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CS 428
Week 11 HW

After watching the video demonstration of Microsoft's Holoportation, I would say the potential in it's uses are quite vast. For the first time, the idea of holograms can come to reality. Interactions between people can finally become quite unlimitless, in which people can talk to each other virtually face to face. Obviously, this is just the beginning in the sense that within the video demonstration, they showcased to us how they approached creating this holoportation. They utilized several cameras that were stationed in the corners of the room to do the tracking and create the 3D Models. Additionally they used the HoloLens smart glasses for the user, in this case, Shahram Izadi, to see what they were going to appear in front of him. This limitation of having several stationary cameras, creating a room scale virtual reality is definitely an early drawback of the technology since the user needs to set up several cameras and are limited to that space only. However, looking at certain trends in the VR Based headsets, it seems to me that holoportation can definitely reach a wireless state, in that users will simply use the Hololens glasses by themselves since a lot of headsets have been moving towards in-side out tracking rather than the usual room scale tracking.

Now to discuss more about the uses of this technology, I can definitely see it being used in several different spaces. One such use I can see is allowing education to be taught in an outside environment more easily. Let's say you decide to not attend a lecture in-person. Instead of watching the online livestream of that lecture, you decided to wear your Hololens glasses and attend the lecture virtually by having a 3D model of yourself teleport to the lecture hall. Within your POV, you can see your professor and their presentation appear in front of you. On the other end, your professor can see a 3D model of yourself sitting in one of the chairs of the lecture hall. This type of simulation allows for a traditional lecture/education setting to still exist except in the sense that it allows students to experience it remotely. Such an example of a use

is quite incredible, because now it allows people to worry less about commuting and more on engaging in their experience. I myself would definitely use something like this if it existed properly today, as I have such a long commute time when it comes to coming to in-person classes.

Besides looking at the use cases for this type of technology, what I think is a huge plus from the demonstration is how closely realistic the 3D models were generated for the user and props that were shown. Such as having Shahram's daughter and her toys being almost closely resembling the real thing, allows the experience to become kinda seamless in the real world. If we were able to further progress this technology, holograms can reach a fidelity where your couldn't tell if it was real or not, only by simply having some sort of indicator or if you were to reach for iti and try to touch it, to see if your hand would go through it. The last thing I would mention from the holoportation demonstration is live recording rerun feature, where one can simply re-wind a real-time recording of the hologram in front of you as if it was like a video.That feature almost shocked me as the possible uses of being able to re-wind day to day experiences to see what you have done whilst doing holoportation is quite incredible.

Site link: https://stasioo.github.io/Personal_Website/hw11.html