International Conference on Design and Digital Heritage
Stockholm, Sweden 2013, Proceedings

NETWORK
OF DESIGN
AND DIGITAL
HERITAGE
Conference Program Committee

Coordinator: Joan Nordbotten, University of Bergen, Norway/USA

Ingvill Andreassen, PFI/InterMedia, University of Oslo, Norway
Bodil Axelsson, Linköping University, Sweden
Anne Balsamo, The New School for Public Engagement, USA
Johanna Berg, Digisam, National Archives, Sweden
Luigina Ciofi, Sheffield Hallam University, UK
Line Daatland, Bergen Art Museum, Norway
Hermina Din, University of Alaska, USA

Sigurjón Baldur Hafsteinsson, University of Iceland, Iceland
Ane Hejliskov Larsen, Århus University, Denmark
Thomas Hillman, Göteborg University, Sweden
Wim Hupperetz, Allard Pierson Museum, University of Amsterdam, Netherlands
Harald Kraemer, Zurich University of the Arts, Switzerland
Gunnar Liestøl, University of Oslo, Norway
Mats Persson, Association of Swedish Museums, Sweden
Sofia Pescarin, CNR ITABC, Italy
Perttu Rastas, The Kiasma Museum of Contemporary Art, Finland
Mariana Salgado, Aalto University, Finland
Neil Silberman, President of the ICOMOS International Scientific Committee on Interpretation and (ICIP), University of Massachusetts Amherst, USA

Jyrki Simovaara, University of Applied Sciences HUMAK, Finland
Rachel Smith, Århus University, Denmark
Ole Smordal, University of Oslo, Norway
Marcin Szeląg, Adam Mickiewicz University, Poland
Krzysztof Walczak, Poznan University of Economics, Poland
Kevin Walker, Royal College of Art, UK
Lena Wilhelmsson, Dunkers kulturhus, Sweden
Proceedings Editorial Team

Publisher
Interactive Institute Swedish ICT

Editor
Halina Gottlieb, Interactive Institute Swedish ICT / NODEM

Assistant Editor
Magdalena Laine-Zamojska, Interactive Institute Swedish ICT / NODEM

Editorial Committee
Anne Balsamo, The New School for Public Engagement, New York City, USA
Hermina Din, University of Alaska, USA
Harald Kraemer, Zurich University of the Arts, Switzerland
Gabriela-Alina Sauciu, Lund University, Sweden
Neil Silberman, President of the ICOMOS International Scientific Committee on Interpretation and (ICIP), University of Massachusetts Amherst, USA
Hans Öjmyr, The Stockholm City Museum, Sweden
Table of contents /alphabetical order/

11 Bringing the kids along: creating a new Kon-Tiki exhibition for both parents and children
   R. Solvik, H. Fangel, C. Grier and O. Heiborg
19 Challenges and opportunities faced by cultural heritage professionals in designing interactive exhibits
   F. McDermott, L. Clarke, E. Hornecker and G. Avram
27 Design research into mobile museum mediation
   R. Baggesen
33 Designing interactive exhibitions based on innovative narrations guided by architectural space and digital technologies
   S. Orhun
41 Discussions on Inclusive, Participative and Open Museums
   M. Salgado and S. Marttila
49 Dos and don’ts on Facebook across museums
   S. Grøn, L. Hansen and M. Holst Mouritzen
65 Experience and re-experience without boundaries in time and space: the extension of a practical tool
   E-L. Bergström and J. Werning
73 Exploring historical, social and natural heritage: Challenges for tangible interaction design at Sheffield General Cemetery
81 Galata Sea and Migration Museum: an immersive and interactive visitor experience
   R. Frasca, D. Pantile and M. Ventrella
89 Indoors and outdoors: designing mobile experiences for Cité de l’espace
   S. Rennick-Egglestone, M. Roussou, P. Brundell, C. Chaffardon, V. Kourtis, B. Koleva and S. Benford
99 Introducing iPads in Danish natural science museum settings: a youthful user perspective
   S. T. Gronemann
103 Investigating central factors for learning in digital workshops in art museums
   C. Kobbernagel
113 Investigating design research landscapes through exhibitions
   L. Jönsson, M. Mäkelä, F. T. Hansen and P. Ahde-Deal
121 Mixed reality and the Holy Ghost Church in Turku
   L. Viinikka, T. Korkalainen, J.P. Arimaa, T. Lehtonen, S. Helle, T. Mäkilä, V. Pönni and O. Heimo
131 Museu do Resgate (Museum of Ransom): can everyday video proclaim documental and patrimonial values?
   D. Brandão, H. Alvelos and N. D. Martins
137 Museum without walls: a digital site-specific museum in São Miguel das Missões
   K. Rodrigues Zulukoski
143 Tacit record: augmented documentation methods to access traditional blacksmith skills
   G. Almevik, P. Jarefjäll and O. Samuelsson
161 Technologies for supporting inter-religious and inter-cultural dialogue at religious museums: the on-field experimental action of Museo Diocesano, Milano
   R. Capurro, S. Chiosa, E. Lupo, D. Spallazzo, R. Trocchianesi
165 The Futurist History project: recreating history with augmented reality solutions
   T. Mäkilä, S. Helle, L. Viinikka, T. Lehtonen, J.P. Arimaa, O. Heimo, P. Nikkola, T. Korkalainen and V. Pönni
171 The Guardians: serious game design for enhancing awareness of cultural heritage preservation
   J. Rhim, M. Do, H. Yeom, M. Kim, Y. Song, S. Lee, J. Kim and Y.Y. Doh
179 The other way round: from semantic search to collaborative curation
   C. Eschenfelder and K. Gresch
183 The responsive museum
   S. Hazan and S. Hermon
195 Time Trails
   G. Giannachi, W. Barrett, R. Lawrence, T. Cadbury, H. Burbage, A. Chapman and P. Farley
201 Too many cooks spoil the broth?
   Exploring the challenges for collaboration between museums and ICT design companies
   A. Rørbaek
Technologies for supporting inter-religious and inter-cultural dialogue at religious museums: the on-field experimental action of Museo Diocesano, Milano

Rita Capurro, PhD, contract researcher; Sara Chiesa, PhD student; Eleonora Lupo, PhD, Assistant professor; Davide Spallazzo, PhD, contract researcher; Raffaella Trocchianesi, Assistant professor, Dip. Design, Politecnico di Milano, Italy

http://www.mela-project.eu/

Abstract: This project presentation describes the first results of an ongoing experimental action conducted within the frame of the European FP7 research project "Mela- Museums in an age of migration" (www.mela-project.eu) related to the topic of new museum technologies applied at Museo Diocesano, a religious museum in Milan. The project is based on a collaboration between the Design department of Milan Politecnico and IIT-A Institute for industrial technology and automation of CNR (National Research Council).

Keywords: inter-religious dialogue, museum and technology, multi-vocal narration, museum interpretation

Introduction

Mela Project is a four-year research project funded by the European Commission under the Seventh Framework Programme. Its main objective is to define innovative museum practices that reflect the challenges of the contemporary processes of globalization, mobility and migration. As people, objects, knowledge and information move at increasingly high rates, a greater awareness of an inclusive approach is needed to facilitate mutual understanding and social cohesion (Basso & Pozzi 2012).

Among the other project partners, the Design department has the task of developing experimental design proposals for museum exhibitions, in particular connected with the ICT role in museums. The aim of the cross-disciplinary research for museums is to develop possible scenarios that can be translated into the production of various experimental exhibition designs as test verification of the theoretical investigations.

By the nature of their institutional role, museums, are committed to improve society, pursuing strategies to facilitate dialogue between different cultures and solve issues arising from cultural diversity (Silverman 2010, p.13). It is relevant that in 1996 UNESCO adopted the Action Plan on Cultural Policies for Development in which important principles were announced. In particular a relevant role has been assigned to the dialogue between cultures, as a major social and political challenge and as a prerequisite for peaceful coexistence. UNESCO reiterated the importance of these statements: in 2001 with the Universal Declaration on Cultural Diversity, and in 2005 with the Convention on the Protection and Promotion of the Diversity of Cultural Expressions, ratified by eighty countries (including Italy) at the end of 2007, thereby acquiring binding force (Bodo & Bodo 2007).

The museum has become more and more a "listening ear" of a multicultural and intercultural society where cultures co-exist and debate. The intercultural dialogue relies on differences among cultures or "diversities" considered and enhanced as resources for mutual understanding. The museum, accepting the challenge to describe and interact with society, could be the privileged place in which these resources can be endorsed. The topic of "representation" is central in museums that need technology in order to represent themselves. "The cultural resonances of technologies can at time even serve to problematize or question" the contents of the museum (Lupo, Allen 2012). One of the most interesting and controversial themes of the inter-culture debate is inter-religious dialogue. The

---

1 "Action Plan on Cultural Policies for Development" was adopted by the Intergovernmental Conference on Cultural Policies for Development - Stockholm, Sweden, 2nd April 1998. Point 5 of the principles recognized: "The dialogue between cultures appears to be one of the fundamental cultural and political challenges for the world today; it is an essential condition of peaceful coexistence." See http://www.unesco.org/culture/unesco/declarations/cultural.pdf

2 This Expression has been used by the Anacostia Museum & Center for African American History and Culture's director, during his conference presentation at the General Conference of ICOM in 1971.
Museo Diocesano, as a religious museum, is an appropriate venue for religious narratives, discussing this topic, by stimulating debates, and fostering equality and dialogue among different communities (Capurro 2010, p.108).

The representation of religious issues in the public discourse of contemporary society seems to be a difficult issue. Problems of identity, diversity and dialogue among different cultures are amplified whenever religious aspects are involved. That is an important concern for museums.

The mise en scène by religious museums is not a neutral topic but is affected by cultural settings and by the contexts of the museums themselves. There are different approaches to what can be summarized under the label of "religion". Talking about religion can imply the following aspects: "discussing on religion", when discussing, contesting or undermining religious identities; "discussing among religion", when confronting, discussing or questioning religious diversity and frictions; and "discussing through religion", when debating among diversities using religion to open the discussion towards a wider cultural sphere (Capurro, Lupo 2013). For the creation of an effective project, which has intercultural dialogue as its principle goal, the work team had to consider all of these variables and possible frictions.

Objectives and methodology

The aim of this experimental action is to discuss and verify the intercultural potential of religion and the possible role of the museum as an ideal place for inter-religious encounters. It consists in designing a visitor experience by transforming the contemplative cultural experience in an interactive and contributory visit, possibly also enabling intercultural dialogue. The project is a prototype path limited to five paintings from the collection of Museo Diocesano, selected in the so-called Sala della Confraternita del SS. Sacramento e S. Caterina: five paintings of the eighteenth century representing various miracles about the Eucharist.

The project is based on the use of digital technologies, like video narrations, performative interaction and 3D visualisations that can stimulate different interpretations.

Technology is a transversal driver that intercepts place/space, content and sociality within museums, functioning as a medium that widens the relation between visitor and content to the ones among visitors and content-in-space and visitors and visitors. (Lupo, Allen 2012, p.163)

The development of a digital interface in the museum, together with a platform enabling comments, and the production of contributions on religious topics, should facilitate the connections and relations among visitors with different cultures.

The most promising aspect of bringing technologies in the museum come through an approach that is well informed by the technological culture form which these technologies and their use-patterns and values emerge. That is, thinking "eco-systemically" about what it means to bring technological interventions into the culture and historical context of a cultural or heritage institution, and vice versa. (Lupo, Allen 2012, p.26)

Design Department with CNR decided to present the contents, both narrative and in the form of a questionnaire, through a tablet. The programmatic intention is to increase the use of technology devices, in particular, with the introduction of tools based on augmented reality, characterized by 3D reproduction of museum works.

Research phases and future actions

The experimental action will be conducted in two different steps, tailored for different visitor targets. In both tests the visitors will use a tablet which contains a video and a questionnaire. The first test took place in October 2013 (http://www.mela-blog.net/archives/3021), and involved experts and specialists (e.g. persons with a deep knowledge of their own religion: priests, theologians, rabbis, etc...). This test has an instrumental nature, designed to verify and review the efficacy of the interpretative tools in enhancing the visitors' experience and to improve the contents. Through user generated content (UGC), by collecting different expert opinions and a wide range of religious beliefs, our aim is to increase the potential multivocality of the narration. Having collected different religious point of views, the questions that will be addressed to the second-test-individuals will be improved by the feedback obtained from the first-test-individuals. The second test will involve general users, not-specialists (e.g. second generation immigrants and foreign community residents in Milan). The second phase will also
add new contents to test the path and to understand whether the intercultural model of socialization through performative and connective technologies is functional or not.

Each path mentioned, namely specialist and not-specialist, will be made up of four different experience levels. Each experience level will contain three themes: historical/artistic themes, Roman Catholic religious themes, and faith and symbolic themes. These contents allows for five dynamics of interaction: contemplative, interpretative, contributive, connective and performative. The idea is to locate similarities and analogies with other religions through the connections to other works on the same topics in the museum. Regarding the possible use of the five dynamics, interaction with technology intends to act at various levels of usability:

Contemplative: visitors are invited to watch a video representing one of the five paintings showing different aspects of the miracle. The tablet must be pointed to the real paint; it will reproduce the image on the screen and the video will start. The idea is to increase the watching experience through digital technologies, amplifying and enriching temporal and spatial horizons of vision, and also showing no so obvious links between the works.

Interpretative: visitors will be encouraged to relate information achieved through the proposed video, together with their own previous knowledge, by answering a simple questionnaire on the device. Technology itself acts as a facilitator, providing the user with different interpretations of the subject and stimulating critical reflection.

Contributive: visitors can add a personal contribution directly to the tablet's folders (e.g. a reference, object, imaginative representative of their religious view, or expression of their culture). Dynamic contribution involves the direct participation of the user called to provide a personal interpretation of the work, and a visiting experience embracing previous knowledge, cultural references or relevant quotations. Therefore the size of the "basket of religious references" will be richer from contribution to contribution, enhancing future visits.

Performative: one of the aims of the project is to introduce performative (or gestural) action through digital technologies. The general user will be able to activate some contents on the tablet with gestures and actions consistent with different cultural practices, avoiding standard interactions with the technological tools and stereotypes of interaction (i.e. touch, click, move and drag).

Connective: digital technologies connecting people to the cultural heritage (community building) act as a facilitator for social relations. Community building processes come as a result of direct social involvement, or through a consistence presence of technology, allowing a better knowledge of the other cultures.

This dynamic creates the paradigm of listen - interpret - contribute - perform - share.

The dynamics of interaction are decided according to user targets to achieve different objectives by testing multiple technologies. A path for the evaluation of contents will be offered to the specialist; their contribution will help verify the hypotheses behind the project, by giving a professional interpretation of religious values connected with intercultural integration within the museums.

Through an experimental sample of public views, the project aims to verify new interpretative tools for religious heritage in order to activate intercultural dialogue. To associate religious heritage to historical and artistic cultural heritage, potentially allows for the activation of a cross-cultural experience of investigation into possible analogies between different religions inside a museum. Moreover the project wishes to experiment with narrative models, with participatory and interactive contributions and social use of technology, to present cultural and religious heritage, promoting the use of mobile devices and tools, such as tablets or smartphones in museums.

The main cultural purpose is to develop an intercultural enhancement of the artistic heritage for the specific museum, but with the idea to spread the results, and share them in order to be adapted to similar circumstances. This experimental action could eventually provide new information and materials to create new curatorial narrations, parallel to the current ones, within the Museo Diocesano.

By the end of 2013, the two tests (experts and general users) will be evaluated together with their contents. By the beginning of 2014, the path will be proposed for a higher number of intercultural visitors. Data and results will therefore be analysed in order to evaluate possible repeatability to a larger number of museums.

The objective of this project is not to work with advanced technologies, but to build multi-vocal narration and promote an inter-religious exchange through them. Moreover, the project is ongoing and
this paper should be considered as a programmatic guideline. At the end of the project a final publication will be created.

References


