



Blockchain simplified and explained

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What is blockchain?

Let's start with an explanation of what blockchain is.

It is basically a growing list of records, called blocks, which are linked using cryptography (secure coding). Each block contains a cryptographic hash of the previous block, a timestamp, and transaction data. By design, the data in a blockchain is very difficult to modify. It is "an open, distributed ledger that can record transactions between parties efficiently and in a verifiable and permanent way".

For use as a distributed ledger, a blockchain is typically managed by a peer-to-peer consensus type network which collectively, following a protocol, use 'inter-node' communication and validating for new blocks. If it's not consensus based then it's through a trusted central authority. Once recorded, the data in any given block cannot be altered retrospectively (without consensus or changing subsequent blocks).

To be fair to lawyers, they are not the only ones struggling to understand the why and how of blockchain. I think the reason is the lack of understanding around the technology but more importantly, people just cannot see how it is relevant to their business or industry and what the benefits are over existing processes.

The primary users will be businesses or industries concerned with product provenance or where they want to achieve increased transactional speed and / or reduced cost by cutting out middle men through automated verification. That's a lot of potential.

Where can blockchain be used?

To make this practical, here are some use cases for Blockchain I have come across which are at planning stages or which are actually in being used in a private blockchain:

1. Diamond tracking provenance e.g. to verify non conflict diamonds.
2. Perishable produce tracking for a US multiple e.g. to underwrite an 'organic' label.
3. Royalty collection for artists via Spotify;
4. Property transactions in the US;
5. Carbon Emissions trading;
6. Buying/selling shares in PLC's to avoid transactional fees;
7. Ingredients provenance in pharmaceuticals.

Developing a blockchain for your business or industry will be a slow and expensive process. IBM and the likes are the front runners in designing the framework and the necessary coding. Consequently your business or industry will have to have scale or very expensive products that make the undertaking worth it. That or wait for 10 years for the price of Blockchain coding to come down.

| Is blockchain secure?

Is anything secure? Not quite. It could possibly be hacked but with great difficulty. The hacker would apparently be better off compromising your digital wallet than trying to unpick the blockchain - but who can vouch for that.

There is a lot of hype around blockchain - some deserved, some not. However, there is no going back. It might well be more disruptive than the internet was. Wow!

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