Bi-Weekly Report 1

Atos Blockchain Team 3

George Pîrlea, Alexis Enston, Danish Alvi

October 4, 2016 – October 12, 2016

1 Overview

In the past two weeks, we have done general research around blockchains and their applications and came up with a few possible ideas for our project. Our goal is to develop a concept of an application based on blockchain technologies that has the potential to disrupt conventional business models.

Our concept so far is an application to store records of people's education and work experience in a decentralised fashion. Academic certificates, work references and more would be authenticated on the blockchain by the issuing authority.

We have set up communication within the team and with the client on Slack, assigned team roles and created a shared drive for storing resources and documents.

2 Meetings

Oct 10: Meeting with Mike Smith, CTO of Atos

Attendees: Mike Smith, Paul Moore, UCL Blockchain teams

- We are taking part in the Atos IT Challenge, an international competition which this year focuses on blockchain technologies
- Competition will have 15 finalists, and potential prizes for the top three teams
- Come up with an innovative concept for an application based on blockchain technologies that shows how the principle of secure, public ledgers can be used to disrupt conventional business models.
- Problem we tackle should require a blockchain to be solved and involve more than one party, ie not an application internal to a company
- Could use Azure's Blockchain as a Service or host on Atos infrastructure
- Agreed Skype call with our client, Paul Moore, to discuss further

Oct 10: Skype Call with Paul Moore

Attendees: Paul Moore, Alexis Enston, Danish Alvi, George Pîrlea

- Clarified the scope of the project: any blockchain based innovation with a business impact is within scope, not only those related to communication & secure messaging
- Set up a face-to-face meeting for Thursday, 13 October

Oct 11: Brainstorm project ideas and assign team roles

Attendees: George Pîrlea, Alexis Enston, Danish Alvi

- Various ideas discussed: decentralised identity, crowd insurance claim validation, smart contracts, blockchain property rights, peer-to-peer lending/microfinance, distributed file storage
- Two main ideas emerged:
  - a peer-to-peer messaging app with identities and message proof-of-receipts stored on a blockchain
  - a decentralised record of real life identities that have verified academic certificates and workplace references associated with them, stored in the blockchain as a curriculum vitae
- Assigned roles:
  - George Pîrlea: Team Leader, Client Liaison
  - Alexis Enston: Deputy Team Leader, Technical Lead
  - Danish Alvi: Chief Editor, Chief Researcher

Oct 12: Administrative meeting

Attendees: George Pîrlea, Alexis Enston, Danish Alvi

- Planned the structure of the bi-weekly report
- Expanded on the decentralised curriculum vitae idea: identity verification, certificates potentially implemented as smart contracts, employer references
- Tentative name: “Bitkariero”
- Researched potential options for implementing various components

3 Plan for the next two weeks

- Meet client to discuss and extend project idea
- Present initial analysis of literature findings to client
- Agree on requirements and write formal requirements document
- Create project website for client, TAs and supervisor
- Write report summarising strategies, ideas, tools, methods

4 Individual Reflection

George: After the teams list was published, I talked with the other blockchain team leaders and set up a joint Slack for all of us, with private channels for the different teams. I've also done wide but shallow reading around blockchain and ideas related to it (Bitcoin, PPCoin, Multichain, Factom, Kudos, Mini-blockchain, Ethereum etc.) to get an overview picture of the field. As team leader, I coordinated communications both within the team and with the client.

Alexis: Over the past two weeks I carried out research into blockchains and their applications, and existing solutions using blockchains including cryptocurrencies such as Bitcoin, and newer more complicated blockchain technologies like Ethereum. I took part in the Skype meetings with Mike Smith from Atos, and with Paul Moore, our client. Following on from this I took part in team meetings to come up with ideas for our project, based upon the research carried out and the meeting with the client. As part of the organisation of the team I have taken on the roles of deputy team leader and technical lead.

Danish: The blockchain technology was an entirely new revelation to me so it took me a while to catch up with understanding how the distributed database of signatures works. I read many texts associated with the Bitcoin technology such as the Satoshi Nakamoto paper and read more about how digital signatures work using hashing. Given the vast array of ideas and possible implementations of the blockchain, it was a difficult task to choose from all the most innovative, relevant, and applicable idea for the project. We spent a lot time consolidating the project idea and we finally came up with "Bitkariero" a decentralized identification service based on the blockchain.