BLOCKCHAIN AND IOT

DONE BY,
K.SASI KIRAN
MCA(R)
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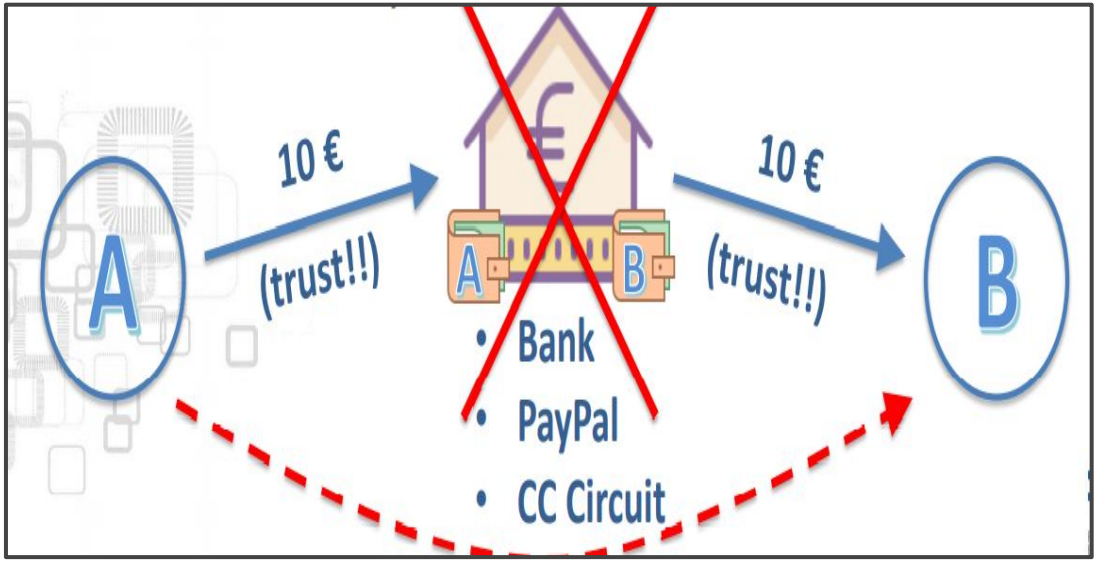
ORIGINS OF BLOCKCHAIN



➔ 2008, Satoshi Nakamoto

➔ Core component of the digital currency

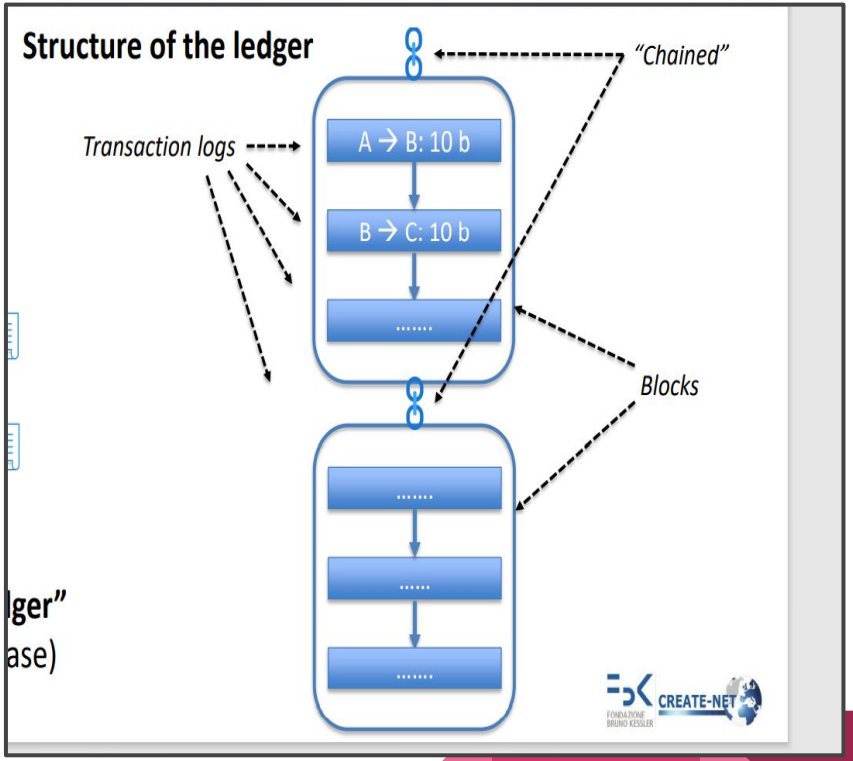
➔ The problem:

– How to perform digital currency transactions between users directly, without an intermediary

HOW DOES BLOCKCHAIN WORK?

Blockchain is a combination of three leading technologies:

1. Cryptographic keys
2. A peer-to-peer network containing a shared ledger
3. A means of computing, to store the transactions and records of the network



BLOCKCHAIN IN IOT:

- **As Internet of Things applications are by definition distributed it's only normal that the distributed ledger technology, which blockchain is, will play a role in how devices will communicate directly between each other .**

- **Blockchain is designed as a basis for applications that involve transaction and interactions. These can include smart contracts or other smart applications that support specific Internet of Things processes. This way blockchain technology can improve not just compliance in the IoT but also IoT features and cost-efficiency.**

IOT - BLOCKCHAIN

Fig. 3. IoT without Blockchain

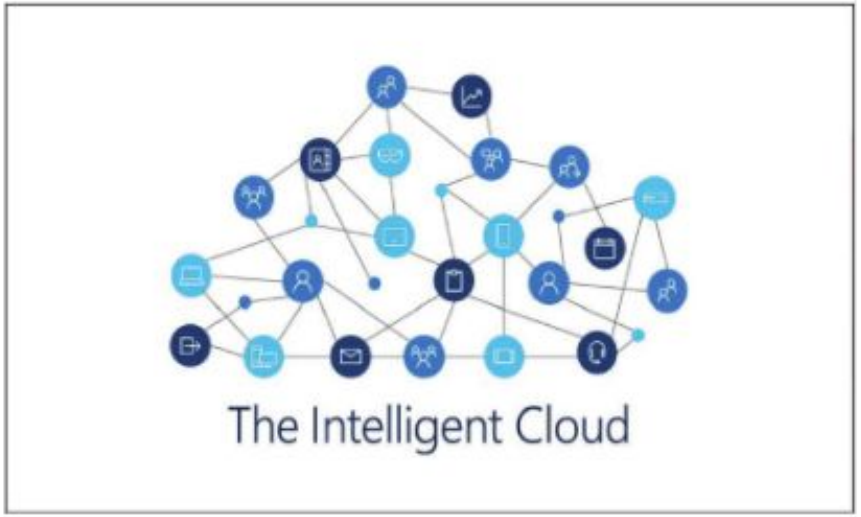
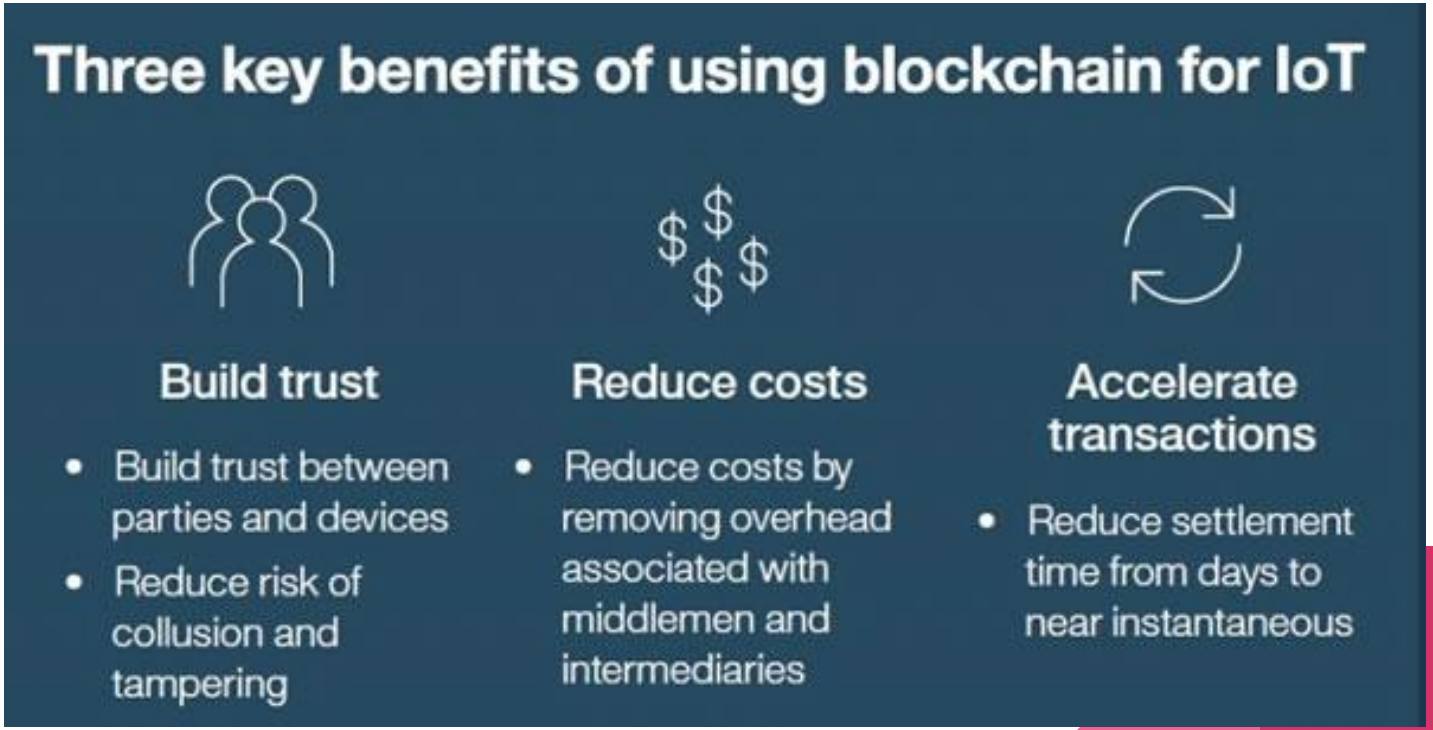


Fig. 4. IoT with Blockchain

Benefit of using Blockchain for IOT



Challenges to solve:

- **Technology**: whereby mainly security comes in the picture. In an Internet of Things context where IoT security is already a challenge, it's clear that security needs to be even more looked at.

- **Operational challenges**: the business model and the practical aspects as this requires many agreements and of course many actors too in a broad ecosystem.

- **Legal and compliance issues**: It refers to responsibility issues in case of actions that are taken by devices, based on a rule that is automatically executed by a blockchain-based application, triggered by another blockchain-based application

GAMECHANGER

Here's why blockchain is a **game changer** for IoT

Leveraging blockchain for your IoT data offers new ways to automate business processes among your partners without setting up a complex and expensive centralized IT infrastructure.

Blockchain's data protection fosters:

- Stronger working relationship with your partners
- Greater efficiency as partners take advantage of the information provided

Enable IoT devices to participate in blockchain transactions

Reimagine the world's most fundamental business interactions; open the door to invent new styles of digital interactions

Reduce the cost and complexity of operating sustaining business

Blockchain and IOT in Insurance:

The 5 practical blockchain use-cases in the insurance industry are-

1. Fraud detection
2. IoT & Blockchain together to structure data
3. Multiple risk participation/Reinsurance
4. On-demand insurance
5. Microinsurance

Blockchain as the answer to IOT challenges:

- Blockchain technology could provide a simple infrastructure for two devices to directly transfer a piece of property such as money or data between one another with a secured and reliable time-stamped contractual handshake.

- Blockchain technology promises to be the missing link enabling peer-to-peer contractual behavior without any third party to “certify” the IoT transaction.

- It answers the challenge of scalability, single point of failure, time stamping, record, privacy, trust and reliability in a very consistent way.


BLOCKCHAIN
and IOT

THANK YOU