ATOS BLOCKCHAIN

Bi-Weekly Report: Issue 2 – 28/10/2016

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MEETINGS HELD. PROJECT COMMUNICATION

- 13/10 /2016 – Lab session & meeting with Prof. Philip. After discussing more ideas with the team, we were called in Prof. Philip's office to discuss a possible project with Team 13, as well as any problems or questions we had.
- 14/ 10/2016 – Skype call with client, John Hall. Our team explained the idea we had discussed the previous day with the client. We then discussed similar and alternative solutions as well as any progress we've had on our research.
- 17/10/2016 – Team meeting. We went over the ideas we had so far, and chose the one that seemed the most interesting. In addition we went over the process that would be necessary to ensure that this project would work and how realistic it is.
- 20/10/ 2016 – Lab session. We continued our research in blockchain and Ethereum.
- 21/10/2016 – Skype call with Prof. Philip. We suggested our idea to Prof. Philip, and agreed we would proceed with this since it seemed interesting and very useful. When asked about the feasibility, Prof. Philip said it's a realistic project that can be achieved by the delivery date.
- 27/10/2016 – Lab session. Hirsch and the team discussed our idea and broke it down to see the technology we would need. He also gave us resources to study Ethereum and Solidity, as well as suggestions on what we should do next.

Besides the previously mentioned meetings, several discussions between the team members have been conducted using electronic means of communication such as Microsoft Skype and Facebook Messenger.

RESEARCH CONDUCTED

After understanding the concept and functionality of blockchain, we had to look into any available platforms that support the technology. In addition we had to look into other technologies that would help shape our idea into a project.

The following content was researched:

1. Ethereum – What is Ethereum, how it's different to other technologies.
2. Smart Contracts – What are smart contracts, functionality.
3. Use of Blockchain and Smart Contracts in the real world, how they would help decentralize different processes.

Studying these topics we became more aware of what each technology does and how we would combine them to create something useful.

PROGRESS MADE

We have agreed on the project we will be creating:

Using smart contracts and blockchain, we will create a system where customers can choose certain information to exchange with companies. Using this system, the privacy of users won't be infringed by having all their data collected and used by companies for their own purposes. Each customer would be able to select what he wishes to be shared with a certain company (perhaps for something in return), and both parties would sign a smart contract to ensure the agreement and automate the data collection process.

Concerning requirements, our client at ATOS did not specify any. Instead we were asked to come up with the project ourselves, set our own requirements, and adjust them as necessary. Even though we've discussed what the basic requirements should be, we have not yet confirmed anything since we believe that more research is required to get a better idea of the feasibility of the project, and set a reasonable scope of difficulty.

PROBLEMS ENCOUNTERED

A problem we discovered is that we can't store an actual contract on the blockchain because it would require great amounts of memory as well as processing power. To resolve this we will have to hash the contracts and keep the hashes on the blockchain, while encrypting and storing the actual contract files on an external database.

FUTURE PLAN

- Continue the research into the Ethereum platform.
- Research the Solidity language that is used with Ethereum.
- Start running tests on Ethereum, for example transferring ether between accounts.
- Agree on the final project idea with the client, as he is away right now and unable to talk via Skype.
- Establish requirements.
- Create project website.

PERSONAL EFFORTS BY TEAM MEMBERS:

Andreas:

During the past two weeks I've been researching blockchain, the Ethereum platform and smart contracts, trying to understand how they work and how they could be used in real life situations. In addition I've been trying to set-up a bitcoin wallet in order to further expand my knowledge on smart transactions, and have attended a bitcoin and blockchain seminar by Dr. Nicolas Courtois which helped shaped my view of the technology in general. Lastly I was responsible for contacting the client, tutors and project supervisor in order to arrange meetings or report our progress.

Charles:

In these two weeks I've been contributing to the shaping of our final goal. We had many meetings discussing our final project's aim, and we are starting to get to something. Yet, we are still quite unaware of the technologies involved in the making of this idea so, like my other team mates, I've been researching technologies about blockchaining. The main focus was on Ethereum: whether this was the most efficient

platform to base our project on and how to fully take advantage of it. In the end we all agreed that this service was the best one. At this moment, since we had a solid starting point, I was put in charge of developing a website to present ourselves and the project. For this I am using basic HTML, CSS and Javascript technology with the Bootstrap framework. The site is at a good point but still needs more work. Therefore my main objective for the next two weeks is to finish the website and continue doing research into Ethereum and the technology underlying smart contracts.

Gabriel

Just like my other team mates , I have spent the last two weeks brainstorming and researching different techniques and technologies to get a better understanding of Blockchain and smart contracts. The main objective of the past two weeks was discussing the project's basic requirements, following with more detailed ones in the following two weeks. We have also divided future tasks and I was in charge, together with Andreas, to research Ethereum and to start learning how to program for it.