

## SMART TECHNOLOGIES IN SCIENCE AND ART

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Various smart technologies have become a part of our daily life and development in various fields such as medicine, construction, education, cinematography, art, etc. for quite some time. A variety of gadgets and programs perform a huge number of tasks, while a person can focus on performing more complex, specific, creative tasks.

One of the areas where the latest technologies can be used is the preservation of the heritage of the past. For example, the creation of completely virtual museums, or the use of augmented reality in simple museums to improve the understanding of exhibits and their addition, as well as Augmented Reality (AR) can be used even in the process of excavations and other archaeological research, to facilitate some steps of research and recovery of already completely lost artifacts, architectural objects and other archaeological finds.

But in addition to the AR mentioned above, there is also mixed reality (MR) technology, which in turn has several differences with AR. The usual example of this technology would be the projection of virtual screens providing information to the user while also seeing the physical space, such as the Google Glass hardware tried to achieve before its untimely death.

The mixed reality, however, combines virtual reality and augmented reality to improve interactivity and the ability to add virtual objects to physical reality, and vice versa to add real objects to virtual reality.

Since the advent of the idea of the virtual museum, the museum community has struggled with a number of controversial aspects such as:

- the question of the aura of the object,
- the question of authenticity and experience,
- the democratization of museums by the new medium,
- the authority of museums,
- trust in virtual museums, and
- the question of whether people will still attend museums when all the content is online. (WERNER SCHWEIBENZ, 2019)

Now most of these problems have been overcome, one of the reasons is the new generation, which is ready to partially combine the virtual and real world and give museums a dual character, both virtual and real.

Museums opened in a new way with the help of smart technologies. With the help of augmented reality and virtual reality, you can hold virtual exhibitions or add interaction with exhibits in a real museum. On the Google Arts & Culture website, you can visit many virtual exhibitions at a time convenient for you.

With this you can visit: The British Museum, London; Guggenheim, New York; National Gallery of Art, Washington, D.C.; Musée d'Orsay, Paris; National Museum of Modern and Contemporary Art, Seoul; Uffizi Gallery, Florence, to name but a few.

Many augmented reality systems can show us many archaeological sites:

- Archeoguide
- Lifeplus
- ARAC Maps (Tommaso, D. P. L., & Mongelli, A. (2015))

Augmented reality allows an alternative way to find important historical monuments by scanning the environment and visualizing it as a virtual object.

Therefore, the development of technology and the further progress of mankind introduce innovations in all possible fields, including the preservation of monuments of history and art of the past and present.

### **References:**

Tommaso, D. P. L., & Mongelli, A. (2015). *Augmented and virtual reality second international conference, AVR 2015, Lecce, Italy, August 31 - September 3, 2015, Proceedings*. Springer International Publishing.

WERNER, W. (2019, August 11). The Virtual Museum: An overview of its origins, concepts, and terminology.