INTERFACE DESIGN

Virtual Magazine

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Yasaman Mobasser

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All Knowing

SPACE *@ THE VIRTUAL MAGAZINE*

Focus Group	Architects, Planners and Designers
Context	Walkthroughs Videos / Animation Audio / Interview Pictures / Panorama Articles

THE VIRTUAL MAGAZINE

Walkthrough

Immersive

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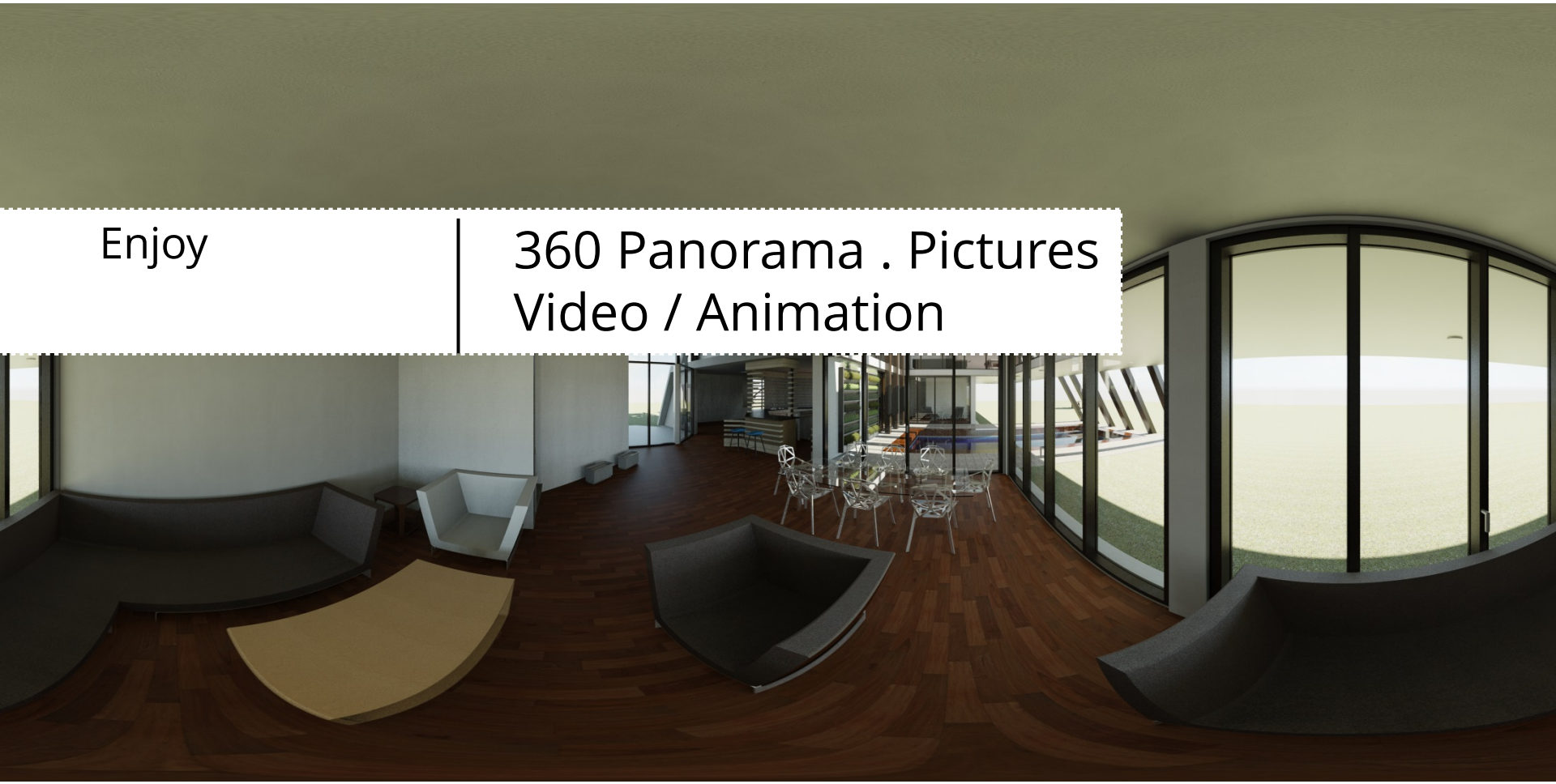
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ARTICLE

Figure 5. A Visitor immersed in the Kivotos system (ReaCTor™) ©IME/FHW

However, the application of virtual reality technologies in this museum, with all its charm, has not been without problems. Considering that one of the goals of using these technologies is creating interactive learning environments that help the educational goal of the museum, there is a concern between educators and technologists alike that the novelty of these virtual spaces for users distracts them from this goal. Furthermore, Unique, size, and fragility of VR aside, high maintenance costs and need for expert manpower are among other problems of this project. Another issue that must be addressed is usability of the VR equipment applied in this museum. The VR equipment is too expensive and fragile. It must consider that active stereoglasses are too large for small heads, especially for children and special ties must be used to hold stereoglasses on children's' heads. Also, navigation tools are relatively heavy and hard-to-use for children. Although, using Projection-based virtual reality systems such as CAVE-like systems solve some problems that older technology had, but they have their own issues. Some advantage of using the new technologies is that less and lighter gear has been used in the new systems and multiple users can share th virtual experience. But, projection-systems are muc complex than other VR systems such as head-m systems. Therefore, more experts are needed to conn integrate different environments. Plus, Tracking is problem when only one or some of a group of us tracked while all others trying to view the same world may get a headache. [7]

VR and Kremer Collection

The Kremer Museum, founded by Kremer family innovative new concept that combines cutti technology with world-class masterpieces. While virtual worlds are created by game developers, an ar Johan van Lierop, founder of Architales and Prin Studio Libeskind, has tried to design an unparalleled sent the scientific and artistic vigo designing the museum, architect Jol *"To design a museum without xde regulations is a dream for*

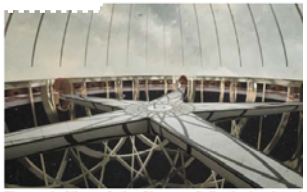

Figure 6. View of the Kremer Collection's virtual museum. ©The Kremer Collection.

High cost and difficulty of finding the perfect locati brick-and-mortar museum aside, Creating the museum that is accessible for the people who are ur travel to Holland was the main motivation for Krer his son Joel, who previously worked at Google industry manager for retail and entertainment. Dis the establishment of the Kremer Museum, George H Founder of the Kremer Collection, says, *"Our jou collectors has always been about finding the highest artworks and simultaneously finding ways to shar with as many people as possible. My wife Ilone believe we can make a greater contribution to the ar by investing in technology rather than in bricks and for our collection."* [8]

The Netherlands-based Kremer Collection develo MOYOSA MEDIA features over 70 Master paint 17th Century Dutch and Flemish art that curren presented in museums and galleries around the wor as The Mauritshuis, The Hague; the National G London; the National Gallery of Art, Washington and the Rijksmuseum, Amsterdam. This collection i artworks such as masterpieces by Rembrandt, A

scenario was designed for the child persona to follow the linear explanations while seeing superimposed graphical effects. It was representing the mythological being Medusa and it showed how ancient Greeks imagined Medusa's powers. The goal of the second one which was developed for adults was to show statues in their original architectural context. The second scenario was related to Kore (a maiden) status which the second type AR activity used. The original colors and narrative audio annotations about history-related details varying around 12-20 seconds were applied to the statue and spatially spread around it. [22][23]

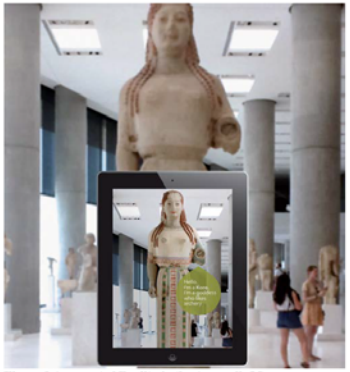

Figure 9 Augmented Reality in the Acropolis Museum, Athens. ©European Commission

Although a survey showed that the project had some problems. For instance, startup-instructions were not clear for some users and they skipped them too quickly. Although due to the novelty of AR technologies, some users found the AR tricky, they were eager to interact with it more than VR. Holding tablets was another difficulty for the users, especially when they need to move it around to see the contents. AS expected, distraction from the contents because of the novelty of the VR technologies was the other issue. [22][23]

CONCLUSION

Virtual reality and augmented reality are promising technologies that can have a wide impact on the new goals of the museums which are defined by the advent of "New Museology". They have the potential to place the visitor at the center of an experience. These cross-media and non-linear storytelling principles can provide museum managers with the opportunity to present more information for the visitors than ever before. They can present fragile artifacts in the most interactive way. Visitors can examine the objects and see them in different angles and selectiv choose the contents which haven't been possible in traditional way. They can help museums to attract visit from different targets and backgrounds. Although novelty of these technologies can distract the visitor fr the subject, the problem can be resolved over ti Likewise, technical problems in implementing th systems require investment in further research.

The Utilization of the VR technology within the museu detaches users from the real world and the physi museum spaces by creating a totally immers environment; it could cause conflict with the social purp of museums. Hence, VR can be a better option for peo around the world who cannot visit the museums, especia for educational purposes. People can access VR fam museums through the internet and immerse in virtual to as well as, unparalleled virtual spaces which have artifa collected from the real museums.

In contrast, AR technology is a tool for enhancing the r world with computer-generated graphics overlaying on it can be used in both outdoor and indoor environments us mobile AR systems. However, controlling the real world more challenging than fully immersive environments t VR technology presents; AR can be a good option wit the museum compared to VR. Augmented Reality provi visitors with interactive information about the artifacts buildings inside the museum's spaces or their real conte in outdoor spaces without detaching them from the r world. Moreover, for using AR technology, users utilize their own devices; therefore, it is an advantage the museums.

However, using these new technologies should serve storytelling and educational goals of the museums. Hen technology should not distract the visitor from the m subjects to the technology itself. Since most of virt contents used in museums are created by compu scientists who don't have sufficient knowledge in the fie of museology; there is a need to train experts who ha adequate skills in both fields of museology and computer

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Interface

Interactive Virtual and Digital Space

Head-Mounted-Displays
Touch Screens
Mobile & Desktop Device

Database for Content

Organized by
Keyword & Media

History Library of
Magazine Data

Magazine Gadget (IoT)

Unlock of special content of magazine
Interact with User

Moving	Individual Teleporting Transport via vehicle (cage)
Controlling	HMD single point mouse Touch gestures Mouse & Controller gestures *Magazine Gadged*

Thank You