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PATCH 2015 - Personalized Access to Cultural Heritage

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ABSTRACT

Since 2007, the PATCH workshop series (<https://patchworkshopseries.wordpress.com/>) 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 2015 edition of the Personalized Access to Cultural Heritage (PATCH) workshop is the 8th edition of this workshop in conjunction with various research conferences, e.g. User Modeling 2007 (Greece), Adaptive Hypermedia 2008 (Germany), UMAP 2012 (Canada) and 2013 (Italy), ACM Multimedia 2012 (Japan) and Intelligent User Interfaces 2011 (USA) and 2014 (Israel). Having the workshop for the third time at the IUI 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 seven years [1].

PATCH 2015 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 [3, 6]. 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 [5]. 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 [8, 9]. 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 [2].

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 [4]. Multimedia information systems (such

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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 [7]. Critically, these systems must become intelligent, so that they are able to adaptively act, react, respond and learn intelligently from user interactions.

The PATCH2015 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

PATCH 2015 ORGANIZERS

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 IUI2015.

Liliana Ardissono¹ is an associate professor at the Department of Computer Science, Università di Torino, Italy. Her research interests include user modeling & adaptive hypermedia, context-aware systems, and computer supported collaboration. She is a member of the Editorial Board of the international journal *User Modeling and User-Adapted Interaction* (Springer) and Secretary of the Board of Directors of User Modeling Inc.

Lora Aroyo² 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

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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. She has co-edited special issue for *IEEE Intelligent Systems* on “AI and Cultural Heritage”. She is also vice-president of the User Modeling, Inc.

Cristina Gena³ is an assistant professor at the Department of Computer Science, Università di 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 has been the scientific coordinator of a research project on the recommendations of cultural contents in an open data environment.

Tsvi Kuflik⁴ is an associate professor and head of the Information Systems Department at the University of Haifa, Israel. His main areas of research are ubiquitous user modelling and intelligent user interfaces. For over ten years Tsvi is leading a research group at the University of Haifa, focusing on “Active Museum” – applying novel computing and communication technology for supporting museum visitors.

Johan Oomen⁵ (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.

Alan J. Wecker⁶ is Doctoral Candidate in a joint program both at University of Haifa and University of Trento. His research deals with lifelong user modeling to enhance the cultural heritage experience. His research interests include: technology for the cultural heritage environment, human-computer interaction, distributed computing, software engineering, XML, and information retrieval.

Oliviero Stock⁷ is a senior fellow at FBK-ICT IRST, Italy. He has been at IRST since 1988 and has been its Director from 1997 to 2001. His activity is mainly in artificial intelligence, natural language processing, intelligent user interfaces, cognitive technologies, computational creativity.

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