

Advantages and Disadvantages of Virtual Reality/Augmented Reality

During class we tried various ways to experience Virtual Reality and Augmented Reality. To experience Virtual Reality and Augmented Reality we used our mobile devices, a HTC Vive, Microsoft HoloLens, and CAVE2. One of the things that was introduced was a mobile app called Quiver. How this app works is there are special pages that the user can print and that make use of the user's camera. Using the camera the app creates a 3D model of whatever object was on the paper. Each page was coded to different things like a dragon that you can play soccer with.

Another way to experience Augmented Reality on our mobile devices was to use Google Cardboard and use the NyTimes app, NYTvr. Using the app and device you were able to experience 360 video. I experienced a video where we were swimming in an ocean.

I think the advantages of experiencing Virtual Reality and Augmented Reality with mobile devices is that it is cheap. Most people already have a smart phone. These apps are free and the Google Cardboard devices are available at as low as \$5. The disadvantages in my opinion are that you don't get a deep experience. I think that only comes with having noise-canceling headphones paired with a device that can sit on your head.

The next devices that were used were the Vive, HoloLens and CAVE2. The Vive and HoloLens are similar in which they are headgear. The difference between the two are the Vive uses controllers for each hand and the HoloLens uses a device very similar to the Kinect which reads your body's movements. The CAVE2 experience is different in which there are glasses you wear with a sensor on them. It makes use of extremely huge monitors that surround you. You are also using a wand type object that helps you do various things like zoom in on images.

The advantages of these devices are pretty obvious in my opinion. They are capable of giving you a very in depth experience. Personally the headgear devices I think give a more immersive experience due to your eyes only being able to see what is viewable through the device while the CAVE2 still has your surroundings in view. These devices are created more to Virtual Reality and Augmented Reality while our mobile devices aren't built exactly for that purpose. I think the only disadvantages of these devices are that they are very expensive. The Vive costs around \$600 and the HoloLens costs around \$3000. The CAVE2 is a system not even available to public in part by it being owned by UIC's EVL department.