

Virtual Reality And The Future Of Communications

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Virtual reality (VR) is a technology that is created to improve users' connection to create a real environment. On a computer, VR is the user's experience through sight and sound. The growth and advancement of technology are improving how people connect with one another no matter the distance (Earnshow, 2017).

This topic is examined further in [How Virtual Reality is Affecting Our Lives and Its Future](#).

VR has been used in video games and gaming technology, but it is also taking place in digital social media. Social media companies are developing technologies such as headsets, headphones and, most importantly, social virtual reality, which will improve interpersonal connections. Social VR technology is capable of allowing users to show their facial expressions, share pictures and videos, and enable users to play games online. For instance, Oculus has developed VR apps such as Oculus Rooms (Earnshow, 2017). Thus, social VR will enable friends and people to socialize in the comfort of their beds.

Therefore, virtual reality technology has the potential to influence communication. This technology will change how people interact and convey their intended messages with each. Thus, it does not only change how people interact in business-to-business communication but also changes how advertisers communicate with their clients (Earnshow, 2017).

Impact Of Virtual Reality On Digital Societies

1.2.1 Business-to-Business

Facebook and other social media platforms have changed the way people interact online with one another. Therefore, Facebook, being one of the biggest social media companies, has taken the first step in introducing social VR (Sherman and Craig, 2018). This technology aims to change how people socialize and interact with one another. It will change the way businesses operate. For instance, social VR will enable business people to sit in a room and hold meetings with one another when they are across the world. Thus, the technology will help social media companies to be used not only as a marketing platform but also as an interactive platform for business communities.

1.2.2 Communication Improvement

Social VR will not only allow users convenience but also allow people to get closer to one another. For instance, globalization has led to the growth of companies that have branches all over the world; thus, VR will improve how employees communicate with one another (Sherman and Craig, 2018). Technology will help improve how people share ideas and connect with each other in different social, cultural and business contexts. Also, social VR will improve the relationship between the users through a virtual experience. Therefore, this technology allows individuals to humanize the people they are interacting with on another side of the phone or computer.

1.2.3 Business to Consumer

The growth of the use of social VR will revolutionize the interaction between businesses and consumers by creating a social marketing experience. Businesses look for clients through advertising and marketing; thus, social VR will enable consumers to interact with an advertisement that has an emotional response (Merchant et al., 2014 34). Therefore, VR will create abilities that allow the viewer to connect to the interaction more than at the video level. It will offer immersive experiences that have a deeper connection. Social VR will change the future of communication by making it possible for people to share their emotions and feelings.

2.1 Green Computing Techniques That Can Reduce Data Center Energy Consumption

2.1.1 Energy Consumption in a Data Center

The digital revolution has improved the way we communicate, as well as data storage and usage. For a digital revolution to work, servers are an important aspect of the growth of technology, but they consume a lot of energy. Servers require power to integrate and process data. This power causes heat, and it has to be cooled to keep the servers working. Efficient cooling systems consume a lot of energy. Therefore, green computing techniques are needed to reduce energy consumption in a data centre.

2.2 Green Computing Techniques

Green computing is a concept that defines methods that will effectively and efficiently work while consuming less power. There are different green computing techniques that can help reduce energy consumption in data centre facilities. They include:

2.2.1 Virtualization and Consolidate

This technique involves consolidating different applications onto servers. This will increase emergency efficiency by decreasing server energy use and reducing cooling requirements. Consolidating fewer servers will help reduce energy consumption by approximately 10% to 40% (Lefèvre and Pierson, 2018).

Also, virtualization helps in lowering energy consumption. Virtualization is achieved by optimizing power and making sure that cooling systems are in line with a lighter load to ensure power usage effectiveness (PUE) doesn't rise.

2.2.2 Use a Containment System

Most of the data centres normally mix hot and cold air. This limits the efficiency of the cooling systems. Thus, the containment system technique helps in separating hot and cold air in the cooling system. To achieve this, you need to do this by supplying vents in the cold aisle while returning vents to the hot aisle along with a hard enclosure to ensure cold or hot aisle are contained (Gai et al., 2016 57). This increases the efficiency and effectiveness of the cooling systems. Also, the technique raises return temperatures, making CRAC units operate more effectively.

2.2.3 Temperature and Humidity Setpoints

The temperature in data centres can help in reducing energy consumption. Many data centres set their temperatures at 55°F, which is against the recommendation of ASHRAE. The ASHRAE recommended that air temperatures of the data centre should vary between 64.4°F at the lowest and 80.6°F the highest point (Gai et al., 2016 55). Thus, by increasing temperatures from 55°F, the data centre will be able to save energy. The same case applies to humidity. Thus, data centres should use the humidity recommended by ASHRAE. Therefore, efficiently changing temperature and humidity to recommended set points will help reduce power consumption.

2.2.4 Automation and Variable Frequency Drives

Variable frequency drives (VFDs) increase the effectiveness of power consumption of cooling equipment by ensuring the cooling systems operate at the required speed. This helps in cooling the supply to match the necessary load. Therefore, this makes the systems use less power by limiting over-cooling in a data centre. The automation systems allow the managers to control and monitor different aspects of the centre, such as HVAC, security and other systems in the automated application. Thus, automation and VFDs entail a comprehensive technique that helps monitor and control different aspects of the data centre, thus ensuring that energy consumption regulation is a priority objective (Ahmed & Rank, 2016).

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