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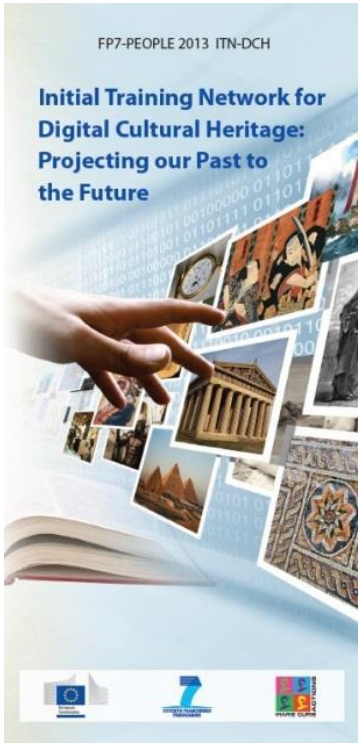

1. ITN-DCH project

The "**Initial Training Network for Digital Cultural Heritage: Projecting our Past to the Future**" (ITN-DCH) is a **Marie Curie fellowship projects** in the area of the e-documentation / e-preservation and CH protection funded by the European Union under the FP7 PEOPLE research framework. The Project started on the 1st of October 2013, its consortium comprises **14 full partners and 9 associate members** covering the entire spectrum of European CH actors, ranging from academia, research institutions, industry, museums, archives and libraries. The project aims to train **20 fellows** in the area of CH digital documentation, preservation and protection in order to create them a strong academic profile and market-oriented skills which will significantly contribute to their career prospects. ITN-DCH targets **all aspects of CH** ranging from tangible (e.g. books, newspapers, images, drawings, manuscripts, uniforms, maps, artefacts, archaeological sites, monuments) to intangible content (e.g., music, performing arts, folklore, theatrical performances) and their inter-relationships.

2. ITN-DCH calls for fellows

The ITN-DCH project is seeking highly motivated and valuable researchers for PhD and Post-Doc positions in the field of Digital Heritage, dealing with data acquisition, data processing, 3D reconstruction and modeling, semantic and ontology representation, metadata, mixed and augmented reality technologies, CH e-services. All project fellows are supposed to travel between the project partners and attend a series of complementary training courses, scientific workshops and summer schools. The still open calls for fellows are available on the ITN-DCH website (http://www.itn-dch.eu) and hereafter for convenience summarized:

Early Stage Researcher (ESR) - http://www.itn-dch.org/?page_id=120

- Call ESR12, New techniques for data storage and archiving of massive and complex amounts of 3D/4D cultural assets @ Cyprus University of Technology (CUT), Limassol, **Cyprus** (deadline: 15/01/2015)

Experienced Researcher (ER) - http://www.itn-dch.org/?page_id=583

- Call ER2, Educational perspectives in digital cultural heritage, Cyprus University of Technology, Limassol, **Cyprus** (deadline: 16/02/2015)
- Call ER3, Machine learning in processing 2D/3D/4D cultural assets, Cyprus University of Technology, Limassol, **Cyprus** (deadline: 01/09/2016)

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3. ITN-DCH @ European Research Night (ERN)

ERN in Athens, Greece *– by Ellie Stathopoulou (ESR4) & Emmanouil Alexakis (ESR15)*

The event took place at the renovated neoclassical Averof building of NTUA in the centre of Athens. During the ERN researchers presented their achievements to the general public through experiments, demonstrations of portable equipment, simulations etc. Hundreds of people took part in the event, professors, researchers, NTUA students and volunteers. The event was a success, with some thousands visitors watching the experiments, getting informed about new methods and enjoy the music activities. ERN attracted a broad variety of visitors, young children, primary/secondary school students accompanied with their teachers or parents, university students, professionals on related fields and all kinds of people interested in science.
ITN-DCH project was present at the event with two NTUA laboratories (Photogrammetry and Materials Science & Engineering). The main part of the demonstration was the realization of digital 3D models and the presentation of optical sensors to investigate materials and protect Cultural Heritage. Information regarding ITN-DCH and its role with respect to Cultural Heritage were gather in some slides and presented to interested groups of people, especially high school students and researchers from related fields. Young children were quite excited about their interaction with 3D models or thermal cameras, students were curious about the math behind 3D reconstructions and researchers were asking about algorithms and software.

ERN in Braunschweig, Germany *– by Matthew L. Vincent (ESR11 – University of Murcia, Spain), Chance Coughenour (ESR1, University of Stuttgart, Germany)*

How do you explain the importance of preserving our cultural heritage to anyone whom you might run into on the high street? Well, this was our challenge the night of September 26 in the Schloss Arkaden in Braunschweig during the European Researchers Night. The story of this schloss is a sad one, particularly for Germany where so many architectural monuments were lost due to damage sustained during the Second World War. This story is the same one playing out across destabilised countries all over the world, and perhaps more than ever the need for preserving our past for the sake of the future is apparent. To communicate this idea, Change Coughenour suggested using a LEGO® model of the Brandenburg Gate in Berlin as a way for attendees, both young and old, to engage with the importance of Digital Cultural Heritage. Three-dimensional models were produced with photogrammetric and structured light scanning methods and later displayed at the booth, allowing visitors to interact and view the LEGO® monument from any angle they pleased. At the same time, the actual LEGO® model was partially disassembled next to the screen, presenting the visitor an opportunity to reconstruct the monument, using only the photogrammetric model.

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As the afternoon progressed, many visitors rebuilt the LEGO® monument. Children could not resist the pull of a pile of LEGO®s and a sign imploring their help to restore the monument. Intuitively, they took the mouse and began interacting with the 3D model, looking at how the monument once was and reconstructing it as best they could. For many of these children, this object lesson may have impressed upon them the need for digitising our heritage now, and how new digital methods make it possible to recover even that which was previously lost. Although children were not the only ones who tackled the restoration project (more than one child-at-heart undertook the task!), it was the parents of the children who would engage with the fellows to find out more about our project.
The ITN-DCH project is about much more than a scanned LEGO® model, but the spirit is the same. Our Cultural Heritage is a shared heritage that belongs to humanity. Working together with new methods to preserve our past makes it possible to give this legacy to those children rebuilding the model, to their children, and to their children's children for generations to come. Perhaps the slogan of the project captures it best: "Projecting our Past to the Future".

ERN in Geneva, Switzerland *– by Simon Senecal (ESR13, MIRALAB)*

The MIRALAB group participated in the ERN in Geneva to demonstrate its activities. One of the most important aspect of Cultural Heritage is the re-use of materials so the possibility to visualize the acquired data or reconstruction for analysis purposes or with the aim of immersion in ancient world for better understanding. There is consequently plenty of visualization strategies who can be classified using different criteria such as historical precision, interactivity, automatism and virtuality.
For the purpose of the 2014 ERN, MIRALAB created an efficient visualization technique, employing tools already available in MIRALAB and applicable to different 3D data. Therefore a 3D render was produced with a little bit of interactivity and a surrounding environment not historically constituent but increasing the esthetic. Our results were really appreciated by the people visiting the boot.

4. Incoming meetings & events

isprs
information from imagery
http://www.3d-arch.org

ISPRS 3D-ARCH Workshop on "3D Virtual Reconstruction and Visualization of Complex Architectures", 25-27 February 2015, Avila, Spain

The 6th edition of the event will focus on the steps and processes for smart 3D terrestrial modelling, accessing and understanding of virtual environments from multiple data sources.

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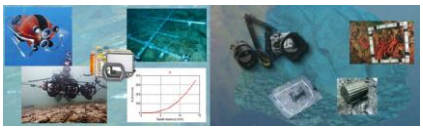
http://caaconference.org/

Int. Computer Applications and Quantitative Methods in Archaeology (CAA), 20 March – 3 April 2015, Siena, Italy

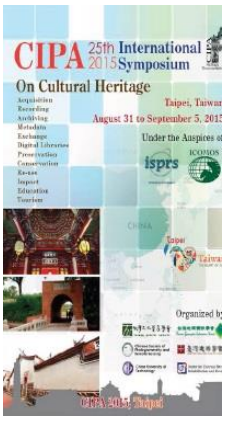
The 43rd Computer Applications and Quantitative Methods in Archaeology "KEEP THE REVOLUTION GOING" Conference (CAA 2015 SIENA) will explore a multitude of topics to showcase ground-breaking technologies and best practice from various archaeological and computer sciences disciplines, with a large diversity of case studies from all over the world. Some of these topics are specific to the Italian scientific community, which played since the early stage of computer application a central role, participating to the debate and development in particular of GIS, databases, semantic, remote sensing, 3D data collection, modeling, visualization, etc.



http://3dom.fbk.eu/files/underwater/index.html

ISPRS/CIPA Workshop on Underwater 3D Surveying and Modeling", 16-17 April 2015, Sorrento, Italy

The workshop aims at bringing together scientists, developers and advanced users in underwater 3D recording and related disciplines for documentation in underwater environments.



http://www.cipa2015.org

25th International CIPA Symposium, 31 Aug – 5 Sept., 2015, Taipei, Taiwan

The International Committee for Documentation of Cultural Heritage (CIPA) will held its next symposium in Taiwan, heading back to Asia after the 2009 event in Japan. The congress direct is Dr. Alex Ya-Ning Yen from the China University of Technology (CUTe). Four organizations will support and work with CUTe to prepare this important event; they are, namely, Taiwan Heritage Society, Taiwan Geographic Information Society, Chinese Society of Photogrammetry and Remote Sensing and Architectural Institute of Taiwan.

http://digitalheritage2015.org/

Int. Conference Digital Heritage 2015, 5-9 October 2015, Granada, Spain

The second edition of the large heritage conference will be held in Granada in October 2015.