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The Metaverse – Our Current Internet on Steroids

Today most of us live in the real world and many of us play games in virtual worlds. Because of Covid-19, for so many people the virtual world became the only way to see family, hold or join meetings, go to conferences, have face to face business meetings, and even go to school.

Today computer programs and apps are our gateway to the internet which is a cyberspace of infinite possibilities. We access it all using our computers, tablets, smartphones, and for some VR headsets. The hardware, software, and computing power that these technologies use continue to increase in power each year. The big question today is has our technology grown powerful enough for our internet to provide us a three Dimensional (3D) virtual reality (VR) and Augmented Reality (AR) world?

Venture capitalists and the leadership of tech companies are embracing the term metaverse that Mark Zuckerberg used in a keynote speech in 2021. In that speech he described where he intends to take his rebranded company Meta (old name Facebook) as they embark on creating a 3D version of the internet.

A virtual alternate world called the metaverse first appeared in the 1992 novel ***Snow Crash*** by Neal Stephenson. In this Sci-Fi novel the metaverse was the virtual world where people escaped the reality of their real lives. The characters in the book shed their human physical form and took on the persona of an avatar that they created. The avatar was a

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software artificial person or life form that they physically controlled for their life experiences in Stephenson's metaverse.

Products that allow you to enter a 3D virtual world today cover your eyes, track the movement of your head, and reproduce our stereoscopic vision by sending each eye slightly different video to simulate our normal vision. See Photo 1. With these headsets on, the virtual world that you are looking at matches your physical movements to generate an immersive 3D environment that seems physically

Oculus Quest 2 - When you place them on your face your left and right eye have their own video screen.

real. See Photo 2.

From personal experience I can tell you wearing a headset for long

This is a composite photo that shows you a student studying a virtual machine

periods of time is actually less comfortable than wearing a mask to keep

you safe from the Coronavirus. The solution of course is next generation displays that provide 3D viewing without the glasses. The technology to do away with the glasses already exists and one example is the Sony Spatial Reality display, see photo 3, which

Sony's Spacial Reality Display
Micro-optical lenses send separate images to each eye

tracks the viewer's eye and head movements so its micro-optical lenses can send separate images to each eye. In time we will see if Mark Zuckerberg's vision of the metaverse becomes reality.

The other vision of the metaverse focuses on Augmented Reality (AR). For AR one only needs to wear eye glasses or have the next generation windshield in your car. See Photo 4.

Vuzix Shield™ Lightweight, stylish, prescription ready AR smart glasses. Its 8-core CPU gives you the power to connect to the metaverse.

You still see the real world in front of you with added information or images. This information can be turn by turn directions when driving or walking in a mall, enhanced information while you look at things in a museum, or images of hidden game treasures that you and your friends try to find in an augmented reality game.

Taking it a Step Further
1. Do you feel that a metaverse where people have to wear virtual reality headgear will ever become popular with young and old members of our society? Why?
2. Which metaverse technology, Virtual Realty or Augmented Reality do you feel will become more significant in the future? Why