



Why Using Blockchain?

A quick guide on the advantage of using Blockchain...

What is Blockchain



History

- 1991: Description of the first work on a cryptographically secured chain of blocks
- 2008: The first blockchain was conceptualized by a person (or group of people) known as Satoshi Nakamoto. The project is called “BitCoin”, and considered as the Blockchain 1.0.
- 2013: Vitalik Buterin describe Ethereum, considered the Blockchain 2.0.



What is it?

- A blockchain is a growing list of records, called blocks, which are linked using cryptography.
- Each block contains a cryptographic hash of the previous block, a timestamp, and a transaction data (generally represented as a merkle tree root hash).
- By design, a blockchain is resistant to modification of the data.

What is Blockchain?

A database or a ledger that maintains a continuously growing list of data records or transactions.

So, it's a spreadsheet, like Excel?

In a way yes, but it has special qualities that make it better than traditional databases.



SHARED PUBLICLY

Servers, or nodes, maintain the entries (known as blocks) and every node sees the transaction data stored in the blocks when created.



DECENTRALIZED

There is no central authority required to approve transactions and set rules.



SECURE

The database is an immutable and irreversible record. Posts to the ledger cannot be revised or tampered with – not even by the operators of the database.



TRUSTED

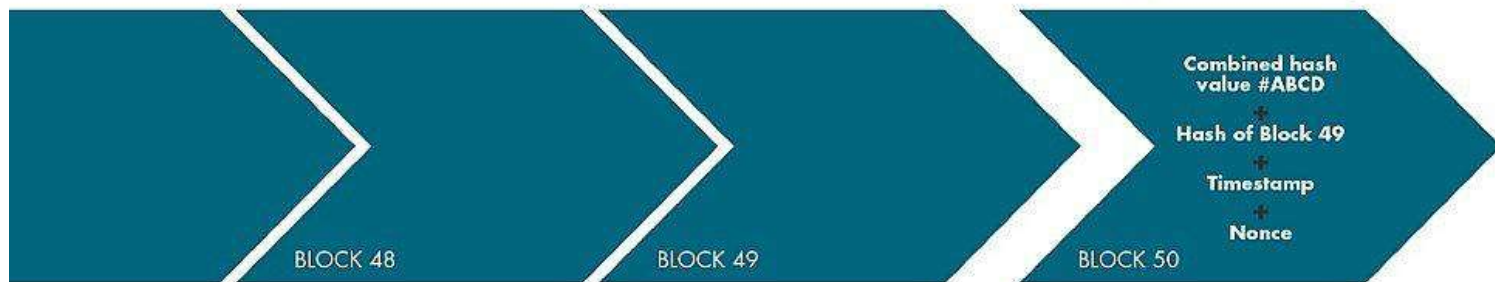
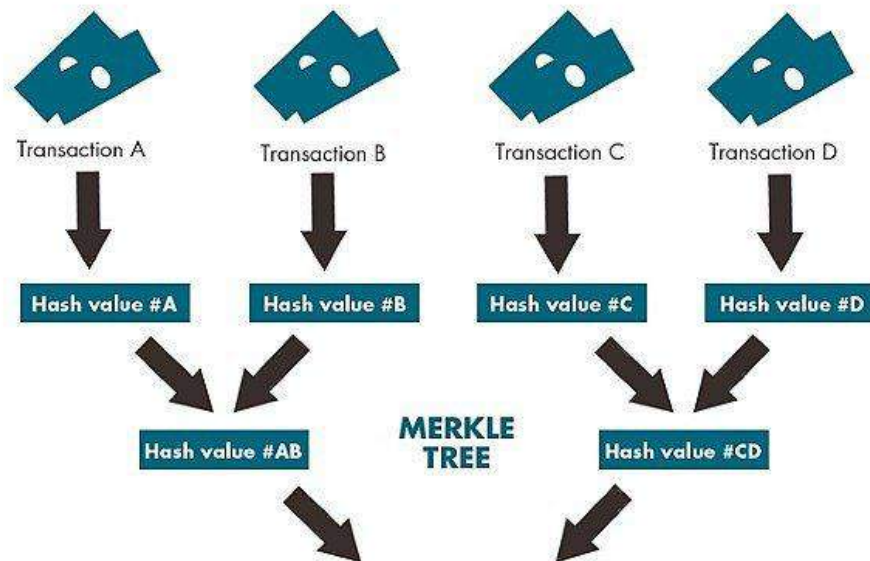
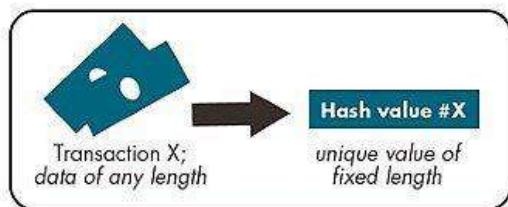
Distributed nature of the network requires computer servers to reach a consensus, which allows for transactions to occur between unknown parties.



AUTOMATED

The software is written so that conflicting or double transactions do not become written in the data set and transactions occur automatically.

HOW THE BLOCKCHAIN WORKS



What are the advantages of Blockchain?



1- No single point of failure

Blockchain relies on top of a network of computer, not 1 single computer.

the software cannot be shut down.

Even if you take out the plug of the server, the system will still be running.

This will make sure for your customer that they will never lose their transaction record, ever.



2- unhackable

in the case of a centralized system, if a hacker hack the server can has access to everything and therefore he can do whatever he wants.

With Blockchain, the hacker has to hack at least 51% of the computer on the blockchain to do harm at the same time (very unlikely)



3- Trust

with blockchain, everyone has a encrypted copy of all transactions from everyone in the network
therefore they don't have to trust one company to make sure of the exactitude of the data.



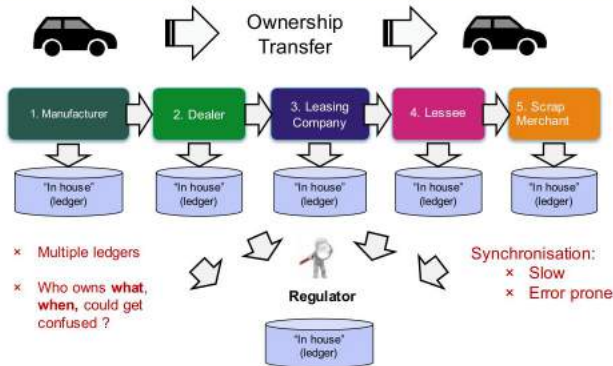
4 - Immutability / audit trail

When you write data to a blockchain, it's like etching the data into stone.

Once it is written in the blockchain, it can never be deleted or modified

Without Blockchain

Car Leasing Business Network

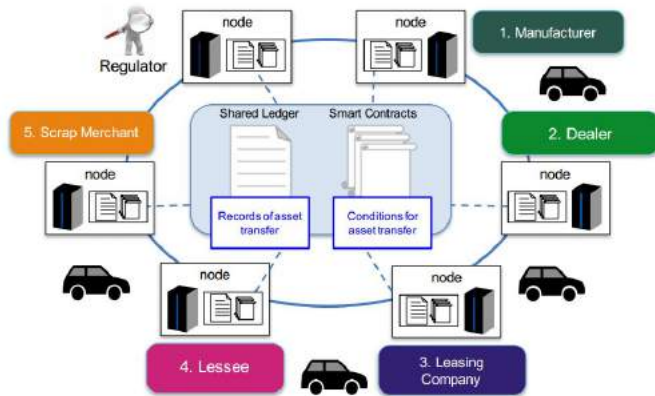


No system are integrated between themselves

The trust relays that each parties believe that the other party does not lie

With Blockchain

Car Leasing Business Network with Blockchain



Every Stakeholder has access to the same records of everyone

Which Blockchain should I use?

Applications

Platform:

eris
INDUSTRIES

 Chain


BLOCKAPPS

 enigma

Processing:



- *Business Logic*

File System:

 IPFS

- *Large Files / Media*

Database: **BIGCHAIN**^{DB}

- *Transactions, Certificates, Contracts and Receipts*
- *1,000,000 writes/s*



Not one blockchain, but several...

- Bitcoin: the first blockchain technology used as a cryptocurrency
- IPFS (InterPlanetary File System): to store big files on a decentralized system
- BigChainDB: for a fast and queryable database / blockchain
- Ethereum: the blockchain for Smart Contract and business logic store in algorithm
- Hyperledger: enterprise grade and permission based blockchain
- Ripple: to send money around the world using Blockchain
- HyperLedger Fabric: Supply chain transparency
- IOTA: Machine to machine payments
- Lisk: to build blockchain application

Question?

Michael Fabing

mfabing@novusteck.com

<http://novusteck.com>

