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UPTAKE

Increase Interest in Cultural Heritage through ICT

2015

THIS IS AN INTERACTIVE BOOK

INSTRUCTIONS

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Interactive software development platforms:

UNITY
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Aurasma
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UNITY 3D

AUGMENTED REALITY POWERED BOOK

ŽIGA PAVLOVIČ

Ever wanted to add something to the book when it was already published or add comments, as you are used to doing on social networks? Information in today's world is shared so quickly, a book feels outdated as soon as it moves hot from the printer's. It's more than just documentation – what if the book could be used as a portal to a shared online space where the conversation would continue, and on top of that present videos, three-dimensional models and animations as part of the reading experience? The eCultValue book is an experiment in that direction by using augmented reality or AR.

AR is a live view of artificial layers seen on digital displays, on top of the real world environment and its objects. It is most often used to enhance the presentation of information in a visual way, but it doesn't fully replace the real world view with a simulated one, like virtual reality does. The graphic lines showing world record times and current standings in sport TV broadcasts, are an example of AR being used to its best effect. Another type is geospatial AR, which uses GPS data on smart devices to place usable information on a virtual map and show us the way to the nearest hotel, or activates at specified GPS coordinates.

The most common experience on today's mobile devices is tracking a certain picture as a marker and displaying text, pictures, 3D objects, animations, videos or interactive buttons spatially relative to that marker. Therefore a marker needs to be within the camera view at all times otherwise the artificial layer disappears. A good marker needs a lot of contrasting areas (dark/light transitions) as seen below. Those features are tracked automatically through an algorithm, which then translates the artificial layer so that it matches the movement of the camera and consequently creates an illusion as if digital objects are part of the real world.

In developing AR applications we have two choices. Either we make a standalone app for each mobile framework – iPhone, Android, Blackberry, Windows Phone – or we develop the experience inside an AR browser app like Aurasma. The second way is cheaper and faster, but limited in options.

For the presentation in this book we chose Aurasma rather than other AR browsers because of its free development and publishing costs, and because it offers hosting AR experiences for an unlimited period of time, which is important. If you find the creation of AR experiences with Aurasma limiting, and you wish to develop your own standalone application for smart devices, or display them on screens to a wider audience, I recommend using the multiplatform Unity 3D game engine with a Vuforia AR unity package.

We have now answered the questions of What AR does, and How and Where it works. But the question of meaningful use of AR for Cultural Heritage is still open. As with the world record graphic lines, AR works best when it's seamlessly blended, almost unnoticeably visually represented data. Accordingly, it's at its worst when the user feels forced.

AR tracking is also moving away from simple image markers and with the use of depth-sensing cameras on smart devices it is possible to achieve seamless interaction without relying on users to find the objects for scanning. Moreover, eyewear products with AR, depth tracking and gesture recognition capabilities are expected to appear on the market in 2016, freeing hands and expanding the field of view for AR experiences. It is at that moment, in my opinion, that augmented reality will become more than a gimmick and will be able to add to the museum experience in a meaningful way, with the limitation of being a singular experience, since we can't share the eyewear screen with another person. Therefore, AR contents will need to exist in a shared metaspace of connected AR eyewear, so that a group of visitors will be able to experience them together.

Miha Horvat and Žiga Pavlovič, KIBLIX - PARALLELS, Maribor, Slovenia, 2014
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THIS IS AN INTERACTIVE BOOK

RELATIONSHIPS BETWEEN ICT PROVIDERS, CULTURAL CONTENT HOLDERS AND USERS, VISITORS, ARTISTS

FROM NEANDERTHAL TO SPACE ART

CONTEMPORARY ART IN DIALOGUE WITH CULTURAL HERITAGE

BUILDING THE AUDIENCES

e & follow-up

g = just the beginning!

t new developments in technologies for cultural

rstanding on the preactical use of technologies

uccess stories: MAXICULTURE event end

December 2014

ether!

Margaretha Mazura, EMF, eCult Summer Stage Maribor, Slovenia, 2014

© ACE KIBLA (photo by Janez Klenovšek)

eCult Observatory webpage

ICT FOR LEARNING AND ACCESS TO CULTURAL HERITAGE RESOURCES

MARGARETHA MAZURA

Cultural heritage is one of the main assets of Europe and the deployment of research results in the areas of interactive storytelling, personalization and adaptivity, coupled with mobility-enabling systems, has the potential to increase access to resources, improve user experiences and boost ICT industries. But take-up is slow and collaboration often difficult. The aim of the eCultValue project was to encourage the use of new technologies that have the potential to revolutionise new ways to access cultural heritage and experiences offered by cultural resources in real and virtual environments or a mix of both.

For this purpose, eCultValue looked into technologies arriving from EU-funded projects (Analysis of available technologies), promoted these technologies to people who apply them (Capacity building of eCult Ambassadors and validation in Living Labs) and related technologies to use-case scenarios (tool-kit on www.ecultobservatory.eu).

eCultValue involved all stakeholders in the cultural value chain, adapting the "triple helix" approach to the cultural environment, to capture multiple reciprocal relationships between IT providers, cultural content holders and users – visitors – artists.

The concrete outcomes of eCultValue are the the eCult Observatory, an online-platform as market place and for knowledge exchange; a sustainable network of trained eCult Ambassadors that support the implementation of project results; a Vademecum of technology strategies for museums; real-life showcases stemming from the project's promotion activities; and a sustainable eCult Stakeholders Community for future collaboration. The implementation was carried out by a partnership that covers all stakeholders, from academia/research to museum networks to ICT providers and user communities.

Concept

"Raising awareness of research results in digital technologies and fostering the dialogue between technology providers and cultural heritage institutions at eCult Dialogue Days, to validation and implementation of such results in practical settings". Three Dialogue Days showed the increasing interest of hitherto often "technophobe" museum representatives, to the point that, upon request by the museum community, the series of Dialogue Days was continued in 2015 (outside the project period). This willingness to listen and discuss is one of the major, sustainable results.

Triple helix

The triple helix theory was devised by Henry Etzkowitz (Newcastle University) as a symbol for the increased convergence between government, business and university whose collaboration is a key element for any innovative process. For eCultValue, the partners with their networks cover each of the actors of the triple helix: technology, museums and other institutions with cultural heritage content, users – young generation, visitors, artists. The partnership was supported by the eCult Expert Group that acted as a think-tank for the project with representatives from museums, research, regional institutions and technology all over Europe (Full list: http://www.ecultobservatory.eu/about/experts). eCultValue acted as spiral model of cultural innovation that captures multiple reciprocal relationships between IT providers, cultural content holders and users/visitors/artists to reach its goals.

Challenges and opportunities

Cultural heritage is a main asset of Europe, a fact already recognized in 1974 by the European Parliament in an initial resolution for Community action to preserve Cultural heritage, and followed through to the EU Digital Agenda and the Innovation Union Communication. It is a field of virtually unlimited possibilities, and combined with the use of new digital technologies, it has the potential to become an important sector to leverage Europe's economic and societal goals in the frame of the Europe2020 strategy. Very often though, there is an issue of understanding among technology developers and museum experts, and a shortcoming in addressing user needs. "Technology comes from Mars, culture from Venus", as one participant of the Dialogue Day put it. It is, however, crucial for the future of Cultural Heritage institutions to not only respond to the challenges of our digital era in a timely manner, but to see them as fantastic opportunities for Europe's rich cultural resources. Museums must become more appealing once again to the younger generation, which is the "born digital" generation. This is a challenge that numerous cultural heritage institutions are facing, especially traditionally-styled museums: how to raise interest in the on-site collection and make it available even for visitors that are not physically in the museum? The use of new technologies can not only solve this problem and attract virtual visitors, but can also raise general interest in the institution and contribute to the general promotion of it. The deployment of research results in the areas of interactive digital storytelling, personalization and adaptivity, and mixed reality, coupled with mobility-enabling systems, promises a lot to make not only cultural heritage sites more attractive but also to provide new means to make cultural knowledge, interpretation, and analysis more effectively conveyed to the public hence to encourage cultural tourism.

Additional opportunities for the exploitation of cultural collections are offered by online platforms and web applications. At first glance, access to online digital collections may look

in competition to the museums that hold the physical collections. Experience though has proven that 49% of on-line visitors do so in planning their physical visit to the museum. Therefore, websites and on-line collections must be considered as an additional opportunity to reach out to new audiences and fields of activities. It is therefore imperative for the traditional museums to "catch the technology train".

The TrendsWatch 2012: Museums and the Pulse of the Future identified seven trends that are highly significant to museums and their communities. Amongst them are three related to new technologies: crowdsourcing, mobile, distributive experiences and augmented reality.

This validates the efforts of European research programmes to focus on new approaches to cultural content, in particular to new experiences that the most recent technologies offer. As a support action, eCultValue enabled the exchange between Cultural Heritage stakeholders and between projects themselves for a better mutual understanding in order to foster this take up. In identifying best practices, methods and solutions that enable new, user-centred experiences for real and virtual visitors.

The project provided benefits not only for the museum sector but also for entrepreneurs. The main goal is to increase or keep high visitor rate in museums and at the same time to foster research and provide income in the ICT creative sector thus encouraging sustainable growth and development.

To face the above challenges eCultValue set up an innovative fresh approach built upon synergistic collaboration, engagement and networking of all key stakeholders.

eCultValue proposes a set of special objectives

1. Raise awareness of research results

taking stock of results and needs-analysis for implementation and further use of technological solutions stemming from currently running projects

2. Promote new technological solutions to cultural stakeholders

eCult Ambassadors coaching: Familiarise persons of target institutions (e.g. museums, national and regional cultural institutions, researchers such as archaeologists etc.) with technological results so that they can apply these results in their respective cultural domain (two Summer Stages were organised followed by on-line coaching courses: http://www.ecultobservatory.eu/basic-page/ambassadors-toolkit)

3. Validate technological solutions in different environments

Organization of eCult Dialogue Days: Three targeted awareness raising and brokerage events were held. Each one of these events targeted a specific topic and showcase the most recent successful technology and success stories. The objective of the eCult Dialogue Days is to bring together technology providers, cultural content holders, and users to exchange ideas, better mutual understanding that eventually leads to the development of new collaborative (and business) models and the take-up of these technologies.

4. Provide tools for easier take-up of technological solutions

eCult Observatory, a multi-functional web portal (www/ecultobservatory.eu): Library of project results, curated news,

http://emuseums-eye.ecultobservatory.eu. Social media/communities; practical use-case scenarios; Webinars to familiarize stakeholders with technological solutions and user needs

5. Encourage cross-fertilisation through the creation of a sustainable eCult Stakeholders community

eCult Expert Group: from its onset, eCultValue was supported by an expert group of key persons from all stakeholder groups in the cultural and ICT field. A first collaboration Stakeholder Workshop brought them together (technology developers, cultural institutions, museums) at the project start. On-line tools for the exchange of knowledge and tools – and invitation to all other eCult events enlarge the community while partners and networks invite their established stakeholder communities to participate.

T**he concrete outcomes of eCultValue are:**

– A Directory of technology providers, museums, experts ambassadors, projects that allow interaction between all stakeholders (http://www.ecultobservatory.eu/directory)

– A sustainable network of eCult Ambassadors that support the take up of project results (http://www.ecultobservatory.eu/users/ambassadors);

– A practical Vademecum for technology strategies for museums, helping them implementing new paths and experiences to cultural content which includes best practice cases and innovative collaborative models between ICT providers and cultural content institutions (http://www.ecultobservatory.eu/basic-page/vademecum-vision-paper-success-stories);

– EC Success Stories publication (this one!) addressing policy makers and a non-technical audience highlighting success stories of Cultural Heritage EU funded projects and initiatives – showing the value of EC investments in the field by highlighting the benefits that new ICT tools bring to the cultural environment and a brief video clip for the same purpose produced for YouTube and other A/V channels (Book on-line version:

YouTube Channel:
http://ecultmovies.kibla.org/

Online book version:
http://issuu.com/kibla/docs/ecult_book_online

eCult Winter Stage, Athens, Greece, 2014
© ACE KIBLA (photo by Matej Kristovič)

eCult Summer Stage, Maribor, Vitanje, Slovenia, 2014
© ACE KIBLA (photo by Janez Klenovšek)

ENCOURAGING THE USE OF NEW TECHNOLOGIES

FROM THE INTERVIEW SUMMARY REPORT

MARIA BOILE, KATERINA EL RAHEB, YANNIS IOANNIDIS, ELENI TOLI
ATHENA RC

The main aim of eCultValue was to encourage the use of new technologies that have the potential to revolutionize the way we are dealing with and accessing Cultural Heritage (CH) in Europe. To be able to do this, it is important to capture the point of view and the needs of the stakeholders working in Cultural Heritage institutions, in relation to the use of ICT.

The eCultValue partners have, therefore, performed a number of interviews with CH stakeholders and technology providers from several European countries. Deliverable reports present the findings of this activity and the information obtained as a result of the interviews, in the form of quantitative data, but they also highlight what has derived and was qualitatively concluded during these meetings.

The aims and objectives of this activity and the necessary background information about the planning and methodology are presented here. The reports provide information about the profiles of the interviewees, the main sectors that have been covered, and the quantitative analysis of the interviews.

In the qualitative analysis of the interviews, the following findings are presented (based on the main issues of interest): the existing ICT solutions in use, as explained by our interviewees; the purpose of their implementation and funding; the challenges and obstacles they have faced during implementation; and the main benefits according to their opinion. The report concludes with the identification of main patterns, derived from all interviews, which will hopefully help CH stakeholders and technology providers to better understand where we stand today, what the main challenges ahead of us are and how we can address them better.

Aims and objectives

Extensive meetings with CH stakeholders helped us to obtain a detailed insight into the operational aspects of Cultural Heritage institutions, their degree of awareness and their acquaintance with state-of-the-art technologies, as well as the real status of the technologies in use.

This knowledge allows us to better articulate the coherent technical requirements as regards the desired technology solutions and supports both, the CH stakeholders for choosing the right technology and the technology providers for making sure that user needs are taken into account.

The vast majority of interviewees (68 %) come from Greece, Slovenia and France, and the other 32 % from United Kingdom, Belgium, Germany, Italy, Croatia, the Netherlands and Spain, as well as Azerbaijan. In particular, CH stakeholders represent all the above mentioned countries – with a rather equal distribution of shares, unlike technology providers, one half of which come from Greece and the other 50 % from France, Slovenia, Italy and Spain (the interviews were conducted from April to July 2013). The consortium partners interviewed stakeholders with a strong CH background that have a high level awareness of ICT solutions, and technology providers with either detailed knowledge of the state of affairs or a background in CH (65 % of the respondents refers to CH stakeholders and the 35 % to technology providers).

Interviewees work both in the public as well as the private sector, covering a wide range of institutions and fields such as museums, national museums, galleries, performing arts, monuments, libraries, etc. They hold various positions within their respective organizations: directors, curators, archaeologists, professors, researchers; some occupy leading management positions or are members of a research / project team. With regard especially to the providers, some of are part of the permanent IT department staff (in the case of technology oriented institutions), or are freelance providers, collaborating with CH institutions on a fixed agreement over a limited period of time and in the frame of a concrete project. Many of them are affiliated to a university or research institution and / or are participating in related research projects.

Qualitative analysis / findings

Some general conclusions can be derived from the qualitative analysis. Our main areas of interest were to identify which technologies are in use and for what purpose the CH institutions use them, how they were funded and implemented and who are the decision-makers behind the adaptation of ICT in a CH institution. We wanted to highlight the issues and challenges faced by our interviewees as they were introducing these technologies, and identify the benefits as perceived by our interviewees.

Information and Communications Technology (ICT) solutions provide cultural heritage (CH) organizations with a very powerful set of tools, both in terms of daily work related to the management of a collection, as well as in terms of reaching out to the visitors, often in new and interesting ways.

Archiving and preservation

Representative CH organizations have developed internal collection management systems designed with respect to the needs of back-

office staff, for editing data records about objects and for supporting all processes within the organization. Especially for museums, this automated system keeps track of all artefacts, their location in the building, their state and history and it also includes descriptions and photographic documentation of each object.

The vast majority of CH stakeholders and IT providers are strong supporters of a more open user access to content, and the necessary adoption of international standards in order to support the interoperability and the collaboration between CH institutions.

Communication tools

According to CH stakeholders, the basic purpose of adopting ICT solutions in their organization is the need to disseminate the value of their collections, share information, and improve services for the visitors (multilingual translation, virtual exhibitions etc.) 80 % of the organizations surveyed have created an official website. A common approach for a large number of these organizations is the creation and use of a profile on social media sites, especially Facebook and Twitter; they are embracing social networking and use it as a means to communicate and promote their activities, and also to interact and engage with the visitors. Only a small share of them has also adopted other solutions, such as blogs, newsletters, pages on Scrib to share documents, YouTube channels etc.

Enhancing the visitor's experience

Nowadays, organizations are generally faced with a crisis of attendance, because visitors have more and more competitive choices available for their free time activities, and also expect to have educational entertainment experiences, the so-called "edutainment". Both CH stakeholders and IT providers argue that audience development is a crucial factor for cultural heritage organizations, which are now more engaged in innovative activities in order to operate in a more sustainable, attractive and interactive way, and to reach out to new audiences, with youth as a particularly interesting target group.

In this context, many memory institutions have decided to adopt interactive systems which introduce visual and emotional variety to the visitors' experience, with the purpose of creating a balance between seeing and doing.

The latest revolution comes in the form mobile devices, smart phones and tablets, which, with the use of advanced applications, tend to replace more traditional tools (like hand-held devices with audio or vision guided tours) and serve as interactive guides through the exhibitions. CH stakeholders believe that applications do not only provide information, but they can also enlarge and extend the visitors' sense of involvement and give them the opportunity to learn while having an entertaining experience. In some of the examples, location-based services have been taken into account. Some museums introduce a digital storytelling approach, which requires the replacement of the traditional set of exhibit-oriented descriptions by cohesive story-centred narratives with references to the exhibits. With the widespread adoption of interactive digital exhibits and mobile technologies, storytelling in a museum is taking on new forms, including mechanisms such as branching narratives, personalization, and adaptivity to visitor behavior and actions. As a result, exhibits and collections become more accessible and engaging for different kinds of audiences.

Getting the funding for the ICT implementation is one of the biggest impediments to its wider adoption. The main channels are: national and / or regional funding, European funds, own funds, sponsorships and pro bono and voluntary work.

The introduction of ICT in CH institutions usually implies top-down decision, it is IT department-driven (only a fraction of the CH institutions have a dedicated IT department) and project-oriented (usually adopted to implement a concrete technology or strategy). Almost 40 % of the interviewees have responded that their institution didn't follow a structured process while implementing ICT. 13 % admitted that although a structured process exists in theory, when it comes to implementation, the stakeholders in charge act intuitively and solutions are provided on the spot, as problems and ideas occur. 47 % of them stated that their organization (or the organizations they have supported, when it comes to technology providers) has a clear and structured process for implementing ICT.

Issues, challenges, obstacles

Technology providers and CH stakeholders consider the financial issue as one of the main obstacles for adopting ICT tools. The financial issue has, however, two aspects: the first one is connected with the lack of funding for this purpose, and the second one is related to the risk of investing in too expensive ICT solutions with no return. Some interviewees also pointed out the connection between the financing scheme and the policies of funding. The possibility of acquiring resources appeared high, however, the non-flexible funding scheme, the bureaucracy, and the slow procedure of receiving these resources made the whole plan of adopting ICT inefficient. Last but not least, low funding as an issue is not only related to the lack of money but also to the lack of resources in general, including human resources, time and know-how.

Time management and time cost – some stakeholders considered the process of implementing and managing the installation and usage of these tools as an extra load on the institutions with already heavy schedules and a lot of pressure on the employees. One of their concerns was how the ICT implementation would be carried out without interrupting their permanent activities. Another significant issue is the maintenance and up-keeping of the ICT tools and solutions, after the development and implementation, and the lack of long-term technical support.

Legal issues, issues related to copyrights, and the complexity of making the content public were also presented as major obstacles or risks from both the stakeholders' and the providers' interviewees. Some stakeholders expressed the concern that making their content public through the web, in digital archives, virtual exhibitions, etc., will make their content vulnerable to third party abuse, and commercial exploitation out of their control. Cultural issues, technophobia and conservatism from CH representatives as an obstacle, was mainly mentioned by the technology providers rather than the stakeholders themselves.

Communication between technology providers and the CH experts is a big challenge, as they usually do not share the same objectives and have their own different perspective.

Another issue, mentioned mainly by the stakeholders, is their concern or even fear that the adoption of new technologies will question the museums' credibility and validity, as curation will not be moderated. With respect mainly to tools such as virtual environments and story-telling, they see a contradiction between the academic insight, the accuracy of scientific description, the factographic curation and the innovative presentations that are subject to inaccuracies and mistakes.

Many stakeholders realize that using ICT is a "matter of survival", "a necessity", so almost all of them claim that it is a challenging process and risks exist, but the benefits of using ICT are unquestionable. Providers, on the other hand, having a more in-depth knowledge about the variety of ICTs that exist, and also taking into account that some providers have worked on several projects for a range of diverse institutions, were more analytical.

Benefits

Communication with the audience – all interviewees were extremely positive about the value of social media and the benefits that digital technology brings in terms of facilitating conversations between the audiences. Characteristically, some stakeholders said that ICT gives voice to the visitors.

Accessibility, publicity & web Presence – one of the greatest benefits that both stakeholders and ICT providers realized is that the usage of ICT allowed more users to access the institutions' content, and go beyond geographical borders, user disabilities, and other physical limitations. Many stakeholders stated that online visibility, web presence, and the public image are some of the most important benefits of using ICT. The use of webpages, social media, online exhibitions, public repositories etc., raised the level of awareness not only about specific CH sites, collections and museums but also about the specific city, country and CH area. ICT contributed to the promotion and dissemination of the institutions and built a public profile which was modern, dynamic, trustful, and in some cases fun, improving open user-access to the content from across the world and, therefore, promoting the democratization of knowledge.

Attracting the audience / profit – the use of ICT increases the visibility of CH institutions and attracts visitors, especially the younger audiences. As a result, some of the CH stakeholders have noticed a considerable increase of ticket- and online sales following the implementation of ICT. Many of the IT providers underlined the economic benefits they had from participating in funding programs. Some providers mentioned the potential use of ICT in boosting tourism and local businesses.

Documentation, archiving and preservation – ICT tools provide useful solutions for documentation, archiving and preservation. In this context, organizations adopt international standards in digitization to reinforce interoperability in the cultural heritage sector.

A significant contribution of ICT is that it helps to provide better services to the institution staff, as well as to their users and visitors. Applications for digital cataloguing of collections, institutions' management systems and tools for automating everyday working processes are some of the examples where ICT supported the "economy" of time and resources and decreased pressure on the employees.

Enhancing visitors' experience: edutainment & visitors satisfaction: the traditional static way of presenting exhibits was transformed significantly by adding creative elements and ideas that encourage interactivity and improve visitors' participation and engagement. ICT solutions fulfill these requirements by enhancing the creation of an immersive and enjoyable environment.

Knowledge about and acceptance of technologies

The vast majority of stakeholders said that although the process of adopting ICT was challenging and in some cases risky, it was definitely worth it, and has resulted in a number of important benefits for their institutions. When introducing ICT in CH institutions, the stakeholders are aware of the available solutions and open to their adoption. Nevertheless, they often can't match available technologies to their particular needs.

Issues identified

The trend is to use mainly tools and solutions to support the institution's web presence, publicity, and the creation of communication channels with the users through webpages, blogs, and social media. These are solutions that are usually easily customized and used; they are either low-cost or even free, and are familiar to both to the users and the staff. However, it seems that the majority of stakeholders' interviewees are not entirely aware or convinced about the beneficial use of ICT in adding value to the collections or objects by representing them in a more innovative, fun, or user- oriented way, especially if the institution is more traditional.

Solutions adopted / proposed

Although the lack of resources seemed to be the main impediment for adopting ICT, stakeholders and technology providers proposed several solutions that can contribute to a more effective and economic adoption of ICT. In the cases of dealing with external providers that do not have any former collaboration with the museum it is more difficult to build a trustful, understanding relationship, and also the cost is usually higher. Suggestions were made regarding potential solutions in terms of sustainability, maintenance and upkeep of the systems. It should also be noted that there is a high need for continuous education of CH stakeholders, with the goal of improving their knowledge and raising awareness about what ICT usage can offer to the field. Last but not least, there is a need to be supported on behalf of decisions makers and the government, not only in the form of money, but also by providing flexible funding schemes, minimizing bureaucracy and establishing strategies that promote innovation and creativity.

eCult Winter Stage, Athens, Greece, 2014
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eCult AMBASSADOR

The eCult ambassador works as an external consultant or internally within the cultural heritage organisation; at the crossroads of the cultural heritage organisation management team, permanent or temporary exhibitions curators, the communication and marketing team (incl. web services) and the visitor services team.

Summary Statement

An eCult ambassador analyses museums' or other cultural institutions', such as galleries, archives, libraries, etc. (hereinafter referred to only as cultural heritage organisations), and visitors' needs, defines and specifies solution requirements and evaluates installed solutions.

Mission

To identify the best-suited solutions, according to the cultural heritage organisations' and visitors' needs, requirements and financial resources and deliver advice on how new technologies can enhance collections and make them more attractive to all types of visitors on- and off-line, but also attract new audiences and ensure their return.

Deliverables

Within a cultural heritage institution, an eCult Amabssador is accountable for the provision of advice on the development of an ICT strategy, which will benefit both the cultural heritage organisation and the visitors.

Furthermore they are accountable for the development of guidelines for the implementation of this strategy in the most effective and efficient manner, evaluation of customer needs and for advice on selection of adequate products and services.

Ambassadors are responsible for solution specifications and liaising between ICT providers and cultural heritage organisation staff.

They contribute to market analysis, user requirements, suggestion of relevant ICT products/services, quality control and assessment of ethical issues.

Main tasks related to cultural heritage organisations' and visitors' needs:

To analyse the market, identify market needs and user requirements.

To evaluate cultural heritage organisations' and visitors' needs and formulate options.

To interface technology and cultural heritage organisation needs.

To understand the expectations of cultural heritage organisations and visitors.

To foresee the impact of technological solutions that will meet the needs of the internal teams s/he works with, as well as of the visitors.

Main tasks related to the provision of advices on the ICT strategy and solutions:

To advise on the elaboration of the institution's ICT strategy.

To plan time, cost and quality of the designed and specified solution including ROI of any technologies.

To raise awareness on information technology innovations and potential value to a business.

To engage cultural heritage organisations in the adoption of new technologies for improved access to cultural heritage.

To remain informed of new and emerging technologies and systems.

To provide advice on the selection of products and solutions.

To advise on the preparation and negotiation of contracts with suppliers.

To advise on compliance with standards and regulations on ICT.

To provide advice on how to optimize the use of existing tools and systems.

To communicate with cultural heritage organisations, staff and technology providers.

To act as a relay between ICT providers/ commercial service providers and cultural heritage organisations.

eCult AMBASSADORS NETWORK

KAJA ANTLEJ

Among a matchmaking platform and other actions for enhancing collaboration between technology providers and cultural heritage sector, the eCultValue initiative introduced also a network of eCult Ambassadors.

eCult Ambassadors are professionals with various backgrounds from both engineering and cultural fields. Many also come from the so-called creative industries (designers). Their role is to act as facilitators between digital solution providers and heritage organisations who usually speak their own jargon. It should be emphasized that for several times and from both sides a lack of good communication has been reported as one of the main challenges for a successful implementation of information and communication technologies (ICT) in heritage interpretation not only in museums, but also in galleries, libraries, archives (GLAM) and other memory institutions.

Nowadays projects of this kind are becoming more and more complex, and as such require an interdisciplinary approach, but due to the rapid development it cannot be expected of engineers to be familiar with all museum and visitor needs, the current trends in museology and their interpretation, nor of cultural workers to be fully informed about the state-of-the-art technology and all the processes behind smooth device housings.

Partly as a result of insufficient knowledge and inappropriate use of technology in the past, which was reflected in ostentatious heritage presentations (technology for technology's sake), technophobia is still slowing down the effective integration of digital technologies. Naturally, not all tools are appropriate for every scenario, but if we want to reach the new digital generations it is significant to adapt the narration in order to be adequate to their expectations.

In order to achieve excellence, it is therefore essential to provide both poles, the cultural and the technological, with competent advisors capable of translating each others concepts and thus constructively link both sides in the direction of finding the most suitable use of technology for a better access to cultural heritage.

Furthermore, the purpose of eCult Ambassadors is also to transfer technological knowledge from developers and other experts to non-experts and potential users. They will also familiarize and train persons, motivate and stimulate future Ambassadors with special emphasis on the involvement of young professionals such as PhD students and junior researchers.

In recent years, important results have been achieved through the EU, as well as through national and privately funded research projects. The eCult Ambassadors assist in the demonstration of already implemented technologies from target institutions such as GLAM (Galleries, Libraries, Archeological sits and Museums), cultural centres, universities and research institutions with an aim to ensure the flow of information and encourage new activities based on the acquired knowledge.

It is important for the eCult Ambassadors to be highly skilled and constantly well informed. For that reason, various events of the eCultObservatory Platform, such as the Summer Stage held in Maribor and the Winter Stage in Athens, or the coaching modules published on the eCultObservatory and broadcasted via webinars and social media, provide the Ambassadors with a supportive environment where they can improve their competences. Topics vary from mobile apps, augmented reality (AR), intelligent hardware, 3D, social media, wearable technology, to digital strategy, crowdsourcing and financing ICT for cultural heritage.

For many Ambassadors at the beginning of their career, active participation in the eCult community is a great opportunity to accelerate their professional development and contribute positively to their future employability. Moreover, being present in both the business and the public sector enhances their international professional network, which is important for all their future activities.

As one of the eCult Ambassadors I am truly grateful for the opportunity to be engaged in this project. Apart from adding new competences to my mixed background of industrial design, 3D and other digital technologies, museology and heritage studies, it also gave me the possibility to exchange experiences with various experts. Such an interdisciplinary, multicultural and enthusiastic environment motivates me to work even harder.

While the take-up of technology is a slow process, museums need to recognize the benefit of engaging in the deployment of technology. It was due to two eCult Ambassadors that the first steps towards a potential take-up were secured: the Krapina Museum in Croatia and the Cart Museum in Sicily.

As regards the Ambassadors' systematic knowledge and their development of skills, much has been done during the course of the eCultValue project. That is why it is important to maintain the network of eCult Ambassadors even after the project is concluded, and thus ensure that all the Ambassadors across Europe will be able to continue with their contribution to the emerging field of digital technologies' implementation in cultural heritage.

The eCult Ambassadors
at eCult Observatory webpage

PHILIPPE WACKER

TECHNOLOGY IS A VECTOR OF EXCELLENCE, A VECTOR OF BEAUTY

Philippe Wacker, is a multilingual and cross-cultural project manager with a strategic outlook and broad international experience – manager of leading international ICT and high technology networks and networking specialist with a broad range of contacts (corporate, research, professions, politics, public administration, investors, media, art, etc.).

Specialties: international project management, strategic project planning and development, international project financing, international business expansion.

Within the eCultValue project he's an expert consultant and eCult Ambassador.

The interview was recorded in September 2014 in Dubrovnik, Croatia – eCult 3rd Dialogue Day, THE BEST IN HERITAGE 2014.

Interview by Kaja Antlej

What are the main challenges of using technology as a form of support to cultural heritage?

Firstly, the term "technology" is still regarded as something alien by many museums; like some sort of "wild beast", as I like to call it. But as a matter of fact, technology should be perceived as an instrument; an instrument to achieve certain goals. Obviously, every museum has goals – preserving heritage, making it available to visitors, publicizing their existence and so on. Technology is a tool to an end – for achieving those goals. For example, we were listening to a concert, and I was thinking about technology in this context … technology is like an instrument. Everybody sees the musician playing the instrument, and beholds the instrument as a vector of beauty, a vector of excellence – technology is exactly the same. So, there is still this psychological issue that many museums need to overcome. On the other hand, I also think that many technology providers are providing nothing but technologies, when they should in fact focus on providing solutions, which have to be adapted to the needs of this particular market (i. e. museums). In order to be able to do this, they have to understand the needs of a museum, the context in which a museum operates; the visitors' needs and desires. They need to reflect on what type of experience the visitor is interested in; how can technology help to enrich and enhance the experience of the visitor; how can it add new layers to the "mere" object that is being displayed; how can it augment the experience of coming to a museum.

But apart from the big, established institutions there are also many museums that struggle with funding, and cannot afford to integrate technology into their programs.

There are already technologies available that are relatively inexpensive, so the problem is not usually the cost of implementing technology as such. It is true that sometimes the use of technology will also require hidden costs (for example, the costs of maintenance) – these are often not considered at the first sight, but still need to be taken into account. However, there are also ways of bringing down the costs: smaller museums can work together, and consider the option of acquiring some things at a shared cost. This would also mean pushing towards a higher common standard: if every museum chooses their own type of technology, there will be no room for an interoperable system – imagine walking into a museum, where your mobile device would not allow you to interact with the locally implemented technology. Having to use a different type of technology every time you go to a different museum would certainly represent a problem for the user experience. If the user interfaces are different, you would have to find out each time how the individual settings work etc. – this could be an issue especially with large groups of visitors. So it would definitely be good to have things standardized. And if museums get together, and define these standards, procure the solutions jointly, this would obviously have a positive influence on the standards, and, probably also a favourable effect on the market prices.

Philippe Wacker, eCult Summer Stage, Maribor, Slovenia, 2014
© ACE KIBLA (photo by Dejan Pestotnik)

How can small companies that develop new technologies cooperate with each other? Can they perhaps address the museums together? Would that be a possible solution?

Many smaller companies often only have to offer one or two solutions. They are thus really only catering to one specific need. But most museums are looking for a broader portfolio of solutions, which would be able to address the entire experience of operating a museum or of a visitor coming to a museum. Again, it would be good to have these smaller companies, which are targeting this particular segment of the market, to get together, to collaborate and develop some sort of portfolio that corresponds to all the needs of a museum, as opposed to catering to one particular aspect (for example, augmented reality). Very often, unfortunately, the presentations and proposals that you see cover only one specific technological need or aspect of a museum. So I think the answer lies in collaboration, in coming together, though the question still remains of how they should come together. But there are possibilities – just recently, I came across a project, funded with the support from the Flanders regional government, who supports three local companies that are looking to prove the efficiency of their solutions and are designing a common portfolio (it will of course be broader than what they could present individually). The second step is that they can also offer their solutions to a broader market, not just to their local or national market. They have also been successful in attracting other partners from other countries. The result of their common efforts is the creation of a new company, which will also be open to the participation of third parties. All in all, it is a model that I find very attractive. I think it could encourage the consolidation of the European industry.

What about the other side – the museums? Do you think they need more education, more knowledge related to technology, so that they would become more familiar with the existing market possibilities?

Well, obviously, if you don't even know what's out there, you can't imagine what you would be able to do with it … So, the first step is to find out what's out there, to have a certain degree of openness, of curiosity; to investigate and evaluate the market offer. Again, this is something that I believe can be done together, as a shared effort, because if each museum does this separately, it will cost them a great deal more – they will probably have to designate a person to do just that etc. I see this as another opportunity where we can "share the burden" – delegate a group of people who will take on this responsibility, and do it for everybody. These people would do the research, evaluate, and rate the different technologies and solutions which are currently available on the market, and which are of interest to all of us, and, of course, share the evaluations and the ratings, so that we all benefit from it. It is definitely a recommendation on our part to do that.

What about open source technologies? Can they represent a solution for the museums that struggle with funding?

Theoretically, of course, open source appears to be the solution. However, open source doesn't fall from the sky either – it needs to be developed, just like any other technology.

I suppose there is the problem of maintenance?

Absolutely … there will be costs of development, costs of maintenance, and so on – open source technology means having expenses, just like everything else. In my opinion, it is not that important whether technology is open source or not. The question is, is it the right technology for you? Does it come at a right cost? For example, Google is not open source, but it's free (many Google functionalities are free). We all use it. So I think that open source is one way of delivering solutions, which can be very positive and very cost-effective, but it's not necessarily the only way. I wouldn't close all doors to the proprietary technologies: if there are companies out there that supply the right type of proprietary technology at the right price – why not? After all, every cell phone, every personal computer is a product of proprietary technology and so are most other technological devices that we know.

What do you think about co-creation and a higher level of involvement of the visitors with the technology solutions inside a museum?

Museums visitors definitely have a role to play in that respect, and can potentially even become co-creators. As a matter of fact, many of them express the desire to become more involved, to become actively engaged in the museum experience. I actually think that this is where the biggest opportunities lie. Going to a museum should not continue in the tradition of a passive experience, like it has been to a large extent in the past, when you just came and consumed something. Now there are so many ways to interact, even to the point where you can create your own version of the experience, or use some of the content to create something different, combine different elements and make connections between, for example, two exhibited pieces. The connection you see between object A and object B is not necessarily the same as mine … there are so many different layers of enrichment that can be generated by the visitors in this way.

RELATIONSHIPS BETWEEN ICT PROVIDERS, CULTURAL CONTENT HOLDERS AND USERS, VISITORS, ARTISTS

SELECTED EU PROJECTS FOR RELEVANCE TO THE USE OF ICT IN THE FIELD OF CULTURAL HERITAGE

3D Icons, CHESS, meSch, TAG CLOUD, V-MusT.net

SELECTED NATIONAL / REGIONAL PROJECTS

MuseumApp, Suhozid.hr

eCultObservatory webpage
The list of FP7 projects
in the ICT & Creativity sector

#AR #interactive #smartobject

This project received funding from the FP7 programme of the European Union.

meSch

WAAG SOCIETY
AMSTERDAM, NETHERLAND

> The museum's preoccupation with the information and the way it is juxtaposed to objects /.../ immediately takes the museum visitor one step beyond the material, physical thing they see displayed before them, away from the emotional and other possibilities that may lie in their sensory interaction with it.
>
> — Sandra Dudley, "Museum Materialities"

There is an opportunity to take advantage of the visitors' physical experience with cultural heritage and to integrate technology into it instead of creating a parallel and detached digital experience. This is what meSch wants to achieve: to put the physical back at the centre of the cultural heritage experience by enabling curators, artists, and designers to create manageable networks of adaptive smart exhibits that make it possible for visitors to "feel the heritage" and for staff to convey the values of their institution. Our vision is of a cultural space with smart objects, each with their own digital content embedded therein, which will be revealed if and when conditions are right, for example, when visitors have reached the proper time in the storyline, or a group of them is acting in a certain way, or another smart object is close by. While technically this has been possible for some time, to make smart tangible objects sustainable for heritage institutions, curators, exhibition designers, and artists need a simple hardware and software platform that allows them to conceive, design, make, and maintain interactive artefacts. To this aim meSch is grounded on principles of co-design, the broad participation of designers, developers and stakeholders into the process, and on a Do-It-Yourself philosophy to making and experimentation: hands-on design and making workshops are employed throughout the project to inform and shape development.

The stages for the creation of a meSch smart object are: a cultural heritage professional retrieves content from multimedia digital repositories; snippets of content are composed in a network to create multiple narratives, each controlled by rules; an executable is then downloaded to a smart interactive device that is placed in an exhibition and can interact with other smart objects, the visitors, and the space to provide personalized content in context; the smart objects have an online shadow that logs the visit an enable the visitors to continue the personalised interaction online; the curator can use the log to monitor how the exhibition is going.

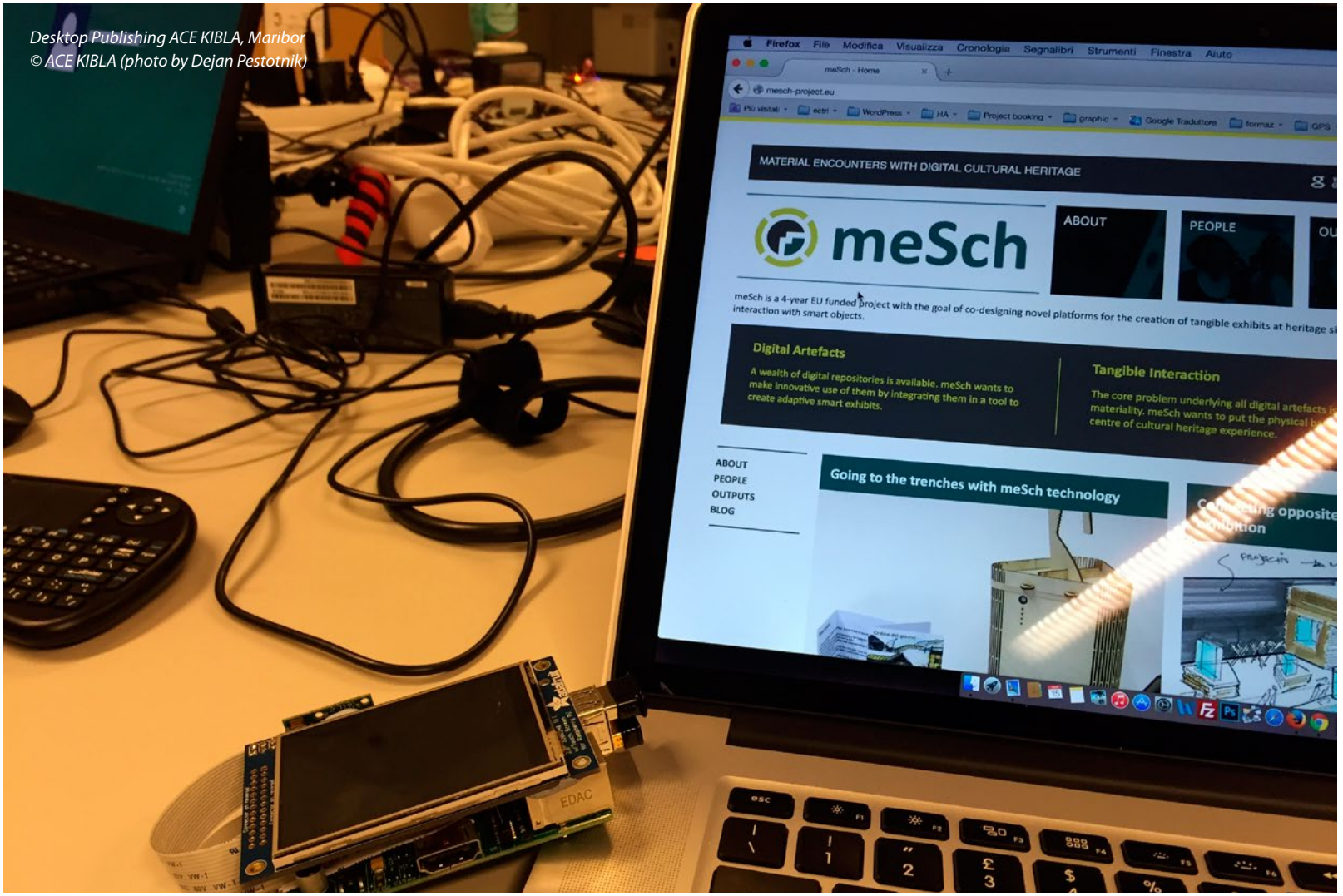
The novel types of visiting experiences developed in meSch illustrate the fusing of digital and physical. The Loupe uses Augmented Reality technology to reveal digital content when pointed over specific objects that have been augmented. A trail of discovery takes the visitor across the museum from exhibit to exhibit.

Fifteen exhibits from the museum deposit compete for one of the four Interactive Display Cases on the exhibit floor. Objects are given a personal voice and a character and speak directly to the visitor: those that capture visitors' interest (based on physical presence or Twitter conversations) stay on display; the lowest scoring is replaced.

The visit of the remains of the trenches of WWI is made special by Narratives in Place: visitors select the story they want to listen to by placing an illustrated card into a slit in one of the pockets in a belt. The visitors' presence at specific points of interest triggers the play of evocative stories from the war, such as diaries, poems, military orders and the life of women.

The meSch project (2013–2017) receives funding from the European Community's Seventh Framework Programme 'ICT for access to cultural resources' (ICT Call 9: FP7-ICT-2011-9) under the Grant Agreement 600851. Waag Society (a Dutch Foundation) is partner in the meSch project.

meSch, The Loupe
© WAAG Society (photo courtesy of WAAG Society)



Desktop Publishing ACE KIBLA, Maribor
© ACE KIBLA (photo by Dejan Pestotnik)

Marc Boonstra, WAAG Society – Institut for Art, Science & Technology
eCult Summer Stage, Maribor, Slovenia

meSch
© WAAG Society (photo courtesy of WAAG Society)

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meSch
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WAAG Society works together with Amsterdam Living Lab which is a member of European Network of Living Labs (EnoLL). The approach of the Amsterdam Living Lab is to establish the European Center for design and development of products and services in the area of ICT and new media. This is done by a strong focus on tools, methodologies and knowledge on measuring and understanding behavior and experience by creating processes with a strong link between design and understanding real life behavior of users.

WAAG SOCIETY

Institute for art, science and technology

AMSTERDAM, NETHERLANDS

WAAG Society building, Amsterdam
©WAAG Society (photo courtesy of WAAG Society)

WAAG develops creative technology for social innovation. The foundation researches, develops concepts, pilots and prototypes and acts as an intermediate between the arts, science and the media. Waag Society cooperates with cultural, public and private parties.

Waag Society follows the method of Creative Research. Creative Research is experimental, interdisciplinary research. Artists, creatives and end users have a central position and a large influence on the final result: Users as Designers.

The classic approach of science and the standard model of research and development is enhanced by this method that cross-links arts, culture and science. Creative Research will bring applications that are suited to the needs and possibilities of their users and is related to participatory design, rapid prototyping, practice based research and tinkering. Waag Society has a strong focus on enabling user groups that otherwise have limited access to participate in internet, new media and technology. Within the organisation, specific themes are used to develop multiple projects, called Labs.

Currently there are six different labs at WAAG: Creative Care Lab, Creative Learning Lab, Future Internet Lab, Open Design Lab, Urban Reality Lab and Open Wet Lab.

The Waag ("weigh house") is a 15th-century building on Nieuwmarkt square in Amsterdam. It was originally a city gate and part of the walls of Amsterdam. The building has also served as a guildhall, museum, fire station and anatomical theatre, among other things. The Waag is the oldest remaining non-religious building in Amsterdam. The building has held rijksmonument status since 1970. The Waag is depicted in Rembrandt's 1632 painting The Anatomy Lesson of Dr. Nicolaes Tulp. The surgeons' guild commissioned this painting for their guildhall in the Waag.

#mixedreality #3D #digitalstorytelling #mobileapps

This project received funding from the FP7 programme of the European Union.

CHESS

CULTURAL HERITAGE EXPERIENCES THROUGH SOCIO-PERSONAL INTERACTIONS AND STORYTELLING

CHESS provides the necessary tools and methodologies to create narrative-driven cultural "adventures" through hybrid structures, which adapt continuously to their visitors and extend over space and time

Cultural heritage institutions nowadays face the important challenge of making their collections more engaging to visitors, especially the young digital natives, while exploiting, in new forms of cultural interactive experiences, the recently developed digital libraries. An approach for cultural heritage institutions (e.g. museums) would be to capitalise on the pervasive use of interactive digital content and systems in order to offer experiences that connect to their visitors' interests, needs, dreams, familiar faces or places; in other words, to the personal narratives they carry with them and, implicitly or explicitly, build when visiting a cultural site.

Storytelling is a new way to guide museum visitors, in which the traditional set of exhibit-oriented descriptions is replaced by cohesive story-centred narratives with carefully designed references to the exhibits. However, realizing an immersive, and, at the same time, interactive personalized digital storytelling experience within a museum is a challenging task. It involves meeting multiple and often contrasting needs: evolving visitor expectations as well as the museum's objectives; an engaging story that flows and provides dramatic tension, as well as interactivity and user control and feedback; personal relevance as well as a variety of multimedia material for all; mobile interface and interaction design as well as focus on the physical space.

The principal objective of CHESS was to research, implement and evaluate an innovative conceptual and technological framework that enables both the experiencing of personalised interactive stories for visitors of cultural sites and their authoring by the cultural content experts. Essentially, CHESS provides the necessary tools and methodologies to create narrative-driven cultural "adventures" through hybrid structures, which adapt continuously to their visitors and extend over space and time. To achieve this, CHESS integrates interdisciplinary research in personalisation and adaptivity, digital storytelling, interaction methodologies, and narrative-oriented mobile and mixed reality technologies, with a sound theoretical basis in the museological, cognitive and learning sciences.

CHESS follows a plot-based approach, where the story authors (curators, museum staff, script writers) write and produce stories around pre-selected museum themes. CHESS provides story authors with a powerful authoring tool, the CAT (CHESS Authoring Tool), enabling them to design and implement interactive stories into the CHESS system. CAT is based upon a rich storytelling data model, using graph-based representations to denote the non-linear story structure, along with structured meta-data to semantically describe all the graph entities. During the visit, the authored story graphs are traversed by the Adaptive Storytelling Engine (ASTE) along with additional visitor and contextual data to appropriately adapt the visitor's CHESS experience.

This tightly integrated framework has been applied and tested in different types of cultural heritage sites; most notably two world-renowned museums, the New Acropolis Museum, and the Cité de l'Espace in France, but also evaluated in Catalhoyuk archaeological site in Turkey and in Stedelijk Modern Art Museum in Amsterdam.

The CHESS project kicked-off in February 2011 and was completed in March 2014. The project was co-financed by the European Commission's Seventh Framework Programme.

Chess applicaton
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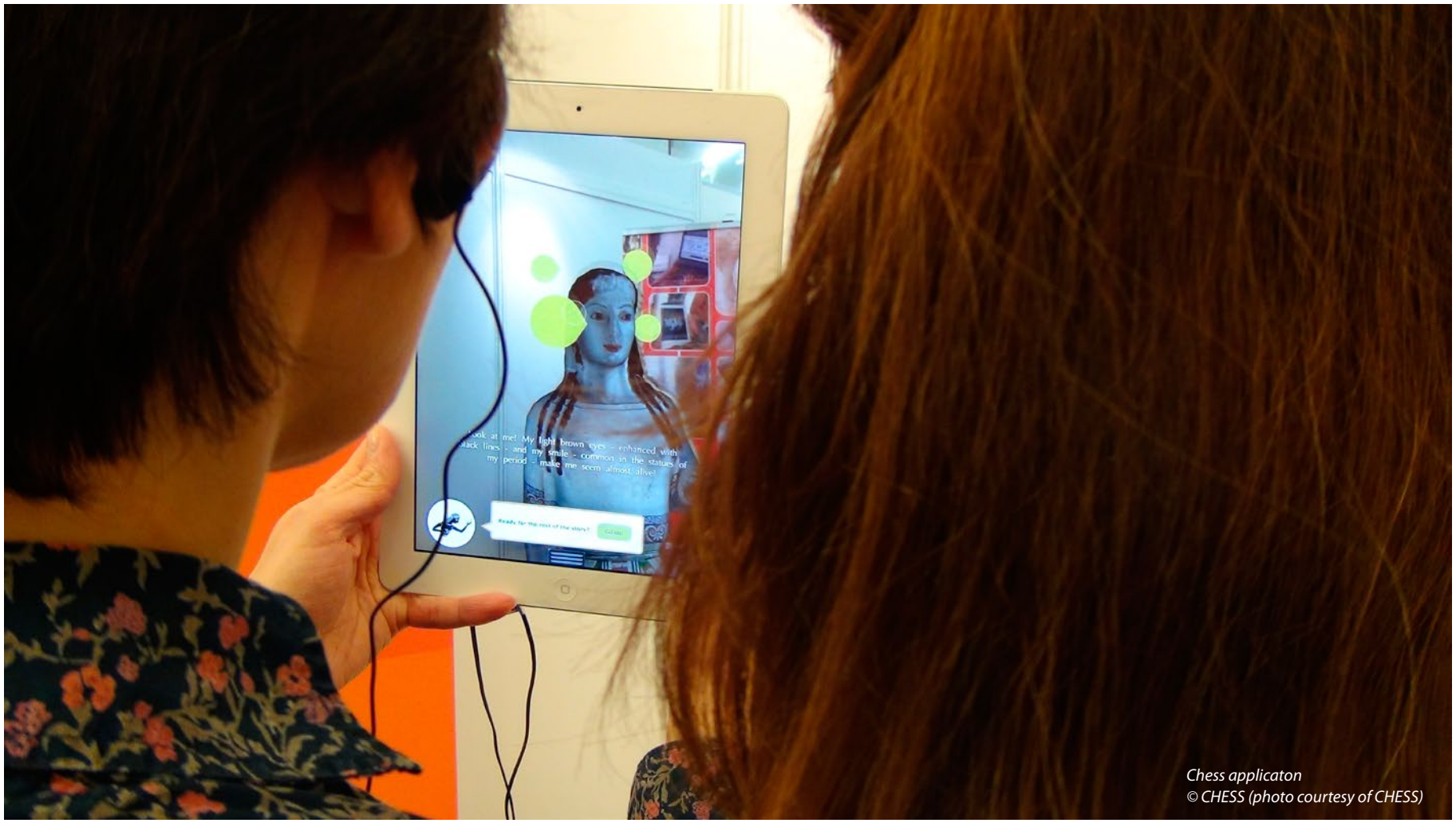


Chess applicaton
© CHESS (photo courtesy of CHESS)

#mobileapps #locationbasedservices #socialnetworks

MuseumApp™

7scenes

AMSTERDAM, NETHERLANDS

DIGITAL COLLECTIONS & NEW VISITORS

In the past few years, museums, archives and other cultural institutions have been working towards one thing: digitizing their collections. At the same time, their visitors are changing. Museum visitors expect not only to browse the collection online, but to be guided around the museum during their visit. They're looking for a personal experience, an interactive experience, an experience that can be shared with their friends. Visitors want to experience this on their own devices, and in their own timeframe.

INSPIRE, CONNECT & GUIDE

In short: cultural institutions need to inspire, connect and guide their visitors, during the whole process of their visit. They use their digitized collection in a meaningful way, that gives their visitors an experience they'll never forget.

Visitors want to browse essential collection information with high-resolution photos and video.

They're looking to discover curated selections of objects and stories on an interactive map. Saving personal favourites and share them with friends on social media is of paramount importance to them. Navigate your exhibition space using a zoomable floor plan, and create stories, using your digital collection. Let visitors unlock photos, video, audio, quizzes at collection objects. Connect your museum to the city. Let visitors enjoy city tours by foot or bike with full GPS tracking and explore your selection of city hotspots such as landmarks, café's, theatres. Of course, they do want to record and share their personal experience.

MUSEUMAPP

MuseumApp is a mobile service to inspire, connect and guide museum visitors on their smartphones and tablets. MuseumApp allows people to prepare their visit, explore arts & culture inside and outside the museum and share their experiences. Publish your collection to smartphones and tablets and create interactive multimedia tours inside the exhibition spaces and outside at city locations.

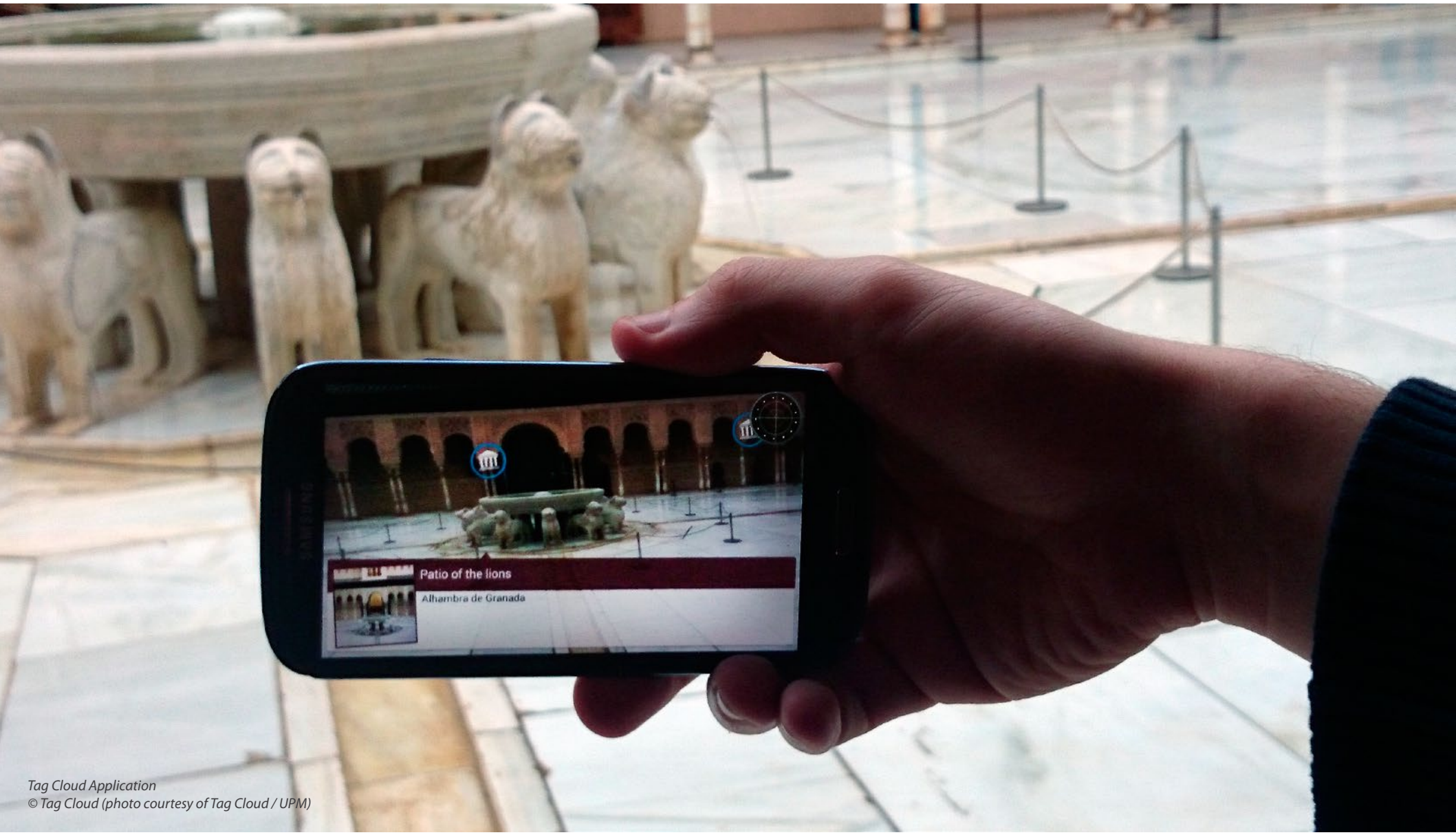
MuseumApp contains a content management system, branded apps for iPhone and Android, an analytics option, and is easily integrated into your existing website.

The MuseumApp framework is carefully tested and being used by museums throughout Europe: from the Red Star Line Museum in Antwerp to the Stedelijk Museum in Amsterdam. 7scenes never just sells an application, but always works towards a sustainable relationship with our customers, as to ensure that the apps work for as long as the customer wants.

7scenes has been working on mobile storytelling since 2003 – ever since Nokia put their first 'smartphones' on the market. As a part of Waag Society, they have a strong background in social research in technology. Since 2007, 7scenes area separate company – and growing ever since.

Working with launching customer Amsterdam Museum (http://www.amsterdammuseum.nl/) and research partner Waag Society (http://waag.org/nl) 7scenes developed the MuseumApp. (http://7scenes.com/projects/the-museumapp/). The MuseumApp is a product with which museums can independently create interactive city tours and games for smartphones.

MuseumApp™ Applicaton
© 7scenes (photo courtesy of 7scenes)



Tag Cloud Application
© Tag Cloud (photo courtesy of Tag Cloud / UPM)

Tag Cloud Application
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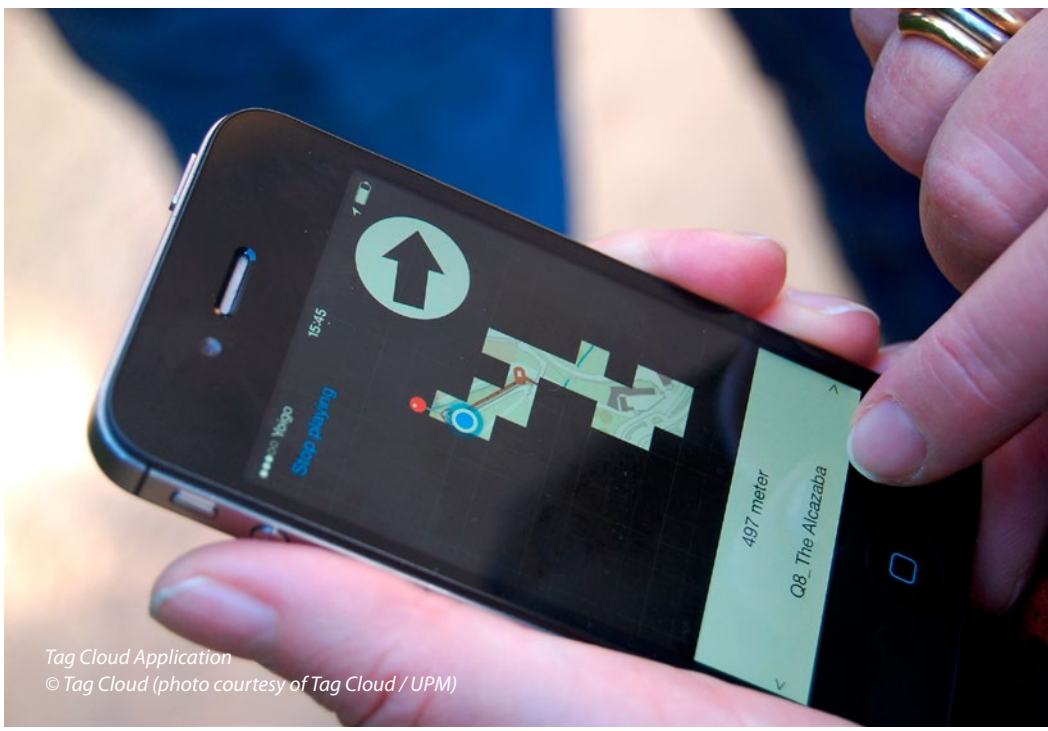

Tag Cloud Application
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#cloudcomputing #digitalstorytelling #mobileapps

This project received funding from the FP7 programme of the European Union.

TAG CLOUD

TECHNOLOGIES LEAD TO ADAPTABILITY & LIFELONG ENGAGEMENT WITH CULTURE THROUGHOUT THE CLOUD

Culture is an important value to the European population. More than three quarters of Europeans consider culture to be important for them, but reality shows that the engagement of the population with its cultural heritage is too low. According to the last Eurobarometer, about 50 % of the population does not visit museums, public libraries or historical monuments, while regular participation in other cultural activities is also minor (about 38 %). Today, one of the challenges for curators and professionals in the heritage sector is to attract, engage and preserve the number of visitors in heritage institutions (libraries, museums, archives and historical societies).

Currently, cultural heritage institutions are attempting to attract visitors by using a range of digital technologies, from the relatively cheap interactive websites, to expensive on-site 3D visualizations. Despite the employment of these technologies the success of significantly increasing their visitor base has been limited.

TAG CLOUD (Technologies lead to Adaptability & lifelong enGagement with culture throughout the CLOUD) is a European project co-funded by the Seventh Framework Programme of the European Commission which started in February 2013.

The project aims to generate lifelong engagement with cultural heritage through personalization, augmented reality and storytelling technologies based in the cloud. TAG CLOUD increases the active participation of general public in cultural events and experiences đby inviting them to become participants in their own cultural experiences, contribute new content and opinions, and share information with other people and heritage institutions, curators and researchers in the cultural field before, during and after the visit.

A basic framework is established to fit user and cultural artefacts requirements. Existing systems, devices and algorithms used worldwide by cultural heritage institutions and relevant social media will be reviewed to draw the preliminary specifications of the system.

The architecture follows a SaaS approach, based on cloud technologies – ways to locate, store and serve the artefacts in a secure fashion and matching users and artefacts. The adaptability of the system for personalized interaction and context-related artefacts is achieved through the development of an overall interface concept which is cross-platform-compatible and user-friendly.

The methodology and interactive technologies developed in TAG CLOUD result in introducing more people to cultural heritage activities, improving the quality of their engagement and increasing the frequency of their visits to cultural sites.

The system's design follows a user centred approach – simultaneously installed in three different pilot sites: The Alhambra of Granada in Spain, The Barber Institute of Fine Arts in the United Kingdom and the city of Sør Trøndelag in Norway.

Led by Universidad Politécnica de Madrid (UPM), the TAG CLOUD project involves other universities and research centers (University of Birmingham, United Kingdom; SINTEF, Norway; and Fraunhofer Fokus, Germany), leading IT companies (BMT Group, United Kingdom; INMARK, Spain; OKKAM, Italy; and GEOMobile, Germany) and three cultural heritage institutions (La Alhambra of Granada, Spain; Barber Institute of Fine Arts – as part of the University of Birmingham, United Kingdom; and Sør Trøndelag Fylkeskommune, Norway).

Tag Cloud Application
© Tag Cloud (photo courtesy of Tag Cloud / Universidad Politécnica de Madrid – UPM)

#3Dmodeling #3Dscanning #digitization

This project received funding from the FP7 programme of the European Union.

3D ICONS

ARCHITECTURAL AND ARCHAEOLOGICAL MONUMENTS AND BUILDINGS IN 3D

3D-ICONS is a pilot project funded under the European Commission's ICT Policy Support Programme which started on 1st February 2012 and lasted for three years. It brings together partners from across Europe with the relevant expertise to digitise architectural and archaeological monuments and buildings in 3D. It is designed to establish a complete pipeline for the production of 3D replicas of archaeological monuments and historic buildings which covers all technical, legal and organisational aspects; to create 3D models and a range of other materials (images, texts and videos) of a series of internationally important monuments and buildings; and to contribute content to Europeana using the CARARE aggregation service.

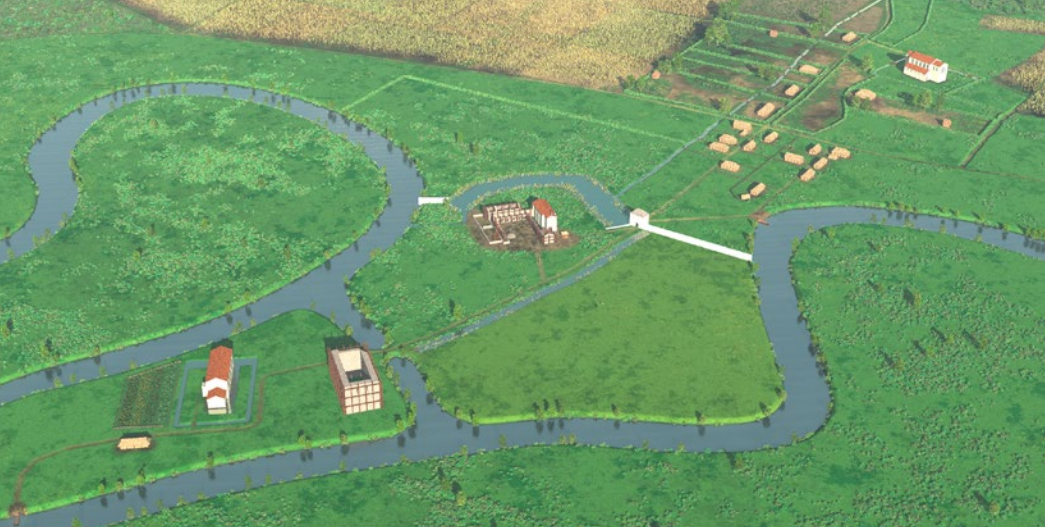
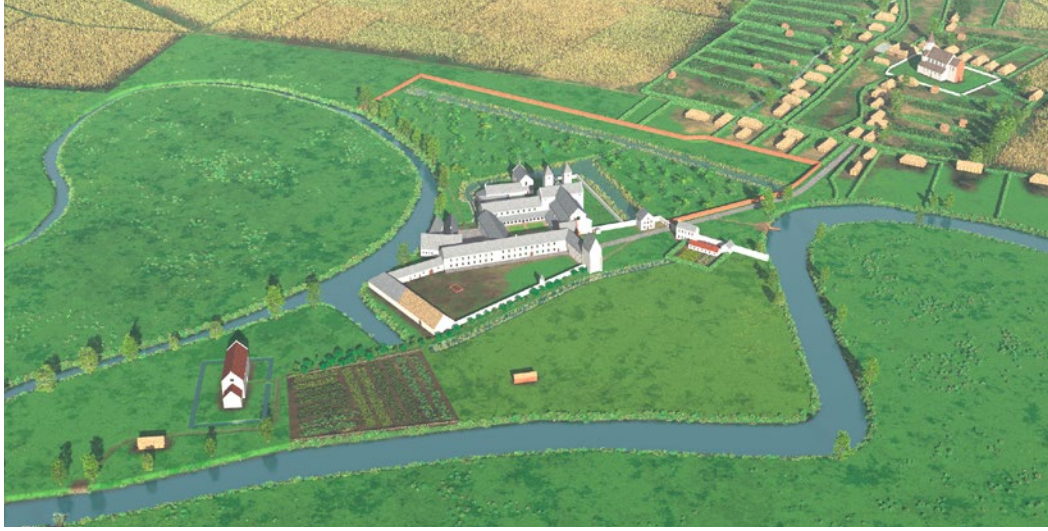
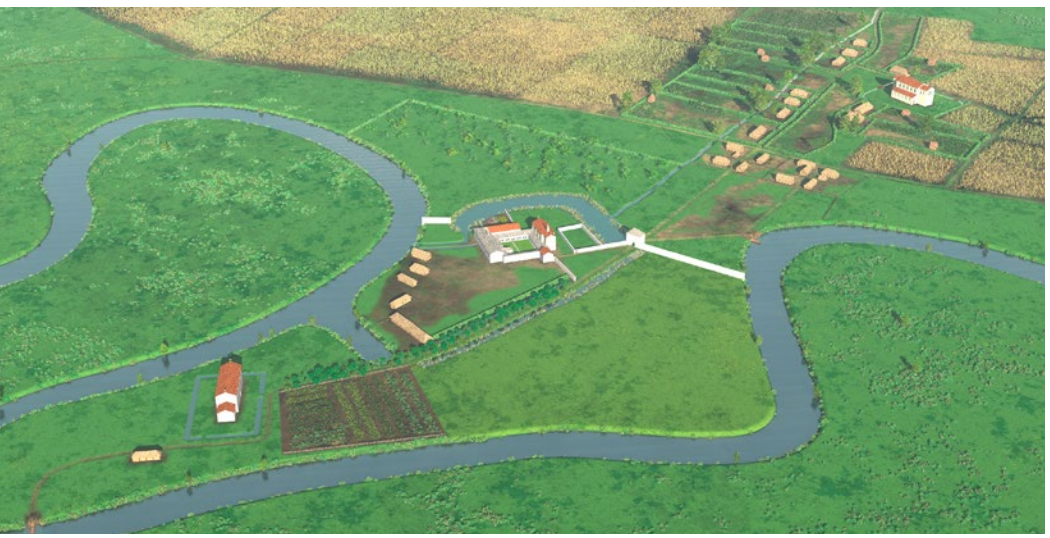
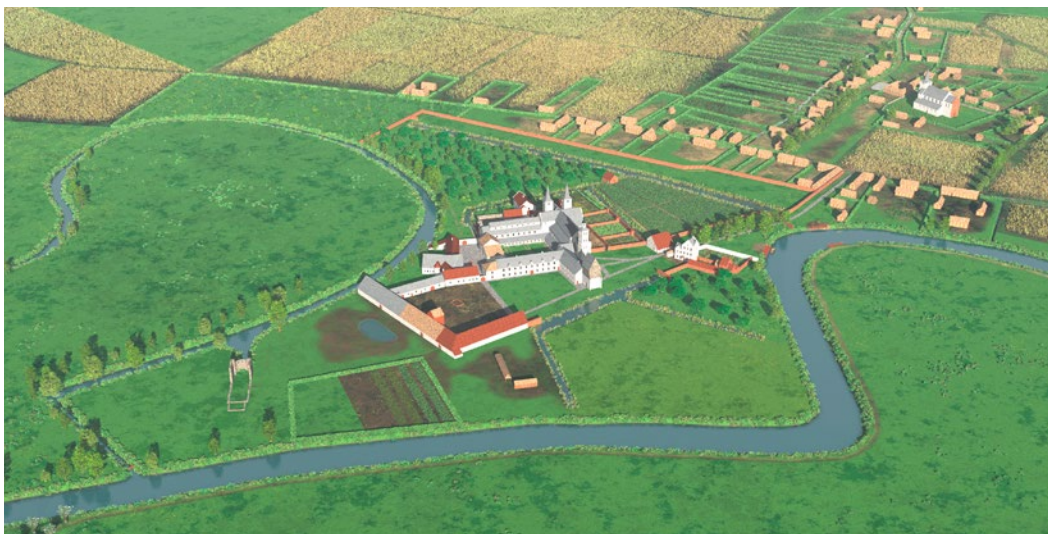
3D-ICONS is part of a series of European projects funded to develop Europeana and its contents. It aims to complement the collections that have been made accessible to Europeana through CARARE, Europeana Local, ATHENA and other projects. It plays an important role by involving organisations with recognised expertise in 3D data acquisition and modelling in the establishment of a full production pipeline. This will cover all aspects of a 3D digitisation project: planning and obtaining permissions, selection of methods and tools, data acquisition, post-processing, publication of content online, metadata capture, and making the content available to Europeana.

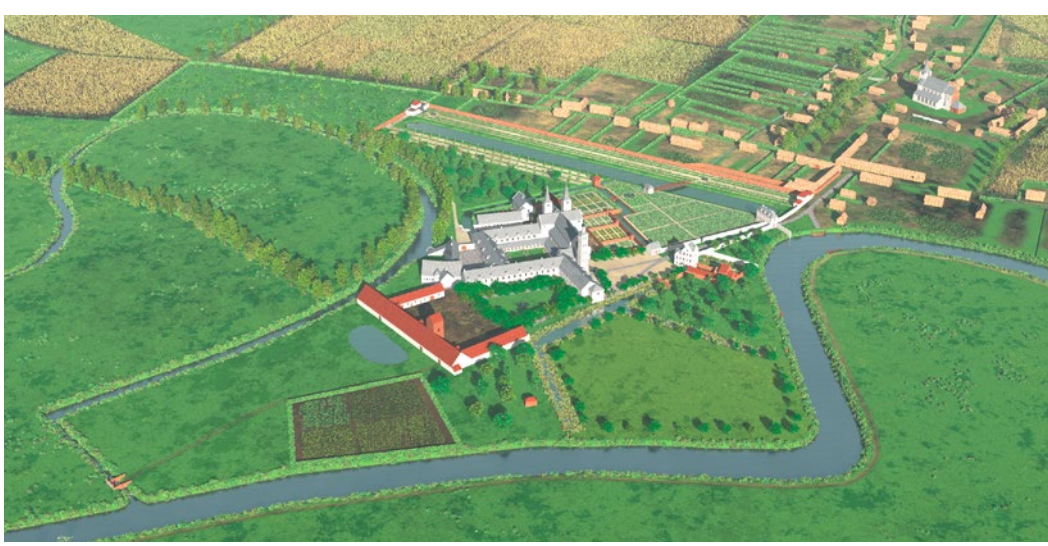
All stages in this pipeline are interrelated and not only directed towards the final online 3D model. In carrying out the 3D heritage efforts, the final potential publishing methodology was also taken into consideration, and the most appropriate capture and modelling techniques to provide this 3D-online solution were identified. The processes involving the creation of metadata and the selection of appropriate data licensing should be integrated in all stages of the pipeline.

The 3D-ICONS consortium includes sixteen partners: four academic institutions (Università degli Studi di Napoli L'Orientale, Universidad de Jaen, Politechnico di Milano and National Technical University of Athens), seven research institutions (Consiglio Nazionale delle Richerche, Athena Research and Innovation Center in Information Communication and Knowledge Technologies, Discovery Programme, Association pour le développement de l'enseignement et des Recherches auprès des universitiés, des centres de recherches et des entreprises d'Aquitaine, Fondazione Bruno Kessler, the Cyprus Research and Education Foundation and Centre National de la Recherche Scientifique), two museums (Koninklijke Musea voor Kunst en Geschiedenis and Muzeul Național de Istorie a României) and three SMEs (MDR Partners, CMC Associates, Visual Dimension).

3D-ICONS is co-ordinated by the Università degli Studi di Napoli L'Orientale, Italy.

3D Icons Screenshots



Web screenshots from V-Must.Net © V-Must.Net (photo courtesy of Consiglio Nazionale delle Ricerche, Italy)

#3D #virtualmuseums #TEL

This project received funding from the FP7 programme of the European Union.

V-MUST.NET

VIRTUAL MUSEUMS TRANSNATIONAL NETWORK

Virtual Museums (VM) is a new model of communication that aims at creating a personalized, immersive, interactive way to enhance our understanding of the world around us. The term "VM" is a shortcut that comprises various types of digital creations. The idea behind it is not new, but unfortunately the development-and implementation research has not yet brought Europe to a leading position in this field as was expected. The sector has not yet reached an adequate level of maturity that is found, for example, in Cinema and Game sectors, and has failed to become as widespread as it should be. What is more, Europe – unlike USA – is still facing a disconnection between the field of research, which develops tools with little interest in their wide application, and the industry, which constructs ten-year plans addressing the market. The VM domain is the perfect area for all these problems to be resolved and eventually develop into a real benefit to the community. A large subset of the most important VMs is implemented by EU groups. Some of the most notable and excellent researchers related to this field come from the EU. This leadership can be achieved only by going beyond the actual research fragmentation, by soliciting a common effort in assessing limitations emerging from all VM experiences consolidated so far, finding proper solutions, assessing them through experimental activity and finally consolidating a transnational network dedicated to VMs. V-MusT.net bridges technological domains, archival, social and cognitive sciences to advance the state-of-the-art digital preservation for future VMs persistence. It creates a virtual research area, identifies researches for further development, identifies the VM of the Future, increases the competitiveness of the EU-ICT industry and creates a quality evaluation procedure.

Partners of project V-Must.Net are: Consiglio Nazionale delle Ricerche (Italy), Agenzia Per La Promozione Della Ricerca Europea (Italy), King's College London, Centre for Computing in the Humanities, King's Visualisation Lab (UK), University of Sarajevo, Dept. Computer Science (Bosnia and Herzegovina), Institut National de Recherche en Informatique et Automatique (France), Lund University, Department of Design Sciences (Sweden), STARC (Cyprus), CINECA (Italy), Foundation of the Hellenic World (Greece), Allard Pirson Museum, University of Amsterdam (Netherlands), Center for Documentation of Cultural and Natural Heritage (Egypt), Comune di Roma, Sovraintendenza ai Beni Culturali, Museo dei Fori Imperiali (Italy), Fraunhofer Institute für Graphische Datenverarbeitung (Germany), Virtualware (Spain), Visual Dimension (Belgium), Sociedad Española de Arqueología Virtual (Spain), Noho LTD (Irland) and University of Brighton, University of Brighton's Business School.

V-MusT.net is a Network of Excellence. The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7 2007/2013) under the Grant Agreement 270404.

VIRTUAL MUSEUMS AIMS TO BECOME THE APPLICATION DOMAIN OF SEVERAL DIFFERENT RESEARCH BRANCHES: CONTENT-RELATED RESEARCH, COGNITIVE SCIENCES, INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT), AND, MORE SPECIFICALLY, INTERACTIVE MEDIA MANAGEMENT, TECHNOLOGY ENHANCED LEARNING (TEL), SERIOUS AND EDUCATIONAL GAMES AND BUSINESS STUDIES. VIRTUAL MUSEUMS ARE BUILT AS AN AGGREGATION OF CONTENT (DIGITAL LIBRARIES OF 3D MODELS, TEXTS, IMAGES, GEOSPATIAL DATA, AUDIO, VIDEO, ETC.) AND ARE BASED ON THE USE OF ICT SOLUTIONS FOR THEIR DEVELOPMENT AND DEPLOYMENT.

#interactivedatabase #geolocation

SUHOZID.HR

FILIP ŠRAJER
CROATIA

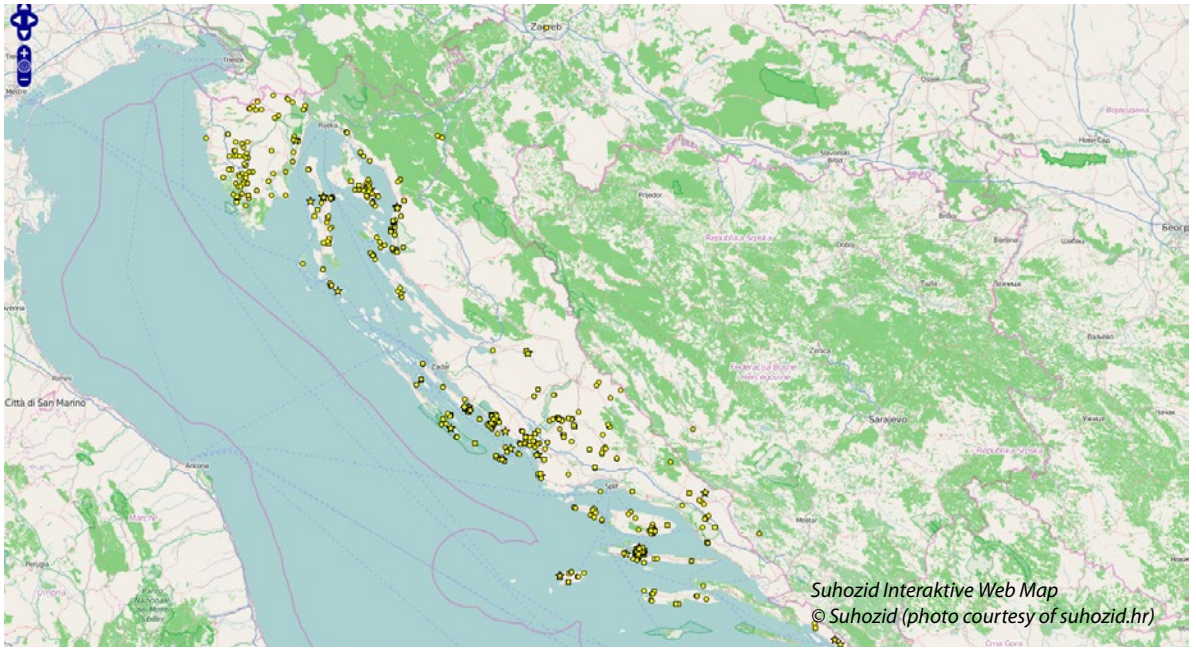
Suhozid.hr is a collaborative digital heritage project launched in 2013 by Croatian heritage and geoinformatics experts and activists. The name "Suhozid" means dry-stone wall and its aim is to crowdsource data on the rich and diverse dry-stone heritage – buildings and landscapes – of the Croatian coastal zone. Contributions are possible through web interface or mobile application, making it the first Public Participation GIS heritage platform in South-Eastern Europe.

The interactive GIS database allows people (heritage enthusiasts, professionals, tourists and others) to use a web interface or mobile application in order to upload the multimedia information on dry stone buildings and landscapes – from the basic info (photo+geo-location) to descriptions, additional photographs, drawings and links. Launch activities are focused on creating wide range unstructured data, which should be followed by expert classification and public evaluation enabled by a Wiki platform, and could further on lead to the use of more advanced GIS functions (advanced search, analyses of distribution, functional and spatial relationships etc.). By the end of the 2014 there were about 40 users and 1,000 inputs, and the project just reached its second phase allowing connectivity and sharing through social networks and integrating wiki-style collaborative evaluation framework.

The technology platform is developed entirely using open software. OpenDataKit is used to collect data through Android devices. Editing and visualising data is done in QGIS software package which is also used for generating interactive web maps. The web server is developed on Django web framework.

suhozid.hr webpage

Nadir
© Suhozid (photo courtesy of suhozid.hr)



Suhozid Interaktive Web Map
© Suhozid (photo courtesy of suhozid.hr)

SUHOZID is a national project supported by Geodetski, Arhitektonski and Agronomski fakultet, Zagreb, Etnološki odsjek Sveučilišta u Zadru, Zadar, and Konzervatorski odjel u Splitu, Split. Preliminary research financed by Studentski zbor Sveučilišta u Zagrebu, Zagreb and the Zaklada HAZU fund.

Island Krk Mosaic
© Suhozid (photo courtesy of suhozid.hr)

FROM NEANDERTHAL TO SPACE ART

“Museums have always been virtual in a way as they have always extracted objects from their natural environments; hence it should be no problem for them to use new virtual technologies.”

— Goranka Horjan, The European Museum Forum

Kraneamus Krapina Neanderthal Museum, Croatia, 2014
© ACE KIBLA (photo by Tadej Vindiš)

#holograph #interactive #3D #mobileapps

KRANEAMUS

KRAPINA NEANDERTHAL MUSEUM

KRAPINA, CROATIA

The Krapina Neanderthals site at Hušnjakovo is the first natural palaeontological monument in Croatia and one of the most significant palaeoanthropological localities in the world. The exceptional abundance of findings and the discovery of the largest habitat of the prehistoric Neanderthal man, coupled with the expert work of geologist and palaeontologist Dragutin Gorjanović Kramberger, make the Krapina site an unparalleled source of contemporary scientific information. The State Institute for Protection of Natural Rarities declared "the semi-cave Hušnjakovo near Krapina and the surroundings of the cave" as a protected natural rarity in 1948. In 1969, the Museum of Evolution was founded in the former Kneipp Sanitarium building in Krapina.

The permanent exhibition was conceptualised by the late Mirko Malez, member of the Croatian Academy of Sciences and Arts. In the 1960s, he began a detailed stratigraphic analysis of the site and initiated the designation of cultural and faunal remains in Krapina. During that period the trails were marked, fences and benches were put up in place, and for the first time, reconstructions of the Neanderthal man and animals were exhibited to the public. The reconstructions, created by the late sculptor Stanko Tucaković according to the instructions of M. Malez, are still displayed at the site today. The so-called "Neanderthal park" was designed by engineer Ana Topfer, who is generally responsible for the revitalization of the Hušnjakovo locality.

The Krapina Neanderthal Museum is a part of the Museums of Hrvatsko zagorje, a legal entity consisting of five organisational units – museums in the Krapina-Zagorje County.
The museum is a national institution founded by Republic of Croatia in 1993 covering republic level. Kraneamus is also a member of Network of Heritage Sites Ice Age Europe.

Kraneamus Krapina Neanderthal Museum, Croatia, 2014
© ACE KIBLA (photo by Tadej Vindiš)


HOMO
RUDOLFENSIS

Kraneamus Krapina Neanderthal Museum, Croatia, 2014
© ACE KIBLA (photo by Tadej Vindiš

Technology for visitor's experience

Today, all types of attractions are competing for visitors who want to be educated, stimulated and entertained. When visiting a museum, exhibition, science centre or theme park, tourists and visitors are continually looking for a unique experience. With state-of-the-art high performance visualization technology used in Krapina Neanderthal Museum visitors can stand out from the crowd and truly engage audiences by offering immersive experiences.

The museum exhibits not only the finds from Krapina but tells the story of the history of our planet and puts things in a perspective showing the history of Earth from the "Big Bang" to the modern humans.

"Forensic science, computer simulations and virtual reality technology are high tech tools used to explain the site where scientists have found the greatest concentration in Europe of Neanderthal remains, the bones, skulls, tools and other effects of an extinct offshoot of mankind who inhabited parts of Asia and Europe until 30,000 years ago. Visitors can touch parts of a digital Neanderthal body to get a medical explanation of their diseases and ailments - most of them very similar to our own, like knee and shoulder problems at a later age."

— Reporting by Zoran Radosavljević, Editing by Paul Casciato, REUTERS

Kraneamus Krapina Neanderthal Museum, Croatia, 2014
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Interview with Vlasta Krklec, Director of the Museum Kraneamus, Krapina Neanderthal Museum, Krapina, Croatia

Kraneamus Krapina Neanderthal Museum, Croatia, 2014
© ACE KIBLA (photo by Tadej Vindiš)

Interactive technologies showcase in Kraneamus Museum

#3D #VR #interactive #AR

ACROPOLIS MUSEUM

ATHENS, GREECE

In the year 2000, the Organization for the Construction of the New Acropolis Museum announced an invitation to a new tender, which was realized in accord with the Directives of the European Union. It is this tender that has come to fruition with the awarding of the design tender to Bernard Tschumi with Michael Photiadis and their associates, and the completion of the construction in 2007.

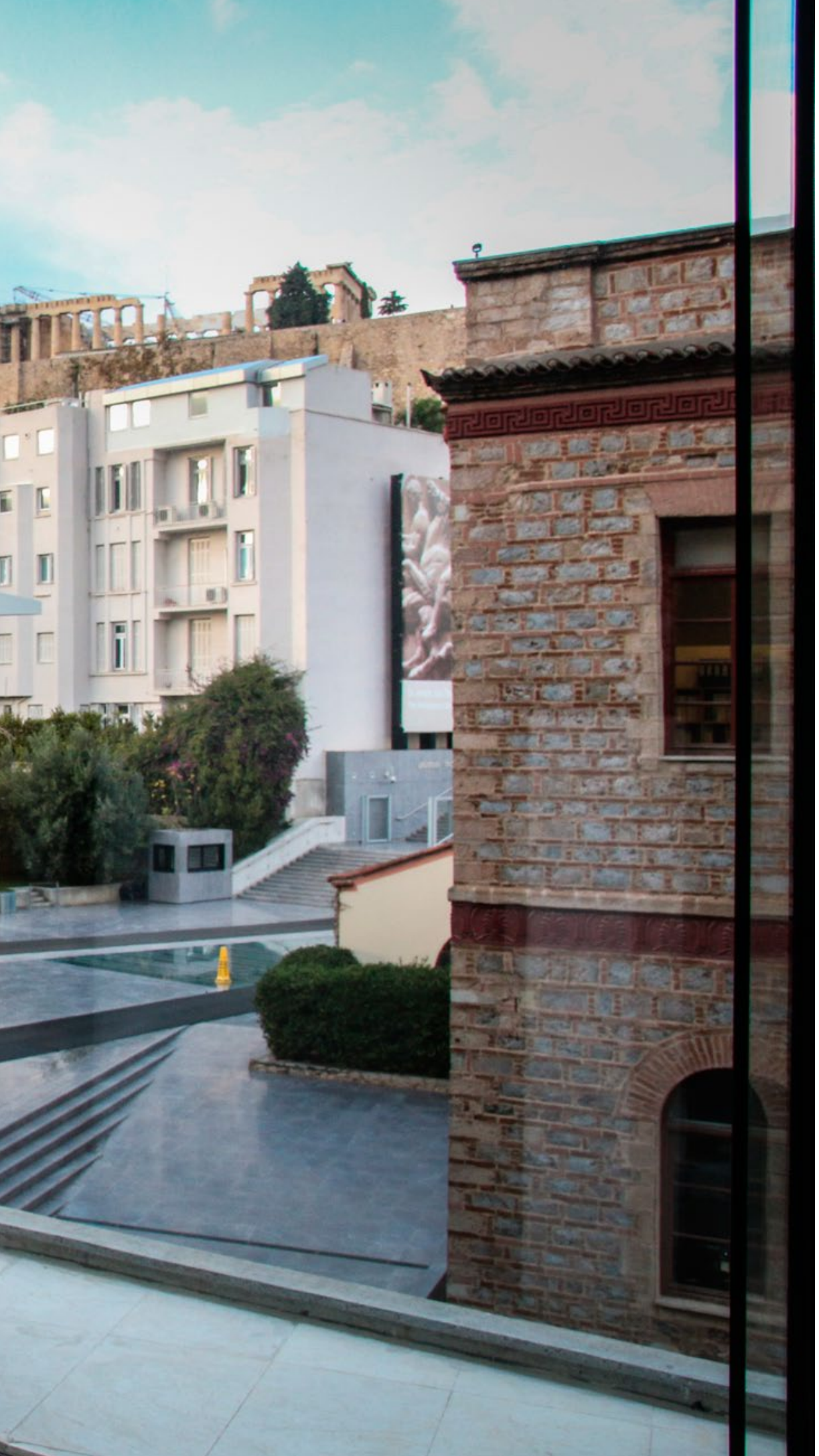
Today, the new Acropolis Museum has a total area of 25,000 square meters, with exhibition space of over 14,000 square meters, ten times more than that of the old museum on the Hill of the Acropolis. The new Museum offers all the amenities expected in an international museum of the 21st century.

Since early February 2011 the Acropolis Museum is a central member of the project funded by the European Union's Seventh Framework Program for Research and Development, focusing on the development of a framework and technology that will enable museums and other cultural sites to provide personalized interactive story experiences to visitors.

The research and pilot program Cultural Heritage Experiences through Socio-Personal Interactions and Storytelling (CHESS) is implemented by an international partnership of universities, research and technology agencies. The Acropolis Museum and the Cité de l'Espace, a science centre in Toulouse (France), are the cultural settings that offer the content and storytelling expertise to develop narratives for visitors based on their own personal profiles, interests and time availability with mobile and mixed reality hand held technologies.

Acropolis Museum Athens, Greece, 2014
© ACE KIBLA (photo by Matej Kristovič)

eCult Winter Stage, Athens, Greece, Acropolis Museum 2014
© ACE KIBLA (photo by Matej Kristovič)



IN ANCIENT GREECE, PRESTIGE WAS DEFINED BY AND RECOGNIZABLE THROUGH VARIOUS CULTURAL PRACTICES. IMAGES SET UP IN THE PUBLIC SPHERE – STATUES, RELIEFS, OR PAINTINGS INITIATED BY THE DEPICTED PERSONS OR BY OTHERS – WERE FOCAL MEANS OF DEMONSTRATING PRESTIGE.

In the poleis of ancient Greece, priests and priestesses rarely had any permanent political, social, or economic power as a group, or outside their sanctuaries. On the other hand, as everyone would agree, priests were an essential component of every Greek polis. One aspect of their position was their high prestige; that is, their reputation and informal authority. Indeed, a large number of such portraits of cult officials are preserved from the Greek poleis. The above testimonies have been catalogued and analysed. However, considering the debate about the roles of priests and priestesses in Greek poleis, it seems highly unusual that they have not been studied under the specific perspective of prestige presentation.

— prof. dr. Ralph Von Den Hoff

eCult Winter Stage, Athens, Greece, Acropolis Museum, 2014
© ACE KIBLA (photo by Matej Kristovič)

Video showcase of Acropolis Museum, Athens, Greece

CULTURAL HERITAGE EXPERIENCES THROUGH SOCIO-PERSONAL INTERACTIONS AND STORYTELLING

Creative use of technology to understand the history

The Acropolis Museum is exploring the development of resources to support self-guided and teacher-led visits so that more students and children can benefit from programs and activities in the Museum. Visitors have the opportunity to discover the Museum exhibits through specially designed online applications, education booklets, Museum kits and brief presentations focusing on one exhibit. Families can borrow the backpack containing various games and activities that are exhibition-based and are supported by children's exhibition labels in the Museum galleries. Moreover, 3-dimensional virtual reality projections help visitors orient themselves to the monuments of the Acropolis.

The Acropolis Museum welcomes visitors also to its Virtual Reality Theatre located on the ground floor of the Museum. Visitors have the opportunity to learn more about the Acropolis monuments from brief 3D video screenings. The ten-minute film "Acropolis in Antiquity" presents the topography and the monuments of the Rock of the Acropolis during the prehistoric, the Archaic and the classical period. The film aims to help visitors recreate and imagine the impressive sanctuary with the aid of 3D models.

eCult Winter Stage, Athens, Greece, 2014
© ACE KIBLA (photo by Matej Kristovič)

eCult Winter Stage, Athens, Greece, Acropolis Museum, 2014
© ACE KIBLA (photo by Matej Kristovič)

eCult Winter Stage, Athens, Greece, Acropolis Museum, 2014
© ACE KIBLA (photo by Matej Kristovič)

#immersive #VR

DEEP SPACE

ARS ELECTRONICA CENTER
LINZ, AUSTRIA

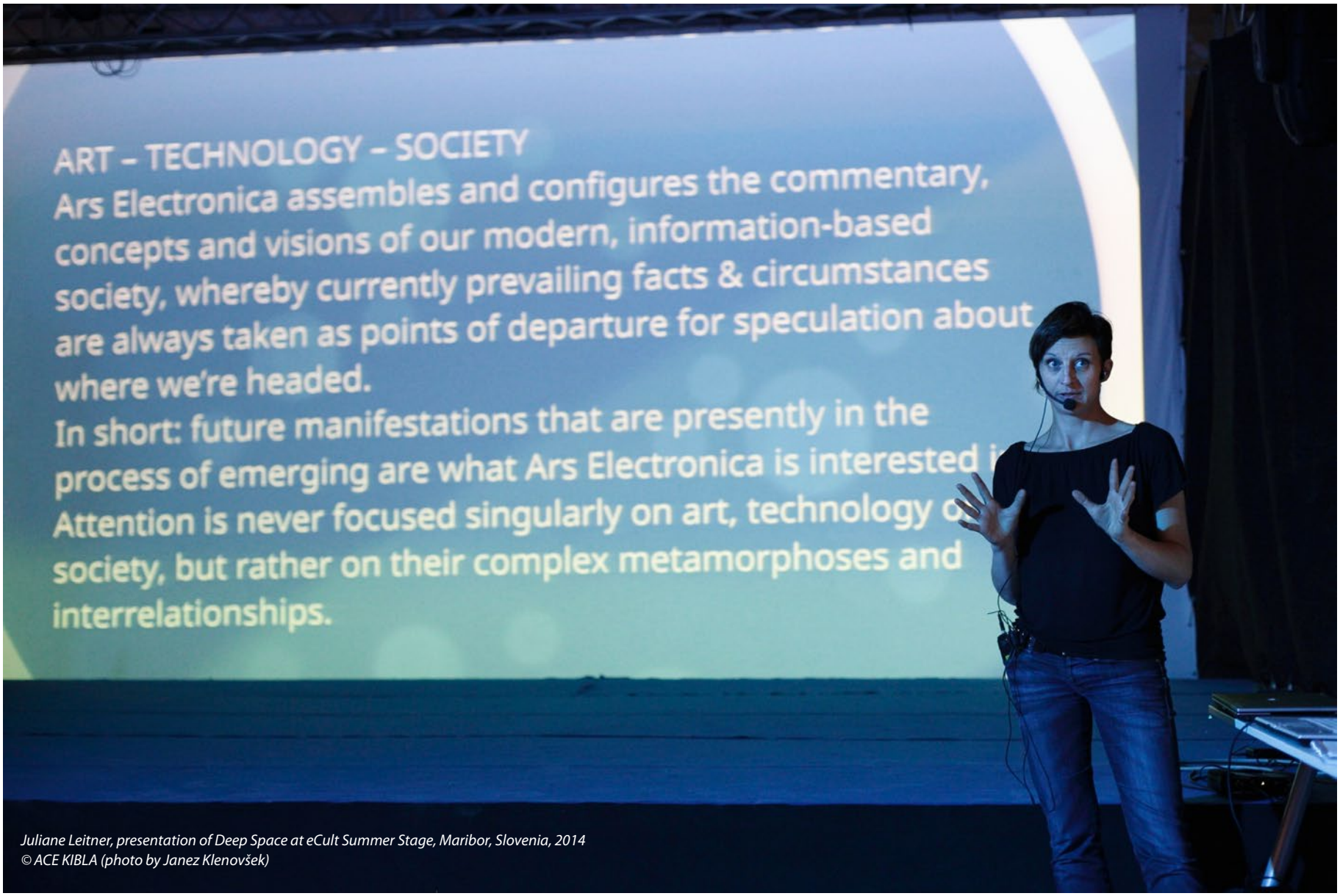
ONE-OF-A-KIND WORLDWIDE

Deep Space delivers incomparable spectacles – nowhere else on Earth can you experience photographic images, films, animation sequences and 3D applications at such high resolution in these dimensions.

FASCINATING – ENTERTAINING – AWE-INSPIRING

Deep Space offers you the opportunity to travel to far-away or long-vanished places and to see things you've never feasted your eyes on before! You can blast off on a journey through the entire known universe, ski at 140 km/h down Kitzbühel's Streif, the world's most challenging downhill run, take a stroll through Thebes in ancient Egypt, or populate a cartoon ocean with sea creatures you design yourself. Artworks of incredible beauty will enchant you; you'll marvel at impressive images from diverse domains of science and art; the death-defying stunts of extreme athletes will literally take your breath away!

AEC Deep Space, Linz, Austria
© Ars Electronica Center (photo courtesy of AEC)



Juliane Leitner, presentation of Deep Space at eCult Summer Stage, Maribor, Slovenia, 2014
© ACE KIBLA (photo by Janez Klenovšek)

Juliane Leitner, presentation of Deep Space, AEC Linz, Austria
eCult Summer Stage, Maribor, Slovenia, 2014

The Ars Electronica Center is the architectural expression of what Ars Electronica is all about: a place of inquiry and discovery, experimentation and exploration, a place that has taken the world of tomorrow as its stage, and that assembles and presents influences from many different ways of thinking and of seeing things. Since 1979, Ars Electronica has sought out interlinkages and congruities, causes and effects. The ideas circulating here are innovative, radical, eccentric in the best sense of that term. They influence our everyday life – our lifestyle, our way of life, every single day. The Center is the Museum of the Future – the place where all the diverse blends of artistic genres, scientific domains and technological directions are displayed and processed. Biotechnology and genetic engineering, neurology, robotics, prosthetics and media art are juxtaposed here on equal terms and form experimental arrays conducive to testing ways in which we might be interacting and communicating with our surroundings and other human beings in the very near future, and getting an impression of what these changes will mean for us and our society. All exhibitions focus on issues having to do with how people can deal with their environment, and offer a variety of perspectives on our nature, our origins and our world. An extensive set of methodological tools is available to provide visitors with multifarious approaches to and ways of looking at the challenges posed by everyday life. Here, the emphasis isn't just on interaction with exhibits on display; it's on participation. The exhibitions are continuously being reworked and updated. What you won't find here is a bunch of "Do Not Touch" signs; you're cordially invited to enjoy a hands-on experience.

AEC Deep Space, Linz, Austria
© Ars Electronica Center (photo courtesy of AEC)

AEC Deep Space, Linz, Austria
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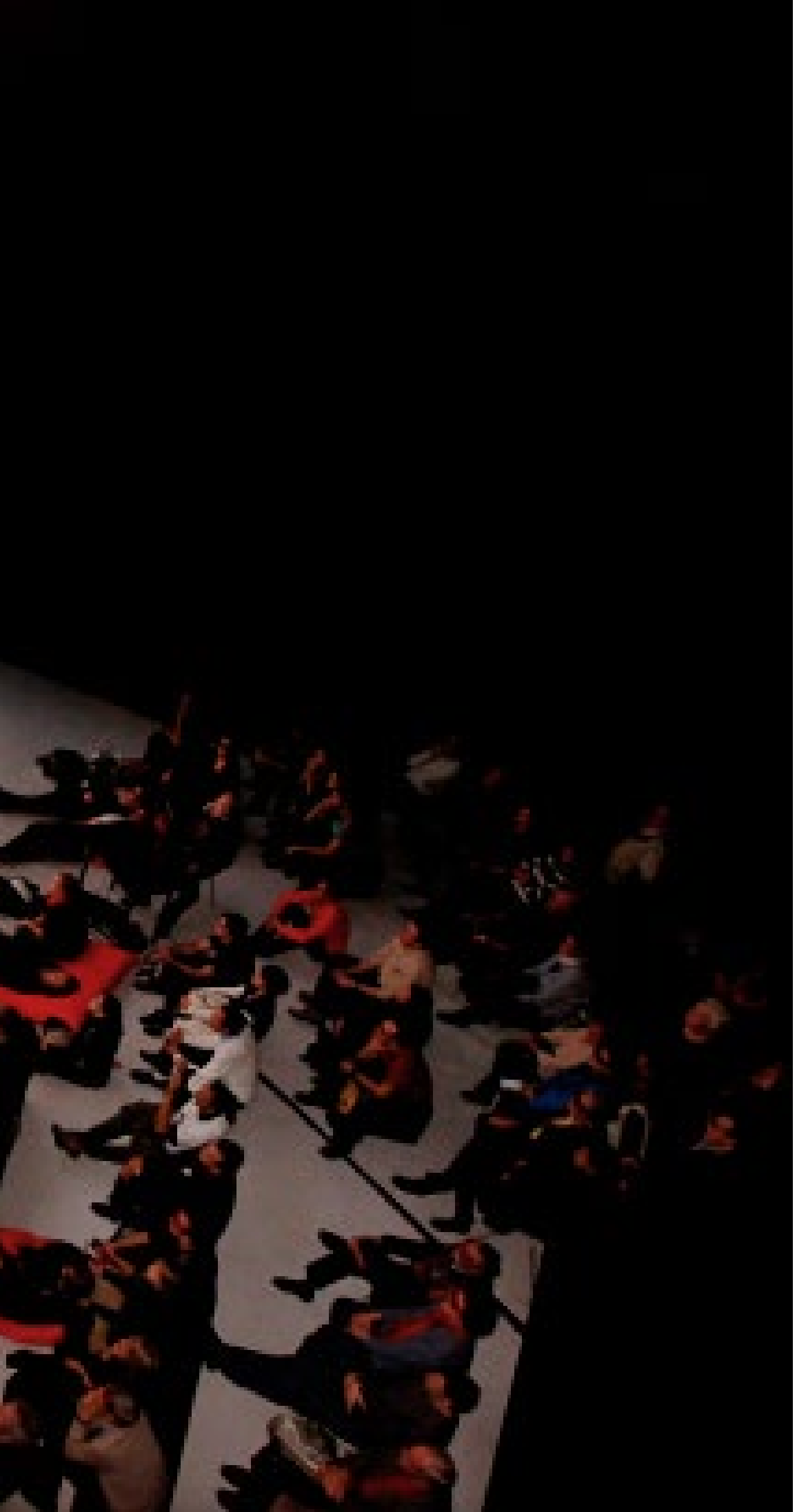

A TOTAL OF EIGHT 1080 p HD AND ACTIVE STEREO-CAPABLE BARCO GALAXY NH12 PROJECTORS LET YOU ENJOY CRYSTAL-CLEAR, 16 × 9 METER IMAGES DISPLAYED ON THE DEEP SPACE'S WALL AND FLOOR. AND AS IF THAT WEREN'T ENOUGH, A VIEWING PLATFORM ARRAYED 5 METERS UP PROVIDES JUST THE RIGHT VANTAGE POINT FROM WHICH TO ENJOY THE WHOLE MIND-BLOWING SCENE.

The cultural revolution in cybertechnologies has always been accompanied by a way of thinking that not only registered and grasped the concrete technological developments, but also what enabled them to eventually become realities. Horace F. Judson's classic The Eighth Day of Creation apostrophizes the molecular technology emerging in the wake of the information revolution as the "new dynasty of thought". This makes an implicit reference to the preparatory qualities of cybertechnologies. In the meantime, life sciences are being hyped as the key technologies of the upcoming decades. As a festival of art, technology and society, Ars Electronica has taken this development into account by seemingly turning away its attention from cybertechnology – the hardware and software - and placing its focus on the "wetware."

The shift of Ars Electronica's focus is only apparent in the sense that nothing has changed in terms of the program agenda of analysing new technologies' cultural processes and the process of becoming a culture, as well as the possibilities of intervening in their formation. With NEXT SEX, however, Ars Electronica takes a step backwards for the sake of a higher degree of precision, and assumes a perspective conducive to cultural critique with respect to the social implications of the life sciences. And, as illustrated by these self-fulfilling prophecies and the consequences of cybertechnologies, it is precisely here that some extrapolations are called for.

If sex is stripped of its procreative function and in return, modern reproductive technology shifts female fertility into the focal point of (patriarchic?) interest; if pop icons orchestrate the media frenzy surrounding their partnerless IVF parenthood, while conservative forces propagate the ideal of family; if the prospect emerges of the emancipation of biological genders as well as socially constructed gender identities by means of the utopian possibility of choosing one gender or the other, or even both – options which also become available as an upshot of biotechnological interventions – then sex and gender will be relativized, and not least of all in relation to the fictional narratives that coalesce about them.

In continuing its thematic focus on LifeScience, Ars Electronica 2000 presents NEXT SEX to meet the obvious need for critical analysis of the social and technological environment in which such prognoses are starting to become operative realities.

— Gerfried Stocker & Christine Schöpf
Ars Electronica Festival, Next Sex, 2000

EC Deep Space, Linz, Austria
© Ars Electronica Center (photo courtesy of AEC)

EC Deep Space, Linz, Austria
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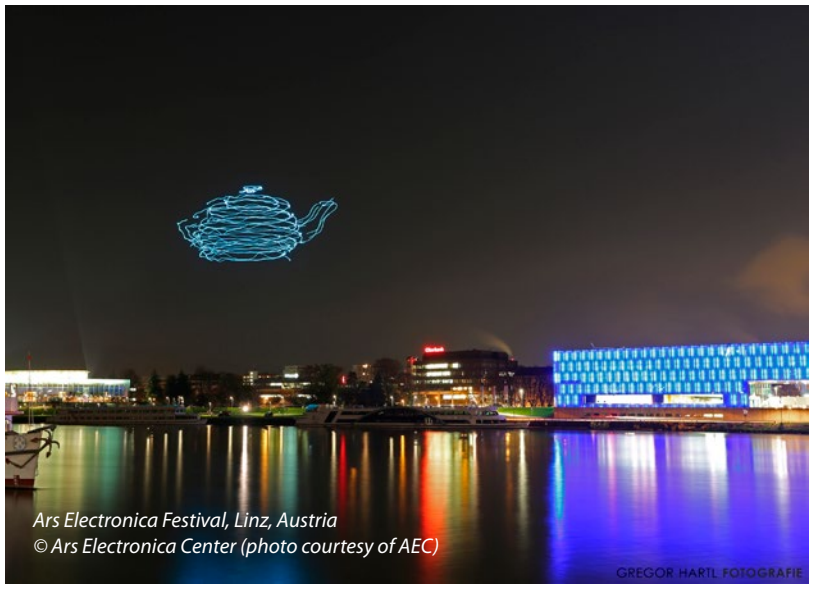

Ars Electronica Festival, Linz, Austria
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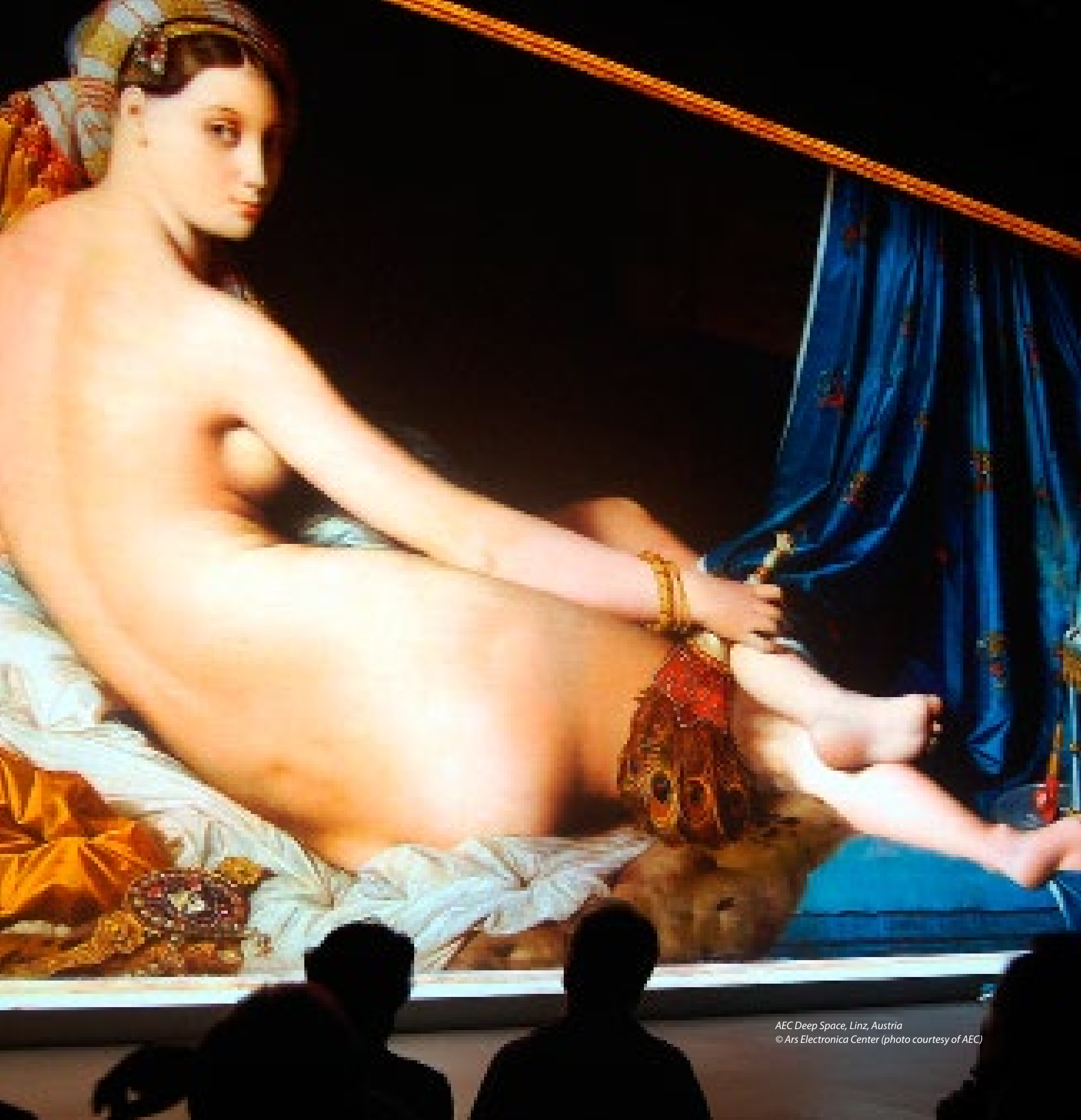

AEC Deep Space, Linz, Austria
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Sicilian Cards Museum, Aci Sant'Antonio, Sicily
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Sicilian Cards Museum, Aci Sant'Antonio, Sicily
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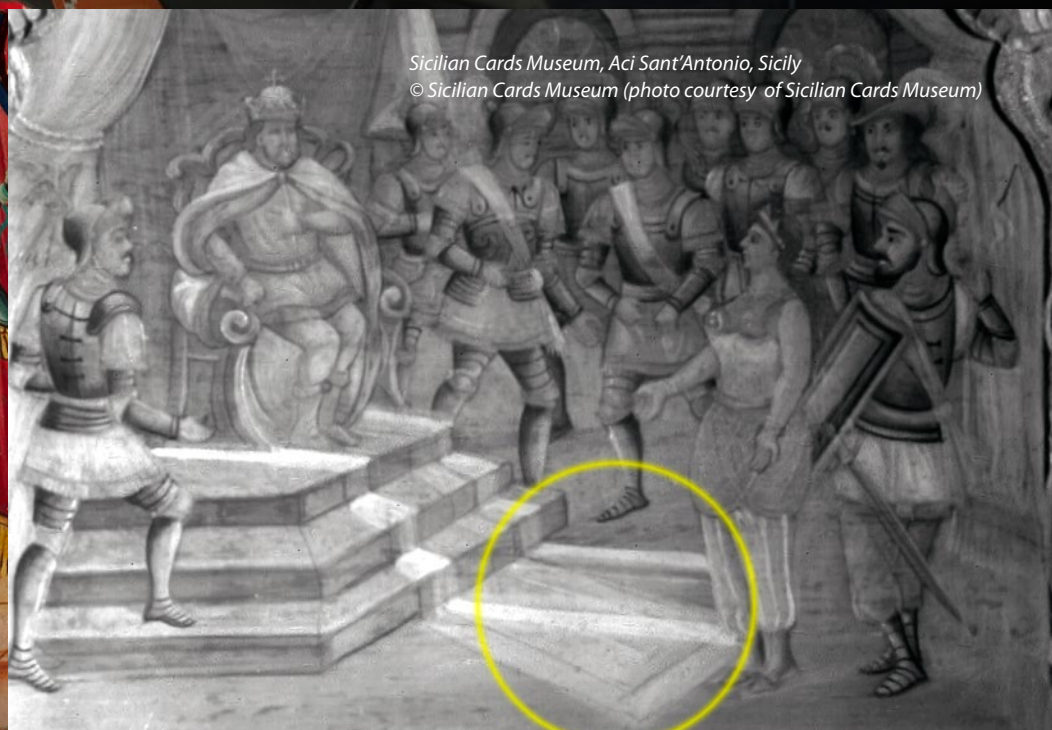

Sicilian Cards Museum, Aci Sant'Antonio, Sicily
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#IRF #opensource

SICILIAN CARTS MUSEUM

ANTONINO COSENTINO
ACI SANT'ANTONIO, SICILY, ITALY

Sicily. Aci Sant'Antonio is a small village on the eastern slopes of Mount Etna. Just recently, in the summer of 2014, the town opened a museum of Sicilian carts – the traditional colorful horse-drawn carts, which are native to Sicily. This particular form of art was developed in the late eighteen hundreds and has become a symbol of the island's cultural identity. Aci Sant'Antonio played a pivotal role in the development of this art, as it worked with the majority of the painters' workshops. Master Domenico di Mauro is one of the last painters still living and painting; at the age of 101. The museum hosts are young volunteer painters, who try to keep this particular form of art alive and pass it on to the next generation

Large, celebrated museums are different from small, local institutions: the former attract thousands of international visitors with different interests, while the latter are limited in number of visitors, but often represent the backbone of a community's cultural identity. They have an undeniable role in boosting the pride of a community for its past artistic and technological achievements, and promote social aggregation that leads to intellectual wellness.

Like many other local museums, the Sicilian carts museum is struggling with limited funds to pursue their cultural program. It is therefore crucial to boost the creation of innovative, affordable and sustainable technologies and tools, not only for the already generously funded prominent institutions, but also for those kept open just by means of volunteer work.

Antonino Cosentino, an eCult ambassador and a local inhabitant of the village, is trying to contribute to the museum's cultural program by implementing some of the tools offered by the eCult Observatory, with a focus on the affordable and the sustainable. Contacts have been established already with Tag Cloud and MeSch, the low cost technologies that serve to generate engagement through social media, augmented reality and storytelling.

Antonino also runs a micro-enterprise called Cultural Heritage Science Open Source (CHSOS), whose mission is to provide on-site technical examination and documentation of works of art for conservation and authentication. CHSOS delivers training programs related to art examination methods. Since its opening, the museum has been among the field projects in which participants could apply these non-invasive technical and scientific technologies to the museum's collection. This collaboration is producing scientific knowledge about the artistic materials and technologies as well as discoveries such as underdrawings and pentimenti.

The museum plans to eventually use these materials to attract visitors with discovery-based engagement guided tours. Before launching CHSOS, Antonino worked as a lecturer (Scientific Methods for Art Investigation) in Italy and in New York, and has carried out several scientific examinations of important works of art as a researcher for many European and American institutions (the European Mobile Laboratory for Art investigation, the Metropolitan Museum of Art, the University of California San Diego).

The collaboration between CHSOS, the enthusiast volunteers and the town's administration, which was determined to create this museum, represents a unique synergy which makes this museum a pilot project for the development and testing of a science-based exploration of art collections by means of affordable and sustainable tools.

#3D #AR #seriousgames

K67 KIOSK

AN INTERPRETATION WITH 3D TECHNOLOGIES

KAJA ANTLEJ
SLOVENIA

The K67 kiosk is one of the most recognisable icons of 20th century Slovene industrial design. It was conceived by the Slovene architect and designer Saša J. Mächtig in 1966. Because of its modularity and adaptability the system was used as a newspaper and tobacco kiosk, ticket office, snack stand, as well for small cafes or flower shops, and it asserted itself as an important element of urban furniture all over the former Yugoslavia and in the Eastern block countries. As such it became an important carrier of common identity. As early as the 1970s, the Museum of Modern Art (MoMA) in New York included the K67 in the 20th century design collection. A total of around 7,500 kiosks were sold.

Kiosk – K 67

Kiosk – K 67, from Kaja Antlej's Manuscript
© Kaja Antlej (photo courtesy of Kaja Antlej)

Kiosk – K 67, 3D Model by Kaja Antlej
© Kaja Antlej (photo courtesy of Kaja Antlej)

During the economic and political changes of the 1990s, the company Imgrad (not in operation anymore) first reduced the production of the kiosks, to then abandon it. Due to the deterioration of the material these kiosks are nowadays disappearing from public spaces and this endangers their existence in our collective memory.

In order to mediate the kiosk to the new digital generations, Kaja Antlej, one of the eCult Ambassadors, is working on its interpretation using 3D and other digital technologies in collaboration with the kiosk's author.

Yet in the doctoral thesis titled 3D Technologies as a Support for Industrial Design Museum Exhibition she prepared proposals for an interpretation of the K67 kiosk in a virtual, mixed and physical environment. Interactive 3D computer models (24 different elements for assembling modular unites), physical 3D printed models, a scenario of a "3D puzzle" serious game "Create your own K67 kiosk", a scenario of an augmented reality mobile application of non-preserved kiosks (e.g. the Hungry Dragon fast food kiosk at Ljubljana Castle) and the idea of a collaboration with the public at 3D digitisation (3D models from photos) of preserved K67 units, were created. Inspired by Helge Kühnel's project the K67 – The Kiosk Shots, it is planned to create an interactive map to enable users geo-locating kiosks accomplished with 3D models and/or photos. Based on the map, different route plans supported with mobile app and other available technology are planned as well.

As a 3D printed model (scale 1 : 20) the K67 kiosk has been a part of several exhibitions organised by the Museum of Architecture and Design, including the travelling exhibition Silent Revolutions: Contemporary Design in Slovenia and the Biennial of (Industrial) Design over 50 Years.

Kiosk – K 67, model by Kaja Antlej
© ACE KIBLA (photo by Matej Kristovič)

Kaja Antlej and Žiga Pavlovič at MAO Ljubjana, Slovenia
© ACE KIBLA (photo by Matej Kristovič)

Interview with Žiga Pavlovič

TECHNOLOGY IS ONLY A TOOL OF INTERPRETATION, NOT AN ITEM FOR OSTENTATIOUS MUSEUM PRESENTATIONS.

Following the latest technological development of wearable technologies and interpretation trends, in collaboration with partners, Kaja Antlej is currently working on a virtual reality presentation of the kiosk using Oculus Rift™, a head-mounted display. The virtual tour will enable the user to explore the kiosk at a full scale, walk around it and to enter inside. This 360° x 360° first person experience will therefore be more authentic and immersive than interaction with an object that is presented on a screen.

All the proposals can be used for further interpretation of the K67 kiosk. Any other museum object can also be narrated in a similar way, but always in line with the idea that technology is only a tool of interpretation, but not an item for ostentatious museum presentations.

Between 2009 and 2013 an interpretation of the K67 kiosk was made within the research program Young Researcher from Business at IB-PROCADD d. o. o. company and the Doctoral Study in Heritology (Heritage Studies), Faculty of Arts, University of Ljubljana. Operation was partly financed by the European Union, European Social Fund.

Kaja Antlej and Saša J. Mächtig
© ACE KIBLA (photo by Matej Kristovič)

Interview with Saša J. Mächtig

Kiosk – K 67
© Kaja Antlej (photo courtesy of Kaja Antlej, photo by Janez Kališnik

Presentation of KIOSK 67 3D model with use of AR

CONTEMPORARY ART IN DIALOGUE WITH CULTURAL HERITAGE

HOW CONTEMPORARY ARTS CAN BE USED TO UNDERSTAND AND CELEBRATE CULTURAL HERITAGE

Internationally, as well as at EU level, the term Culture is usually considered to embrace the Arts - implying that the Arts are actually a part of Culture. The Arts comprise visual arts, performing arts and physical arts. Culture includes the arts as well as traditions and popular beliefs and practices. For the purpose of this publication, the term arts and culture includes visual arts, performing arts, physical arts, cultural heritage & cultural activities, audio-visual activities, music and venues such as art centres, museums, galleries, etc.

ICT plays a most important role which enables vision creation, imagination stimulation, offering knowledge trough stories, exchange of ideas, allows experimentation, implementation, deconstruction, sharing, and DIY-art-making with no limits. The impact of science and technology on the social life of the individual, and an in-depth research into the secrets of science, which holds the key to our future are two aspects which should be taken under consideration when talking about implementation of hi-tech in any kind of presentation format. Both aspects are trying to come up with solutions to bridge over the powerlessness of the individual in contemporary society.

Contemporary Arts can educate visitors about the historical and cultural context of a certain historical case trough interactive concepts and innovative ways of presentation and provide opportunities for active participation trough exhibitions.

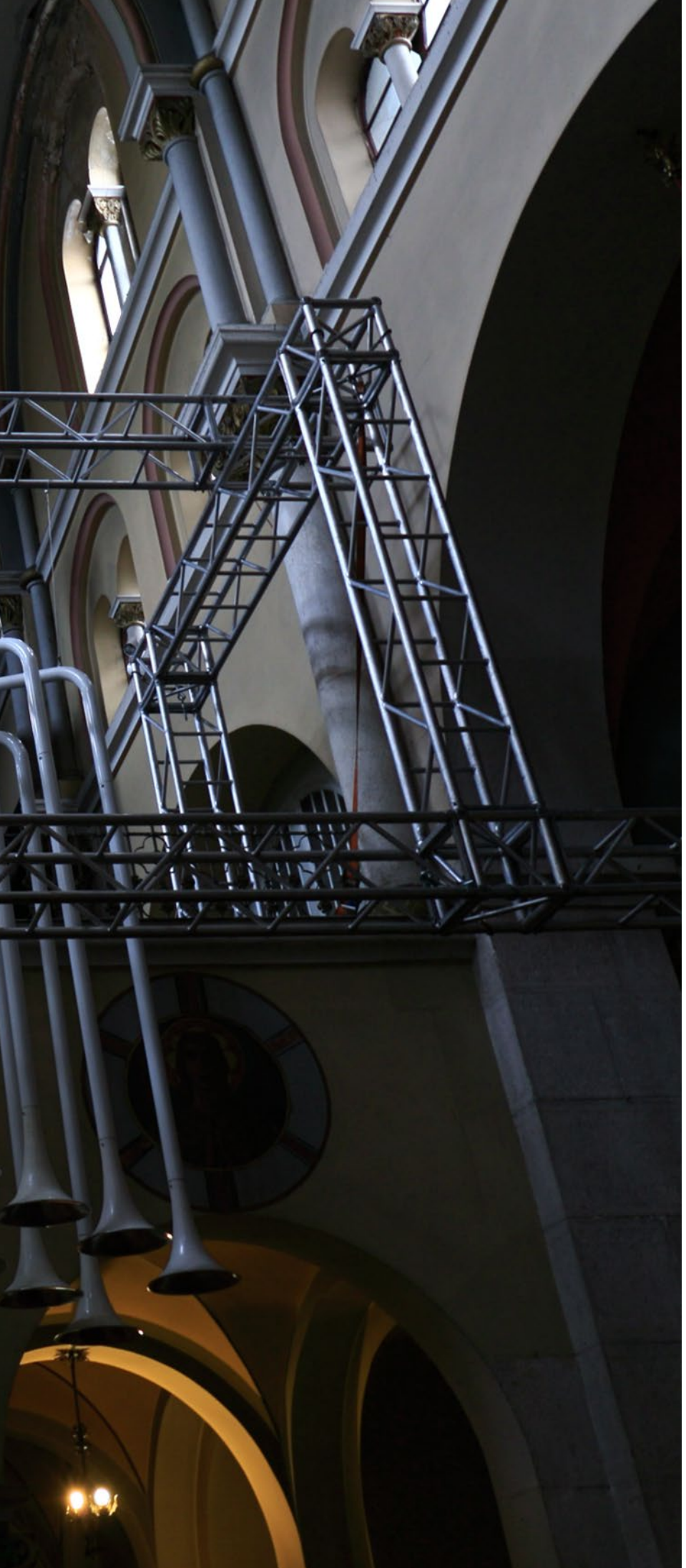
The visitors' response, as we argue contains aspects of an informal learning process, an individual competence as well as collective. The theoretical tools derive from both socio cultural theory and from a multimodal perspective and offer contributions for thinking about learning in informal settings.

The socio–cultural framework emphasizes the concept of intersubjectivity as an approach to learning. In a learning setting, intersubjectivity is the act of negotiating meaning in a dialogue between the present and the past. In the light of a socio–cultural perspective, contemporary art installations or performances are seen as mediating tools of inner transformation, which responds to different levels of understanding of the museum exhibition or any other cultural heritage content, person or object.

We would like to broaden our focus in order to pay attention to contemporary interactive art concept as a communicative resource, which has positive and valuable consequences for our understanding of cultural heritage.

— Dejan Pestotnik ACE KIBLA, Maribor, Slovenia

Tania Candiani, Organ, Interactive Art Installation, Kiblix – Paralleles, Franciscan Church, Maribor, Slovenia, 2014
© ACE KIBLA (photo by Janez Klenovšek)



#contemporaryart #interactiveartinstallation #opensource

TANIA CANDIANI

ORGAN

INTERACTIVE ART INSTALLATION
KIBLIX 2014 - PARALLELES
FRANCISCAN CHURCH
MARIBOR, SLOVENIA

Complex oral language is exclusive to humans. Through history there has always existed a quest to imitate human voice mechanically. Organ is a machine that keeps this search alive. The choir, once occupied by an organ, is now mounted with a new organ, transformed into a talkative system. The machine has two keyboards: one musical and the other from a typewriter. When the carriage lever is released, the user can hear, through the use of a voice synthesizer, what has been written. In the musical keyboard, each key or chord has been programmed to produce the sound of a phonic syllable, giving voice to 1,200 syllables and resembling the language learning process.

The machine is programmed to translate and interpret, and involves more than one semiotic system: the conversion of writing into orality and the conversion of orality into musical notation. The result is a system of artificial voice that redefines the sonorous dimension of language.

Tania Candiani, Organ, Interactive Art Installation,
Kiblix – Paralleles, Franciscan Church, Maribor, Slovenia, 2014
© ACE KIBLA (photo by Janez Klenovšek)

Video presentation of Organ installation in Franciscan Church in Maribor

Tania Candiani, Kiblix – Paralleles, Maribor, Slovenia, 2014
© ACE KIBLA (photo by Janez Klenovšek)

"I am referring to variations that occur through phenomena such as the codification of language, the encryption of the orality of the expression in particular circumstances, involving the innovation of machines and the functions of specific devices, tensing the voice that narrates as much as the systems that listens. the narrative behind each one of these speaking machines and listening systems is found in the link they share with the genealogy of automatons and a desire implied in an archaeology of science fiction."

— Tania Candiani

FRANCISCAN CHURCH

The two-towered, three-nave basilica dedicated to St Mary Mother of Mercy was built at the turn of the 19th and 20th century according to a plan designed by the Viennese architect Richard Jordan. It was constructed on the location of the former Capuchin monastery and the Church of the Mother of Mercy, which from 1786 was the seat of the Slovene suburban parish. Before the church was built a two-floored monastery was constructed in the style of an old Roman basilica, which joins the church on its southern section. The bricks for the construction of the building were carried by women from Melje district, for which they received two indulgences.

The majority of paintings inside the church were painted by the Hungarian artist Ferenz Pruszinskay, the Way of the Cross was carved by Miloš Hohnjec from Celje; the organ was made by the Maribor master Jožef Brandl. On the main altar is the pilgrimage statue of Mary dating from the 18th century. In the presbytery there are frescoes and stained glass windows that are the work of the artist Stane Kregar.

Did you know the legend of the Franciscan monks?

"A long, long time ago some farmers gave the Franciscan monks the gift of a cow. But the monks did not have a rope to put around the cow's neck, which of course caused them a lot of trouble. Since then they always wear a rope around their waists."

Tania Candiani (MX), Organ. Credits: Conaculta, INBA, Laboratorio Arte Alameda. Maribor Parish – St. Mary – Franciscan church: KIBLIX 2014 – Parallels, Festival / Exhibition, October 8–25, 2014, Maribor, Slovenia.

KIBLIX is a part of the Soft Control project supported by the Culture Programme of the European Union. Support: the eCultValue project financed by Seventh Framework Programme.

Franciscan Church, Maribor, Slovenia, 2014
© ACE KIBLA (photo by Janez Klenovšek)

Kiblix – Paralleles, Franciscan Church, Maribor, Slovenia, 2014
© ACE KIBLA (photo by Janez Klenovšek)

#contemporaryart #science #intermedia #VR #digitalization

HALLERSTEIN

ART-SCIENCE-INTERMEDIA PROJECT

The Hallerstein project is devoted to one of the major 18th-century scientists. The project is an artistic interpretation of the life of the Baron Ferdinand Augustine von Hallerstein – in Chinese Liu Songling (Ljubljana, Slovenia, 1703–Beijing, China, 1774), who spent 35 years as the court astronomer, missionary, "cultural ambassador" and mandarin (having the status of the Head of the Imperial Astronomical Bureau) in Beijing, China, between the years 1739–1774. He was even the first demographer, as he precisely calculated the exact number of Chinese population of the time (198,214,553); he also participated in Chinese cartography. He was a Carniola man, a Jesuit from Menges, better known in scientific circles around Europe than in his homeland or in China, where only recently he has again attracted the attention of historians.

Hallerstein gained fame in Europe with his scientific work in astronomy; he also discovered a comet that was named after him. His scientific activity contributed greatly to the world immaterial heritage, he is known from London to Paris and Saint Petersburg, having been a member of Academies of Science in all the three cities, from Germany and Vienna where he mainly published his scientific disputes, to Rome and Lisbon, the city of his correspondence and of his personal friend – the Queen of Portugal. It was from Portugal that he travelled to India as a missionary, where he worked in Goa and Macau and then continued his travel to Beijing. In Budapest, translations of his letters were published already in the 18th century, while in Europe we have only recently began to discover the details of his life.

The former Beijing Astronomical observatory, now a museum, still hosts the armillary sphere with rotating rings, which was made under Hallerstein's leadership and is considered the most prominent astronomical instrument.

The project integrates many Chinese and European institutions, international experts and artists. By overlapping historical documents and contemporary works of art, the possibility will be created to understand both previous as well as current Chinese and European conditions.

The Hallerstein project shall be put in the context of researching the relations between the traditional and contemporary, between science and art and as a dialogue between East and West.

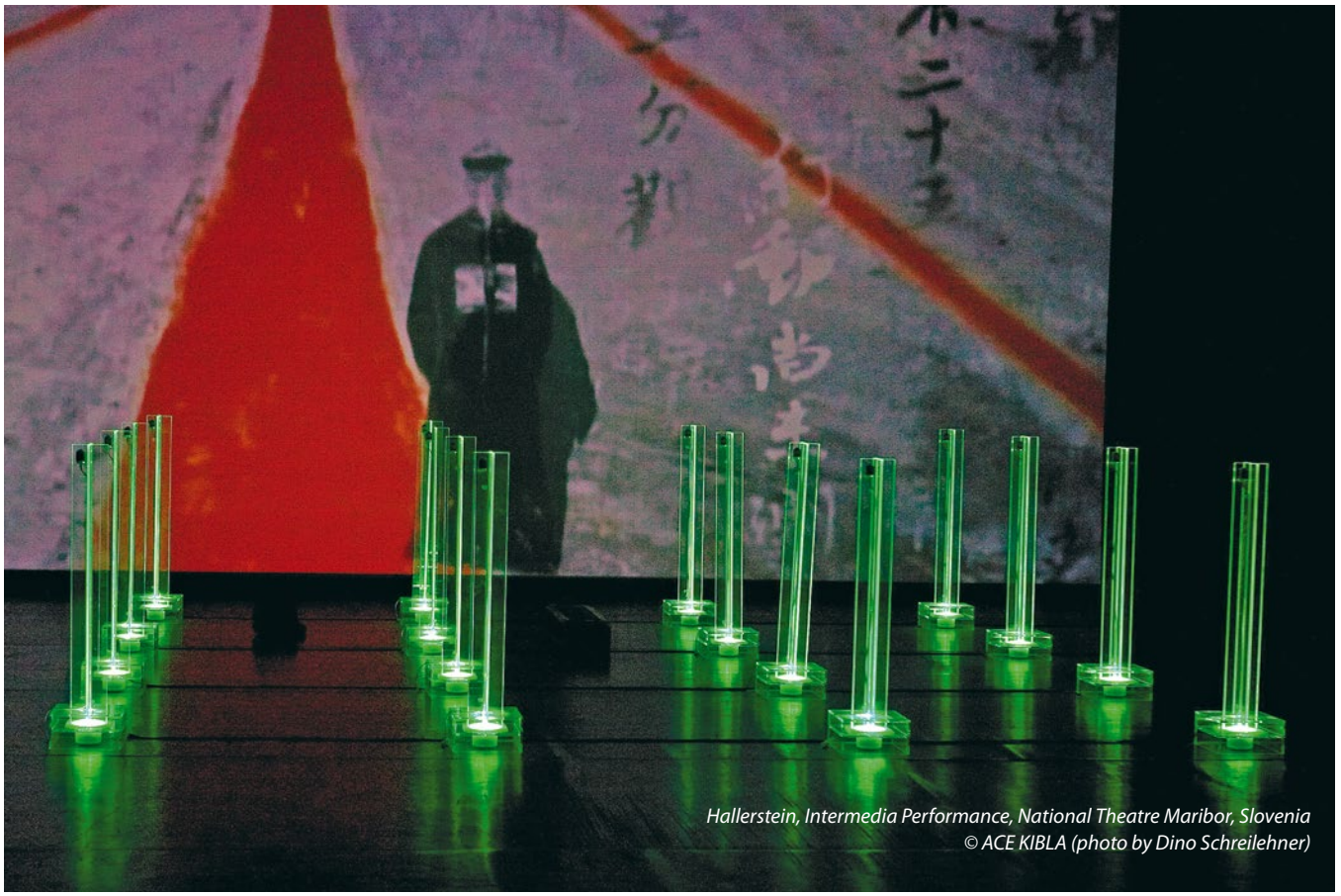
— Aleksandra Kostič
ACE KIBLA, Maribor, Slovenia

The former Beijing Astronomical observatory, now a museum, China
© ACE KIBLA (photo by Anton Levstek)

Edvard Clug, Hallerstein, Intermedia Performance, National Theatre Maribor, Slovenia
© ACE KIBLA (photo by Dino Schreilehner)

Huiqin Wang, Hallerstein, Intermedia Performance, National Theatre Maribor, Slovenia
© ACE KIBLA (photo by Dino Schreilehner)

Hallerstein – part 1, intermedia performance, National Theatre of Maribor, Slovenia
Production: ACE KIBLA



Hallerstein, Intermedia Performance, National Theatre Maribor, Slovenia
© ACE KIBLA (photo by Dino Schreilehner)

Hallerstein – part 2, intermedia performance, National Theatre of Maribor, Slovenia
Production: ACE KIBLA

Hallerstein intermedia performance celebrated the 253rd anniversary of his death and the international year of astronomy (2009). Also named after Hallerstein is the asteroid 1507 Hallerstein, which was discovered in 1969 by astronomers of Črni Vrh observatory (Slovenia).

The project was prepared within the call under Strand 1.3, Special Actions, Cultural Cooperation with and in third countries, EACEA 21/2007, priority countries for European participation having been India and China. The results of the Call for Cultural Cooperation with and in third countries have been published at the European Commission webpage since 11 February 2008.

Hallerstein Project was supported by EACEA, programme Cwulture, EU, Ministry of Culture of the Republic of Slovenia and Municipality of Maribor

#spacetechnologies #mobileapps

CULTURALIZATION OF SPACE

THE CULTURAL CENTRE OF EUROPEAN SPACE TECHNOLOGIES (KSEVT)

VITANJE, SLOVENIA

KSEVT is enabling and facilitating a neutral context for the transfer of knowledge through its Composite Missions, in the form of conferences, workshops and residencies where artists and scientists engage on diverse topic research about human activity within space. The main purpose of their engagement is the development of cultural applications for space programmes. These cultural applications literally build on a holistic approach where theoretical and practical levels develop composite thinking processes (Arts and Science). Furthermore this transfer of knowledge is then presented to institutions and organizations who are dealing with space research on a continuous basis, also including scientific research as well as artistic and cultural production.

KSEVT is an institute with the purpose to initiate and facilitate space culturalization research and development activities by means of intellectual and artistic investigation through cross-discipline activities. Its secondary activity is that of a museum, which acknowledges space research and its implications on cultural production and creates an immersive environment for contemporary and historical intercultural scientific investigation. By disseminating knowledge dedicated to space culturalization to the larger public and through publishing and educational activities as well as engaging in the production of exhibitions and events on location, KSEVT establishes a regular contact with various audiences. The third main activity is that of a laboratory dedicated to practical informal educational activities, often connected to exhibitions, where younger generations can reproduce smaller technological objects and learn about space research.

"The building is designed as an architectural planetary position of the Potočnik orbital station – but this is really the Vitanje living room."

— Dragan Živadinov
Artist and initiator of KSEVT

Miha Turšič, director of KSEVT, says that the Noordung exhibition mainly represents the humanization of the development of technology. The exhibition itself is the sum of the impact that Noordung's work had on the development of space technologies, which enabled the flight of the first satellite in space, the first flight of man to the moon and installation of a space station in Earth orbit.

The connection between art and science, according to the Tadej Bajd, a member of the Slovenian Academy of Sciences and Arts (SASA) and Professor of Robotics at the Faculty of Electrical Engineering is the unique advantage of KSEVT. "This is exactly why mentors from the Faculty of Electrical Engineering and Computer Science, the Jozef Stefan Institute, and of course the Academy of Fine Arts and Design were thrilled that our students in the fifth year of robotics in FE conducted a series of projects that will bring together art robotics", says Bajd.

He adds that he sees KSEVT also as an institution that will increase the interest of young people in engineering, technology and science. According to him, the universe also has the advantage that quite naturally connects the arts through the social science, technology and the sciences of life.

KSEVT (The Cultural Centre of European Space Technologies) in Vitanje, Slovenia, 2014
© ACE KIBLA (photo by Janez Klenovšek)

The Cultural Centre of European Space Technologies (KSEVT), Vitanje, Slovenia

eCultValue Summer Stage, KSEVT in Vitanje, Slovenia, 2014
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Museum Exhibition dedicated to Herman Poročnik – Noordung
© ACE KIBLA archive (photo by Janez Klenovšek)

eCultValue Summer Stage, KSEVT in Vitanje, Slovenia, 2014
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Dragan Živadinov in KSEVT, Vitanje, eCultValue Summer Stage
© ACE KIBLA (photo by Janez Klenovšek)

Dragan Živadinov in KSEVT, Vitanje, eCultValue Summer Stage
© ACE KIBLA (photo by Janez Klenovšek)

HERMAN POTOČNIK – NOORDUNG was born on 22nd December 1892 in Pula. He spent his childhood in Maribor, attended school in Fischau, Hranice and Mödling and fought at the battlefields of World War I. After the war, he was retired as a war invalid but despite that fact he decided to continue his studies in Vienna and eventually became a rocket technologies engineer. From 1922 to his death, he devoted himself to space science and became a pioneer of cosmonautics.

At the end of 1928 he published his sole book Das Problem der Befahrung des Weltraums – der Raketen-Motor (The Problem of Space Travel – The Rocket Motor) where he set out a plan for a breakthrough into space and the establishment of a permanent human presence there.

He conceived a detailed design of a space station and was the first man to recognize the significance of the geostationary orbit, on which the station would orbit the Earth and for which he made detailed calculations. He died on 27th August 1929 in Vienna.

BUILDING THE AUDIENCES

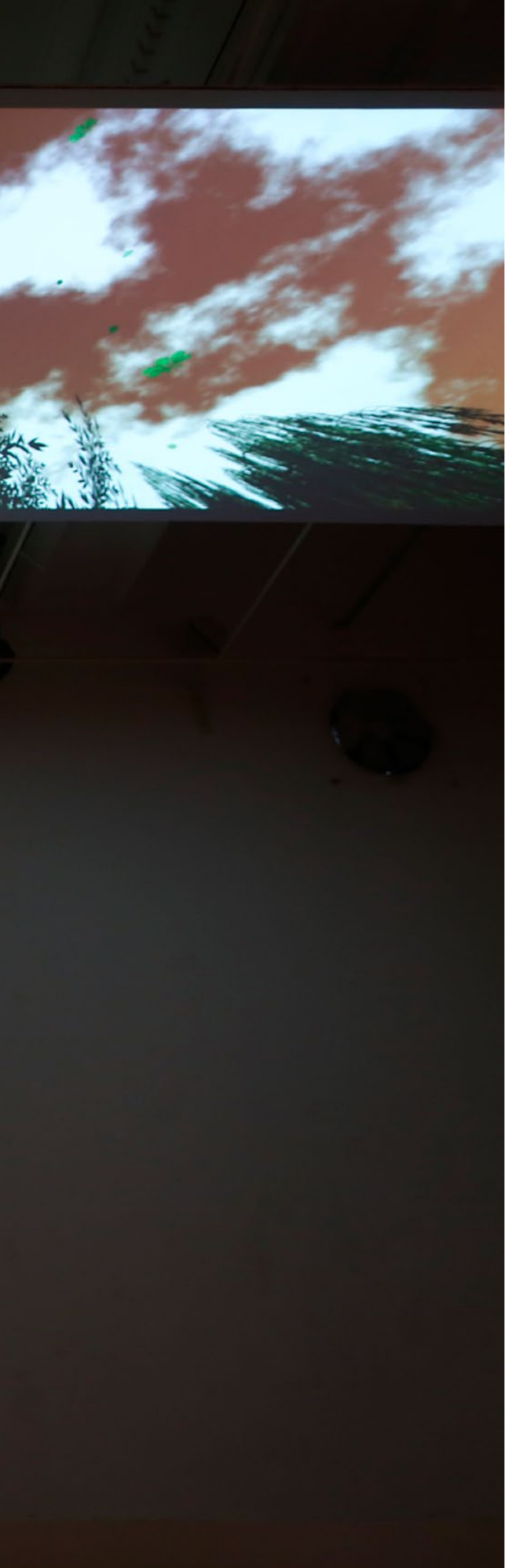
Through different programmes we tried to explore how everyday experiences of children, and their imaginative and creative worlds, are collected, interpreted and displayed in museums, and represented through objects and cultural lore. Young people constitute up to half the population of any given society, but their lives are inescapably influenced by the expectations and decisions of adults. As a result, children's distinct experiences are frequently subsumed within the broader histories and heritage of their families and communities. And while adults inevitably play a prominent role in children's lives, children are also active creators of their own cultures.

Deep space, AEC Linz, Austria
© Ars Electronica Center (photo courtesy of AEC)

Festival KIBLIX 2012 Part One: Robots and Avatars – Our Colleagues and Playmates of the Future, Interdisciplinary Exhibition, KIBLA, Maribor, Slovenia, October 2012. The project was supported by the Culture Programme of the European Union. The Slovenian version was financially supported by the Ministry of Education, Science, Culture and Sport of the Republic of Slovenia and co-produced with Maribor 2012 – European Capital of Culture.

Robots and Avatars is a programme originally conceived and produced by body>data>space <http://www.bodydataspace.net/> who led the project through research and development into an EU Culture project involving 5 other UK and European partners. The exhibition Robots and Avatars – our colleagues and playmates of the future was part of the RACIF project, coordinated by lead organiser body>data>space, London (UK) and co-organisers KIBLA, Maribor, Slovenia and AltArt, Cluj-Napoca, Romania.

Michael Takeo Magruder, Drew Baker, Eric Fleming, David Steele: Visions of Our Communal Dreams, Robots and Avatars, Space for Art KiBela, ACE KIBLA, Slovenia, 2012 © ACE KIBLA (photo by Boštjan Lah)



#avatars #robotics #3D #smartobjects

ROBOTS AND AVATARS OUR COLLEAGUES AND PLAYMATES OF THE FUTURE

EU INTERDISCIPLINARY PROJECT

Robots and Avatars brings together a rich and diverse group of people to explore questions around new representational forms of identity in the next 10 to 15 years. We are proud to be supported by our project champions; experts in their field, their contributions invigorate the fascinating discussions around Robots and Avatars.

Robots and avatars – our colleagues and playmates of the future? is an interdisciplinary project based on technological objects and extensions such as robots, avatars, virtual worlds, telepresence and real-time presence in correlation to social creative places, cultural environments, interactive entertainment and play space. This interconnected framework of events comprises selected mobile exhibition artworks, workshop learning experiences, and artist interviews and discussions.

Robots and Avatars departs from pop culture imagery and re-imagines these technologies for a new reality: how do we envisage our future relationships with robotic and avatar colleagues and playmates, and at what point does this evolution cross our personal boundaries of what it is to be a living, feeling human being?

The exhibition presents a variety of immersive experiences – from unconventional approaches to social networks, their re-defining and exploring their influences and dead ends, through virtual worlds rendered into pixels through the act of touch, collaborative landscapes stretching beyond the confines of popular gaming, to electro-acoustic biological extensions, wearable technologies and interactive robotic elements that affect and try to define us, to seemingly ordinary, human behaviour imitating robots.

With an interactive educational program and by means of school interventions the project aims to encourage the development of skills and thinking that will be indispensable to young people in future professions, though these are not yet formed.

Robots and Avatars Learning Experiences

Robots and Avatars Learning Experiences are creative digital workshops in the areas of Avatars, Robotics, Telepresence and Social Media/Online Communication. They are aimed at enabling young people to acquire self-confidence and creative thinking and explore issues of identity, communication and team work for the 21st century.

Robots and Avatars Intergenerational Camp

The Intergenerational Camp is a one week residential camp concept exploring intergenerational knowledge exchange and shared learning based in the extension of existing skills and the acquisition of new skills required in the digital 21st century, using a open, participative methodology. The participants, ranging in ages from 7 to 70 years old, are invited to create and reflect, individually and collectively around the topics of "Collaborative and Intergenerational Futures".

— Ghislaine Boddington
body>data>space, London, UK

#smartobjects #robotics

MY FIRST DiscoHosmačBot

The future is now and robots are our helpers. But can they become your friends and companions? If yes, how would they look like? On the workshop we'll produce simple robotic creatures from a variety of materials. Participants will have the opportunity to create their own toy or fashion accessory in their own way. The basic idea is to build a simple bionic toy from little material but for a lot of joy. The workshop is more than appropriate for kids, fashion enthusiasts and other mechanical creature lovers.

Worskshop for kids by Monica Pocrnjić
ACE KIBLA, Maribor, Slovenia

Robots and Avatars, Space for Art KiBela, ACE KIBLA, Slovenia, 2012
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Robots and Avatars, Space for Art KiBela, ACE KIBLA, Slovenia, 2012
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#advancednonformaleducation

ARKEN MUSEUM OF MODERN ART

ISHØJ, DENMARK

ARKEN Museum of Modern Art is a monumental landmark surrounded by a manmade beachscape just south of Copenhagen. The museum showcases one of Scandinavia's finest collections of contemporary art, and the maritime-inspired architecture has gained the museum international renown.

One of Denmark's newest contemporary art museums, the ARKEN Museum of Modern Art was inaugurated on 15 March 1996 by Her Majesty Queen Margrethe II. Prior to this, years had been spent to ensure that this coastal location in Ishøj just south of Copenhagen would become a significant player in Danish cultural life.

By collecting, registering, storing, researching and communicating in the world of modern art, ARKEN's goal is to safeguard Denmark's cultural heritage. The museum aims to spread knowledge of and highlight conditions and changes in modern art. ARKEN is suitable for all ages, with particular focus on communicating with children.

Arken Museum of Modern Art, Ishøj, Denmark, 2014
© ACE KIBLA (photo by Dejan Pestotnik)

Arken Museum of Modern Art, Ishøj, Denmark, 2014
© ACE KIBLA (photo by Dejan Pestotnik)

The Kids' Research Laboratory AEC Linz, Austria
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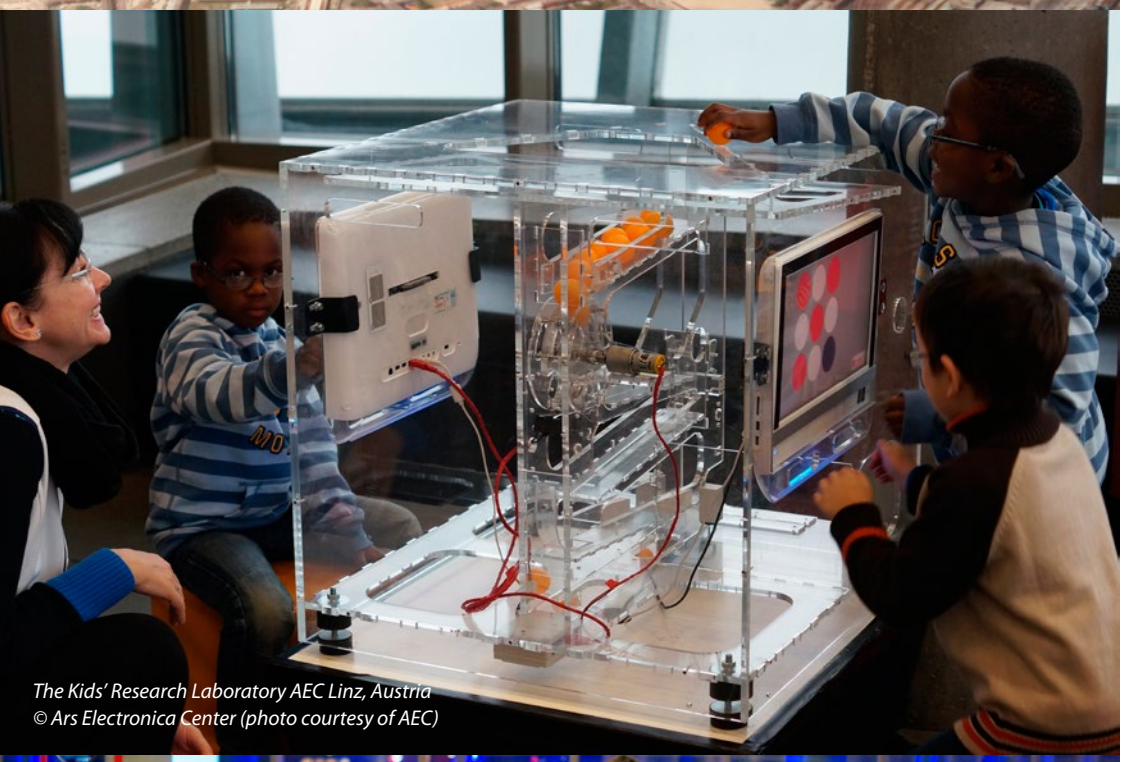

The Kids' Research Laboratory AEC Linz, Austria
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The Kids' Research Laboratory AEC Linz, Austria
© Ars Electronica Center (photo courtesy of AEC)

#VR #AR #robotics #smartobjects #interactive #telepresence #biotelematics #mobileapps

THE KIDS' RESEARCH LABORATORY– HIGH-TECH PLAYGROUND FOR CHILDREN

ARS ELECTRONICA CENTER LINZ, AUSTRIA

"Up to now, most of the offerings in our museum & school program targeted youngsters age 6 and up. In fact, if you consider what other museums – in Austria and elsewhere in Europe too – have been doing, then you see that young people's first contacts with technical and scientific topics don't occur until they begin attending elementary school. Nevertheless, kids nowadays start encountering high tech and new media at a relatively early age, so I think it's a good idea to get them started with a bit of an introduction and some training in the preschool phase. But, of course, the approach has to be totally different. The tactile properties of these installations, their appearance and the mode of dealing with them have to be custom-tailored to the needs of kindergartens, and I believe it's essential for this contact to commence prior to school enrolment."

— Nicole Grüneis
Ars Electronica Center's Education and Cultural Communication department

Thutmosis. Bust of Nefertiti
© bpk / Ägyptisches Museum und Papyrussammlung, SMB (photo courtesy of bpk / Ägyptisches Museum und Papyrussammlung, SMB, photo by Margarete Büsing)

Nefertiti, whose name means "the beautiful one has come," was the queen of Egypt and wife of Pharaoh Akhenaten during the 14th century B.C. She and her husband established the cult of Aten, the sun god, and promoted Egyptian artwork that was radically different from its predecessors. A bust of Nefertiti is one of the most iconic symbols of Egypt.

Her mummy has not yet been found.

The development of new interactive technologies has inevitably impacted traditional sciences and arts. This is more evident in the case of novel interactive technologies that fascinate the broad public, as has always been the case with use of ICT. The blending of disciplines and the evolution of techniques has brought forth the need for better modes of communication. Consequently, virtual ICT interfaces, interaction techniques, and devices have improved greatly in order to provide more natural and obvious modes of interaction and motivational elements. Nevertheless, the prohibitive costs and inaccessibility of ICT, coupled with issues of usability, staff training, operation, and maintenance, present important drawbacks for the use of ICT in public spaces, making it difficult to incorporate in dwindling museum or school budgets. In spite of these concerns and objections regarding the appropriateness and educational efficacy of ICT, there remain compelling reasons for believing that virtual environments for the broad public warrant serious investigation and can provide strong tools for learning. Institutions of informal education, such as museums, research, and cultural centers are in a better position to make use of such advanced systems and investigate their educational potential while effectively shaping how they deliver public entertainment and education.

— Dejan Pestotnik
ACE KIBLA, Maribor, Slovenia

WHAT'S NEXT?

UPTAKE

Increase Interest in Cultural Heritage through ICT

An Interactive Book

Publisher
Association for Culture and Education KIBLA
Ulica kneza Koclja 9, Maribor, Slovenia

Represented by
Aleksandra Kostič, President of ACE KIBLA

Production
X-OP

Edition
TOX, timetable trough three thousand,
Volume 20 (2015), No. 49

ISBN 978-961-6304-36-8

Editor-in-chief
Dejan Pestotnik

Co-editors
Tadej Vindiš, Kaja Antlej

Interactive Technology
Žiga Pavlovič

Interactive software development platforms:
UNITY
unity3d.com

Aurasma
http://www.aurasma.com

Consulting
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Supervision
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Translations
Helena Fošnjar

Proofreading
Helena Fošnjar, Cameron Bobro (X-OP)

Photo Selection
Dejan Pestotnik, Tadej Vindiš, Kaja Antlej

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Cover
© ACE KIBLA (cover design by Vid Andrej, Tadej Vindiš, Dejan Pestotnik)

Layout
DTP ACE KIBLA: Tadej Vindiš, Vid Andrej

Print
Repro Point d. o. o.
Slovenia, 2015
Print run 1,000 copies

EU Project: eCultValue Project

The eCultValue project is co-funded by the FP7 program of the European Commission.

CIP - Kataložni zapis o publikaciji
Univerzitetna knjižnica Maribor

338.483.13:004.031.42(082)

UPTAKE : increase interest in cultural heritage through ICT.
[Editor-in-chief Dejan Pestotnik ; photo selection Dejan Pestotnik, Tadej Vindiš, Kaja Antlej ; photo credits 3D Icons photo archive ... et al.]. - Maribor
Association for Culture and Education Kibla, 2015.
(Edition Tox : timetable trough three thousand ; vol. 20, no. 49)

1000 izv.

ISBN 978-961-6304-36-8
1. Pestotnik, Dejan
COBISS.SI-ID 81346817

UPTAKE

Increase Interest and Cultural Heritage through ICT
eCultValue Success Stories Book
(QR codes, links, video, AR):

Page 1: QR (code design)
eCultObservatory.eu

Page 6: QR (qr codes – free software development platforms)
Aurasma: iOS / Android
http://www.aurasma.com

UNITY 3D
https://unity3d.com/

Page 10: QR
link to eCult Observatory webpage
http://www.ecultobservatory.eu

Page 12: link to video and e_book
YouTube Channel // eCultMuvies.kibla
https://www.youtube.com/user/KIDKIBLA
&
http://ecultmovies.kibla.org/

> intro 2:29
http://ecultmovies.kibla.org/?page_id=6

> Interviews
http://ecultmovies.kibla.org/?page_id=8

> Projects
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(Video shooting and montage by Matej Kristovič.)

Online book version: UPTAKE PDF

Page 19: QR
eCult ambasadors
(link to eCultObservatory webpage)
http://www.ecultobservatory.eu/users/ambassadors

Page 23: QR
The official list of FP7 projects in the ICT & Creativity sector
(link to eCultObservatory webpage)
http://www.ecultobservatory.eu/eu_projects_corner
& link to
http://cordis.europa.eu/fp7/ict/creativity/creativity-projects_en.html

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Marc Boonstra, WAAG Society – Institute for Art, Science & Technology,
MeSch project presentation: eCult Summer Stage, Maribor, Slovenia, 2014 (32:22)
http://ecultmovies.kibla.org/?page_id=8
&
https://www.youtube.com/watch?v=nOWjfkxBFCY
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Link to Suhozid.hr webpage
http://suhozid.geof.unizg.hr/

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Interview with Vlasta Krklec, Director of Kraneamus, Krapina Neanderthal Museum (8:20)
http://ecultmovies.kibla.org/?page_id=6
&
https://www.youtube.com/watch?v=Z-DcwhEVea0
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Interactive technologies showcase – Kraneamus (2:07)
http://ecultmovies.kibla.org/?page_id=8
&
https://www.youtube.com/watch?v=_1DvnRYYqR4
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Video showcase of Acropolis museum, Athens, Greece (1:21)
http://ecultmovies.kibla.org/?page_id=8
&
https://www.youtube.com/watch?v=sdQyrh6SuyM
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Juliane Leitner, presentation of Deep Space AEC Linz: eCult Summer Stage, Maribor, Slovenia, 2014 (34:48)
http://ecultmovies.kibla.org/?page_id=8
&
https://www.youtube.com/watch?v=XtR3uLQ8sHE
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Presentation of KIOSK 67 3D model with use of AR © Kaja Antlej

See also K67:
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Interactive platforms and technologies
Interactive Technology by Žiga Pavlovič.
Links to interactive free software development platforms:

UNITY
https://unity3d.com/
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AURASMA
http://www.aurasma.com
Aurasma is the industry's leading augmented reality platform, available as a free app for iOS and high-powered Android devices or as an SDK for developers. Aurasma's core technology uses advanced image and pattern recognition to blend the real world with digital, interactive content such as videos and 3D animations called "Auras." Download the free Aurasma app or become a customer and start changing the way you see and interact with the world today.

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http://issuu.com/kibla/docs/ecult_book_online

RELATIONSHIPS BETWEEN ICT PROVIDERS, CULTURAL CONTENT HOLDERS AND USERS, VISITORS, ARTISTS

meSch
The project (2013–2017) receives funding from the European Community's Seventh Framework Programme 'ICT for access to cultural resources' (ICT Call 9: FP7-ICT-2011-9) under the Grant Agreement 600851.

CHESS
The CHESS project kicked-off in February 2011 and was completed in March 2014. The project was co-financed by the European Commission's Seventh Framework Programme under Grant Agreement 270198.

MuseumApp
Launching customer Amsterdam Museum (http://www.amsterdammuseum.nl/), developed by 7scenes (http://7scenes.com/projects/the-museumapp/), research partner Waag Society (http://waag.org/nl).

TAG CLOUD
TAG CLOUD (Technologies lead to Adaptability & lifelong enGagement with culture throughout the CLOUD) is a European project co-funded by the Seventh Framework Programme of the European Commission which started in February 2013 under Grant Agreement 600924.

3D-ICONS
3D-ICONS is a pilot project funded under the European Commission's ICT Policy Support Programme which started on 1st February 2012 and lasted for three years under Grant agreement 297194.

V-MUST.NET
V-MusT.net is a Network of Excellence. The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7 2007/2013) under the Grant Agreement 270404.

SUHOZID.hr
Project supported by Geodetski, Arhitektonski and Agronomski fakultet, Zagreb, Etnološki odsjek Sveučilišta u Zadru, Zadar, and Konzervatorski odjel u Splitu, Split. Preliminary research financed by Studentski zbor Sveučilišta u Zagrebu, Zagreb and the Zaklada HAZU fund.

Krapina Neanderthal Museum
The Krapina Neanderthal Museum is a national institution founded by Republic of Croatia in 1993 covering republic level. Kraneamus is also a member of Network of Heritage Sites Ice Age Europe.

AKROPOLIS MUSEUM
The Acropolis Museum was a central partner of the CHESS project, co-funded by FP7.

K67 KIOSK
2009–2013 within the research program Young Researcher from Business at IB-PROCADD d. o. o. company and the Doctoral Study in Heritology (Heritage Studies), Faculty of Arts, University of Ljubljana. Partly financed by the European Union, European Social Fund.

Tania Candiani: ORGAN
Credits: Conaculta, INBA, Laboratorio Arte Alameda. Maribor Parish – St. Mary – Franciscan church: KIBLIX 2014 – Parallels, Festival / Exhibition, October 8–25, 2014, Maribor, Slovenia. KIBLIX is a part of the Soft Control project supported by the Culture Programme of the European Union. Support: the eCultValue project financed by Seventh Framework Programme.

HALLERSTEIN
Hallerstein Project was supported by EACEA, programme Culture, EU, Ministry of Culture of the Republic of Slovenia and Municipality of Maribor.

BUILDING THE AUDIENCES (Best practice cases to involve children in art)

Festival KIBLIX 2012 Part One: Robots and Avatars – Our Colleagues and Playmates of the Future, Interdisciplinary Exhibition, KIBLA, Maribor, Slovenia, October 2012.
Supported by the Culture Programme of the European Union. The Slovenian version financially supported by the Ministry of Education, Science, Culture and Sport of the Republic of Slovenia and co-produced with Maribor 2012 – European Capital of Culture.

UPTAKE

Increase Interest in Cultural Heritage through ICT