Cryptocurrencies and Blockchain

The impact of a decentralised financial system

What is Cryptocurrency?

- Cryptocurrency is a form of digital currency which uses encryption techniques to regulate the generation of the currency and verify the carried out transactions.
- The prime reason for creating such a financial concept was to eliminate the centralized banking system which holds the records of all the carried out transactions.
- Cryptocurrencies provide an outlet for personal wealth to be expended without any restriction or confiscation.
- Bitcoin was the first cryptocurrency that came into existence.

Bitcoin - The First Decentralized Currency

- Bitcoin is a cryptocurrency and a worldwide accepted payment system invented by an unknown programmed or group of programmers named ‘Satoshi Nakamoto’.
- The payment system is peer-to-peer and transactions take place directly between the payer and the payee without any centralized system keeping track of the transaction.
- The transactions are verified by distributed nodes all around the world and recorded in a public distributed ledger. This ledger is called a blockchain.

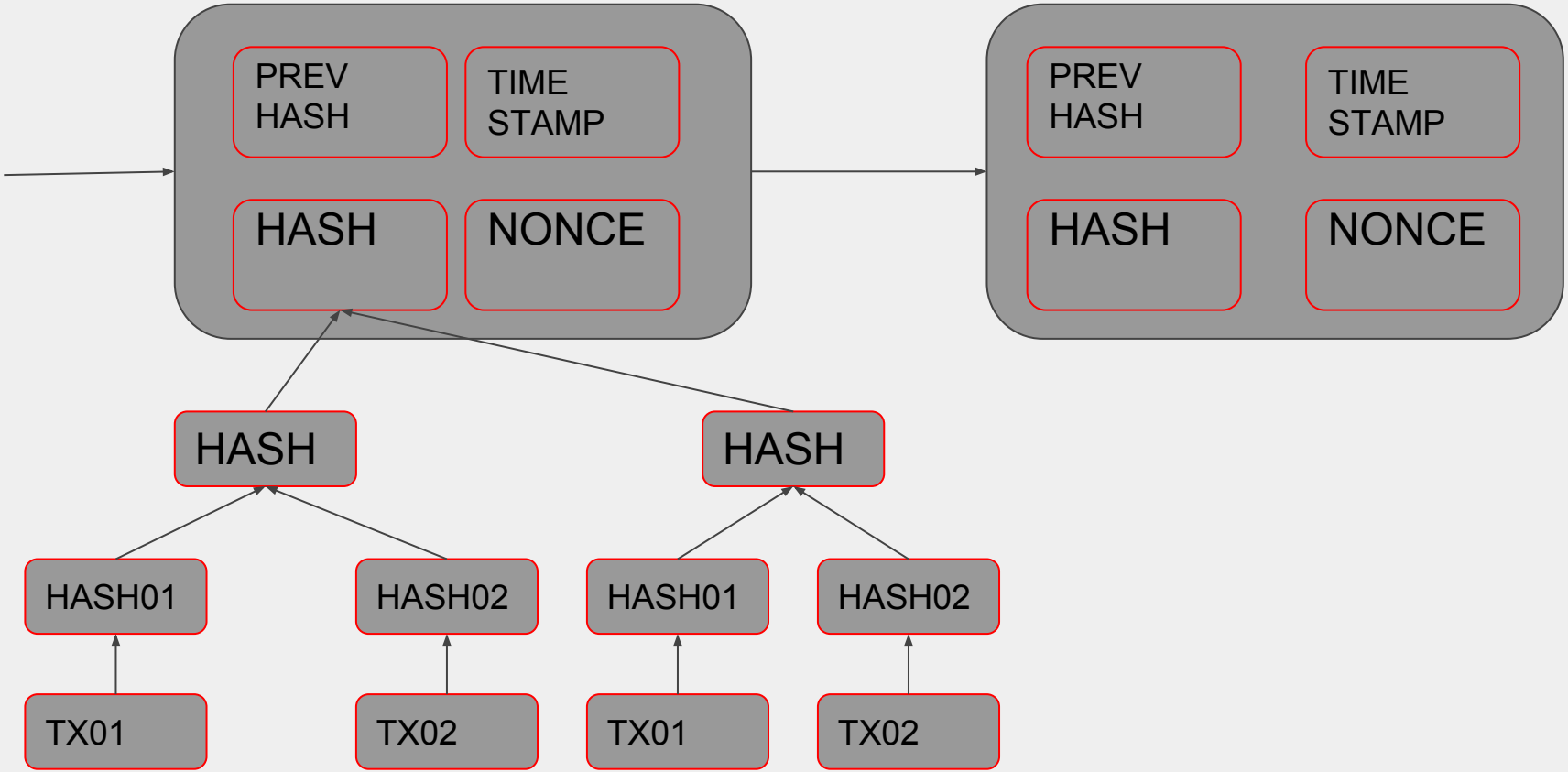
Design and Structure of Bitcoin

1. Blockchain Technology - Used in the public ledger system

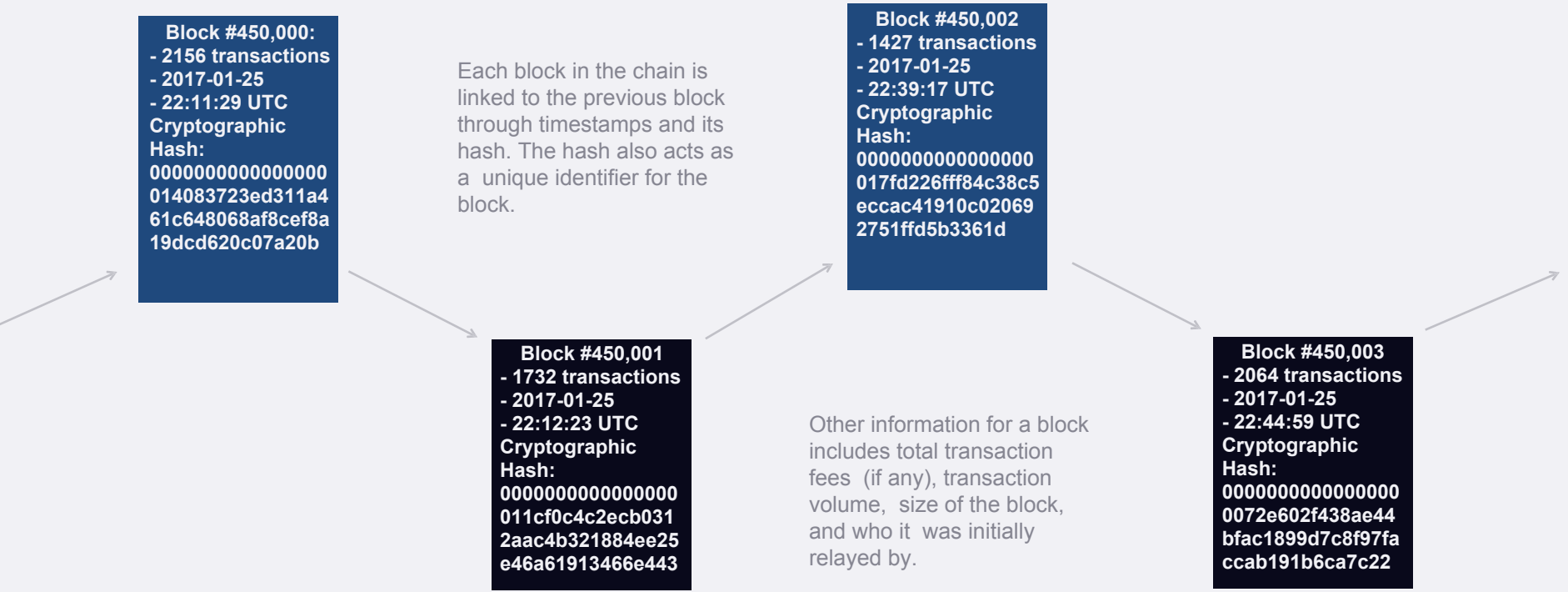
2. Bitcoin Mining

3. Bitcoin Wallets

Blockchain Implementation in Bitcoin



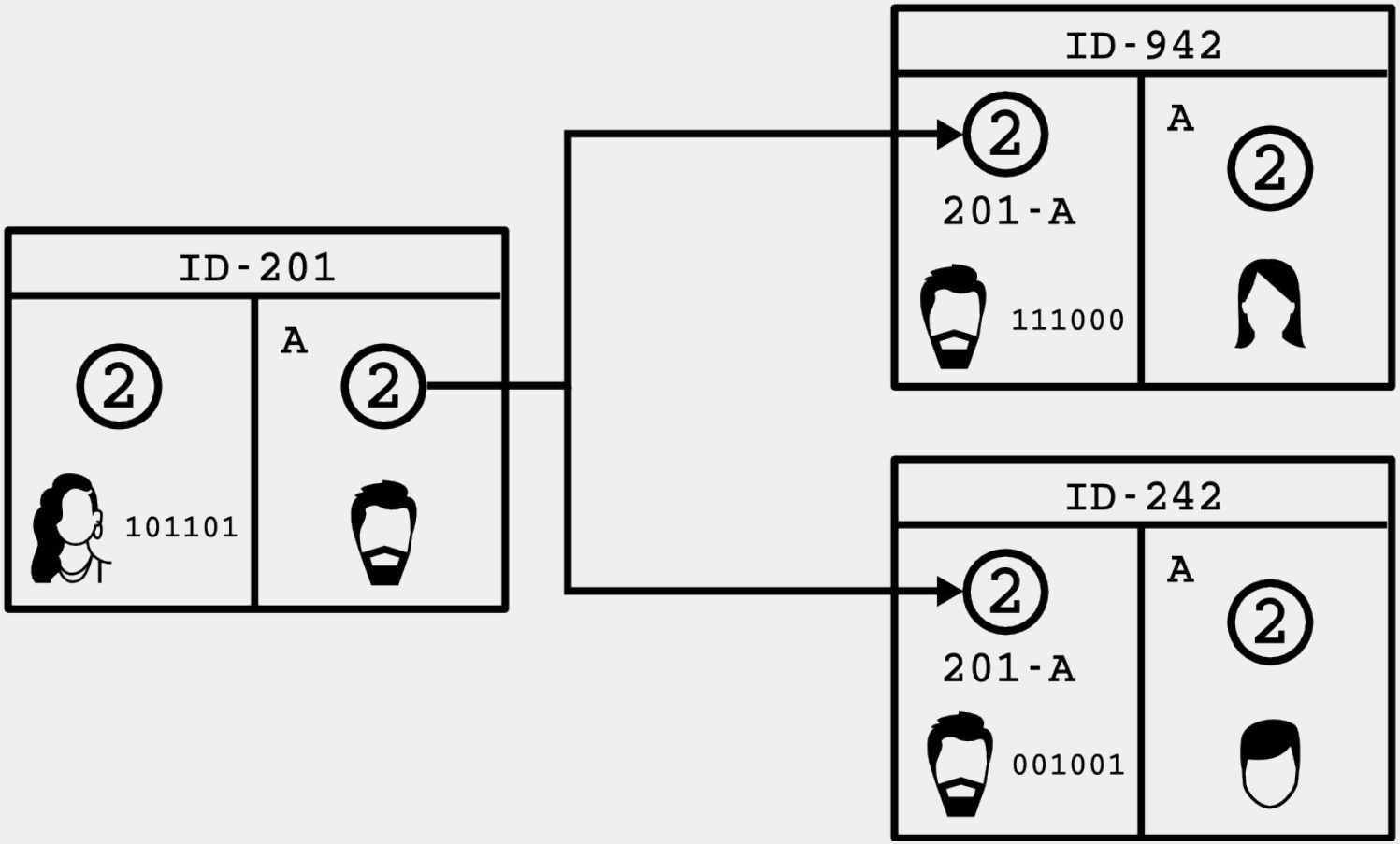
Visualisation of Blockchain



Decentralization Achieved By Blockchain

- In case of the public ledger, the data of all the transactions that are being carried out in the world is distributed across the network and not held locally on a centralized database.
- Every node or miner in a decentralized system has a copy of the blockchain. Data quality is maintained by massive database replication and computational trust.
- All the transactions are validated by nodes across the world and then after the validation,are added to the blockchain. The updated ledger is then shared with the other nodes across the world. The miners who validated the transaction,are given a proof-of-work.

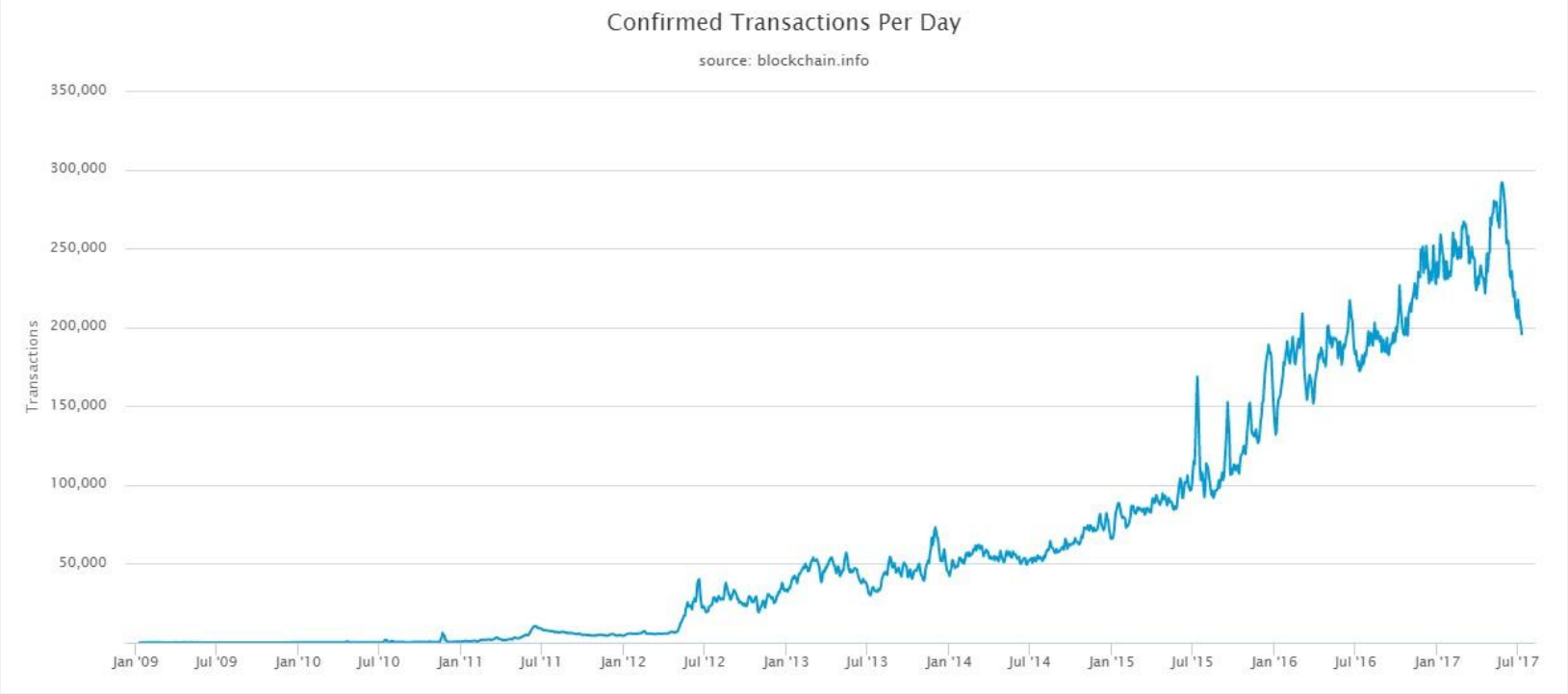
The Problem of Double Spending



The Pros and Cons of Blockchain

pros	cons
Cheap transactions Near-instant	Require large amounts of energy
Easy-to-verify transactions	Higher initial costs
	Completely redefines how traditional systems work, so a full transition will be difficult
Decentralized; no institution or government is in control of the network	Generally harder to understand than the current norm
A robust, trustless, and secure medium of exchange	Regulatory status is vague and constantly changing

Bitcoin Transaction Analysis



Other Popular Cryptocurrencies

Ethereum

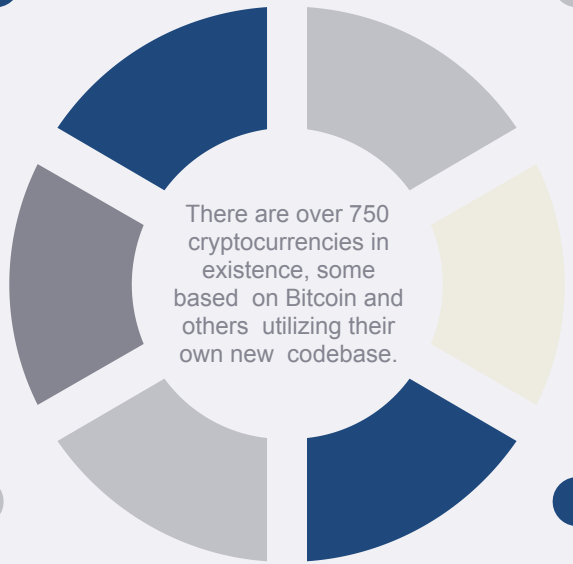
While not intended as a currency in itself, the Ethereum platform allows for distributed computing, tokenization, and smart contracts.

Ripple

In a sense redefining cryptocurrencies on its own, Ripple acts as a real-time gross settlement system, currency exchange, token system, and remittance network

Litecoin

Bitcoin's first real competitor, Litecoin is based on Bitcoin's code with major changes including a different hashing algorithm for mining, shorter block time, and larger total supply.



Monero

A currency aimed at providing truly anonymous transactions, Monero differs from many other privacy- centric coins by not being based on Bitcoin's code.

BitShares

With more traditional financial services in a decentralized manner, BitShares supports user- issued assets, price-stable cryptocurrencies, and controls for a corporate environment, among other features.

Peercoin

While it has declined in popularity over the years, Peercoin was one of the first
real hybrid currencies featuring a network with a simultaneous PoW/PoS scheme.

Legality of Cryptocurrencies Worldwide

Other Uses of Blockchain

Storj.io

Decentralized Cloud Storage

While there are other similar projects, Storj is a popular initiative aiming to create a decentralized cloud storage network. This network is distributed, blockchain-based, and end-to-end encrypted.

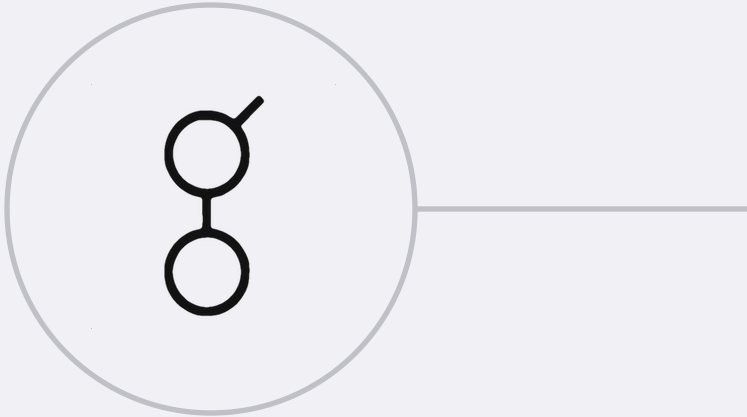
It works by any user with idle storage space on their computer being able to rent it out to a network. In turn, someone looking to store anything in the cloud can pay this storage provider to store their information. This creates a cloud storage solution that potentially is cheaper, harder to take down, and encrypted.

Golem

Worldwide Supercomputer

Golem aims to create a decentralized supercomputer utilizing the collective power of users around the world with idle machines. It can be accessed by anyone to compute just about any program one can imagine.

In turn, users that rent out their computing power are compensated for their resources. This results in the creation of an inexpensive and decentralized sharing economy.



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Thank You

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