

Cultural Heritage and Mobile Technologies – Towards a Bibliography (1938-2015)

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The paper provides a survey of the scientific literature on cultural economy and applications of modern Information and Communication Technologies (ICT) in cultural sector with particular emphasis on the implementation of virtual exhibitions on mobile devices. The selected literature is presented for the period 1938-2015. A total of 100 articles, conference papers and books are enlisted according to the selected application area. The paper objective is to provide a bibliography as a resource for those that are interested in the field.

Keywords: Bibliography, Mobile Technologies, Virtual Exhibitions, Cultural Heritage

1 Introduction

In the last years, the evolution of internet and information and communication technologies was very dynamic and had a significant impact on all human activity fields. The internet changed the way in which people are communicating and the manner in which they are working. Now, it is possible to work on a worldwide project from home or from an office located anywhere around the world.

The rapid development and growth of mobile technologies and applications and the hardware evolutions have made possible to access personal and professional resources anytime and from anywhere.

In [74] is presented that the evolution of new solutions in the field of information and communication technologies gives new opportunities to promote and valorize the cultural heritage elements. The potential offered by mobile technologies and the increased number of mobile devices that can process multimedia content, both offline and online, facilitates the feasibility of creating online virtual exhibitions.

These changes regarding the technology evolution and their impact on human life have implications in all fields of activities, including the cultural field.

The museums and libraries are forced to digitize their collections in order to make them available online, on their own websites, on different portals that aggregate them, like

Europeana (<http://www.europeana.eu>), or to publish them in virtual exhibitions.

The advantages of turning physical objects into digital ones are obvious: it prevents them from destruction and provides publication opportunities that not existed before.

Museums and libraries are confronted with a situation that they never face before. They must be competitive on the information market, in order to survive and attract many visitors that will bring them revenues.

In order to attract visitors, cultural institutions are creating exhibitions with special occasions. In order to make these exhibitions accessible by a great number of visitors, they must be transformed in virtual exhibitions and must be published online. The good news is there are available on the market advanced ICT platforms to create virtual exhibitions. A representative example is MOVIO already utilized in ATHENA Plus project [85] [86].

Generally, the concept of virtual exhibition is defined as an online dynamic web-based and hyper-textual collection, which is dedicated to a specific theme or topic, concept or idea. Many virtual exhibitions are attributed to museums or libraries, in order to make visible their collections to the visitors [52].

Coming back to the context of rapid growth of mobile technologies, in order to increase the visibility of virtual exhibitions, they must be implemented as native mobile applications, available for main mobile operating systems, such as Android, iOS,

Windows Phone, or such as web applications that have responsive interface, which adapts on different screen sizes and resolutions.

The paper is intended to highlight several of the main works published in the field of usage of ITC in the cultural domain with particular emphasis on virtual exhibitions, cultural heritage and mobile technologies, in order to establish the current state of researches in the field of implementation of virtual exhibitions on mobile devices.

Some very good examples of a similar bibliography are presented at the following addresses:

- a bibliography in the field of DSS (Decision Support Systems): <http://www.cif.ulbsibiu.ro/mariusc/bibliographySSD.htm>
- a bibliography about PSO (Particle Swarm Optimization): <http://www.swarmintelligence.org/bibliography.php>

The references that are presented at the end of this paper represents a sample until an extended bibliography will be ready.

2 Methodology

To evaluate the evolution of the domain, a list of 100 relevant books and papers presented at prestigious conference or published in scientific journals were analyzed. Parts of the current bibliographical list were included in previous papers published by the author on the specified topic. For each source from the bibliographical list, the author searched for an online reference to the integral work (paper or book), in order to make it available for readers interested on the topic. For the sources that does not have a hyperlink, any online reference to the complete paper or book was not found or was not accessible for free. Some of the books were consulted from special online databases and from dedicated libraries.

3 Conclusions

The current list of bibliographical sources is intended to represent a starting reference for the people interested in the field of cultural

heritage and information and communication technologies. The bibliography will be updated, and extended and it will be published as a web page with hyperlinks to each source.

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