

BI-Weekly Report- HoloLens project

Client: Microsoft HoloLens Gaming (Group 11)

Team: Miron Zelina (Leader), Mehul Modha, Tilman Schmidt

Internal Supervisor: Dr Dean Mohamedally **TA:** Aron Monzpart

Report Number: 1

Introduction:

Team 11 is working on the Microsoft HoloLens with the objective of delivering a Game or API showcasing the capabilities of what the HoloLens can do. The idea being that the API can be used as a building block of other application that will be design in the future of this product.

Discussed tasked and challenged:

So far we have introduced ourselves to on other and have met with our teaching assistant Aron Monzpart. He has provided us with some background information on what resources we may need to use in order to build on Applications HoloLens. Requirements such as C sharp and unity may be required. We will also require Visual studio as a part of this project.

We have also met with Mr Lee Stott, *Microsoft CTO Academic Engagements*. During this meeting he discussed the objective of the project and introduced what the Microsoft HoloLens is and some of the feature we should be able to manipulate during production of our application or Proof of concept. Feature such as:

- In built Cortana
- Building in 3D spaces
- Beacon/ Check point system
- Real life tracking

For this project we have been given the choice to choose the direction we would like to pursue when design our game. We are to log and observe all the challenges and outcomes from this project.

Considerations:

Currently we have not had a chance to interact with the HoloLens but we have contacted Dr Yun Fu who has arranged access for us on Tuesday 11th October 2016.

Meeting with Dean Mohamedally on 10th October 2016

With Dean Mohamedally we discussed the goal and objective of this project:

As instructed we were told to consider some of the literature, what is already out in the market and see what were the most wanted game engines are achieving and how to capture their essence. The idea being that we capture augmented reality and show what the HoloLens can do and bring to this field. The objective is to then provide an open source library which other can then use. We are to consider the Internet of things too. The idea is to enrich the user experience with all the hardware capabilities and we are not just limited to the HoloLens for this project. However due to time limitation we must also consider the complexity of our idea and how it will be possible to execute and provide the deliverable on time as well.

Plan of action

So far we have begun to assemble all the resources we require. This may have been installing the necessary programs to run visual studios and the HoloLens VR studio. As a team we have also looked at what target need to be met throughout this project. The following task are currently under consideration for the next two weeks:

- Design and setup of website
- Introduction and begin using the HoloLens
- Setting up contact methods with the team and TA
- Team video (time budgeting)

As a team we have learnt that we all have various skillsets and we will need to consider this when distributing the work load in order to make this project run efficiently and meet the deadline and the requirements set.

Problems/ Challenges of this week:

At the moment, some issues are getting the Visual Studios to run on personal computers. There are lots of step and procedures to get it to work. We will use the Microsoft support in order to get the programs up and running so we can begin working on the program development.

Since this is fairly new technology there is not a lot on the market for us to explore and analyse. We will need to look at the hardware and find what we can do to provide a unique experience to the HoloLens. Once we get a chance to interact with the technology, we hope it will provide us with a clear idea of how we can go on to design a product or API which will demonstrate what can be achieved with this technology.

Individual Bi-Weekly feedback

Mehul Modha: This week I have begun researching on the background of the HoloLens and explored application already designed for it. I have also starting installing all the necessary software in order to design the products away from labs. In addition, I have drafted up the formats for the Bi-Weekly reports and communicated with our team mate on objective for the following week. It is our hope to begin preparing the layout for the website in the following weeks as well as begin research and logging.

Tilman Schmidt: During this week, I completed the setup needed to develop an app for the HoloLens, which included upgrading my windows version and installing Visual Studio and Unity. I have also read through the main documentation pages of the HoloLens to gain a sense of the capabilities of the device. Based on this information, I also brainstormed potential ideas for a project, however, I am waiting for the chance to actually use the HoloLens in the next lab sessions, after which I should be able to properly evaluate which ideas are feasible. In addition to this, I also researched current HoloLens projects in development to find out where there might be space for our project to fill a need or expand certain functionality.

Miron Zelina: This week I focused on installing necessary software for Hololens development. I installed Windows 10 Education, since my Home version was not sufficient to run the Hololens emulator. After that, I updated Visual Studio and downloaded the Microsoft SDK. I also downloaded the emulator itself and started working on downloading Unity. Apart from this technical aspect, I was thinking about various ways we could use the Hololens capabilities for a game. Admittedly, this was rather difficult, since this early, we only have a vague idea about the Hololens hardware and API. Watching demo videos from the Hololens website was helpful in gathering potential ideas and understanding the general functionality of Hololens.