Net-a-Porter VR Project

Bi-weekly Report 3
18 November 2016
Group Members: Vania D. Gunawan Setiono (Team Leader), Haran Anand, Yll Kelani

Overview

We have done more research on the tools that we need for our project and we have ordered a 3D scanner and an Ultrahaptics evaluation kit, which will be useful for our project. We have also finalised our requirements and categorised them into functional and non-functional requirements. Additionally, we have created paper prototypes for what the display would look like and the sequence of interface that the user will see when they do certain actions. Our website is also now set up on the UCL CS server.

Summary of Meetings

Meeting 1 (Thursday, 17 November 2016)
Attendees: Vania D. Gunawan Setiono, Haran Anand, Yll Kelani
Location: MPEB Labs

We brainstormed to finalise our requirements and sketched some ideas of what the interface would look like on paper. We also found an online platform that would get depth information and was a proper SDK for developing the application. After doing this, we spoke to our TA about mapping the clothes using techniques such as draping. Most importantly however is that we were able to confirm that we were able to get a piece of tech that we needed to make our project a lot more feasible, more specifically a colour 3D scanner called the Sense 3D scanner.

Meeting 2 (Friday, 18 November 2016)
Attendees: Vania D. Gunawan Setiono, Haran Anand, Yll Kelani
Location: Roberts Engineering Building

Our TA suggested us to talk to another professor who is an expert in the subject. We contacted the professor through email and arranged a Skype meeting with him. In this meeting, we had a Skype meeting with Professor Philip Treleaven to ask for help in 3D modelling and 3D body rendering. He then gave us a few more contacts and samples from past projects that are similar to our project. After the Skype meeting, we met with another person that he suggested and discussed further about 3D body modelling. He guided us through the step by step process and advised us to take a realistic approach on our project. He suggested that we figure out how to render the body in real time and how we'll show the front, side and back profile while the user is wearing the hololens. He also suggested that we should focus on the body mesh first then the garment and the texture afterwards.

Tasks Completed

- Finalised the project requirements
- Systematically planned our next steps of action

- Researched more about the SDKs available that will be useful for our project
- Met up with some professors that specialize in garments, 3D modelling and virtual reality and had an in-depth discussion about our project
- Set up our website on the UCL CS server

Problems

We faced problems in deciding how feasible certain requirements were for our project timeframe. The biggest issue was whether we would have time to implement the function to allow our users to purchase items from Net-a-porter within our app. We've provisionally decided that the ability to shortlist items for purchase via the website would be enough functionality. Another problem we had is in figuring out how we would match the shape of the clothing to the body shape of the user. We have spoken to professors that specialise in 3D modelling specifically with garments and so they should give us some guidelines.

Next Steps

Our next steps our to gain further familiarity with the HoloLens including the libraries and SDKs available to make the application as smooth as possible. We have to follow up on the suggested guidelines offered by the professors and see how that changes our plans for the project. We also have to make sure our requirements are up to date with what we see feasible. We have to make sure our website is up to date with required content.

Individual Contribution

Vania D Gunawan Setiono

Since the last biweekly report, I have been researching more about the project and the tools that we can use to start building our project. I have also been in touch with the supervisor to place the order for the tools that we need and I have reached out to another professor at UCL who specialises in 3D modelling and 3D scanning to seek for guidance and help for our project. Moreover, I have contacted the client to report our progress and asked her to provide us with some sample garments so that we can start 3D scanning the clothing.

Haran Anand

Since the last biweekly report, aside from continuing to go through Microsoft's tutorials regarding developing for the Hololens using Unity, I did a lot of research into body scanning and draping of fabrics to show texture. As well as this, I researched potential pieces of tech that might make our project a lot easier and have managed to persuade the department to get a specific one that I wanted, the Sense 3D scanner. After the meeting today, I also had a look at quite a few of the things Philip Treleaven and his associate. This has made me more confident that we can achieve a very successful solution.

Yll Kelani

Since the last biweekly report, I have practised using Unity with the hololens. I've helped draw the sketches to plan the view that the user will see within the app. I then helped finalise the requirements, both functional and non-functional. I've worked on planning our next steps with the group with respect to the 3d representation of the clothing and how it fits on the body.