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MUSEUM IN THE ERA OF DIGITAL TECHNOLOGY

Abstract: The advance in digitization and its practical use in museology have contributed to the preservation, promotion and application of digitized material in the *virtual world of digital technologies*. The appearance of new technologies in museology has made available a new method of presenting museum collections by developing a concept of **virtual exhibitions**. Thus, museums are able to conceptualise and actualise exhibitions beyond galleries in real space and time. Additionally, through various virtual exhibitions they transfer collections into the world of Internet galleries. As a consequence, cultural heritage starts to transcend **national and regional borders** and becomes a part of **global heritage**. Contrary to traditional models of presentation of cultural heritage, virtual exhibitions allow us to have a system of information management that enhances mobility and proves to be more dynamic and creative. *Virtual exhibitions* are not only more accessible to wider audience, they also have a simpler approach to collections, provide replacement and protection of the original and make material more accessible. Furthermore, they open new possibilities of material exchange and loans, which can result in a positive financial outcome. This application of digital technologies provides an easier access to cultural heritage, improves its protection level, and contributes to the development of Informational society.

Keywords: digitization, collections, cultural heritage, virtual exhibition

Cultural heritage represents shared material and spiritual legacy of every civilization, with all their differences and peculiarities intervened, giving cultural heritage specific importance. Conservation and preservation of heritage is certainly one of the primary factors for the affirmation of cultural identity and preservation of the national and global heritage. Development of science and new technologies has enabled the rapid transformation and transmission of data, information and knowledge in digital form. Rapid progress in science and the development of computer programs has brought plenty of new methods for the application of knowledge. That has resulted in significant changes in terms of synergy of science and culture. Science is changing the ways in which documents and information are stored, organized, searched, and used, while culture retains the role of preservation and presentation of cultural heritage in a modern way.

Accordingly, *the process of digitization* has become an important key factor for both the scientific and cultural heritage. In a united effort, science and culture generate a quality dissemination of information and knowledge towards global, civilization progress, and preservation of rich heritage for future generations. Changes in communicational methods and performance of everyday activities under the influence of the rapid development of informational technology did not bypass cultural institutions. Consequently, these technologies have become an irreplaceable part of the museum and the working environment (Mrđa, 2009, p. 56).

As an institution responsible for the preservation and presentation of national heritage, the contemporary museum coordinates its work with scientific institutions, and as such is a good indicator of the effects of implementation of scientific methods on cultural matters.

Challenges that global changes, rapid technological development and changes in patterns of communication at all levels bring, impose the need for specially designed access to the representation of museum collections, and with it, the creation of the electronic concept of heritage.

Informational technologies have significantly restructured the traditional dimensions of time and space in which we communicate, while global communication network (Internet) has altered almost every aspect of our lives.

Through their Internet presentations and websites, museums are bringing their collections closer to "the user", introducing him to a variety of national cultural heritage with more or less success. Cultural and scientific heritage collectively present a unique set of intellectual values of a society, while the digitization represents essential step in creating electronic heritage. The development of digitization and its implementation is contributing to the preservation, promotion and application of digitized material in *the virtual world of digital technology*.

Since the main activities of the museum are collecting, preserving and research of museum objects, as well as its public activities, digitization has found wide implementation. When it comes to the protection of the museum collection, the employment of digitization is reflected in the preservation of original digital copies of analogue objects in electronic form, thus creating a new kind of heritage - *electronic heritage*. Digitization in that sense, provides widespread availability, use, and exchange of cultural contents, facilitates access and presentation of works of cultural heritage. In the field of museum's public activities, digitization refers to the museum's exposure, its communication with users, media and other interested groups, as well as scientific and professional presentation of the collected and exhibited objects over the internet. In this way, the presentation of cultural heritage gets a multimedia character as the communication through social networks, blogs and forums is encouraged.

Implementation of digitization imposed a new way of presenting the content of museum collections with so-called *electronic virtual exhibitions*.

Virtual exhibitions are one of the modern audio-visual methods of presenting cultural heritage. The concept of *virtual exhibitions* is to enable the museum to present the digitized materials online through their web pages, and to store them on other portable media (CD, DVD, flash drive). *Virtual exhibitions* grant access to diverse collections of digitized materials to wider audience, professional and scientific public. In this way, preservation of the collective and individual cultural heritage and diversity can be achieved.

As they are available negating time and language limits and the need of being in a physical space, they operate in the electronic media as a multimedia *virtual reality* (combining images, music, voice, text, namely audio-visual recordings). By carefully observing and digitally zooming, the user can notice even the smallest details of the exhibits (jewelry, decorations on clothes, facial expressions, objects and people in the background, texture, material, etc.). With a little imagination it is possible to envision the lives of people and the atmosphere from various historical periods, to hear the sounds that made up their everyday life, to find out what time it is on a street clock, and see the elegant scenes of aristocratic life and experience the illusion of reality.

Virtual exhibitions provide an opportunity for achieving interactive online communications. To create *virtual exhibition* isn't purpose by itself, the emphasis is on

feedback and communication with "the user" originating from various social and educational backgrounds. The user gives his impressions of the material, exhibitions, shares his opinions with other users and curators. Furthermore, curators associate with other museum curators and create an atmosphere of a professional discussion. It is possible to monitor the presence and level of "the users" interest from different environments for exact exhibits and to get feedback for artifacts whose data were incomplete. As a result, the users can actively participate in the process of creating an exhibition by choosing the artifacts, which they want to see, thus actualizing a fully interactive exhibition.

In this way, the museum is given the ability to design and create exhibitions outside their galleries in real time and space and to move their funds through a variety of *virtual exhibitions* in *internet galleries* making the new concept of shifting *the focus* to the nonphysical substance.

Virtual exhibitions can be created thematically, chronologically, by type of material, by place and area where they are located, but also by a significant person, object or event to which they refer. They can be recreated in the museums, as well as exist apart from the exhibitions carried out in a physical world.

Advantages of *virtual exhibitions*

Throughout history, the real engine of human progress has been the concept of "merging and exchanging of ideas in order to create new ideas" (Ridley, 2010). Therefore, we should focus on the concept of an interconnected world of creativity, ideas and knowledge that will help us face the challenges of the modern information age. *Virtual exhibitions*, in this respect, help people exchange ideas, contribute to a higher level of creativity and knowledge acquisition.

As educational, they have a role in the inclusion of education, including new forms and types of learning. *Virtual exhibitions* don't have marketing character, but informative and cultural, especially when presenting the national heritage in the development of cultural tourism in a particular country.

In the era of modern society, national heritage presented through *virtual exhibitions* opens up the possibility for cooperation with the national communities in the region and economically developed countries. These *virtual exhibitions* are becoming civilization inheritances that transcend national boundaries and becoming part of the cultural heritage in the region of Southeastern Europe, and as such an integral part of the global world heritage, with the right to cultural diversity and cultural identity.

In long term, the digitized material through *the virtual exhibitions* in whole leads to the creating of a recognizable and relevant content of "cultural space" - the brand of museum, but also the brand of Serbia, in the electronic environment. Likewise, *the virtual exhibitions* through quality presentation of cultural content contribute to the reputation of the country and national identity affirmation.

Tendency in creating *the virtual exhibitions*, could significantly improve the problematic areas in museum work. The forms of presenting museum exhibitions are overcoming, approach of the curator to the object, visitor and his perception and as well as the very role of the curator is modernized, the financial costs are reduced and the marketing approach is completed. Although they direct visitors from gallery to the Internet, *virtual exhibitions* also create initiative and desire to visit museums, repress the stereotype of museums as boring old warehouses and increase interest of the teaching staff and so on.

Unlike the traditional approach to the presentation of cultural heritage, with *virtual exhibition* we get much more dynamic and more mobile system of creativity maintenance and information management.

Virtual exhibitions facilitate access to the contents that are unique in its cultural and historical value, as well as access to the exhibits that are hidden far from public, placed in dark storerooms of the museum, and that are often pointed out as a less important material, not currently actual in a given area and time. In terms of cultural property preservation, they significantly improve the level of protection of museum materials, reducing the risk of damage.

Compared with the traditional approach to cultural heritage, *virtual exhibitions* attract new target groups, a younger population, with its new and attractive way of presenting cultural content that they consider interesting.

Unlike traditional exhibitions, *virtual exhibitions* do not require large financial costs and do not require the occupation of real space.

At the current level intertwining information sciences and their implementation in culture, they open up the possibility of exchange of and borrowing materials. In economic terms, they can make a financial profit (charging for services to access certain funds, reducing the costs of professional processing, tourism propaganda, preparation of electronic editions etc.).

Disadvantages of *virtual exhibitions*

As a potential disadvantage of these exhibitions stands out the inability of *live* communication and real experience of the exhibition. This means that visitors are deprived of verbal dialogue's charm and discussion, personal engagement, active participation in the exhibition and its following programs, as well as special sensory effects and entire atmosphere produced by direct contacts with the original objects and exhibition space. In addition, *virtual exhibitions* are limited only to internet users. Outcome of visit to *the virtual exhibition* can possibly cause the effects of the reduced presence in the museum.

The future of *virtual exhibitions* and the modern museum

Virtual exhibitions designed in such a way will improve the development of digital culture, information society, the protection of cultural heritage, the quality of the visibility of their funds to the public, will accelerate the overall flow of human knowledge, and finally, will expand the role of the curator that is through forums, blogs, etc. promoted to the position of the mediator between the user and the vast sea of information. Introducing the widest audience to the contents of museum collections through *virtual exhibition*, we also provide the best protection for this part of the museum heritage. The resulting electronic cultural heritage from digitized collections of national heritage is considered to have a universal value for future generations.

These exhibitions with its rich, widely accessible contents in digitized forms are assumption for protecting and valuing cultural heritage, preservation of cultural diversity, as well as the use of cultural content in education, tourism and other activities.

Virtual exhibitions are an integral part of modern museums, which keeping step with the innovations that time brings, represent their collections in a creative way and offer attractive and unique experience of museum objects and general museum contents.

Digitization of national heritage is the precondition for networking of national cultural heritage in the global heirdom. *Virtual exhibitions* in international and European networks of

cultural contents in a symbolic way represent the civilization rights to the common identity and history.

Museum in the era of digital technology, conceived in this way, will respond to the challenges of modern age - the issue of communication and will become one of the most important modern cultural centers.

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