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Virtual Reality and Future Cinema

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ABSTRACT

Virtual reality is like an illusion of an imaginary world where the viewers see and hear the simulation created in a computer. VR (Virtual Reality) is an interactive computer simulation, giving the users a feeling of being present in a virtual reality world. VR is totally an artificial environment created with the help of software and presented to the user and the user believe and accept it as the real environment. Presently VR is used for the simulation of an original environment for training and education or an imagined environment is developed for the purpose of gaming or interactive story.

INTRODUCTION

Film is an incredible medium but essentially it was the same now as it is then. It's a collection of rectangles played in a series, and we call it as frames. We have done unbelievable things with those rectangles. When we start of thinking about the frames and its representations, it's just a window to another world, it connect us to a virtual world. But is it really virtual? Can we feel like the depth, smell and other parameters in this virtual world? If the answer is a no, that means we have certain limitations in the current cinema frames. People started trying to break these barriers in these frames in the early 1970's. In the early stages of cinema itself several experiments were took down for adding additional dimensions to the film such as wind, smell, etc. to create reality to the frames and also to make the viewers to feel that they are immersed into the frames. But unfortunately these experiments never fulfilled the thirst of viewer to travel to a dream world. Director's imaginations had certain limitations in portraying some unnatural sequences in cinema. In this time visual effects played a substantial role in helping the director make his dreams come true as such. Again dimensions in cinema were a big barrier for the film makers to communicate the viewers, because the viewer won't get the exact essence of sequences every time. The viewer was always looked through a window and never immersed in the frame. The frame was another world for him always. This became a major drawback of the conventional cinema frames. But now, with the invention of virtual reality it's in no doubt that we will break this barrier soon.

WHAT IS VR (VIRTUAL REALITY)?

Virtual Reality is a simulated reality created with the help of a computer. The technology used in the computer replicates a real or imaginary environment and the user can interact with this virtual environment. Virtual realities are displayed on a head mounted display or we call it as VR headset. Virtual reality is in its preparatory stage now. It is sure that miracles will happen after the progression of this technology. Not only in entertainment media but also in every aspects of human life the technologies like virtual reality, augmented reality , artificial intelligence will make the human's life better.

VIRTUAL REALITY THE PAST, PRESENT AND THE FUTURE

People started experimenting on virtual reality since 1838. With the help of Stereoscopic photo viewer Charles Whearstone showed that brain can construct 3 dimensional images from 2D. That was a beginning. An equipment called Link trainer later invented in 1929 to train the pilots that helped the aeronautics for training the pilots in an easier way. The Link Trainer simulated bad weather or night with the help of pumps and valves that blows air attached to it. In 1936 a short story that predicts the form and functions of VR helmets

was published by the Pygmalion's Spectacles. The View-Master stereoscopic photo viewer released in 1939 and that was primal from of VR headset that we are seeing nowadays. This brought 3D photos of monuments to the public. Morton Heiling patents a Telesphere Mask in 1960, which was a head-mounted with 3d display for showing films, but the absence of head-tracking was its major barrier. Later in 1961 Philco Corporation's Headsight used a screen for each eye and a head-tracking system linked to cameras for remote viewing of dangerous military situations. Ivan Sutherland and Bob Sproull create the Sword of Damocles head-tracking system in 1968 at Harvard University. Next year Artist Myron Kruege made a computer-controlled environment that responds to the people in it and named Glowflow. The Aspen Movie Map is filmed in 1978 which was produced by MIT, paved the way for services such as Google's Street View and the game 'Atari Shock' wiped billions off money from the American videogame companies in 1983. Virtuality's 1000 Series arcade machines are released in 1991 and they offered nine computer games. Feature film The Lawnmower Man in 1992, brought the concepts of VR to a wider audience. Nintendo's Virtual Boy is launched in 1995 to worldwide which used primitive graphics. In 2012 Palmer Luckey invented Oculus VR, later it sold to Facebook in 2014 and launched its first product, the Rift VR helmet, in 2016.

Going to the movies gets a entire new aspect in the VR (Virtual Reality) Cinema. It offers you an immense experience to watch movies like you've never done before. Moreover, there will not be any usual cinema chairs and also the big white screen is nowhere to be seen. Because of the immersive nature of the VR-movies the characteristic red cinema chairs will be replaced by custom made rotating chairs. This allows you to liberally look around and see what's happening in every perspective of you. More and more virtual reality movies do not only contain 360 degrees visuals, but also the sound that moves in the same direction as your head. This generates a special dimension to the virtual experience.

So far VR is used in video games and Hollywood has been gradually catching the potential of VR. VR has the potential to attract and immerse the users into the world of virtual reality. But presently we are facing a lot of physical challenges while shooting a VR video. Because it's shot in a 3600 with a cube of cameras there are some practical problems. Although VR is certainly the future, but don't expect the VR to replace the big screens. It's not going to replace the TV or theatre screens. It's a new medium.

REFERENCES

1.   Ackerman, M. J. (1991). The visible human project. J Biocommun, 18(2), 14.
2.   Ackerman, M. J., Yoo, T., & Jenkins, D. (2001). From data to knowledge--the

visible human project continues. Medinfo, 10(Pt 2), 887-890.

3.   Alcañiz, M., Perpiña, C., Baños, R., Lozano, J. A., Montesa, J., Botella, C., et al. (2000). A new realistic 3d body representation in virtual environments for the treatment of disturbed body image in eating disorders. CyberPsychology and Behavior, 3(3), 421-432.

4.   Ali, M. R., Mowery, Y., Kaplan, B., & DeMaria, E. J. (2002). Training the novice in laparoscopy. Surg Endosc.

5.   Aucar, J. A., Groch, N. R., Troxel, S. A., & Eubanks, S. W. (2005). A review of surgical simulation with attention to validation methodology. Surg Laparosc Endosc Percutan Tech, 15(2), 82-89.

6.   Botella, C., Perpiña, C., Baños, R. M., & Garcia-Palacios, A. (1998). Virtual reality: A new clinical setting lab. Studies in Health Technology and Informatics, 58, 73-81.

7.   Broeren, J., Bjorkdahl, A., Pascher, R., & Rydmark, M. (2002). Virtual reality and haptics as an assessment device in the postacute phase after stroke. Cyberpsychol Behav, 5(3), 207-211.

8.   Brooks, F. P. (1999). What's real about virtual reality? IEEE Computer Graphics and Applications, 19(6), 16-27.

9.   Burdea, G. C., & Coiffet, P. (2003). Virtual reality technology (2nd ed.). New Brunswick, NJ: Wiley-IEEE Press.

10.   Damasio, A. (1999). The feeling of what happens: Body, emotion and the making of consciousness. San Diego, CA: Harcourt Brace and Co, Inc.

11.   Dammann, F., Bode, A., Schwaderer, E., Schaich, M., Heuschmid, M., & Maassen, M. M. (2001). Computer-aided surgical planning for implantation of hearing aids based on ct data in a vr environment. Radiographics, 21(1), 183-191.

12.   Dobson, H. D., Pearl, R. K., Orsay, C. P., Rasmussen, M., Evenhouse, R., Ai, Z., et al. (2003). Virtual reality: New method of teaching anorectal and pelvic floor anatomy. Dis Colon Rectum, 46(3), 349-352.

13.   Dunkin, B. J. (2003). Flexible endoscopy simulators. Semin Laparosc Surg, 10(1), 29-35.

14.   Durlach, N. I., & Mavor, A. S. E. (1995). Virtual reality: Scientific and technological challenges. Washington, D.C.: National Academy Press. Online: http://www.nap.edu/books/0309051355/html/index.html.

15.   Emmelkamp, P. M., Bruynzeel, M., Drost, L., & van der Mast, C. A. (2001). Virtual reality treatment in acrophobia: A comparison with exposure in vivo. CyberPsychology & Behavior, 4(3), 335-339.

16.   Emmelkamp, P. M., Krijn, M., Hulsbosch, A. M., de Vries, S., Schuemie, M. J., & van der Mast, C. A. (2002). Virtual reality treatment versus exposure in vivo: A comparative evaluation in acrophobia. Behaviour Research & Therapy, 40(5), 509-516.

17.   Erel, E., Aiyenibe, B., & Butler, P. E. (2003). Microsurgery simulators in virtual reality: Review. Microsurgery, 23(2), 147-152.

18.   Friedl, R., Preisack, M. B., Klas, W., Rose, T., Stracke, S., Quast, K. J., et al. (2002). Virtual reality and 3d visualizations in heart surgery education. Heart Surg Forum, 5(3), E17-21.

19.   Garcia-Palacios, A., Hoffman, H., Carlin, A., Furness, T. A., 3rd, & Botella, C. (2002). Virtual reality in the treatment of spider phobia: A controlled study. Behavior Research and Therapy, 40(9), 983-993.

20.   Gor, M., McCloy, R., Stone, R., & Smith, A. (2003). Virtual reality laparoscopic simulator for assessment in gynaecology. Bjog, 110(2), 181-187.

21.   Gourlay, D., Lun, K. C., Lee, Y. N., & Tay, J. (2000). Virtual reality for relearning daily living skills. Int J Med Inf, 60(3), 255-261.

22.   Herfarth, C., Lamade, W., Fischer, L., Chiu, P., Cardenas, C., Thorn, M., et al. (2002). The effect of virtual reality and training on liver operation planning. Swiss Surg, 8(2), 67-73.