

# **REPORT ON: DEVELOPING BLOCKCHAIN SOLUTIONS BEYOND CRYPTOCURRENCY**

**Speaker:** Karan Motwani, Starbucks Coffee Company

**Blockchain** is the latest technology which has boomed exponentially in the past year. A block chain is a continuously growing list of records, which are linked and secured using cryptography. Each block typically contains a cryptographic hash of the previous block, a timestamp and transaction data. It is an open, distributed ledger that can record transactions between two parties efficiently and in a verifiable and permanent way.

The speaker started with explaining how the block-chain process works. He also explained how the peer-to-peer secure distributed networks works and contributes to the process of the blockchain. The 5 main attributes of blockchain are: Trust, Shared, Temper Proof, Security and Traceability.

With the help of example, the speaker presented and explained the technology and functionalities which the blockchain uses. The main feature which it uses is a distributed ledger to track the transactions. This was the technology which was designed to powered the bitcoin currency. I found that although the example which the speaker uses was a great example but the concept still remained a bit blurred to me.

It is called a block chain because, all the transactions made are connected with a chain of blocks. The transaction chain helps in tracking when there is change in the ownership while the block chain tracks the order of transactions.

He also explained the 3 types of networks which are used mainly for this distributed system. The 3 network types are: Public, Private and Consortium. He also elaborated on what all things should be kept in mind. Some of these considerations are: Images should not be kept in the block chain.

Block chain is a technology which cannot run without the other aspects of the system. Every new technology needs the supports of other departments of technology to work efficiently and effectively. The main architecture of the blockchain system are: architect who designs the solution, the security team which authenticates and authorizes the security, blockchain users who submit the transactions to the ledger, developer who creates the applications, traditional systems(ERP) which helps in moving the data and lastly, the network operators which helps in deciding as to which network is the best for which type of system.

The speaker provided many scenarios explaining how and when the blockchain technology can be used. He gave a great example of factory and carriers to the retails store and how it reaches the customers. He spent quite some time in explaining this concept.

After explaining the process and technology, he speaker did not fail to tell about the challenges which this technology faces. The 3 main challenges: TPS i.e. the ledger created lacks the performance, confidentiality; Smart Contracts and Integration. This is because there are challenges to include the block chain which the existing IT architecture. These were some of the points which the speaker presented. He seemed extremely experienced in this domain, yet I feel I am still not sure of the concepts.

After attending this talk, I am still confused with the technology and the features of it. The speaker started on a great note and I personally understood a lot better in the beginning rather than the end.

The speaker did not pay much attention to some of the concepts but rather was engaged most of the time in answering the queries of other students, which is a good thing, but this led to loss of time in explaining some of the major concepts. It was because of the time scheduling. If there was a bit more time for the talk, it would have been much better. I was very interested in attending this talk as bitcoin had increased so much and I wanted to know the technology behind it.