuss user studies dynamics, that we consider as a loop-interaction, and the consequences that they entail upon the system design.

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GEOGRAPHICAL INFORMATION SYSTEM FOR THE CULTURAL HERITAGE AND PROTECTED LANDSCAPE OF REGIONE TOSCANA

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Abstract:

LaMMA Consortium, with collaboration of Regione Toscana and Ministero per iBeni e le AttivitàCulturali (MiBAC), has realized the web Geographical Information System for Cultural Heritage and Protected Landscape of Regione Toscana. This system gives today the possibility to access the digital maps and the digital archives of archaeological, architectural and landscape related restrictions over the entire region. In order to continuously update the realized system for maintaining its utility and validity, Regione Toscana together with MiBAC signed a protocol agreement (2004), according to which every new restriction measure issued is sent as a copy also to the regional offices and then to LaMMA Consortium, that attends to update the digital archives and the digital maps. Thanks to this agreement, the system counts today over 18.000 measures, with an average yearly increase of almost 250 measures that determine restrictions for 9.000 areas.

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COLONIZATION OF MALTESE CATACOMBS BY PHOTOTROPHIC BIOFILMS. HOW MUCH DOES LIGHT MATTER?

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Abstract:

The study of phototrophic biofilms from Maltese catacombs has shown that their distribution within catacombs does not show a significant dependence on orientation of catacomb and their location inside the catacombs. A decrease on species richness is observed when light availability diminishes, but the composition of biofilms does not change significantly. The proportion of green algae has a slight increase in darker areas, while cyanobacteria remain stable and diatoms decrease. Diatoms are almost not present in deeper areas inside catacombs. However, light is not the only key factor driving the colonization by phototrophic biofilms.

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ISLAMIC MANUSCRIPT COLLECTIONS ON THE WEB: AN EVALUATION OF THE USER INTERFACES

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Abstract:

This paper presents a survey conducted to provide an overview of the functions and features of digital library user interfaces within the Islamic manuscript context. Based on Internet and bibliographical keyword search, the survey identifies 49 digital libraries that contain Islamic manuscript collections. The findings illustrate varying patterns for browsing, searching, navigation, and page-viewing systems as well as uncommon yet relevant tools and features offered by the interfaces for digital libraries.

CULTURAL EUROPEAN ROUTES: TRANSFER EXPERIENCES, SHARE SOLUTIONS (CERTESS)

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Abstract:

This paper deals with the building-up of a methodological framework on how to develop and manage Cultural Routes (CRs) by making use of route development best practices and governance instruments targeted to foster sustainable cultural tourism. CRs are intended by the Council of Europe as "historical lines interconnecting one or more regions and organized around topics whose historical, artistic or social interest proves to be European, either because of the geographical layout of the route, or due to its contents and significance". Most ECRs lack comprehensive methodologies and governance instruments to implement effective strategies at regional level. The draft methodology is intended to be tested and detailed under a European project (CERTESS) where partners, while designing their CR Route Plans, will: a) adopt customised Best Practices; b) develop and adopt well-suited governance tools; c) promote local enterprises and products along their routes by use of innovative immaterial services including ITC. CERTESS partners intend to make their activities sustainable by integrating their Plans into a ECR strategy for establishing Europe as a "first cultural tourism destination in the world".

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THE ARAB IMAGE FOUNDATION: COLLECTING, STUDYING AND PRESERVING PHOTOGRAPHS FROM THE MIDDLE EAST AND NORTH AFRICA

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Abstract:

The Arab Image Foundation (AIF) has been collecting, studying and preserving photographs from the Middle East and North Africa since 1997. It runs curatorial and research projects, and activities related to photograph preservation. Fifteen years after its creation, the AIF's archive holds over 600,000 images, including complete collections entrusted by photographers such as Hashem el Madani (Lebanon) or Kamil and RifaatChadirji (Iraq). Such collections require sustained efforts in terms of archiving, documenting and digitizing. In addition to the care of its own collection, the AIF's current preservation programs include the Middle East Photograph Preservation Initiative (MEPPI), which seeks to identify and offer training to significant photographic collections in a region where expertise in conservation and preservation is all too often absent. The AIF is also a member of the Modern Heritage Observatory, a coalition which campaigns for the preservation of modern cultural heritage through the creation of a regional network of individuals and institutions committed to its cause.

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CULTURAL HERITAGE EDUCATION FOR INTERCULTURAL COMMUNICATION

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KEYWORDS: craft traditions, craft education, cultural heritage, intercultural communication, European network, lifelong learning, trans-generational learning

ABSTRACT:

In this paper, cultural heritage is considered as an important aspect of intercultural communication and social cohesion, both in local communities as well as on the European level. In European societies of today, the role of the cultural heritage of arts and crafts is under discussion. Attention has turned to the importance of conserving and developing traditional knowledge and techniques. On the basis of this and the practical experiences from craft and cultural heritage projects in Finland and Cyprus, we briefly outline the project plan and its theoretical background. The main idea is to develop a European network of craft professionals and craft teachers who will develop and implement a series of training events and projects. Apart from supporting continuing professional development, the network will also initiate cooperation between artists, professionals and teachers. The aim is to create school and youth projects as well as cooperation between institutions in various countries in order to promote transnational projects. Occupation with traditional arts and crafts is not restricted to formal learning but expands to informal and lifelong learning activities. In this context, the transfer of trans-generational knowledge will be supported through community projects.