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## **TOURISM AND DIGITIZATION OF CULTURAL HERITAGE**

**Abstract.** In the contemporary society memory institutions experience great changes associated with digitization-the new method for preservation, education and access. Since in many cases memory institutions have the insufficient budgets, commercial promotion of cultural heritage can be seen as an alternative financial source indicating the possible niches, like cultural tourism, in the digital services market. In this paper we highlight some connections between tourism, memory institutions and digitization of cultural heritage.

**Key words:** Digitization of cultural heritage, Internet, tourism, museums, interpretation, sustainable development.

### **0. Introduction**

The critical role that digitization plays in cultural heritage initiative was recognized in European Union's eEurope 2002 Action plan, aimed at stimulating European initiative to realize opportunities created by the digital technologies, and summarized by DigiCult 2003(Digital Heritage and Digital Content): "Digitization contributes to the conservation and preservation of heritage and scientific resources; it creates new educational opportunities; it can be used to encourage tourism; and it provides ways of improving access by citizen to their patrimony".

Digital materials: data bases, catalogues, virtual reconstructions, Web pages, e-mail, digital photographs, Internet, DVD and CD-ROMs can be made available to a broader audience than those who have the sources or ability to travel to see the collections. Some institutions have a policy of creating an electronic image of every item in their collection and placing it on their Website. The National Gallery in London is one organization that has done so ([www.nationalgallery.org.uk/](http://www.nationalgallery.org.uk/)). Other possibilities are to collect electronic images based around exhibition themes, or to make educational modules, as it was done by the Metropolitan Museum of Arts in New York ([www.metmuseum.org/](http://www.metmuseum.org/)).

We cite Michaele S. Shapiro, Secretary and General Council International Intellectual Property Institute, Washington, DC (in: Managing Museum Digital Assets: A resource guide for museums): "The digital future is bright for museums. Many museums are beginning to mount "virtual exhibition" using the most advances technologies. Museum educators are bringing cultural treasures directly into the classroom for use by students and teachers. World cultural heritage information is becoming more widely available for tourists and scholarly use."

The public response has been overwhelming. Some museums count more attendance in cyberspace than on Earth, with the international museum audience estimated to be 1 billion. The Internet offers to cultural institutions possibilities of distribution of information that are relatively limited in costs and their public is enlarged geographically and on a social level.

From one hand, the presence of digitized cultural heritage on Internet allows the spread of itself on a wide area and for the other, the tools for user, fitted to personal needs of the user himself (S. Fantoni, [4]).

In the eighties, the heritage tourism tends to be the deciding factor when subsidy grants for cultural heritage are considered, particularly in Anglo-Saxon countries.

### **1. Some facts about the importance of information and communication technologies in tourism**

Tourism is not only one of the largest industries in the world, but also the number one online segment, accounting for 11% of overall sales on the Internet. In 2003, over 30% of online sales is generated by online travel alone, including actual travel products as well as advertising earned by travel oriented sites.

The tourism system is inevitably influenced by the diffusion of information and communication technologies (ICTs). "Tourism is a very information intensive activity. In few other areas of activity are the generation, gathering, processing, application and communication of information as important for day-to-day operations as they are for the travel and tourism industry." (Poon, [15]).

Intangible tourism services cannot be **physically displayed** or **inspected** at the point of sale before purchasing, and so tourism product is dependent upon information in printed and audio-visual form. The success tourism product will depend on extensive and targeted marketing, leading to the growth of new distribution channels.

The continuous development of ICTs during the last decade has had important application for the tourism industry (Buhalis, [1]). ICTs provide opportunities for business expansion in all geographical, marketing and operational senses and play a critical role in customer relationship management [6], which is of the fundamental importance for the successful tourism organization.

ICTs enable tourism organizations to differentiate their products and to target the market segment, which consists of an individual consumer. Websites are increasingly adapted to their users, providing improved personalization for the individual.

In service industries (like tourism) the most important relationship is between the supplier and the consumer. **Production integrate consumer-** new concept called **prosumer**, which means a combination of producer and consumer, emphasizes the **active role** of consumers in the process of service production.

As it is difficult that a tourist form a clear image of a destination without the actual experience, the multimedia interactive nature of the Web can add a new dimension to destination marketing. Virtual travel experience is very important in the decision making process.

By Sheldon [18] "information is the life-blood of the travel industry" and effective use of ICTs is a competitive advantage for a tourism destination. A well designed Website of a tourist destination can facilitate the planning process of a tourist, helping him to make a good choice and to have an enjoyable experience.

Hence, each tourist destination must have a major Web portal rather than a fragmented number of individual Websites put online by independent stakeholders (tourist agencies, touroperators, hotels, restaurants, services).

Technological development lead to multichannel, multimedia destination management system, serving purposes not only of travel information distribution, planning and fulfillment, but also of travel-related education and entertainment (the so called "edutainment"), which is important for sustainable development of tourism.

Sustainable development is defined as "development which meets the needs of the present without compromising the ability of future generation to meet their own needs (see the document Agenda 21 for more details, [20]).

Tourism destination emerge as umbrella brands, and they need to be promoted in the global market place as **one entity** for each target market they try to attract. The globalization and concentration of supply increase the level of competition and require new Internet marketing strategy for destinations. Hence, destination marketing organization have to identify niche markets and develop their **interactivity** with tourist.

By World Tourist Organization one of the most important niche market is the market of **cultural heritage tourism** and in the next section we shall pointed out the importance of digitized cultural heritage in developing a sustainable cultural heritage tourism.

### 3. Cultural heritage tourism and the digitization of cultural heritage

There is a close relationship between tourism and cultural heritage. On the one hand, cultural heritage can serve as a tourism attractions, while tourism can lead to financial and political support.

The multifacet character of culture can be explained by the words of James Wolfensohn (Worlds Bank President): “Culture can be justified for tourism, for industry and for employment, but it must also be seen as an essential element in preserving and enhancing national pride and spirit.”

By G. Richards “... cultural tourism can be therefore seen as covering both “heritage tourism” (related to artifacts in the past) and “art tourism” (related to contemporary cultural production).”

It will be argued that cultural tourism can no longer be consider only as a special interest niche sector, but also as an **umbrella term** for diverse activities which have a cultural focus. Richards suggests that it is inevitable that cultural tourism appears to be growing, because more and more tourist attractions are now being defined as “cultural” and as tourism grows internationally it will be more visitors to cultural attractions.

The World Tourism Organization reports that 37% of all international trips include a cultural component. “Greatly motivated” cultural tourist represent the core of cultural tourism, but most cultural heritage tourism activities are complement to other travel activities (“accidental cultural heritage tourist”).

Clearly, the tourist awareness, prior knowledge and experience, cultural identity and perception of quality and value are factors that affect **motivation to visit** a destination and selection to travel experience. This implies the **necessaty of education** in the field of cultural heritage, which can be more successful by using digitized cultural heritage.

The cultural heritage tourism industry is now in the process of systematic use of information, communication and multimedia technologies, in order to achive competitive advantage by developing tourism destinations.

The WWW is introducing many tourist to the global market of cultural heritage tourism, anable them to be informed about locations they might have never known existed. The heritage tourism destination is an ideal candidate for **branding** by the use of the WWW. Pioneers among cultural institution in the use of the WWW where the National Gallery in London, and the Uffizi. There are now tens of thousand of such sites, and the scope of digital culture has been growing steadily.

We can now see an another dimension of the evolving Internet, i.e. its potential for sharing knowledge in order to arrive at new definitions of culture and new form of knowledge. The new media offer more then a copy of an original. They entail a shift for static to dynamic form of knowledge. Multimedia technologies can extent the tourism experience, because visual and auditory images are central in the experience.

Digitization of culture heritage and the use of the WWW give a chance for cultural institution to attract more visitors in the uncomfortable position to having to compete ( in terms of entertainment and experience value) in a new, unusual horizon, subject to market forces. This environment implies necessarily a shift to a new “cultural economy” (Delous), which is characterize by the accessibility to user-driven service.

Digitized cultural heritage contribute to marketing of cultural institutions, which enable them to offer consumers the value they seek after that is not offer by other cultural attractivities, and help build relationships between consumers and institutions, which is the most important element of the so called relationship marketing. The way in which the cultural experience is carried on has not changed much for centuries. Especially the young seem to require novel modes of being exposed to the cultural material, such as multimodal interfaces, micro-sensory systems and intelligent systems. These novel modes can transform a museums’s restrictive environment in such a way that a passive object observed by the visitors become an active subject capable of providing new information in a context sensitive manner, a kind of hyperlink for accesing additional information.

Interactivity is an important aspect in communicating and understanding cultural heritages. Multimedia techniques offer many opportunities; 3D representation (Virtual Environment) and Wireless Appliances (Was) are among the most important techniques (A. Mecocci, [11]).

“In the past few years personalization through ITCs has become a significant trend in the museum world, where more and more institutions are introducing it to complement their collections and to better reach out to their visitors”(S.Fantoni. [4]).

Personalization or adaptivity – it is a system which changes its own characteristics automatically according to user’s need.

“What makes this technology so exceptional is that little effort is required on the part of the user, because individual profiles grows and refines, continuously adjusting their preference.” (S. Fantoni, [4]).

This is important for a cultural tourist since adaptive systems have great potentialities in the museum context. Examples of this technique applied to segmentation of the cultural tourism market can be found on some museum’s Websites **dedicated spaces**, which are allocated to different categories of users (tourists, childrens, experts).

Digitized culture heritage can be used for the sustainable development of cultural tourism. An important element of the sustainable development of cultural tourism is **visitors behavior** at the place of location of cultural heritage. There exists various channels for raising visitors awareness and encouraging specific behavior. From this point of view, the interpretation process, in which digitized cultural heritage is used, can play an important role.

**Interpretation** is a communication process designed to reveal meanings of cultural and natural heritage, which play a major role in providing a quality visitors experience, facilitating sustainable visitors flows.

High quality information through digitized cultural heritage optimize the **visitors understanding** of the significant heritage characteristics and the need for their protection, helping the visitor to enjoy the place in an appropriate manner.

“Heritage presentation and interpretation are indispensable elements in the conservation natural and cultural resources” (Banff Declaration – First World Congress on heritage presentation and interpretation).

Many cultural channels of influence, that used to operate independently, are now unified in coordinating and coordinated market strategies. One of the most European projects, the Open Heritage project has the goal to market efficiently the digital assets of medium and small museums (D. Delouis, [2]).

A good example of the European cooperation in culture is a European Union-supported portal of cultural heritage Museumland.com, which organized attractions into 45 categories. The portal offers an enormous range of choices in cultural tourism and can help to a tourist in the decision making process. European visions of the possible applications of the Internet in tourism assume a multilingual context, with a far greater emphasis on culture and history. Europe's approach to cultural tourism is strongly linked with re-assessment of Europe's sense of its place in the world, culture integrations and identity.

The importance of digitized cultural heritage was pointed out at the European Conference of Minerva, held in Parma 2003. A lot of papers are devoted to the question of the quality of cultural Websites and the possible applications of the digitized cultural heritage to preservation, education and cultural tourism.

A very interesting European project is the CHIMER Project [19], which is developing and implementing applications for mobile technologies in a cultural heritage environment "based on a combination of Internet, GPS (Global Positioning System), GPRS (General Packet Radio Service), WI-FI (Wireless Fidelity) and GIS (Geographic Information Systems) technologies, in order to develop interfacing and user access tools adapted to evolving 3G (Third Generation) networked multimedia technology for retrieving local heritage from 6 partner countries" [19].

In spite of the fact that Serbia possesses a valuable cultural heritage, our country is not yet included in the process of the European cultural integration conducted by European Union, but we hope that this will be realized in a short time. The activity of the Mathematical Institute of the Serbian Academy of Science and Arts in digitization of culture heritage can help our country in the process of European integration and in developing cultural tourism. The including of national government organizations, connected with culture and tourism, in the financial support of projects on digitization of cultural heritage, would be of the crucial importance for successful development of cultural tourism in Serbia.

The agreement on the cooperation between Balkan's countries in developing of cultural tourism (Greece, Septembar, 2003) is closely related with the cooperation in the field of digitized cultural heritage. A common Web portal on cultural heritage in Balkan's countries can help in the developing of Balkan's cultural tourism and in the promotion of Balkan's cultural routes.

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