

MST Google Project 2 – 16/10/15

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Overview of previous weeks

We met with Usama Inam (Google), Dr Dean Mohamedally, Dr Kotskova (Principal Research Associate for eHealth in the Computer Science department at UCL), and Aron Monszpart (TA) to get an overview of our project. Our former Alzheimer's experience project has been taken over by Google so we are now working with Google and Médecins Sans Frontières.

We are working on a proof of concept for this project: the idea is to have a drone flying and recording a video of the field below. As it does this, data is collected through various sensors and analysed, to be relayed live to a user on the ground using a Google cardboard. This augmented reality experience involves an interface on which the user can see the aerial view and interpreted data, which could help prevent and control numerous issues. The way it is to work is where 2 individuals use the device, with one person using the Google Cardboard device and another controlling the drone's movement. Another scenario of use we were told about is where the users have a multiple monitor setup where they can view all of the information that the drone is sending them.

Meetings

15/10/15: First meeting with our client to get a briefing on the project

20/10/15: Group meeting to delegate tasks following our research

Tasks completed and time estimate

After meeting with our client we now have a briefing for the project, so are working on defining the scope and the requirements. The overview of the proof of concept is as follows:

- Cameras on the drone relay live data to the Google cardboard user
- Using sensors to collect data on height, chemicals, gases, movements
- Using GPS coordinates, overlaying a map (using Google maps) with information based off the data collected
- Using computer graphics to read the data and relay it onto the map as interpretable information for the users.

Problems to be resolved

We will need to meet up with group 1 of the project who we are collaborating with, Garret May and Hekla Helgadóttir, to split the work between us and decide who will be working on what aspects. Once we have enough research we will need to clearly define our scope.

Plan for upcoming weeks

To get started with this project we need to conduct our initial research. This includes:

- Researching the Google API for the cardboard, such as how to handle/view a video, video processing, and how to read data collected by sensors onto the cardboard.
- Using the Google Maps API to collect GPS coordinates and plot information on the map accordingly
- Researching if similar projects exist. If so, what aspects they have developed, what similarities and differences they have to ours so we can improve our proof of concept, etc.

This research will help us identify the scope of our project and define requirements, which will lead to a division of the work between the four members.

Finally we need to communicate the hardware we will need for the project by November. It seems the drones we have now, Phantom and ___ might not be suitable for attaching go-pros, raspberry pi's and sensors due to size constraints.

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As this is the start of the project, over the last two weeks we have organised client meetings via email.