Personalized access to cultural heritage (PATCH2014): the future of experiencing cultural heritage

(Article begins on next page)

03 May 2024

PATCH 2014 - Personalized Access to Cultural Heritage: the Future of Experiencing Cultural Heritage

Johan Oomen
Netherlands Institute for Sound
and Vision
The Netherlands
joomen@beeldengeluid.nl

Lora Aroyo
VU University Amsterdam
The Network Institute
The Netherlands
lora.aroyo@vu.nl

Cristina Gena
Università di Torino
Computer Science Department
Italy
cristina.gena@unito.it

Alan J. Wecker
University of Haifa
Department of Information
Systems
Israel
ajwecker@gmail.com

Abstract

Since 2007, the PATCH workshop series[1] have been gathering successfully researchers and professionals from various countries and institutions to discuss the topics of digital access to cultural heritage and specifically the personalization aspects in this process. Due to this rich history, the reach of the PATCH workshop in various research communities is extensive.

Author Keywords
Cultural Heritage; Multimedia Interaction; Personalization;

ACM Classification Keywords
J.5 ARTS AND HUMANITIES, H.5.3 Group and Organization Interfaces, H.5.4 Hypertext/Hypermedia H.5.m. Information interfaces and presentation (e.g., HCI)

Introduction
The 2014 edition of the Personalized Access to Cultural Heritage (PATCH) workshop is the 7th edition of this workshop in conjunction with various research conferences, e.g. User Modeling 2007 (Greece),

---

[1] http://patchworkshopseries.wordpress.com

Adaptive Hypermedia 2008 (Germany), UMAP 2012 (Canada) and 2013 (Italy), ACM Multimedia 2012 (Japan) and Intelligent User Interfaces 2011 (USA) and 2014. Having the workshop for the second time at the IUI 2014 conference is a timely and natural addition to the previous editions. The workshop papers deal specifically with mobile, personalized and context aware delivery of cultural heritage and the workshop topics were built upon lessons learned from past PATCH workshops and a number of research projects actively involved in the fields of intelligent user interfaces and personalization for cultural heritage for over six years.

PATCH 2014 Goals

The primary goal of this workshop is to gather researchers and practitioners from different fields, e.g., user interaction, arts and heritage curation, interface design, user modeling and personalization, in order to showcase novel applications and discuss opportunities that grow from the connections between users and multimedia systems in the cultural heritage domain. Special emphasis is placed on *mobile, personalized and context-aware cultural heritage information delivery* using a range of new and emerging types of devices.

The rapid development of information technologies and the vast growth of the Web has enabled memory organizations, such as museums, archives and libraries, to provide access to their collections online and ubiquitously, and thus attract wider audiences than those that visit the physical museums. Various trends on the social web allow for users not only to be passive consumers, but also active participants. Additionally, personalization capitalizes on a user-centered intelligent interactive information exchange between websites or mobile guide systems and visitors. In this

way the museum monologue turns into a dialogue, and personalization provides opportunities for a new communication strategy based on a continuous process of interaction, collaboration, learning and adaptation between the museum and its visitors.

Given these developments and trends, it is critical for the memory institutions to know their visitors (users), and provide personalized interactive methods and systems for accessing their collections and services, both online and in physical space. Multimedia information systems (such as interactive tours, visualizations and search engines) are now positioned centrally in a shared information space consisting of (1) the digitized artifacts (2) the social web (3) and links between them. Personalization in multimedia information systems can improve the experience of visitors by assisting them in finding appropriate starting points, and in discovering new relevant information. Critically, these systems must become intelligent, so that they are able to adaptively act, react, respond and learn intelligently from user interactions.

The PATCH2014 workshop investigates three timely and interrelated issues relevant to the domains of both intelligent user interaction and cultural heritage:

- **Mobile, personalized and context-aware cultural heritage information delivery** - using mobile devices, large displays, projectors embedded in the environment and new technologies including Google Glass.
- **Grow existing knowledge with new knowledge** - Explore methods and tools to capture knowledge resulting from interactions between users

(collective intelligence), professionals and collection artifacts, and interaction between users and different (intelligent systems) collecting information about them

▪ **Extend contexts of use** - Appropriation of digitized artifacts from memory organizations outside the traditional museum and research context for both visitors and professionals

The three issues listed above are closely linked to the IUI 2014 research topics on *processing of multi-modal input, intelligent visualization tools* and *smart environments and tangible computing*. PATCH 2014 helps in scoping those topics specifically for the application domain of Cultural Heritage, which has a continuously growing and considerable societal and industrial impact. In effect, PATCH 2014 draws in audiences from outside the existing IUI community.

PATCH 2014 Organisers
The complementary expertise areas of the workshop organizers represent four domains, e.g. cultural heritage and museum studies, information science, user modeling and personalization and distributed computing. Together they cover the various perspectives relevant to explore this edition of PATCH at IUI2014.

Johan Oomen[2] (Netherlands Institute for Sound and Vision) Drs. Johan Oomen is head of the R&D Department of the Netherlands Institute for Sound and Vision and researcher at the Web and Media group of the Vrije Universiteit Amsterdam. Since 2012, he is elected as Network Officer for Europeana and board

member of CLICK-NL, The Dutch Creative Industries knowledge and innovation network. His PhD research focuses on how user engagement can help to establish a more open, smart and connected cultural heritage.

Lora Aroyo[3] is an associate professor at the Web and Media group, part of the Network Institute, at the Department of Computer Science, VU University Amsterdam, the Netherlands. Her research interests are in using semantic web technologies for modeling user interests and context, recommendation systems and personalized access of online multimedia collections, e.g. cultural heritage collections, multimedia archives and interactive TV.

Cristina Gena[4] is an assistant professor at the Department of Computer Science, University of Torino where she teaches at the School of Multimedia and Arts. Her research interests include user modeling, adaptive user interfaces, intelligent user interfaces, interaction design, semantic and social web. She is currency the scientific coordinator of a research project on the recommendations of cultural contents in an open data environment.

Alan J. Wecker[5] is Doctoral Candidate in a joint program both at University of Haifa and University of Trento and a Senior member of the ACM. His research deals with lifelong user modeling to enhance the cultural heritage experience. He has extensive experience in conducting research in a for-profit

---

[2] http://nl.linkedin.com/in/johanoomen/

[3] http://lora-aroyo.net

[4] http://www.di.unito.it/~cgena/

[5] http://www.linkedin.com/in/ajwecker

context, primarily the IBM Haifa Research Lab, where he has received numerous awards and filed over 10 patents. His research interests include: Technology for the Cultural Heritage Environment, Human-Computer Interaction, Distributed Computing, Software Engineering, XML, and Information Retrieval.

Acknowledgement