

22 MAY 2010



Jeroen Bulters _
chief executive nerd

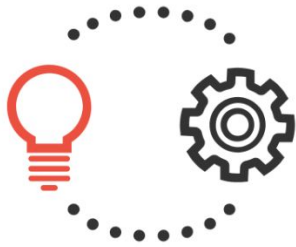
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nerd as a service _

CATTS.

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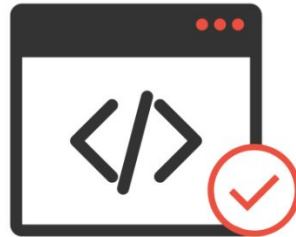
**Implementation
Support**



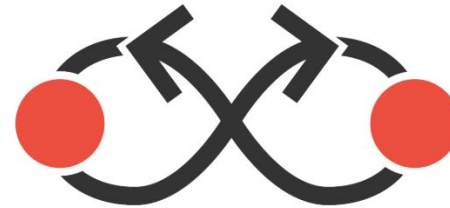
Quality Assurance



**Software
Engineering**



**Technical
Validation**



**Transaction
Services**

nerd as a service_

Beyond Blockchain_

Nerd as a Service b.v.

Pettemerstraat 7
1823 CW Alkmaar
Netherlands

Disclaimer:

There ARE technical inaccuracies in this presentation.

Blockchain is not simple.

I do NOT give financial advice.

Captain Phasma is misunderstood.

n_

THIS IS NOT THE SOLUTION

YOU ARE LOOKING FOR

What is Blockchain_

What can it do for me_

What's next_

Act 1:

What is Blockchain_



DigiCash team, 1994

STEVEN LEVY 12.01.94 12:00 PM

E-MONEY (THAT'S WHAT I WANT)

The killer application for electronic networks isn't video-on-demand. It's going to hit you where it really matters - in your wallet. It's, not only going to revolutionize the Net, it will change the global economy.

Wired magazine, 1994

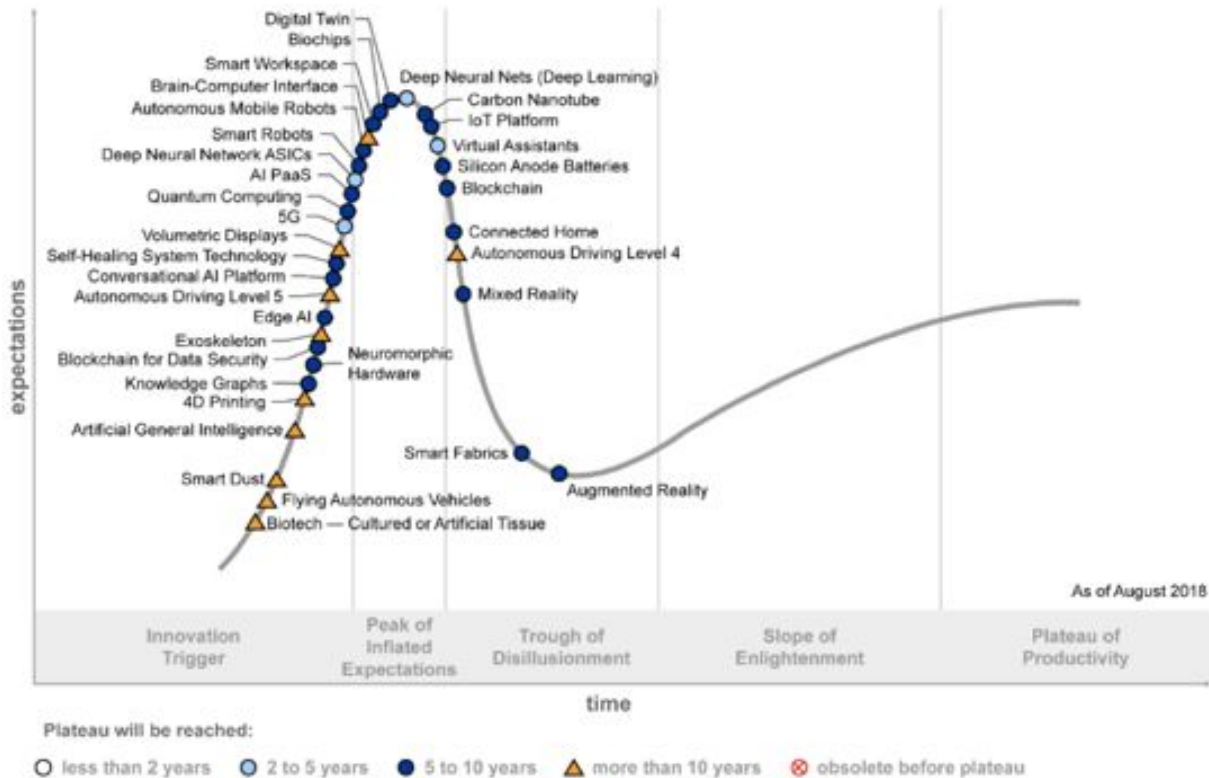
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Bitcoin: A Peer-to-Peer Electronic Cash System

Satoshi Nakamoto
satoshin@gmx.com
www.bitcoin.org

Abstract. A purely peer-to-peer version of electronic cash would allow online payments to be sent directly from one party to another without going through a financial institution. Digital signatures provide part of the solution, but the main benefits are lost if a trusted third party is still required to prevent double-spending. We propose a solution to the double-spending problem using a peer-to-peer network. The network timestamps transactions by hashing them into an ongoing chain of hash-based proof-of-work, forming a record that cannot be changed without redoing the proof-of-work. The longest chain not only serves as proof of the sequence of events witnessed, but proof that it came from the largest pool of CPU power. As long as a majority of CPU power is controlled by nodes that are not cooperating to attack the network, they'll generate the longest chain and outpace attackers. The network itself requires minimal structure. Messages are broadcast on a best effort basis, and nodes can leave and rejoin the network at will, accepting the longest proof-of-work chain as proof of what happened while they were gone.

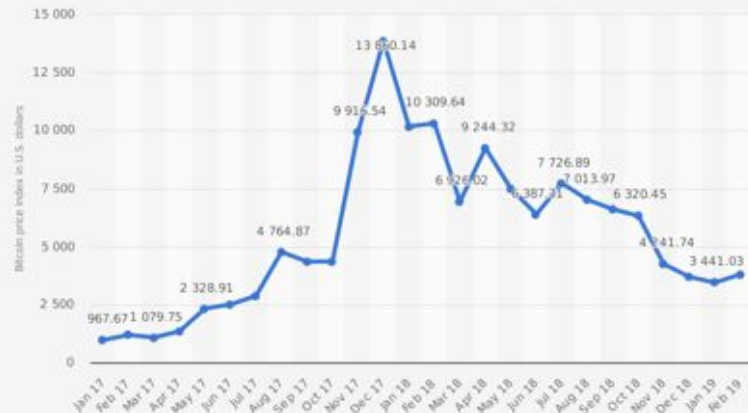
Bitcoin: A Peer-to-Peer Electronic Cash System, Oct 2008



Gartner Hype Cycle 2018



Bitcoin price index from February 2017 to February 2019 (in U.S. dollars)



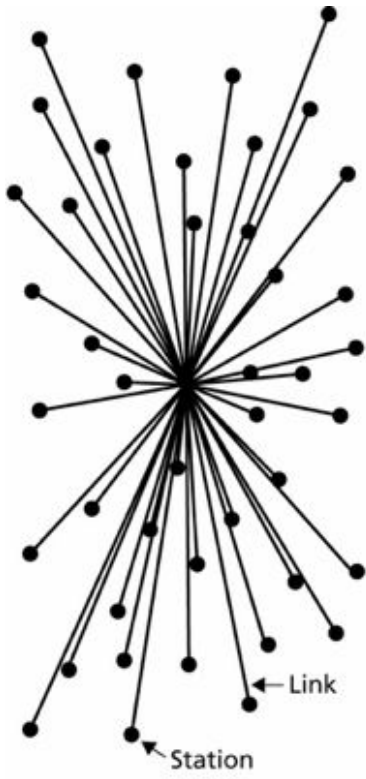
Source:
CoinDesk
© Statista 2019

Additional Information:
Worldwide, CoinDesk.

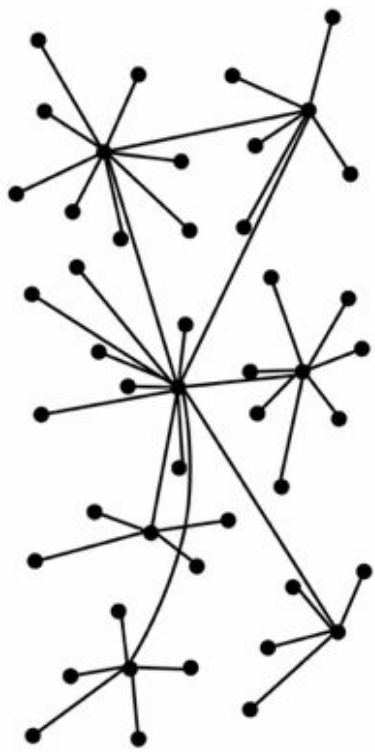
Hype-Cycle VS Bitcoin Price

**A distributed, cryptographically secure,
consensus driven, smart contract
facilitating ledger solution_**

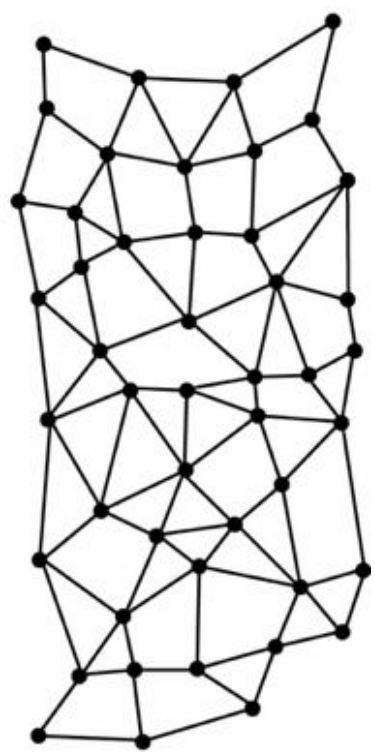
**A distributed, cryptographically secure,
consensus driven, smart contract
facilitating ledger solution_**



Centralized (A)



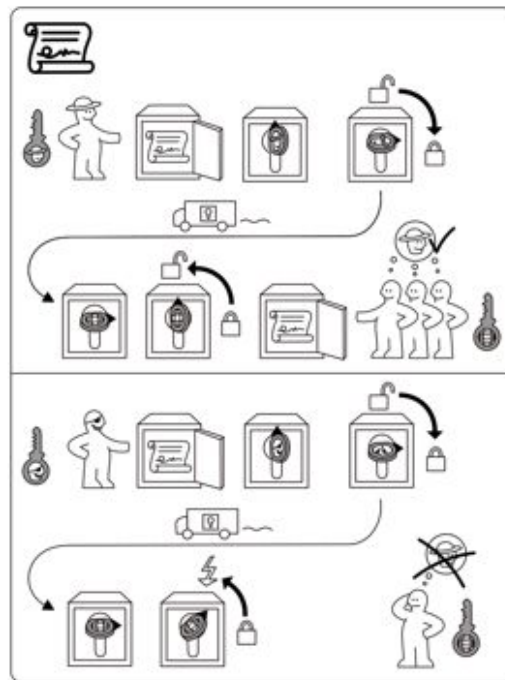
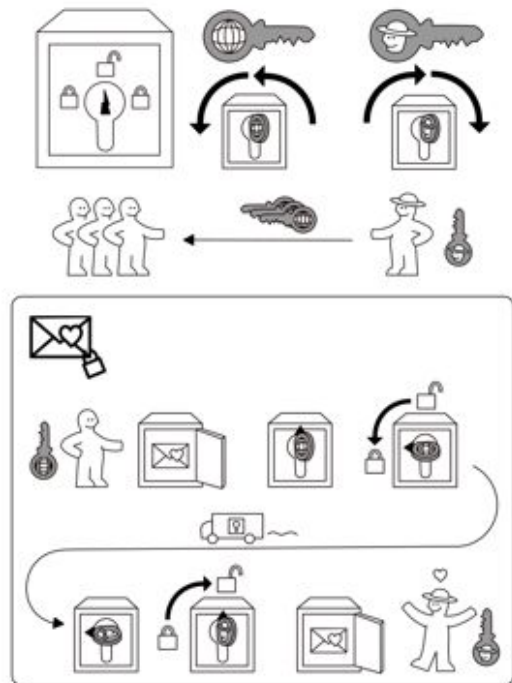
Decentralized (B)



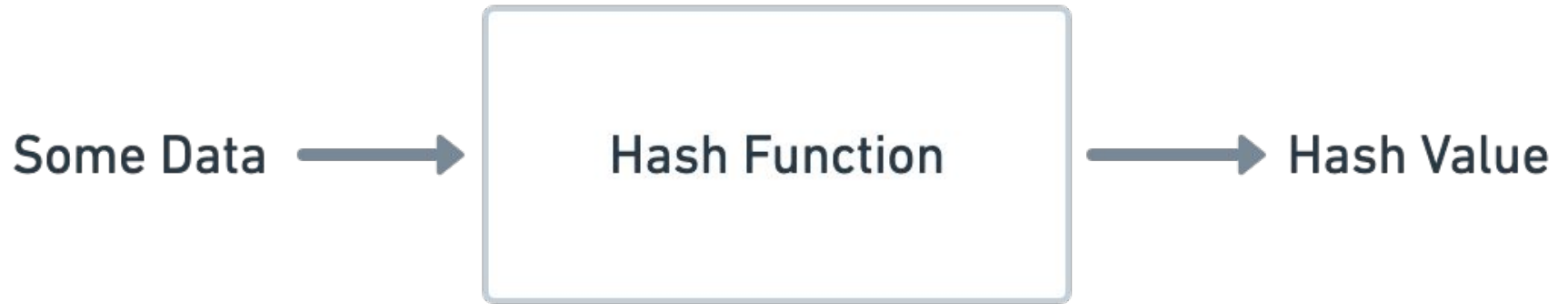
Distributed (C)

A distributed, cryptographically secure,
consensus driven, smart contract
facilitating ledger **solution_**

PUBLIK KEY KRYPTO



Scandinavian explanation



Hashing

A distributed, cryptographically secure,
consensus driven, smart contract
facilitating ledger **solution** _

/kən'sensəs/

noun

a general agreement.

Proof of Work_

Block #1

Transfer 20 from a to b

Transfer 1 from c to d

Previous block: None



8b8f6fa6c5049c3feaedd097c33b8a14dbbbf3dd628d308cad208e865a6ec2e2

Block #1

Transfer 20 from a to b

Transfer 1 from c to d

Previous block: None

Hash: 8b8f ... c2e2

Block #1
Transfer 20 from a to b
Transfer 1 from c to d
Previous block: None
Hash: 8b8f ... c2e2

Block #2
Transfer 20 from a to b
Transfer 1 from c to d
Previous block: 8b8f ... c2e2
Hash: 880d ... d9a9



Difficulty_

Random values_

Rinse and Repeat_

Mining_

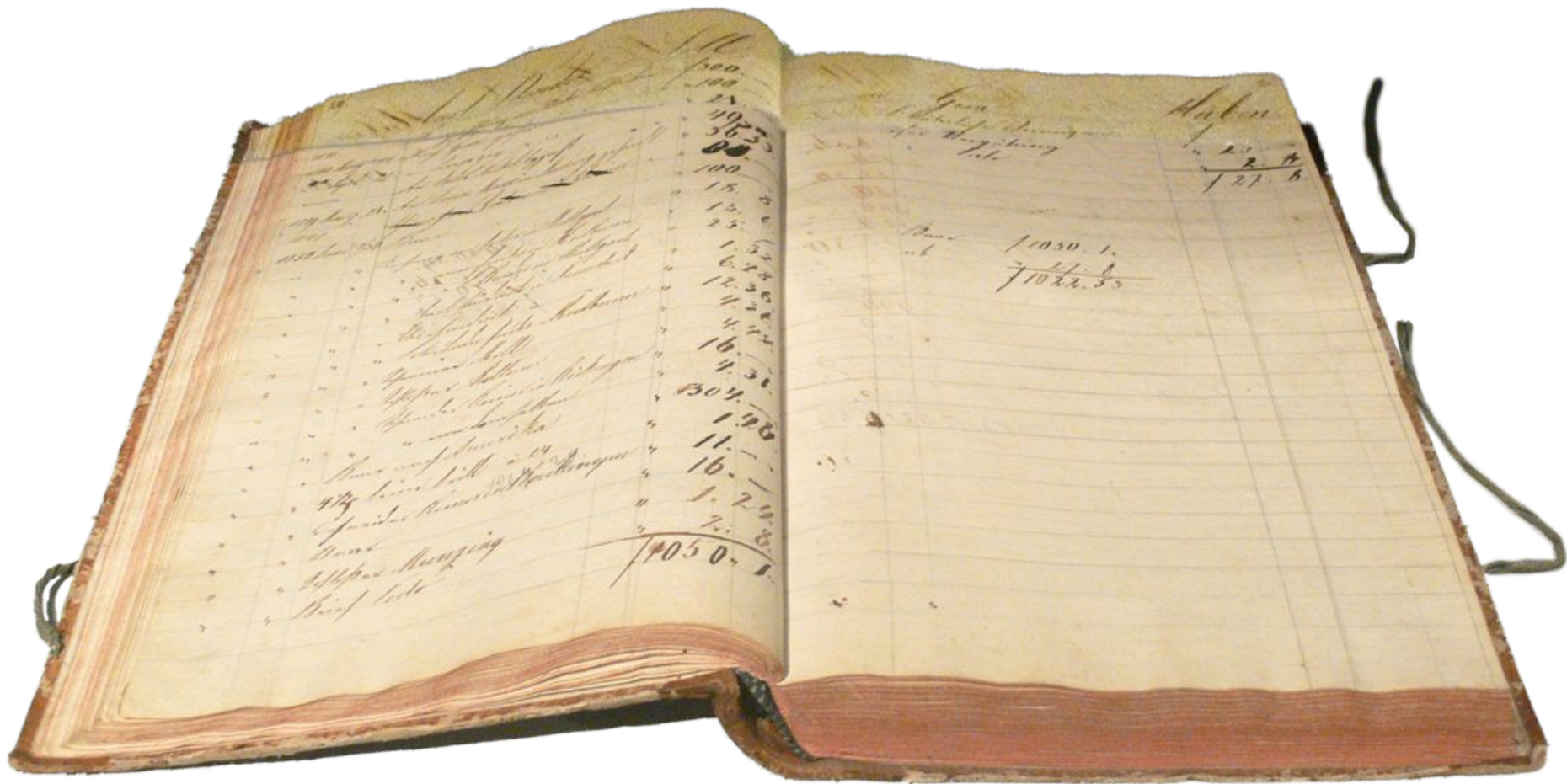
nerd as a service_

Challenge_

A distributed, cryptographically secure,
consensus driven, **smart contract**
facilitating ledger solution_

TL;DR;
It's just software

**A distributed, cryptographically secure,
consensus driven, smart contract
facilitating ledger solution_**



111
100
100
25
40
36
80
100
15
13
25
1.50
6.25
12.50
4.25
4.25
16
4.38
304
170
11
16
1.25
7.88
1050.1

Good
for
1050.1
7.88
1057.98

121.5

Stuff left out_

Act 2:

What can it do for me_

Things Blockchain is good at_

Store something permanently_

Be transparent to participants_

Event ordering_

LIKE ME



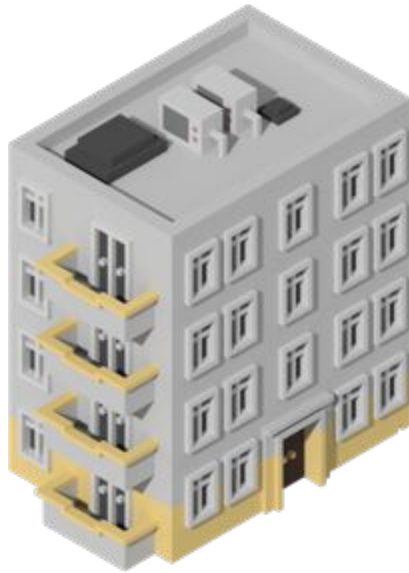
BLOCKCHAIN IS NOT

Things Blockchain is NOT good at_

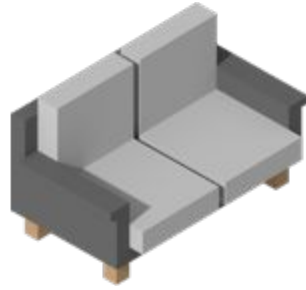
Storing a lot of "things" _

Being fast _

Being easy _



nerd as a service_

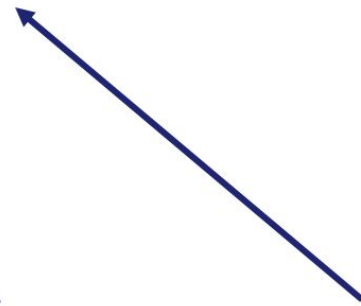
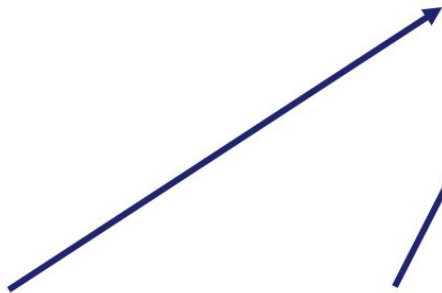
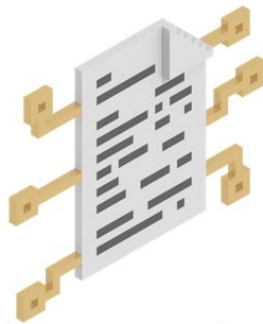


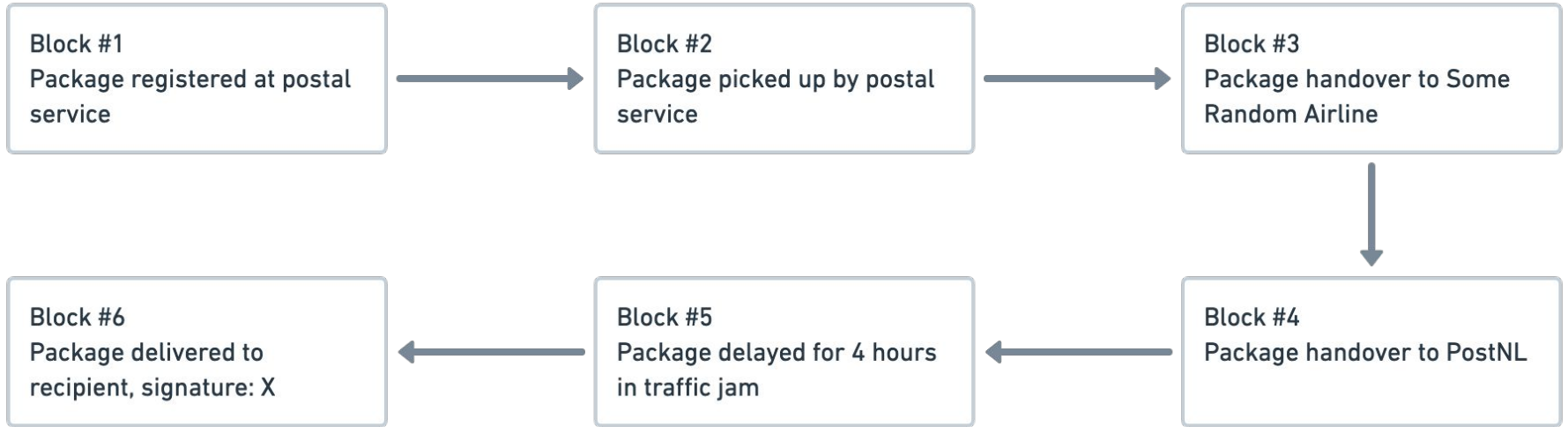
nerd as a service_



nerd as a service_







Block #6
Package delivered to
recipient, signature: X

Block #5
Package delayed for 4 hours
in traffic jam

Block #4
Package handover to PostNL

Block #3
Package handover to Some
Random Airline

Block #2
Package picked up by postal
service

Block #1
Package registered at postal
service

Act 3:
What's next

Learn 

nerd as a service 

Learn when to apply Blockchain_

Learn when to apply Public Key Cryptography_

Learn when to use Hashing_

Learn when to use Peer-to-Peer Networking_

Learn when to ...

**Learn to use Blockchain as
"just another technology" _**

What is Blockchain_

What can it do for me_

What's next_

CATTS.



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