Net-a-Porter VR Project

Bi-weekly Report 8
27 February 2017
Group Members: Vania D. Gunawan Setiono (Team Leader), Haran Anand, Yll Kelani

Overview

Considering the past two weeks have consisted of Reading Week and Scenario Week, the majority of the work produced in these two weeks has been individual, with each person working on their respective task as was delegated in the previous Bi-weekly report.

Summary of Meetings

Meeting 1 (Wednesday 15th February)
Attendees: Vania D. Gunawan Setiono, Haran Anand, Yll Kelani
Location: Meeting over the phone
We spoke over the phone to discuss the direction that our own delegated tasks were headed in and how that affected the problem as a whole. We spoke about decisions made ourselves like the decision to use a scan of Andrew's mannequin as an avatar just during development. We also spoke about the difficulty with scanning accurately and what could be causing potential issues.

Meeting 2 (Friday 17th February)
Attendees: Vania D. Gunawan Setiono, Haran Anand, Yll Kelani
Location: Skype meeting
We had a Skype meeting to discuss our individual progress, arrange our next meetings and agreed on a time to reach out to the staff member who could help us with lighting for our 3D scans. We thought that a studio setting would be ideal for the scans as then we could block out external light and potentially use light fixtures that we could control ourselves in the hope that they would allow the 3D scanner to better see the material of the clothes regardless of folds or position.

Tasks Completed

- Displayed the sample 3D file on the emulator and attempted to implement the gesture functionalities
- Researching how to change the size of an avatar at specific parts on the shape such as the shoulders, waist etc.
- Thought of a solution to make scanning clothes easier and to produce scans of higher quality for improved realism.
- Researching how to map clothing scans on to a body.

Problems

During experimentation with the tutorial files, one of our team members faced a problem during compilation of the project in Visual Studio. This problem occurred multiple times and was resolved by changing the Unity version from 5.4 to 5.5. To avoid this problem, our team

members should create Unity projects of the same version and keep it consistent throughout the project.

Next Steps

We need to go and speak to the member of staff who has access to a photo/video studio, recommended to us by Dr Philip Treleaven. This is in order for us to get better scans of the clothing. We also need to continue with our delegated individual tasks when we aren't working on producing the scans. This includes fixing the gesture implementation, adding voice recognition functionalities, and reflecting the user's body shape and size on the avatar.

Individual Contribution

Vania D Gunawan Setiono

Over the last two weeks, I have been trying to integrate the sample 3D models that we have with assets like a cursor and the gesture manager. These assets enable users to use their hand for the gesture input and this will be represented with the cursor asset. Moreover, there are additional functionalities to the cursor asset, such as displaying arrows indicating where the main hologram is positioned. So far, I have successfully displayed the 3D model in the emulator along with the cursor. However, the function of the cursor such as rotating and moving the hologram has not been working even though the script is added. Once this is resolved, I will test in on the actual Hololens and then move on to the voice input functionality as it is run on the script, similar to gesture inputs.

Haran Anand

Over the past two weeks, I have focussed on trying to map the clothing scans that we have already onto a stock female body shape. This took a little bit of initial research, as I initially had no idea how to do it, and even once I found the research it has been a challenging task to do. However I do feel that I am on the way to perfecting the method. It will be interesting to see how it will work when we combine this with the work done with the other three teams. As well as this the model that I have been using to map the clothes onto the body so far has moreorless been an anatomically correct one. However the body shape used when displaying garments, in particular the shape of the mannequin that we are using is quite different, so I will have to try and adjust to that at a time when we have the scans properly done.

Yll Kelani

Over the past two weeks, I researched on how to manipulate a 3D shape at specific coordinates as to adjust its shape and size. This is so we could use one base mannequin model to represent the avatar and then change the shape of the model according to the shoulder size, waist size etc. that the user will provide. This is necessary for an element of realism and to satisfy the requirement that the application should provide a virtual experience of personal shopping. I found that there are methods that require using 3D editing tools like Blender but we'd rather find a pure solution using Unity. From what I read there is a Mesh class that enables manipulation of shapes possibly in the way we need but that requires further experimentation.