MST Google Project 2 – 24/03/16

Daniel Eldar, Carla Hyenne

Overview of previous week

The past two weeks have been productive and we have made progress: the separate functionalities are starting to come together. Further parts for the sensors were ordered and should arrive in April, which will hopefully provide enough time for us to include them to our project.

Meetings

18/03/16

Attendees:
Garrett May, Carla Hyenne, Daniel Eldar, Hekla Helgadottir
Aron Monszpart (TA)
Dr. Yun Fu

Overview:
Meeting with Dr. Yun Fu to demonstrate the progress on the app. We had a long discussion about the design of the UI and how best to display the graphs, sensor data and video footage to meet MSF's requirements while making the best use of the Google Cardboard.

22/03/16

Attendees:
Garrett May, Carla Hyenne, Daniel Eldar
Aron Monszpart (TA)

Plan for the upcoming weeks

With a month left until our final demonstration, here are the tasks we need to complete within our team:

- Gather GPS data and send it through the server, so the OpenStreetMap code can use it to retrieve a relevant map image.
- Link the sensor data collected to the graphs in the UI.

- Improve the UI so it makes best use of the Google Cardboard and at the same time fulfills MSF requirements.
- Set up a server for production, and connect the drone data/video, map queries, and front-end.
- Complete the website with documentation and demonstration of our project. Information we need to include are instructions on how our project can evolve, such as creating an API for further use for example.
- Write a short, publishable paper on our project.

We have also set up a meeting early in April with our clients to show them our progress and get feedback one last time until our final deadline.

Work Packages Completed

Carla Hyenne

Over the past two weeks I have managed to install Mapnik, the API used by OpenStreetMap to render map images from XML data or Shapefiles. Now I am able to pass a map file and retrieve an image. By passing GPS coordinates we should be able to get a more centralised image; by passing certain attributes (such as roads, highways..) or XML style files we can display different versions of the map. I implemented the Mapnik module in Python, and it also works with node.js so the next step is to decide on which language is best suited for our case.

Daniel Eldar

During the last 2 weeks I worked on overlaying a 3D arrow on top of the camera input that the phone will receive. At the moment, it is overlaid over data given from the camera on the phone which we will swap with the drone camera input once it is ready. They are of the same type as the general GUI to make the application more modular and easier to expand. Furthermore, the arrows move depending on the GPS coordinate of the drone which means they will automatically move depending on where the drone is in relation to the landmark the arrow is pointing at.