

Critical Analysis of Collaborative tools we have discussed in CS 491

The possibilities for types of collaborations get way more vast and complicated when you're able to use the ever increasing technical advancements in virtual or augmented reality. As talked in class, this idea has been around for a while, but as technology keeps advancing the more options we have for interaction, and higher quality of that interaction.

Starting with the idea of playing games with people in VR using avatars, the specific game I'm referring to is *Rec Room* as shown in class. The ability to customize the characters to make the avatars feel more unique helps people make the experience more personal, since you know that what the other avatars are doing, i.e. if they are looking at you, talking to you, or interacting with objects it becomes clear. Now the avatars aren't perfect, but they do a great job of taking place of humans in a fun to play sport filled game. It's not that important for them to look too real, as long as you know what they are doing, i.e. talking, waving, giving hi-5's, throwing basketballs, waving tennis rackets etc.



The more impressive technology I would claim would be the work of Microsoft with the ability to do real time conferencing with seeing people in augmented reality using HoloLens (holoportation). This type of technology is much more impressive then what is currently done in VR, since the other person can be seen in your surroundings as if they were in our room, and they see the same thing, the caveat being that both people can be in different parts of the world when doing this. Instead of having to use

avatars to depict human beings, you can now see them

in real life, and to scale as well, where not much has to be left to imagination. The fact that HoloLens is a contained piece of equipment as well, ensures that the conferencing can move towards more wider and open spaces. I would take this Star-trek like technology over using Skypye any day. It is definitely more engaging, and in the future I hope this technology can be extended to people interacting with very small and detailed items, for example showing how to fix a certain piece of hardware by physically helping the other person, or just to prove their point better.

From the older technologies we have been shown, I feel that great strides have been made to slowly but surely create a way for people to meet virtually and not being to limited to sitting in front of webcams on their laptops. VR and AR are both great options, where AR seems better in respective that both people can use their already existing and familiar areas to hold meet, while VR is another great option with respect to being able for multiple people to experience the same thing, since VR encapsulates everybody in to that virtual space. Another bonus of virtual reality, is that people are put on the same playing field (as mentioned in lecture) such that kids and adults can feel that they have the same amount of power, and don't have to worry about the age/size difference. For certain applications this can be a negative, such as areas where you do want to get a more personal feeling for the other person, this is where AR would shine due to being able to see a person and compare them to yourself and your real life surroundings.

Summary:

Augmented and virtual realities make collaborations easier by letting people from across the globe to interact with each other, but being much more hands on and personal when compared to existing solutions (skype mainly), by having a better feel of the other peoples actions.