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Study on Virtual Reality-Rethinking Boundaries

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Abstract:

Jaron Lanier coined the term 'Virtual Reality' (VR). The last eras have been marked by the remarkable growth in the digital field such as computers, a device used in almost every aspect of human activity. Graphical user interfaces based on the desktop image creates a virtual environment that simplifies human-machine communication by forming a palpable, concrete delusion for users. In this paper we have discussed the general perspective of submission of Virtual Reality has been discussed when incorporated in other field and also about the future that it holds for the mankind.

Keywords: *Virtual Reality, Graphics, Future perspective, 3D techniques.*

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Introduction

A computer generated three dimensional world that enables us to live a kind of parallel reality or virtual world. To create virtual environment isn't easy and to create as accurate and perfect as it is in real. This needs to incorporate 3D sound, Artificial smell generation and also sense of touch (Forsberg and LaViola, 2000). The basis of virtual world involves the work on scientific visualization, cyberspace design, visual languages, and hypertext browsers. Virtualization is the process of drafting of an abstract data of a virtual area. Current role of the virtual reality interface can be defined in terms of how efficiently a set of data is evaluated.

Figure No.1: VR aiding in Engineering

Figure No.2: Aid of VR in treating Acrophobia

Figure No.3: Aid of VR in Medicine

Figure No.3: Aid of VR in Entertainment and Gaming

Review of Literature

Spring and Jennings (1992), majorly worked on the relation between abstract data and dimension of Virtual Reality. In their paper they have summarized the role of virtual reality technique to solve heavy data issues.

Forsberg and LaViola (2000), discussed the aspects and general introduction of Virtual Reality. He explained role of its application into innumerable fields like Stereographic projections tracking devices, Cyber puck, HMD, CAVE, Data glove, Archaeology & Arts, Medicine, Health Sciences, Entertainment, Engineering, Simulation and Training, Rehabilitation etc. They concluded that their perspective is to expand the application of VR in order to assist other fields as well since it has already been serving well to humankind through other active fields.

Mandal (2013), In her paper she has discussed generalized introduction of Virtual Reality and has also discussed few challenges regarding when it's incorporated to other field. According to her paper, one can manipulate the 3D world accordingly – She has also discussed levels of immersion in VR systems, types of immersion, uses and advantages as well as its future aspects and concluded that this innovation widen the boundaries for exploring the world of 3D with our imagination.

Zhang et al. (2016), discussed in their paper about recent developments in game-based virtual reality. They have expressed that many drawbacks enshrined

VR prevents its development in educational areas and according to them limitations include non-realistic representation along with physical and psychological discomforts. The concluded their work by mentioning Microsoft Kinetic as a tracking tool for the user.

Singh and Singh (2017), they expressed virtual reality as a notion of immersion which in other terms can be explained as new developments in technology in the field of human-machine interaction. They have covered ideas & concepts under the architectural representation, supporting software & hardware implementations, various categorized languages & modelling tools etc.

Sherman and Craig (2017), in his book-Understanding Virtual Reality: Interface, Application, and Design, explained that the working of virtual reality, all the possible fields it shares its impact on and what could be the possible future of virtual reality. It was also discussed that how can we tackle the possible disadvantages.

Conclusion

Virtual Reality seems to be an efficient instrument for the visualization of heavy scientific deatils and models (Forsberg and LaViola, 2000). Recent technical developments in computer-aided surgery, the feasibility of computed navigation assistance in neurosurgery as well as in head and neck surgery has been demonstrated for a wide variety of indications that how much VR can play a spectacular part to mankind.

Incorporation of VR with other fields like Stereographic projections tracking devices, Cyber puck, HMD, CAVE, Data glove, Archaeology & Arts, Medicine, Health Sciences, Entertainment, Engineering, Simulation and Training, Rehabilitation is giving out satisfactory output.

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