

Week 1 – VR Demos Review

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Advantages:

CAVE2: This is the first panel in terms of the presentation I went to. Immediately I was blown away by the immersion in the cave, where I could easily see the 3d details shown around me from the rendering of the human protein (cell form), the human nervous system within the brain, planets, and non-rendered forms of panoramic images. With what seems to be 3d glasses, depth is emphasized between objects that appear close versus further away, in such that physically moving around the cave whilst viewing the spectacle allowed this depth of 3d to be emphasized further. However, this was only viewed in the default 3d glasses. There was one pair of 3d glasses that was fitted with the motion sensor which allowed the user to physically “look around” the images, which greatly benefitted micro-analyzation of the surface area which means we can physically “move” in the 3d rendered space, looking above, below, and sideways of the currently generated render. And of course, there is the remote, which allowed controlled movement in the rendered plane.

These advantages are in no doubt useful in presentations for either architecture projects, human anatomy projects, and other projects involving seeing the smallest of details in rendered environments.

HoLoLens: The second part of the demo I attended. These lenses are extremely versatile in terms of usage, the biggest advantage that these offer is that they allow the user to interact with the environment they are currently in no matter where they are, while still being able to see the “real world” around them. It also has no wire tied down to it.

VIVE: This VR system is cool, and modern, where the user can dive right into the immersion, where 100% of the user’s sight and perhaps 50% of the user’s hearing is dedicated to the VIVE. With the VIVE, there are controls where you can enable hand movements with very familiar buttons which allow traditional methods of gameplay. The VIVE also offered minor foot movements to be incorporated into the game, such as moving around a small area. The greatest advantage of this set is that the user’s (mostly hand gesture) actions are not encumbered by gestures, but rather traditional buttons, because of the two controllers we are given. Steam can be used to play the games.

Disadvantages:

CAVE2: There are obviously many disadvantages of uses the CAVE, but if used in the right conditions, these advantages outweigh the disadvantages. These disadvantages are the cost, electricity/power and maintenance of all the panels and graphics cards used to generate the things we can see around cave. Also because of this, the CAVE is generally then restricted to one area only, making movement around different locations not recommended.

HoLoLens: The games are cool, however it is very cumbersome to do many of the hand gestures due to the program, or the hardware that senses it. This makes programming the games difficult, and a lot of work has to be put to ensure that mistakes (wrong gestures, other people) don’t interfere the user. Additionally, the Lens is very inconvenient to put on. I can imagine these being very successful in controlled environments however (laser tag?).

VIVE: The biggest downside the currently set up VIVE is that it is shackled down to one locations via wire. However, the games are much easier to make. Because of this, the user has to dedicate their 100% vision to the product and thus cannot see where they are going, and requires another user to handle the behind the headset to prevent tangling or tripping. These headsets require a larger amount of space around the user to ensure safety.