# Personal report

I want to report on my own work which I have done on behalf of this project. After we finalized our subject: “Geographical data of BitCoin transactions”, we divided the work as follows: Ruud would research what data we could visualize and I would research how we could visualize it. We also did a lot of research in how the bitcoin system really works and have read the [original paper](https://bitcoin.org/bitcoin.pdf) about it.

I started with investigation how Google maps API works and discovered all features that are available through the version 3 API. Not only the basic one like markers but also the advanced functionality like layers and fusion tables. I have set up a GitHub project so that we could better cooperate together.

After that I did the first four visualizations for the transaction verification part:

1. Heatmap
2. Markers
3. Grouped markers
4. Countries

The Country part was very challenging because I had to use the Google database to select each country with SQL code. Thereafter to draw the extracted layers on the map. I linked each country from this database to a country that was extracted while transforming an IP address to a Lat/Long location. That did not correspond 100% but I fixed the differences. After that we manipulated the layer to change the color which resulted in this in my opinion fantastic manipulation. See also a little legenda block as bonus.

After that I did the information retrieval part of the transaction propagation part, extracting all IP’s for three examples. I did offline because this data could not be extracted real-time because of BlockChain API limitations. Other ways we could link the data from first two and third part.

I have also been responsible for setting up the code structure and realized that the real-time data retrieval can continue while the visualizations can switch over and back. Then we tuned the presentation of the project and I have written the about page.

I have enjoyed working on this project and I think that we divided the work equally because we have worked on it almost always together.

I am looking forward towards the presentation and a great mark.

Kind regards,  
Karens Grigorjancs