ITN-DCH
Newsletter

June 2017

ITN-DCH: PROJECTING OUR PAST TO THE FUTURE

IN THIS ISSUE

ITN-DCH Final Conference
A Successful Story
by George Leventis, ER3 & Vasiliki Nikolakopoulou, ESR12

During the last week of May, the Marie Curie Initial Training Network on Digital Cultural Heritage (ITN-DCH, www.itn-dch.eu) organized a unique conference which was held 23rd – 25th May 2017 in Olimje, Slovenia, where researchers, experts, stakeholders and professionals in the field of Cultural Heritage had the opportunity to meet and exchange ideas.

Preparing ITN-DCH Conference
All the intensive preparations for the conference started approximately 3 months ago, where the ITN-DCH supervisors and especially the project's coordinator, together with the fellows ER3-Georgios Leventis, ESR3-Diego Bellido Castaneda, ESR7-Matevž Domajnko, ESR8-Nicola Carboni, ESR10-Margarita Papaefthymiou and ESR12-Vasiliki Nikolakopoulou had 3 times per week several Skype calls in order to handle efficiently the huge amount of work that was needed to be carried out. The planning along with the preparation of the agenda was one of the most important tasks as for the conference's booklet and e-agenda to be based upon so eventually the authors to be informed for their date of oral presentation. Subsequently, the proper allocation of accepted submissions to the various sessions taking into consideration the time margins were needed in order to ensure the smooth organization of the conference.

The Conference
The Conference started with our local invited speakers, Pater Ernest Benko and Teo Hrvoje Oršanič (Figure 1). Afterwards, the Coordinator, Dr. Ioannides, gave his presentation regarding the progress of the project wrapping up with a beautiful video compilation of all the work done so far in the ITN-DCH (Figure 2).

Figure 1. Our Local invited keynote speakers: (left) Pater Ernest Benko, (right) Teo Hrvoje Oršanič

Figure 2. Dr. Ioannides presenting ITN-DCH progress wrapping up with a video compilation

Our next keynote speaker and member of the project's Advisory Board, Mrs. Eleonor Fink (Figure 3), continued with her presentation "From Virtual Databases to LOD Clouds: The Quest for Universal Access to Digital Cultural Heritage (DCH)". The presentation was focused on the need for innovation approaches in DCH data mining, storage and archiving in order to be accessible, findable and retrievable.

Session I started with ESR3, Diego Bellido Castaneda, and ESR7, Matevž Domajnko chairing the session, and later gave their presentation on the fieldwork results of the 3rd ITN-DCH Case Study: Donaustauf Castle (Figure 4). The day continued with the interactive Workshop prepared by the former fellows ER1-George Bruseker, and ESR8-Nicola Carboni, on "The workflow for the integration heritage digital resources" (Figure 5). The Workshop included presentations of the fellows in order to introduce the audience to the basics: role of Ontologies, general idea of semantics, annotations, data cleaning, data enrichment and data transformation. At the second half of the Workshop, the attendees were given exercises of conceptual Mapping examples: fill up missing fields such as Field Name, CRM translation, Schema description and Comments.
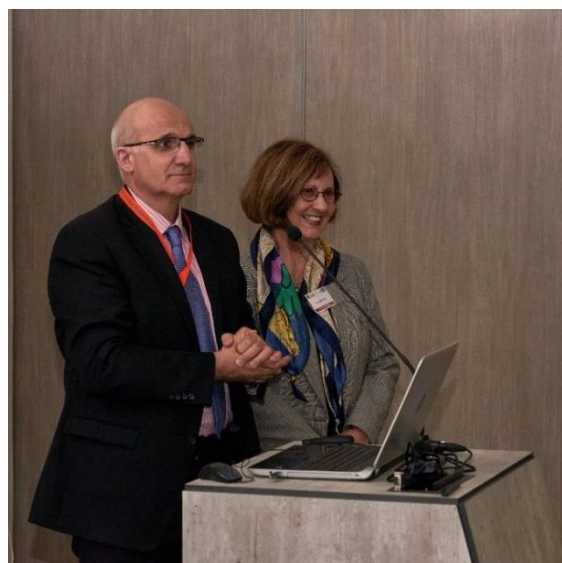

Figure 3. The Coordinator of the project presenting keynote speaker, Mrs. Eleonor Fink.

The next day started with two renowned keynote speakers at the domain of DCH: Prof. Alex Yen (ITN-DCH advisor) from the Technical University of Taiwan in Taipei and Dr. Pavlos Chatzigrigoriou (Project Manager of ITN-DCH and Postdoc researcher at DHRLab) (Figure 6). Prof. Yen spoke of CH College mechanism which is a new idea that can link the potential research energy in universities with the on-site requirement through the partnership between the governmental and educational sectors, while Dr. Chatzigrigoriou continued on presenting the used data acquisition methods regarding the pathology state of historic buildings in Hermoupolis, Syros island, Greece. Hermoupolis is the 1st case study of the HERMeS project, which will expand internationally to other 4 cities through the "INTERREG V-B Balkan - Mediterranean 2014-2020", under the name "IRC HERMeS", where Digital Heritage Research Lab is the leader partner.

Figure 4. ESR7-Matevž Domajnko presenting the joint work on Donaustauf Castle

Following up, Session II "3D Modelling and Reconstruction in CH" was chaired by Prof. Žarnić and PhD student Meta Kržan, where distinquish sholars and experts gave interesting presentations. Among others,

Prof. Dieter Fritsch (ITN-DCH supervisor), gave also an intriguing presentation on a more applicable approach of DCH data: "Design of 3D and 4D apps for Cultural Heritage preservation" (Figure 7). The Session III entitled "Ontologies and Metadata in DCH" was chaired by Vasiliki Nikolakopoulou and Nicola Carboni, who had the opportunity to administer authors whose semantic work is considered of high competence. Afterwards, the two ITN-DCH fellows of CUT chaired the Session IV on the "Reuse and assessment of Digital Cultural Heritage Data", where many interesting presentations took place. ESR12 presented also her work on evaluating an e-learning platform specially designed for World Heritage Listed monuments located in Cyprus, such as Timios Stavros and Asinou church (ITN-DCH 1st case study) under the moto of "Every Monument is a Digital Course" (Figure 8).

Figure 5. ER1-George Bruseker and ESR8-Nicola Carboni during the workshop

Figure 6. Left: Alex Yen during his keynote speech. Right: Dr. Pavlos Chatzigrigoriou answering to participant regarding his keynote presentation.

With the end of Session IV, participants along with the ITN-DCH consortium had the opportunity to relax and pass a great evening during the social dinner which has been held at the premises of the touristic complex of Terme Olimje, accompanied with traditional Slovenian music.

During the last day of the conference (25th May), there was the last Session entitled "Visualisation, VR, AR and Serious Games", where special reference was given to the use of technological advances in the CH field through the development of VR/AR applications aimed to provide immersive user experiences. In parallel to the session, all ITN-DCH fellows had a meeting with project's Advisory Board discussing important details regarding its final months (Figure *9*). After that, fellows also had their own meeting with its main issue: the voting of the new fellows' leader.

Figure 7. Prof. Dieter Fritsch presenting "Design of 3D and 4D apps for Cultural Heritage preservation" at Session II "3D Modelling and Reconstruction in CH"

Figure 8. ESR12-Vasiliki Nikolakopoulou presenting "Evaluation of an e-learning platform for UNESCO WHL monuments in Cyprus"

Figure 9. Screenshot from our Advisory Meeting

Then, it was time for ESR10-Margarita Papaefthymiou and ER3-Georgios Leventis to give their oral presentations of their research work. Margarita presented how the rapid reconstruction and simulation of real characters in Mixed Reality environments with virtual narrators can play a vital role in the presentation of Cultural Heritage by giving

instructions to the users and transfer knowledge about the history of the Cultural Heritage monuments (Figure 11). Following up ESR10's presentation, ER3 presented a novel way of interacting with CH through the use of Artistic Style transfer from a fresco of Asinou to an AR video of Asinou's virtual priest, exploiting Deep Learning techniques with Cultural Heritage through artistic style transfer" (Figure 12).

Figure 10. Screenshot from our registration booth

After that Session, conference's participants were given the time to visit Olimje's monastery, where they were welcomed by Pater Ernest Benko, who guided them around monastery's inner chambers and pharmacy (Figure 13).

The Verdict

The dissemination of the event in various social platforms and the mass mailings led in over 70 submissions of extended abstracts from authors in 22 countries. More than 40 of them have been approved for an oral presentation while the rest were either have been accepted as posters or their work was not considered that brings added value to the Cultural Heritage field, while in the end 60 registered persons attended our scientific event. In addition, the ITN-DCH Final Conference's papers will be published by SPRINGER VERLAG in the Lecture Notes for Computer Science - LNCS, at the end of the year.

Figure 11. ESR10-Margarita Papaefthymiou presenting "Rapid reconstruction and simulation of real characters in Mixed Reality environments", while ER3-George Leventis is co-chairing at the Session.

In overall, the conference and its organization boosted our skills and provided us a tremendous experience. Fortunately, the pressure did not overwhelm us as we had similar experience with EuroMed2016.

Figure 12. ER3-Georgios Leventis presenting "A new way of interacting with Cultural Heritage through the application of artistic style transfer"

Figure 13. Screenshots from the visit at the Monastery

For more images visit our Conference's Photo Gallery:
http://www.digitalheritage2017.eu/

ITN-DCH @ Coding Durer
by Nicola Carboni, ESR8

ESR8 Nicola Carboni attended the Coding Durer (Figure 14), a five days international and interdisciplinary Hackathon for Art History and Information Science held March 13-17 2017 in Munich, Germany. Organised by the Ludwig-Maximilians-University Munich together with the Digital Humanities Lab, University of Basel, the hackathon hosted 42 chosen participants, all expert in the domain of digital humanities, digital art history, digital cultural heritage and data science.

The specific purpose of the hackathon was to provide to the participants a special setting to foster their ideas, giving them the possibility to create a project with a group of other fellow experts. The main aim was to demonstrate the research possibilities that the use of digital tools would open for the research in art history.

Figure 14. ITN-DCH presentation

During the first day of the event, the participants started to presents their skills and work field, in order to get an idea of who is doing what Geographically speaking, a large group of participants was coming from U.S.A., others from U.K., but also Germany and Spain were very well represented. The diversity in domains was also great. Many IT specialists, together with pure art historians and information scientists formed the main group, but many other domains were represented (archival science, library science, digital heritage etc.). After an initial presentation, a plenary session on the potential of mixed methods and interdisciplinary collaboration was held, with a lively discussion about the role of digital tools and skills in the art historical curriculum.

Followed by this initial approach, a keynote from Nuria Rodríguez Ortega, University of Málaga, on software, tools and methods to analyse and visualise data, was held. The keynote speaker explored and provide a perspective on several tools for analysing digital datasets, providing to the participants the necessary background for the following days. After a summary of the data sources available, and their potentiality for the outcome of the hackathon, a session focused on the creation, sharing and fostering of ideas was held. Frantically, everyone with a topic in mind started pinning it up in a wall, trying to find other nice ideas or other persons for creating a group. The wall started soon to be full of post-it with interesting titles and possible subjects. People started to get interested and ask questions. After very little time eight groups, comprising 6–7 participants, were formed.

From that moment on, the groups started brainstorming, defining their aims and objectives, trying to dividing the tasks and their priorities.

ESR8 was part of the group "Tracing Picasso, a project aiming to translate artwork provenance information in space and time in order to easily understand the path followed by Picasso's artworks, as well as their institutional reception, both in Europe and the US (Figure 15). The achievement of the project would provide a better understanding of Picasso as a global phenomenon and a way to easily visualise - and, therefore, comprehend - the artworks movements between Europe and U.S. following II world war

For three full days, paused only by interesting lunch lectures held by several speakers, the groups worked as hard as they could in order to meet the deadline, finalise the work, overcome the issues and make everything usable. When Friday finally arrived, after some late nights and very early morning the project was ready for its public presentation to be held in the Department of Art History of the Ludwig-Maximilians-Universität München. Before the final even the Tracing Picasso project wrap up their efforts and published a demo online[1], distribute the code and data used on Github[2], and posted an explanation of its results and issued encountered on the Coding Durer blog[3]. The presentations of the groups were very interactive and the public quite reactive, and they come with a realisation that everyone encountered similar problems, particularly connected with data quality and integration, problems which seem to be quite common in the data science field. After some hours of presentation, discussion and greetings, the event was over.

Figure 15. Tracing Picasso Group

[1] https://ilokhov.github.io/picasso/
[2] https://github.com/ilokhov/picasso
[3] http://codingdurer.de/tracing-picasso/

At the end of the day, Coding Durer was a huge success in term of participants, topics, products and person involved, and left everyone with a warm feeling of being part of something bigger, something of its own kind.
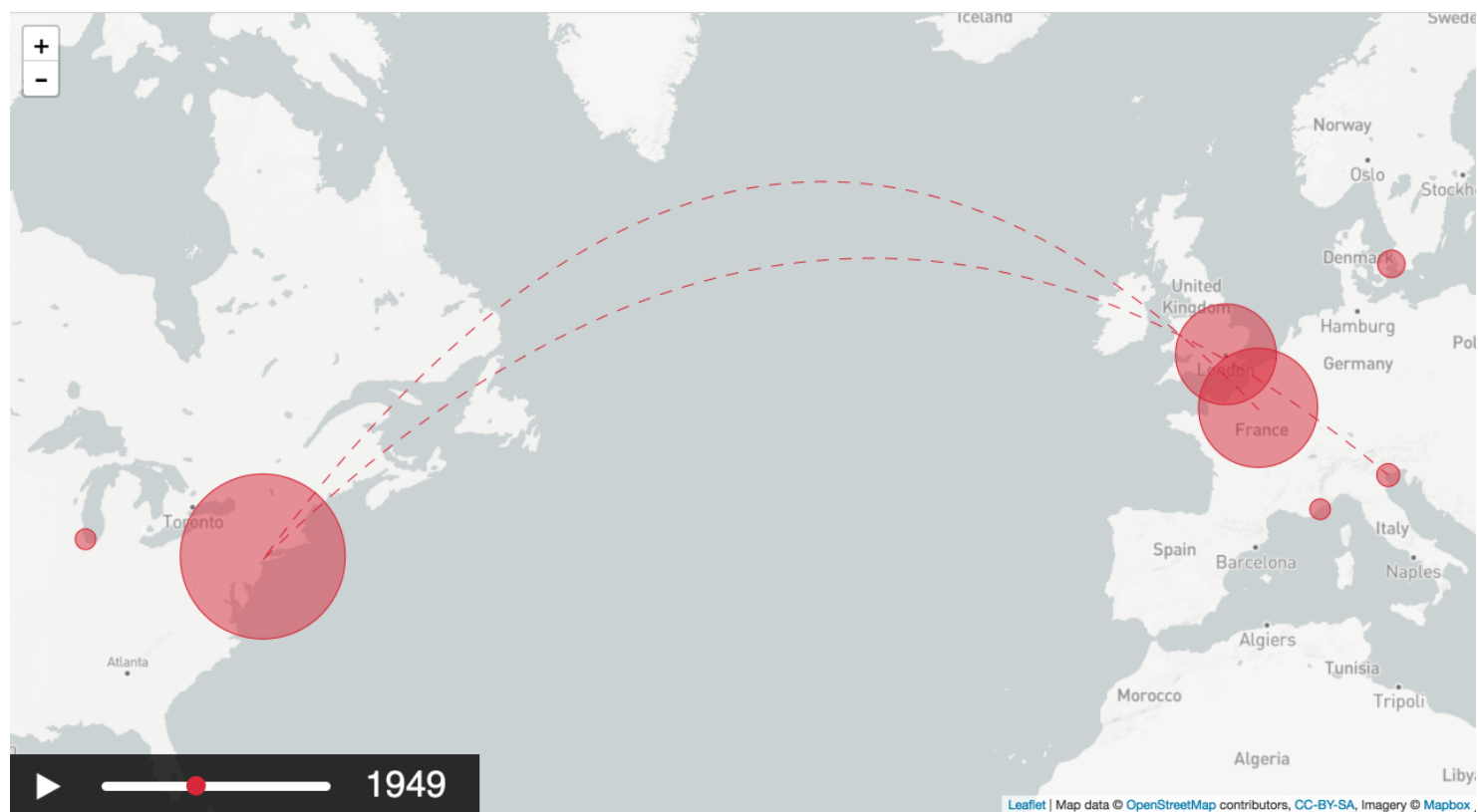

Figure 16. Tracing Picasso demo

Mediterranean Science Festival
by CUT

The DHRLab's Booth

During the last week of April 2017 (27th -30th), the Mediterranean Science Festival took place at the Old Port Square of Limassol, Cyprus, where young scientists and researchers along with their institutions, were provided the opportunity to showcase their research work and engage the public (kids, youth, adults) in various learning activities. The Festival held under the auspices of Cyprus Minister of Education & Culture and included talks, workshops, labs for kids, performances and science-art exhibitions through different thematic areas extending from Innovation & Entrepreneurship, Computer Science & Digital Technology to Physics, Chemistry, Environmental Science.

ESR12-Vasiliki Nikolakopoulou and ER3-Georgios Leventis, set-up Digital Heritage Research Lab's booth together with lab's associate researcher Vasilis Athanasiou, where they presented (Figure 17) innovative digital mediums towards the protection, preservation and promotion of Cultural Heritage assets: the 1st case study of ITN-DCH project, the church of Asinou. The main activities of the fellows focused on informing the public about the documentation methods applied on Asinou and demonstrating the interactive book (Figure 18), enriched with multimedia content as well as the 3D printer, which was printing at that time a small size model of the muse Calliope. The majority of the visitors attended the Festival showed great interest in learning about the work conducted within the ITN-DCH project as well as the creative re-use of the acquired data. Regarding our interactive installation, the digital book was consisted of a projector, a web camera, a touch foil and of course physical "papyrus-like" pages, where written and multimedia content were combined harmonically. The users learnt about the history of the UNESCO monument through a "play & learn" process interacting with the available content (images, 3D model, video) such as putting together the pieces of an Asinou fresco in the form of a puzzle.

It is remarkable to mention that through this event the fellows, as members of the Marie Curie Alumni Association (MCAA) Cyprus Chapter (Figure 19), took the initiative to promote both the actions and the role of the Association in the European Union along with the benefits for young researchers which are derived from Marie Skłodowska-Curie fellowships.

Figure 17. (Left top) Our Lab's 3D printed models and child interacting with them. (Right top) ER3 & ESR12 explaining to children how we create 3D models and how we 3D print them!

Figure 18. The interactive book installation at our Lab's booth

The Workshop
Digital Cultural Heritage: An approach to Historical Churches (The case of Asinou)

The Workshop "Digital Cultural Heritage: An approach to Historical Churches – The case of Asinou" aimed at engaging youth and adults, parents and children, in this UNESCO monument's history, its constructural phases, the research that has been conducted on the church by the Project so far and its outcomes; the Android mobile

application in particular. ESR12 designed three main activities for the participants, which included sketching on 2D photogrammetric and other various images of Asinou, painting and assembling parts of the 3D model of the church (Figure 20).

Figure 19. Promoting the MCAA & the Marie Curie Actions.

Figure 20. An overview of the Workshop (short video on https://goo.gl/d3shmc)

Θα θέλατε να επισκεφτείτε την Εκκλησία? - Would you like to visit the Church?
(11 απαντήσεις)

- Ναι - Yes
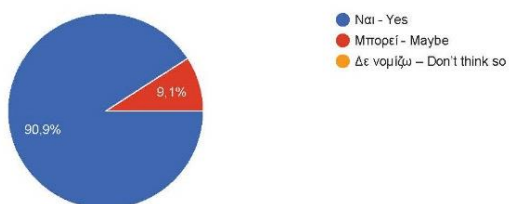- Μπορεί - Maybe
- Δε νομίζω – Don't think so

90,9%   9,1%

Figure 21. Eagerness by the participants to visit the church after the Workshop

The parts were 3D-printed in different colors in order to have colorful variations in the 3D assembling outcome. Tempera and oil paints in lighter shades were picked for the painting activity, and colourful markers for the sketching on the images. A brief Questionnaire was formed, both in English (for the tourists that were joining the Festival) and Greek, concerning which activities and why the participants chose them. A small Quiz about the history of the church was also inserted at the end of the Questionnaire along with further information and useful links for Asinou.

Figure 22. Children with their parents engaging with the activities

At the beginning of the Workshop, a dramatized video reciting the history of the church, was introduced to the participants. The video continued playing throughout the whole session. Four main tables were used, two for the painting activity. Participants were advised to go through all the activities and let themselves free to express whatever idea was crossing their minds. Parents and children, from age 4 to 55, went through all the activities, with parents mainly helping their younger children to assemble and paint the 3D models. Half of the participants completed the Questionnaire while all of them were willing, after a quick demonstration of the AR feature, to download the mobile app!

Figure 23. 3D painted models

All of them declared that are willing to visit the church (Figure 21) while all the attendees took the small brochure of the App with the downloading QR code. At a general view of the Workshop, we noticed high levels of engagement resulting in beautiful outcomes (Figure 23, Figure 24) that were afterwards demonstrated at the Lab's booth as an exhibition!
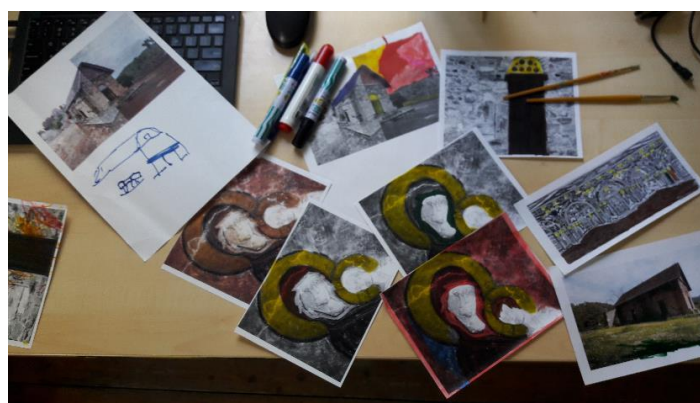

Figure 24. Colored and sketched images

Personal Remarks on ITN-DCH Project
by Martin Schaich, ArcTron 3D

The "Initial Training Network for Digital Cultural Heritage: Projecting our Past to the Future" (ITN-DCH) was the first Marie Curie fellowship project for our company. From 2014 until 2017, we were able to participate in a whole series of fascinating research trips, excursions, secondments and high-quality meetings, workshops, congresses and trade fairs, some of which were organized by ArcTron. Both the ITN-DCH project and -network provided us with an extraordinarily interesting and high-profiled framework. At the same time we also faced many challenges, both in administrative, organizational and contextual form. Perhaps the biggest corporate change which has resulted from the ITN-DCH project as well as by another international EU-research project (3D-Pitoti) was losing the "fear" of English communication within the company. Thus it has strengthened our team for over the past 3 years with highly qualified specialists from abroad. In addition to the German employees, we currently employ permanent specialists from the Czech Republic, Turkey and Spain working together on our projects.

About the company

ArcTron 3D has been active for many years in the real Cultural Heritage (CH) project work as well as in specific research projects (Archaeology & Preservation of Monuments). However, a specific training activity to mediate our know-how accumulated over more than 25 years was not one of our specific tasks up to this point. It was a fascinating experience, especially during the summer-secondments 2015, which lasted for several weeks in our headquarter, to transfer our technical possibilities and approaches to so many motivated, inquisitive young researchers from a wide range of disciplines. But, of course, the main task was to focus on the fellow appointed to us and accompany his project work and development and supporting it. This was particularly interesting and challenging at the same time.

Doubled Recruiting Process

After the Europe wide tender of the Fellowships (ESR3), which focused on "Laser scanning and structured lighting methods in Cultural Heritage digitization for high resolution 3D surveys", our first fellow, Nicolas Martin-Beaumont, has been selected in an elaborate selection process. For personal reasons, however, Nicolas decided, after only 3 months, not to continue participating in the project. After a new no less complex selection process, the young Spanish geodetic and geo-informatician Diego Bellido Castaneda, our new collaborator, was able to enjoy the generous EU-promotion and research support as part of the ITN-DCH-program.

Deliverable-Time

At first, Diego had to carry out a bulk of theoretical work and be involved in a preparation phase , which together with workshops and individual training measures claimed the majority of his time. In this phase, the concrete cooperation in the company and getting to know our detailed workflows were rather missing out. Theoretical and administrative work had priority. Despite this situation, Diego was able to create smaller and larger free time windows to focus with great commitment on studying about the latest 3D surveying and data processing technologies even beyond the framework of the compulsory case studies.

Case Studies

More free space and better integration into workflows only came into play in the second half of the fellowship when the reports were essentially finished and Diego was able to work in many areas of our field of expertise. The Case Studies included on one hand the Castle Hill of Donaustauf ("Burgberg von Donaustauf") recorded with photorealistic 3D documentation of landscape, ruins and wall structures (Figure 25, top). On the other hand, they included the high-resolution 3D documentation of the archaeological grave finding of Ilmendorf (Figure 25, bottom). The main topics of airborne and terrestrial laser scanning and SFM photogrammetry included also the use of very high-resolution scanners and the color-calibrated macro-photogrammetry for the documentation of small and very small objects.

Figure 25. (Top) "Burgberg von Donaustauf" recorded with photorealistic 3D documentation of landscape, ruins and wall structures. (Bottom) high-resolution 3D documentation of the archaeological grave finding of Ilmendorf

Special core areas of Diego's work included:

- using the photogrammetry copter for complex CH documentation
- collaboration during the integration and testing of an airborne laser scanning platform (RIEGL VP1) into ArcTron 3D's ultra light trike (Figure 27, top),
- terrestrial 3D laser scanning with RIEGL VZ-400 (Figure 27, 2nd from top),
- high resolution scanning with different light-projection and hand-held scanning systems (PTM, Artec Eva+Spider, ZEB1, ZEB Revo) (Figure 27, 3rd & 4th),
- SFM photogrammetry with different camera system.

Of course, in addition to the data acquisition, the emphasis lay on the integration into industrial and internal data research processing workflows. Diego has worked intensively with an abundance of in house available industrial software solutions, as well as OS software and with aspect 3D, developed by ArcTron3D.

The right choice

Diego convinced the entire team at ArcTron with his reserved courtesy and kindness. As a well-trained soccer player, he also showed great endurance even in long working days out in the field. Perhaps the best proof that we have made the right choice with Diego is that we had offered him a leading position in the surveying department right after his internship. We were especially pleased, that he accepted this position without any hesitation!

For me, as archaeologist and CEO of an engineering company, specializing in 3D documentation, 3D visualization and multimedia presentation of our Cultural Heritage, the participation in the ITN-DCH project as a whole was a great enrichment! I would like to thank all partners, consultants, interns and, of course, the project initiator and managers and the EU.

Figure 26. An ITN-DCH project's sketched map: The partners, the Case Studies and representative monuments of the involved European countries

Figure 27. Screenshots from special core areas of ESR3 work

VR/AR @ Asinou church!
by Margarita Papaefthymiou, ESR10

ESR10, Margarita Papaefthymiou together with ER3, Georgios Leventis have visited Asinou church in order to gather data and prepare the material which was essential for their research work and presentations for the ITN-DCH Final Conference. The main goals of the visits were to reconstruct the priest of Asinou church, prepare a virtual tour in Asinou church, provided by the reconstructed priest in mixed reality environments and capture videos of the Mixed reality applications.

The first visit to the church held on 28th of May, where the two ITN-DCH fellows met up with the priest Kyriacos in church's outskirts and had a brief discussion on fellows' work. Using the Occipital Structure Sensor, the fellows have reconstructed the priest of Asinou.

Figure 28. Left: ESR10 during the modelling process. Right: Capture of Sensor's virtual environment

For the mixed reality applications, it is important to naturally illuminate the virtual models with the environment light. To achieve this, the fellows captured HDR irradiance map from the interior of the church using the Ricoh Theta camera, in order to use the light of the irradiance map to realistically shade the virtual priest. Before the next visit to the church, the data needed processing in order for the virtual tour applications to be prepared properly. The mesh of the virtual priest has been improved and the noise of the texture has been removed with the help of 3ds Max modelling software. Then, the virtual priest was automatically rigged using Mixamo software and have been created a number of different blend shapes, necessary for the lip synchronization of the priest during speaking. The reconstructed virtual priest has been employed to provide a tour to the end-user regarding historical information of the monument, and supported a wide range of different behaviours like performing gestures, speech and lip synchronization.

During the second visit on 5th of May, the fellows have captured many videos of the virtual tour running on mobile AR as well as on Microsoft Hololens. On mobile AR, the user had interaction with the augmented priest through the provided Graphical User Interface (GUI), which on Microsoft Hololens differs greatly due its operation using voice commands and hand gestures. The outcomes derived from the two visits of this work were presented during the ESR10 presentation "Rapid Reconstruction and Simulation of Real Characters in Mixed Reality Environments" and ER3 presentation "A New Way of Interacting with Cultural Heritage through the Application of Artistic Style Transfer".

Figure 29. From top left to bottom left clockwise: ESR10 and ER3 using Microsoft Hololens, Mobile AR application depicting virtual priest, Virtual priest (hologram) as seen through Microsoft Hololens.

International day of Archiving

by Georgios Leventis, ER3

On Thursday 8th of June 2017, Dr. Marinos Ioannides together with the researchers of Digital Heritage Research Lab: Dr. Pavlos Chatzigrigoriou, ER3-Georgios Leventis and ESR12-Vasiliki Nikolakopoulou visited the premises of the Cultural Foundation of Bank of Cyprus in Nicosia after an invitation received from the foundation's director Dr. Ioanna Hadjicosti, to attend a special event regarding the Archive of ITN-DCH's associate partner Cyprus Broadcasting Corporation (CYBC).

The event was held to celebrate the International Archives Day (9th June) and was organized by the department of Historical Archive of the Bank of Cyprus – Bank of Cyprus Cultural Foundation. Following a brief introduction by Dr. Christodoulos Hadjichristodoulou; a renowned Byzantinologist and Curator (Figure 30), Mr. Symeon Matsis the CEO of the Cultural Foundation, greeted and thanked the participants for their interest in this special event.

Figure 30. Dr. Christodoulos Hadjichristodoulou during his brief introduction on the event.

Subsequently, a unique lecture was given by the Head of the Archive of the Cyprus Broadcasting Corporation: Ms. Phivia Savva, who showed explicit parts of CYBC's Archive. Ms. Sava presented the dialectical relation between the content of the CYBC Archive, and the contemporary History of Cyprus as well as the history of the wider Hellenism. The presentation was also supplemented by the projection of archival material, which is partly unpublished and covered important aspects from international milestones happened the last 6 decades such as the Cypriot coup d'état of 1974, the Turkish Invasion in Cyprus, the Greek military Junta (1967-1974), the death of Princess Diana, the attacks of 9/11 in New York, the ISIS' atrocities in Aleppo etc. Within the same framework, a presentation took place of the process needed upon archiving TV and Radio historical documents as well as on the progression of the CYBC Archive through time. Reference was also made to activities of maintaining and promoting archival wealth, including the case of an INTERREG project named "Digital Herodotus" that has enabled the demonstration of exclusive records from the historical events of Cypriot 1974 period.

Overall the event was considered successful in terms of organization and planning as well as in the efforts made by the respective parties to transmit the cultural knowledge, which is archived and scientifically documented at CYBC's facilities.

Figure 31. Left to Right: Dr. Christodoulos Hadjichristodoulou, Dr. Ioanna Hadjicosti, Mr. Symeon Matsis, Dr. Marinos Ioannides, ESR12-Vasiliki Nikolakopoulou, Dr. Pavlos Chatzigrigoriou, ER3-Georgios Leventis.

Digital Workflows for Heritage Conservation
CIPA, Ottawa 2017
26th International Symposium

The 26th International Symposium of CIPA on Digital Workflows for Heritage Conservation will be held at Ottawa, Canada on **August 28th – September 1st, 2017**.

The rapid rise in new digital technologies has revolutionized the practice of recording heritage places. Digital tools and media offer a myriad of new opportunities for collecting, analyzing and disseminating information about heritage sites. With new opportunities, there are also conflicts, and an intense effort to incorporate digital media into the education of conservation professionals. Issues regarding the proper, innovative and research-focused uses of digital media in heritage conservation are urgent topics in the global heritage conservation field, and CIPA and its partners have played a leading role in this area of cross-disciplinary research and practice. The symposium will offer a unique opportunity for educators, professionals, heritage institutions, and managers of heritage places to share, exchange, and explore new approaches, best practices, and research results in the area of these workflows.

Main Activities:

- Emerging Documentation Leaders Workshop
- Professional Tutorials
- Industry/Government/Academia Leader Keynotes
- Parallel Sessions
- Youth Forum on Heritage Documentation
- Technical Excursions
- NSERC Create Heritage Engineering Forum on Rehabilitation and Sustainability
- SSHRC New paradigm / new tools for architectural heritage in Canada Meeting

as well as Workshops and Tutorials with partners and contributors is organizing a number of exciting workshops and tutorial on digital workflows for heritage conservation:

- Digital Fabrication for conservation of heritage places
- Workshop: Arches Heritage Inventory and Management Platform, Version 4.0 (GCI/WMF)
- AMAL in Heritage Workshop: Emergency Management Tools for Cultural Heritage (GHF)
- CIPA Tutorial on Dense Image Matching for 3D Reconstruction
- Workshop on Nunaliit Atlas Framework for Heritage Conservation
- Workshop on 3D Scanning for Heritage Conservation
- Augmented and Virtual Reality in Heritage Conservation

More info: http://www.cipaottawa.org/

Interdisciplinary Conference on Digital Cultural Heritage, DCH 2017

The Interdisciplinary Conference on Digital Cultural Heritage will take place on **August 30-September 01, 2017** in Staatsbibliothek Berlin, Germany.

The Scope:

The conference is open for contributions that cover technical challenges as well as strategic guidance. Key messages relating to the impact of new technologies and processes on cultural heritage are especially welcome.

Special aims:

- raise awareness in Society, Science, and Technology fields about importance of the cultural dimensions and the growing potential of Digital Cultural Heritage
- promote innovative content analysis from cross-organizational interoperability of digital humanities databases and XML methods, techniques, and approaches
- indicate on the central role of spatial concepts enabling synergy for knowledge generation from massive granular digital cultural heritage content
- create innovative cross-disciplines / cross sectors partnerships facilitate intercultural and interdisciplinary dialogue
- elaborate roles and interest of information society

More info: http://dch2017.net/index.shtml

Registration form

CIDOC 2017 Annual Conference

The CIDOC 2017 Annual Conference on "Documentation: Past, Present, Future…" will be held on **September 25-29, 2017** in Tbilisi, Georgia.

Past, Present, and Future Issues in Documentation

Documentation of museum collections is at the core of every museum. It assists work at all levels: organizational decision-making, collection and exhibition management, research, education, publications, and access to collections. Ensuring proper management and availability of information further advances the public use of collections through scientific networking and the intercultural dialogues around the world. There is constant progress in the field of documentation, and today's museums use a variety of tools from this evolutionary path. Standards, technical tools, and intellectual methods offer many advantages documentation practitioners.

This year we propose to look back at the evolution of documentation, so as to inform our analysis of current practice and to look into future innovative approaches and techniques. This insight will allow a deeper understanding of the importance of documentation.

This year's CIDOC conference aims to encourage active reviews and discussions on the topics below with a broad international focus. While illuminating the philosophy and activities of documentation officers, collection managers, registrars, conservators, curators, researchers, educators and all other stakeholders in documenting and preserving the cultural heritage. All professionals are invited to participate in the conference presenting their practices, reviews and approaches.

Conference topics:

- How did museum documentation start in different places and how did it develop?
- Cultural heritage documentation as knowledge management
- Standards and their application in museum documentation
- Documentation in excavation work
- Working with multilingual tools to support museum work
- Enabling cross-border, cross-sectoral networking of museum documentation to support research, education and presentation
- Challenges of the 21st century – Inter-cultural dialogue supported by museum documentation
- Implementing best practices in museum documentation

Original contributions that advance the state-of-the-art are invited in topics related to:

More info: http://www.cidoc2017.com/432828576

European Researchers' Night
September 29th, 2017

The event where you discover science, meet researchers and have fun!

Become a hero for a day: fight cancer, stop global warming, prevent hunger and drought, invent devices to counteract handicaps, and build plans to make human life easy in space!

It's all possible when you meet the heroes of science at the European Researchers' Night 2017. Those researchers from different disciplines actually lead a fascinating work that can change our lives.

With family, friends, your school or on your own, become a scientist for a day, participate in science activities and, most of all, have fun!

All the events will take place - simultaneously - on **Friday 29 September**, in over 300 cities across Europe and in neighbouring countries.

In Brussels, the European Commission and the European Parliament are organising a special event on Wednesday 27 September called "Science is wonder-ful" to illustrate the achievements of Marie Skłodowska-Curie researchers.

Don't miss this mega event! And experience live the fascinating path of research as a career and its significant societal impact.

Conference on Cultural Heritage and New Technologies, CHNT 22, 2017

The Conference on Cultural Heritage and New Technologies will be held on **November 8-10, 2017** in Vienna, Austria.

COMBINING ARCHAEOLOGY, HISTORY, AND NEW TECHNOLOGIES

The aim of this conference is to enhance the collaboration between historians and archaeologists and related disciplines using new technologies and to showcase best practice applications in multidisciplinary research. The conference organizers invite sessions dealing with one of the following topics or a combination thereof:

- Application of effective 3D-methods for the reconstruction of buildings, integrating archaeological excavation data with historical sources including images, thus increasing our understanding of the past
- Additional digital methods for the combined visualisation of archaeological and historical data (e.g. monitoring changes and preservation of archaeological monuments based on historical images).
- Application of new technologies to assess the archaeological record based on historical data (maps, tax returns, inventories, ship wreck lists, etc.) and/or combining historical sources and archaeological data in a geographical information system for recording the history of urban or rural landscapes.
- Games, apps, and teaching software integrating archaeological and historical knowledge
- Historical data as a basis for checking or validating digital tools applied in archaeology and vice versa.
- Dealing with inscriptions (including cuneiform, hieroglyphs and symbols): digital methods for enhancing readability (e.g. Reflectance Transformation Imaging), pattern recognition of letters or pictograms, comparison of hand writing (same author?).
- Statistical analysis investigating the correlation between historical place names and archaeological evidence.

More info: http://www.chnt.at/

The CALL is **extended** until **June 21, 2017**

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https://www.youtube.com/watch?v=1npcQvGaQJY

Download the Final ITN-DCH Booklet: Our Story in 61 pages!

Credits:

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