

STUDY ON VIRTUAL REALITY AND ITS VITAL ROLE IN CONTEMPORARY WORLD

From

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ABSTRACT:

Modern era has seen visual spectacle in the form of Virtual Reality. It is way in which glorification of real world is simulated and presented in a manner to the user so that he can experience and explore things which are identical to reality. This paper concentrates on the areas where virtual reality is applicable and its growth. Sectors such as education, healthcare, military, entertainment are largely occupied by VR technology. Objectives of this paper are to know the technological inventions in the field of VR and its impact on day to day life. Data is collected from secondary sources and strictly based on self analysis. Findings of the paper include company's and people are more interested in VR that in coming days we will see most of the operations will be carried out using virtual techniques. However it is expensive and has impact on health condition. Awareness programs must conduct at regular intervals to know the pros and cons of VR. Whether virtual or simulated world is good or bad depends on the creator himself. If it is used in a systematic way for getting desired result then it going to be a invention which will last for longer period of time.

Key words: Virtual reality, Augmented reality, Multinational companies, innovations.

INTRODUCTION

Inventions are occurring as if they were bound to happen; as a result man started discovering new things to satisfy his needs and to keep himself updated with the changing circumstances. Past few decades have seen the emergence of digital techniques which involves simulation of natural environment to fictional environment. Virtual reality is the simulation of actual happenings with the help of computers which gives interactive

experience to the user. The term 'virtual reality' basically means near reality, concept build upon the ideas that were generated in 1800s but reference to modern concept of reality came from science fiction. In 1950s experience theatre was developed and it displayed short films where the user can get experience of his senses that is sight, sound, smell and touch. In 1990s virtual headsets were developed and it contained LCD screens, stereo headphones and sensors which is useful in tracking the movements of users head. Now its importance is seen in gaming, movies, health care, automobiles, education, shopping, military etc. In health care virtual training is given to the trainee to know the real surgical environment and to identify the errors which may occur during real surgical situations. Military use of virtual reality includes flight simulation, battlefield simulation and vehicle simulation. Virtual reality in education has student friendly interface and easy availability of resources, gesture control and gives unique experience to the user. Learning is more standardized and learner can grasp the information at a faster rate. Car manufacturer uses VR technology to enable the user to give test rides and helps them to make use of virtual showrooms. VR blinds the user completely from real environment and takes them into fictional environment. Whenever we talk about VR there is another aspect to it called as augmented reality (AR). However two terms are not similar. AR uses real world situations and gives fictional touch to it, it generally uses Smartphone camera to operate which is seen in games such as Pokémon Go. VR uses headsets which blocks the vision of the user and keeps him interested in happenings of simulated environment. Head mounted displays are usually seen as a part of virtual reality such as Oculus Rift which is specifically designed for video gaming, HTC Vive which has controller combo, Samsung Gear VR which is basically a

head set which requires smart phone device to power it. Optical head mounted display which reflect the projected image and helps the user to see through it such as Google glass, so which connects natural world to artificial with the help of augmented reality. Play station VR is introduced by Sony which gives the user home video games benefits. Google has introduced Google Cardboard which uses low cost materials in the headsets. VR is visual treat to the user who wants to explore new things. Virtual tours are increasing day by day in which user can visualize the place more effectively through interaction. VR changed the way in which we see the world as a result it focuses on virtual belief of a man and it acts on it. Multinationals are using VR to create customer base, brand reputation and ultimately yielding high profits. Accessibility of a man has increased because of VR and helps him in finding new things, adjusting old things. Experimentation is possible in VR world because it can be used ahead of the real world so barriers if any can be removed well in advance so when same experiment is conducted in real situation which can be free from all the bias. It enhances the lives of the people as they are in touch with modern up gradation so technology enabled man is more competent compared to other. In coming days we may see inventions which may surpass the VR technology as human tendency is to not satisfying with what he has. World will be a better place if technologies are implemented for right purpose and it is used to the extent to which it is needed. VR helps in getting pleasure if it used for entertainment purpose, it helps in getting required information if it is applied in such fields so it fits well in various sectors as a common benchmark is set for coming generations.

LITERATURE REVIEW

According to Jinzhao wang “virtual reality is a dynamic circumstances where it can make reaction according to people’s form and language by which real time communication is formed between people and virtual world”.

According to Marie Laure Ryan “virtual reality is a culture of immersive ideals, culture which is more concerned about the interactivity, and considering the virtual reality as an total art which is essential for the people situated in the society”.

According to Franc biocca “ Virtual reality is computer sensory technology used to create computer controlled multi sensory communication which is helpful in viewing environment with the help of computer or its relatable means”.

According to neven A M sayed “agumented reality is adding unreal objects to real life situations or adding virtual objects to real scenes through enabling the addition of missing information in real life.

According to Maryam vafadar “virtual reality is a term that applies to computer simulated environment that can simulate physical presence in place of real as well as imaginary world, so it contributes to feeling being part of action on virtual safe environment without any real danger.

According to Fuchs and Bishop “VR is real time interactive graphics with 3D models, combined with the display of technology that gives the user the immersion in model world and direct manipulation.

According to Gigante “ VR is a illusion of participation in a synthetic enviornment rather than external observation of such environment however it relies on 3D, stereoscopic head tracker displays, hand body tracking and binaural sound”.

SCOPE OF THE STUDY

Contemporary world has seen many emerging innovation and one among them is virtual reality. Three dimensional experience and user interaction with the computer makes it helpful to explore many things. VR in health care sector helps in phobia treatment, surgery simulation and skill training. Growth of VR is not restricted to only one sector but we see the impact of VR in the fields like education where it is used to simulate virtual space for the study of solar system so it enables the student learn things at a faster rate. Entertainment sector such as gaming and movies has more scope towards implementation of VR as it involves using sensors for detecting person’s presence and usage of three dimensional graphics. Combat and survival training is given to soldiers without facing any harm with the help of VR. Crime scenes can be investigated virtually to find any information so that judgment given is fare and in right party’s favor. Use of VR depends on the need of the hour

as technological inventions often tend to give the desired outcomes when it is implemented properly.

OBJECTIVES OF THE STUDY

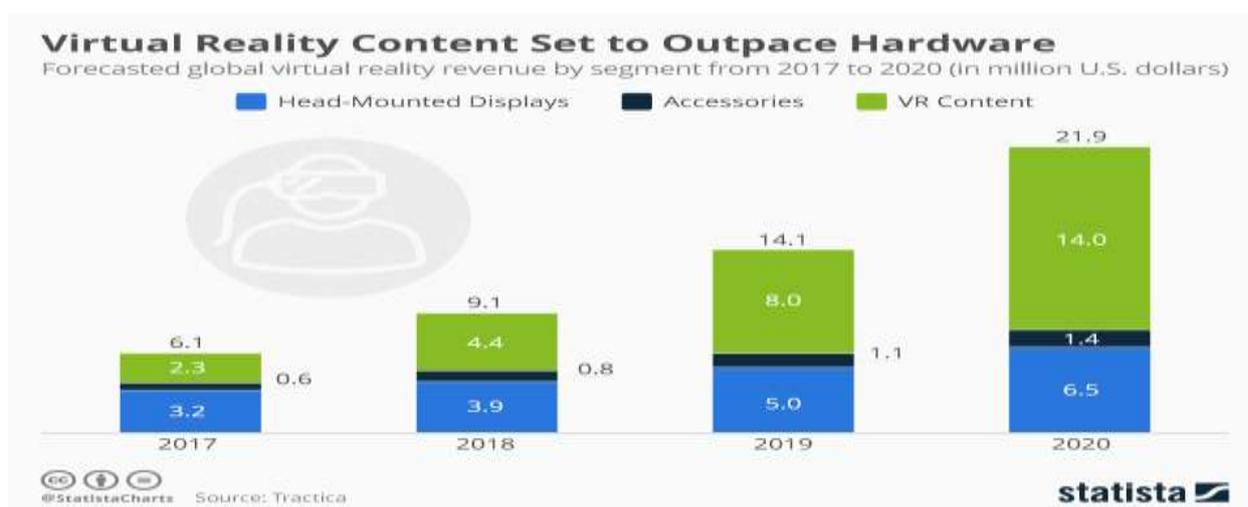
- To know the various areas in which Virtual reality is implemented.
- To know how virtual reality differs from augmented reality.
- To understand the technological inventions with regards to virtual environment.
- To know the future of virtual reality and its applications.

- To determine how simulation helps in giving realistic experience to the user of VR.

Research Methodology

This paper gives an idea of Virtual reality and its applicability. For this purpose secondary data is taken from various websites, magazines and newspaper. Many research papers have been analyzed on this topic for better presentation of study. Study is purely based on self analysis and it gives clear picture of VR and its vital role in contemporary world.

Data Analysis



The Chart given above explains various VR category and revenues expected to be derived from respected divisions for the year ended 2017 to 2020. It is clear from the chart head mounted display revenue is increasing and it will be doubled by the end of 2020 that is 3.2 million dollars in 2017 to 6.5 million dollars in 2020. VR accessories shows the increase at the steady pace as its revenue is smaller portion compared to other two divisions. Revenue generated from VR content will be highest as it is a profitable means for the developer to produce such quality technology. Total revenue in 2017 is 6.1 million dollars which will go up to 21.9 million in 2020. This indicates VR technology has more of an impact in today’s world and people will go for Virtual devices in coming days. On other hand manufacturer of VR will face stiff competition as many company’s producing similar

product however it will boost the profits of the company to the greater extent.

FINDINGS OF THE STUDY

- It is clear from the study that Virtual reality will be the future where in which people will experience all the real things at simulated environment and it will lead to better visualization experience to the user.
- VR is implemented in all the concerned areas such as healthcare, education, safety so Virtual Reality is slowly but surely occupying its place in the modern world.
- Major company’s investing their money in development of virtual objects as a result it will increase the sales, revenues and reputation.

- Innovativeness of a man has reached advance level as he is creating more and more virtually reliable things and trying to bring one ultimate product which has all the features which will match with real environment.
- Coming years will see a rise in virtual reality application and its usage because more people wants to explore things in a different manner and more fields wants applicability of VR for better functioning.

CHALLENGES

- Virtual world is just a simulation of the real world so it cannot give perfection of real world environment.
- Virtually sound people often want to use technical tools rather than natural things available in environment as a result it will have adverse effect on living of human being.
- MNC's may end up in cut throat competition of producing virtual objects, and may induce the customer in forceful unnecessary buying of products.
- Cost of VR kits are expensive, sometimes it does not give value for your money so it is not a worth to buy.
- Mental stress, depression, addiction and health related problems are seen with the heavy usage of Virtual reality devices.

SUGGESTIONS

- Virtual reality does not use real life environment instead it creates similar environment where as augmented reality uses real object along with simulated features, so for a better experience and effective usage both must be blended together.
- Virtual technology must be used only when it is required, over usage and over dependence must be avoided so that innovation can be used in a right direction.
- Most of the people unaware of VR so awareness programs must be given at educational field and demonstration of VR

shall be made available at all corners of the world.

- Safety of the user must be kept in mind before developing VR products and all precautionary measures must be stated properly.

CONCLUSION

Virtual world is not just a fantasy now it is a reality, as three dimensional technology are gearing towards giving user ultimate experience. User can experience real world happening without moving an inch just by wearing head mounted displays. Major company's are now technologically superior thanks to VR. VR is applied in all the sectors as it is useful in getting information and exploration of things. Market is wide for VR gadgets as there is huge demand for it. Studies have shown in future man will be more dependent on VR as he wants to see and feel the things at faster rate. VR gives unlimited hours of entertainment, gaming and learning. Virtual reality is good or bad depends on its usage and its development. Severe use of VR may cause eye sight problem and depression. However if it is implemented for the benefit of man and it is used in right direction, that is to ease the burden of work then its role cannot be denied in the contemporary world.

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