

Will **blockchain** change the world ?

*Arthur Levoir
Thomas Sadurni*

1

Technology

Background
Blockchain
POW/POS

2

Cryptocurrencies

What is a Cryptocurrency?

Bitcoin

What about others Cryptocurrencies ?

3

To go further

DeFi
NFT
Stablecoins
Pros and cons

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1991

Stuart Haber and Scott Stornetta theorized a system where document timestamps could not be tampered with



2008

Satoshi Nakamoto writes the whitepaper detailing **Bitcoin** (must read)



2009

Bitcoin is released



2010

The first ever purchase using
Bitcoin occurs

2011

Bitcoin's value passes the \$1
threshold

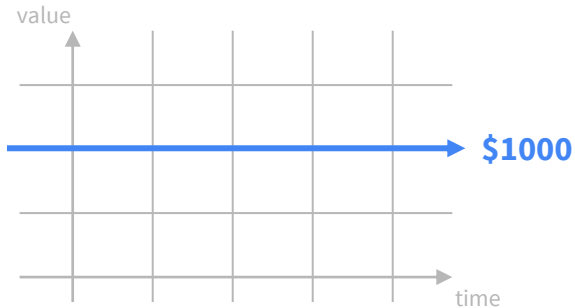


2013 - 2017

Bitcoin's value is hovering around
\$1000

Bullrun brings price to
\$20000

Bitcoin ATH : **\$69000**



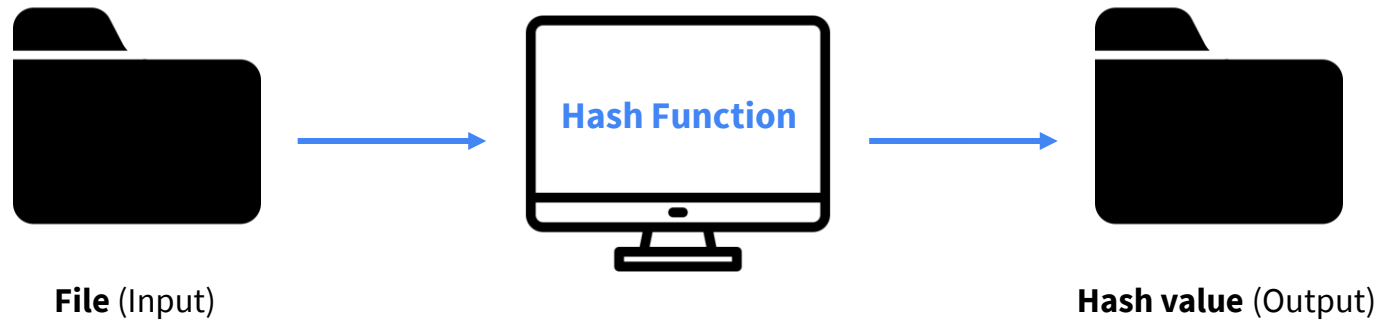
2021

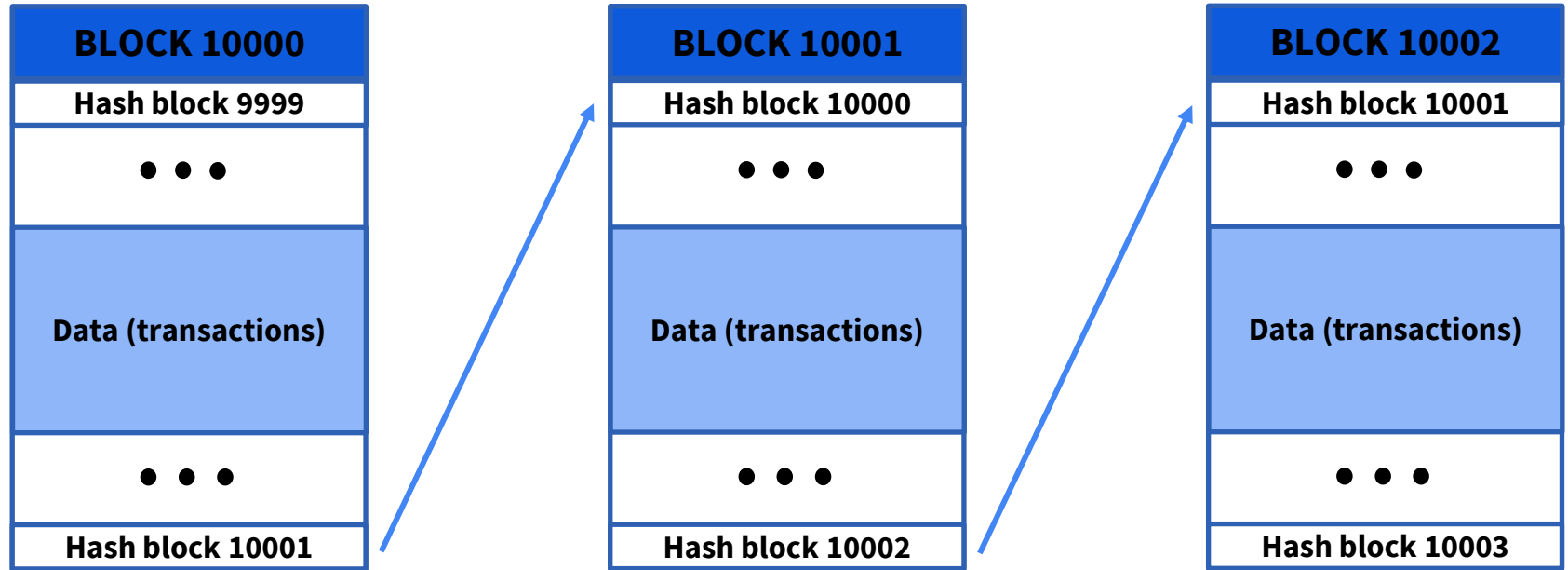
“

A **blockchain** is a growing list of records, called blocks, that are linked using cryptography.

”

Wikipedia, **Blockchain**





“

***Proof of Work** and **Proof of Stake** are consensus mechanisms, and they represent a requirement to confirm transactions that take place on a blockchain, without needing an intermediary.*

”

bitdegree.com



Proof of Work

First to resolve the problem wins

Cryptographic algorithm : $8 + 2$

Miner 1, Miner 2, Miner 3 ... Miner N

Miner 1 : 12 ; 8 ; 10

Miner 2 : 14 ; 20 ; 8

Miner 3 : 5 ; 9 ; 12

...

Miner N : 2 ; 34 ; 7

Miner 1 is the winner for this transaction

- First one to solve a mathematical problem wins
- Need huge computing power
- Use huge amount of energy
- Slower



Proof of Stake

The more pieces you have the more chance you have to win

Context : To validate transactions on the Avalanche network, you will need to stake and freeze at least 2000 Avax coins

You have 4000 **AVAX coins**

You now have a 3% chance of winning each reward.

- First one to solve a mathematical problem wins
- Need huge computing power
- Use huge amount of energy
- Slower





Bitcoin mining farm

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“
Right now Cryptocurrencies feel like the internet before the browser.
”

“
Bitcoin will do to banks what email did to the postal sector.
”

What is a cryptocurrency ?

Cryptocurrencies



Cryptocurrency in some words

- ✓ Base on blockchain technology
- ✓ “Cryptocurrency” derived from encryption (security)
- ✓ Difficult to replicate
- ✓ Easy to exchange
- ✓ Divisible
- ✓ Inflation resistant
- ✓ Transparent



What is a cryptocurrency ?

Cryptocurrencies

Private key



97b10642647d0ad6762b6
cedb30e5bf1ae5412995d
92fe2fc20aa352e8440081

Required to make transactions
(i.e ATM PIN)



Public key



0xa712D630407c01df10d
40519fCEfdAae1098cc19

Wallet address
(i.e bank account number)



100% VIRTUAL Based on trust



90% VIRTUAL Based on trust

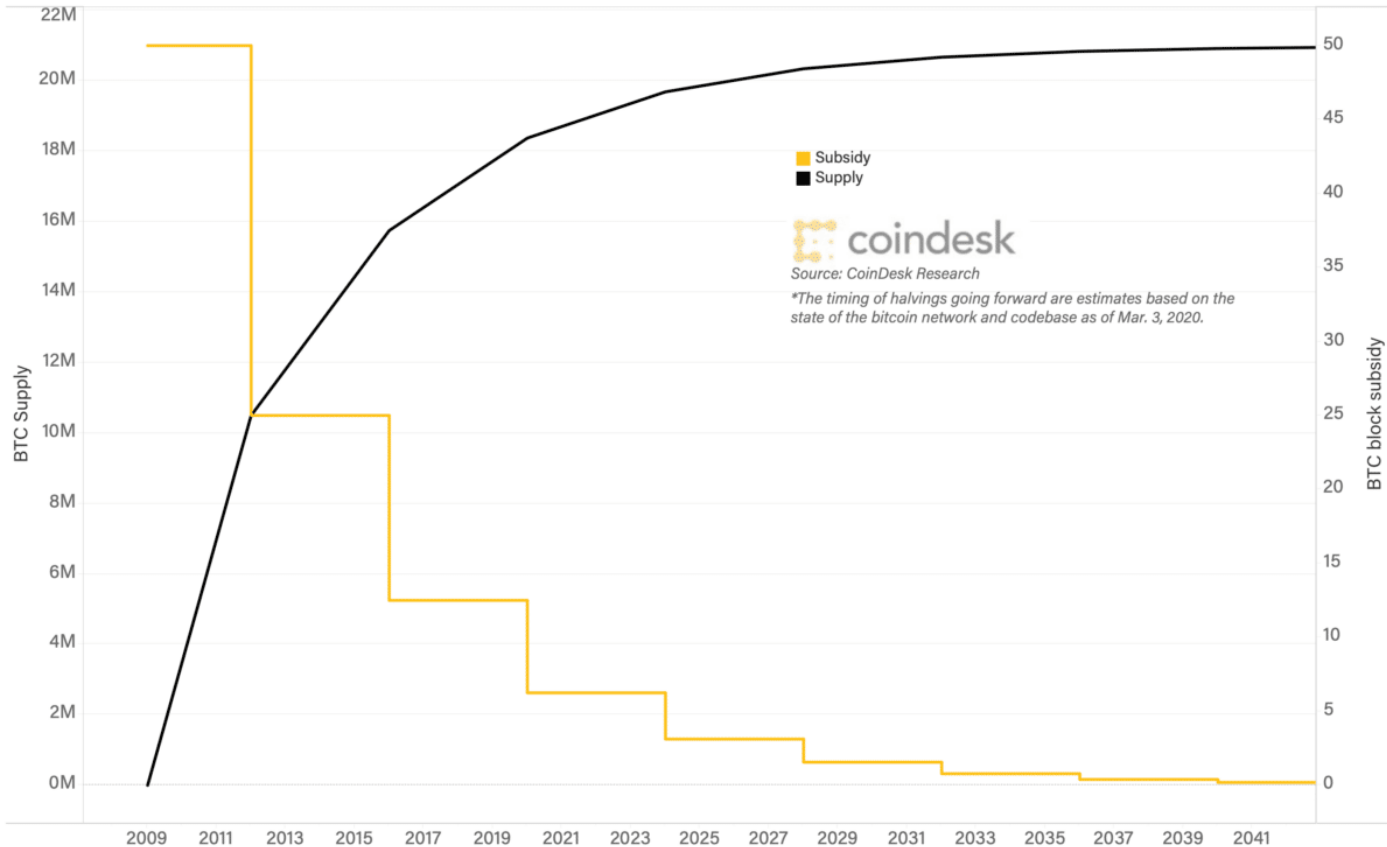


90% VIRTUAL Based on trust

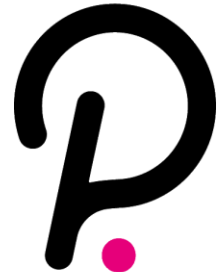
Bitcoin

Cryptocurrencies

Bitcoin supply and block subsidy by year



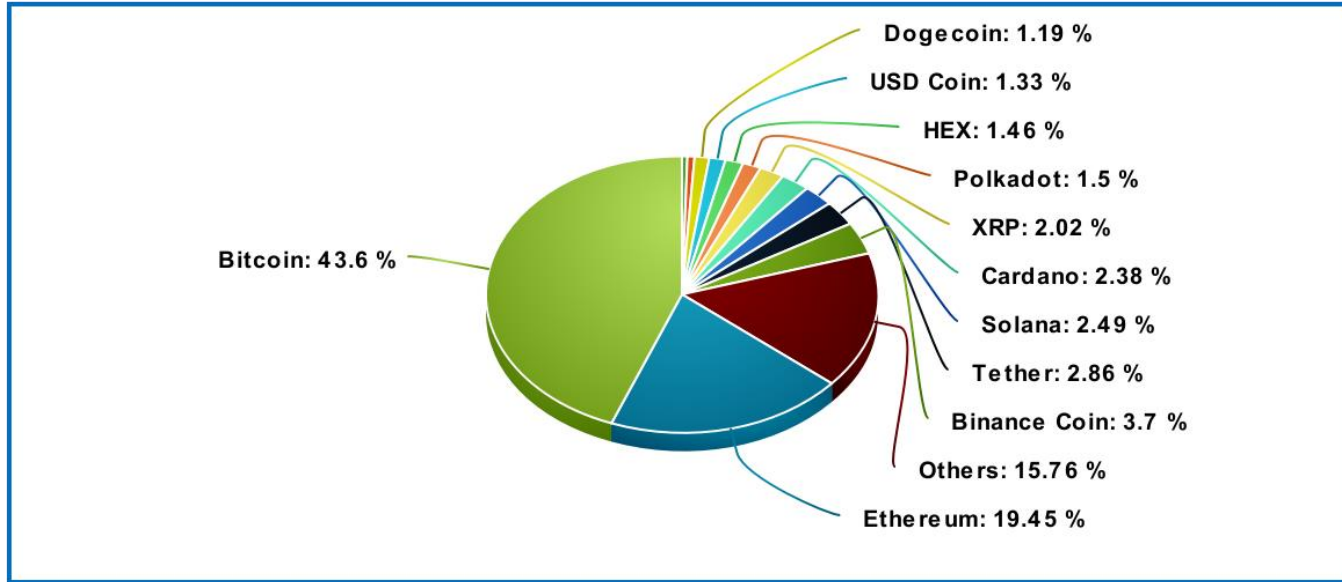
Is there only Bitcoin ?



What about others Cryptocurrencies ?

Cryptocurrencies

Repartition of the market cap
CoinMarketCap



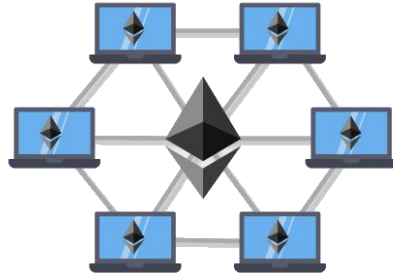
Market Cap = Price * Circulating supply

What about others Cryptocurrencies ?

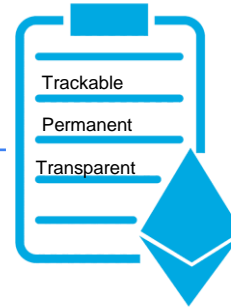
ETHEREUM the revolution



Vitalik Buterin



Ethereum Virtual Machine



First Smart
Contract
blockchain



Decentralized Application



OpenSea

What about others Cryptocurrencies ?

ETHEREUM 2.0, the game changer ?

Upgrading Ethereum to radical new heights



ETH



ETH 2.0

- High fees (~ 15\$)
- 15 transactions per second
- Proof of Work

- Low fees (~ <0.0001\$)
- 100 000 transactions per second
- Proof of Stake
- More scalable
- More secure
- More sustainable

Small wallet → Layers 2

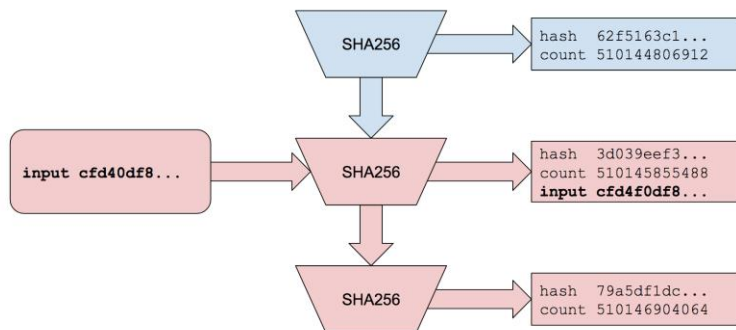


Huge adoption of anyone
ETH flipping BTC ?



What about others Cryptocurrencies ?

SOLANA



Proof of History

- Fastest blockchain : 50 000 tx per seconds (10x Visa)
- Low fees (~ <\$0.0001)
- Proof of History
- 4th crypto in market cap
- DEX
- DeFi
- NFTs
- dApps



Solanart : NFT marketplace

What about others Cryptocurrencies ?

POLKADOT, a layer 0 ?



Relaychain

Shared security
Interchain message passing

Parachain

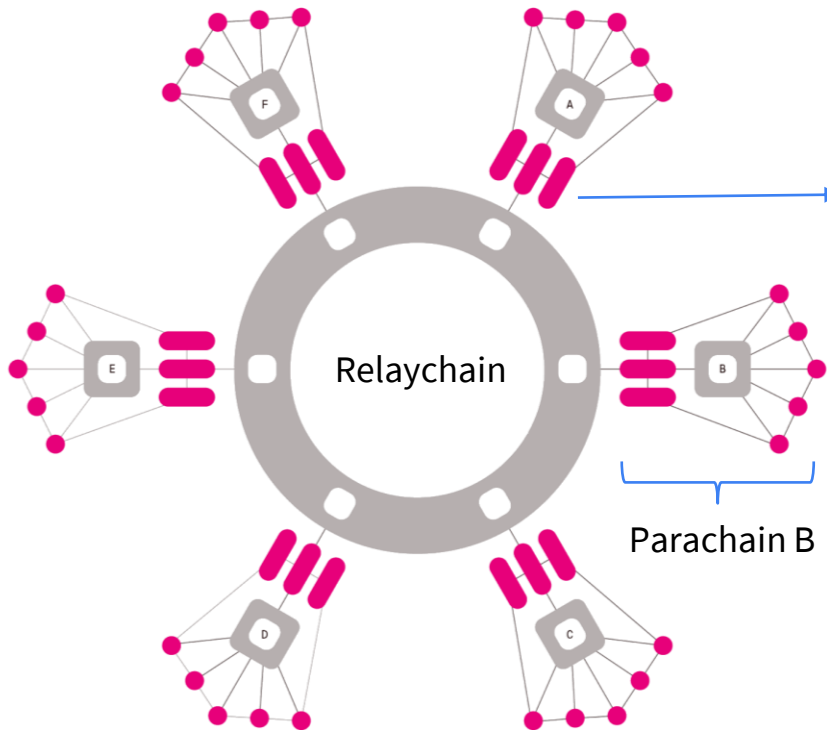
Blockchain that has its own logic

Nominated Proof of Stake

Vote for a set of validators






Auction

Vote for a project to go live on the blockchain



Shoutout to another cryptocurrency

Usages

	 BTC	 ETH	 DOT	 SOL	 VISA
TPS	7	15	1000	50000	10000
Latency (s)	600	98	5	2	3
Fees (\$)	3	50	0.001	0.0001	1.2%
Consensus	PoW	PoW	PoS	PoH	-
Market Cap (B\$)	1094	500	40	63	-

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Usages

What is a currency?
Comparison with **Bitcoin**
What about others Cryptocurrencies ?

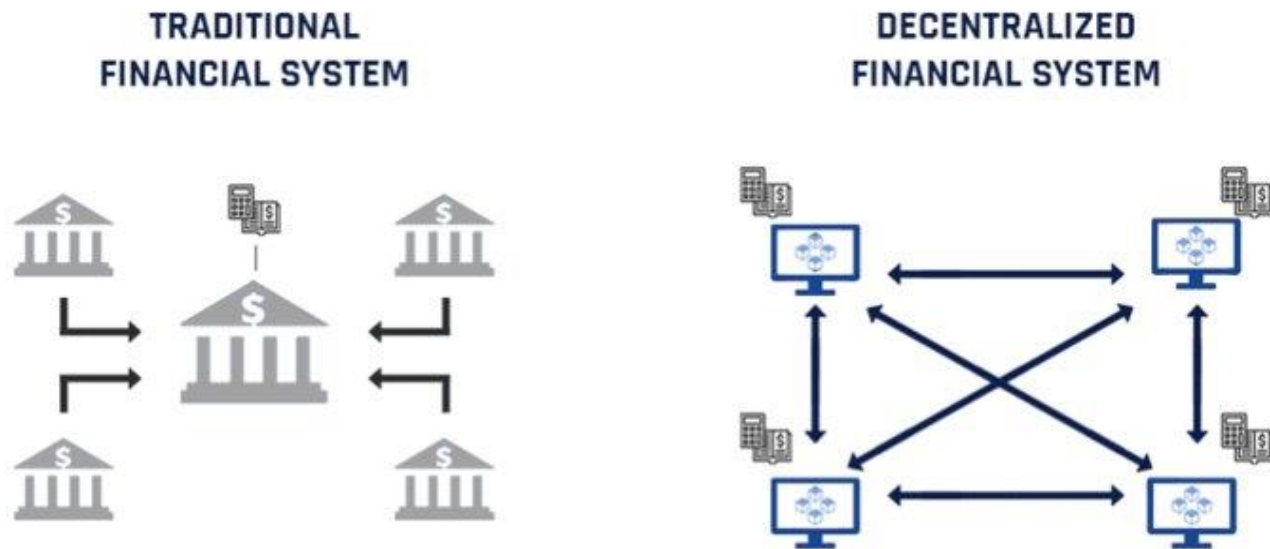
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To go further

DeFi
NFT
Stablecoins
Pros and cons

“**Decentralized finance** (commonly referred to as **DeFi**) is a blockchain-based form of finance that does not rely on central financial **intermediaries** such as **brokerages**, **exchanges**, or **banks** to offer traditional **financial instruments**, and instead utilizes **smart contracts** on **blockchains**”

Wikipedia, **DeFi**



DeFi

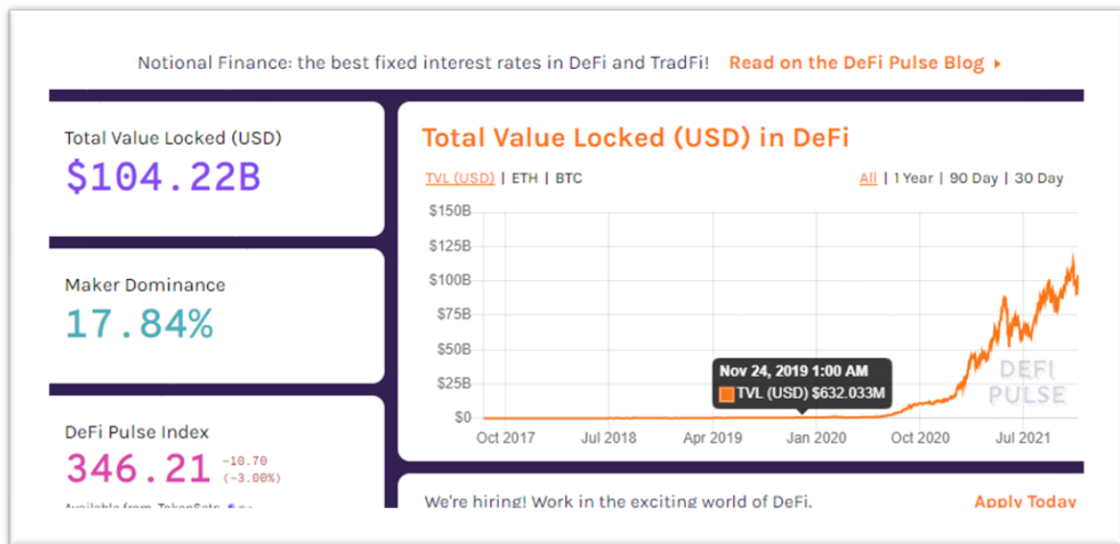
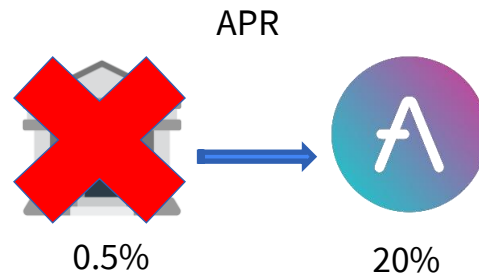
To go further

Main principles :

- Uses Smart Contracts
- Operates on decentralized infrastructures and blockchain
- Exchanges, Insurance
- Lending / Borrowing and earn interests
- Big APR
- Natively digital
- Open to all

Disadvantages :

- Difficult to understand : use of metamask and Web 3.0
- Hackers and bugs might empty your wallet



Metrics taken on defipulse.com

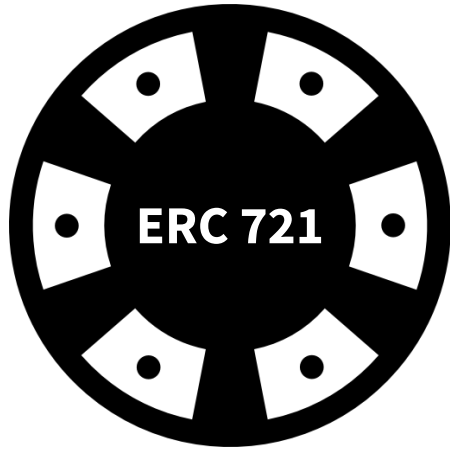


Non Fungible Token

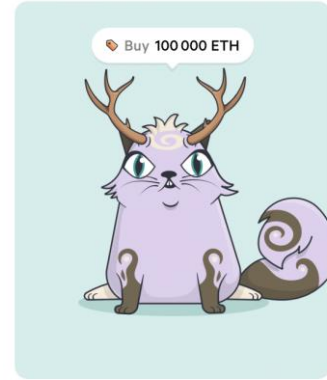
JPEG

NFT



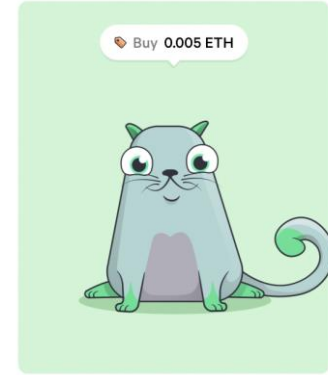


On the **Ether**
Blockchain



637029

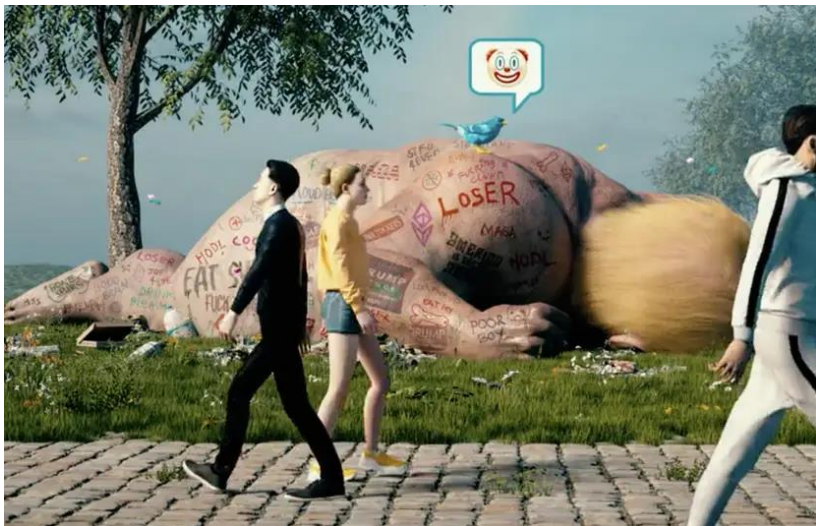
Gen 12 Plodding (8h)



357703

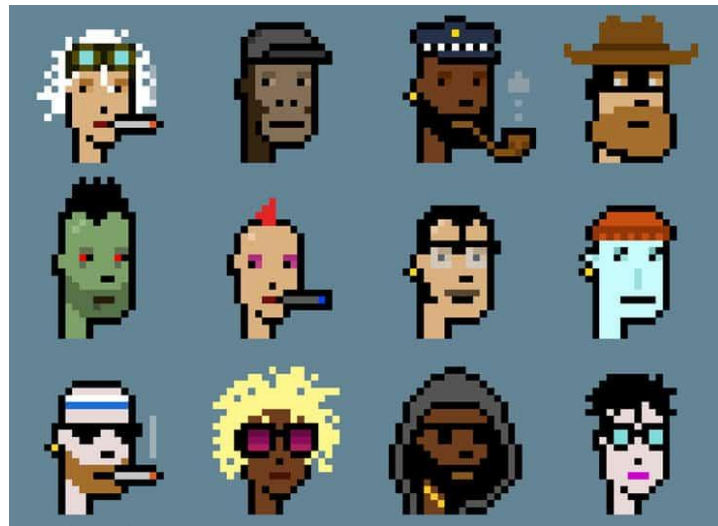
Gen 7 Brisk (1h)

2017 : **Cryptokitties**



6.6M\$

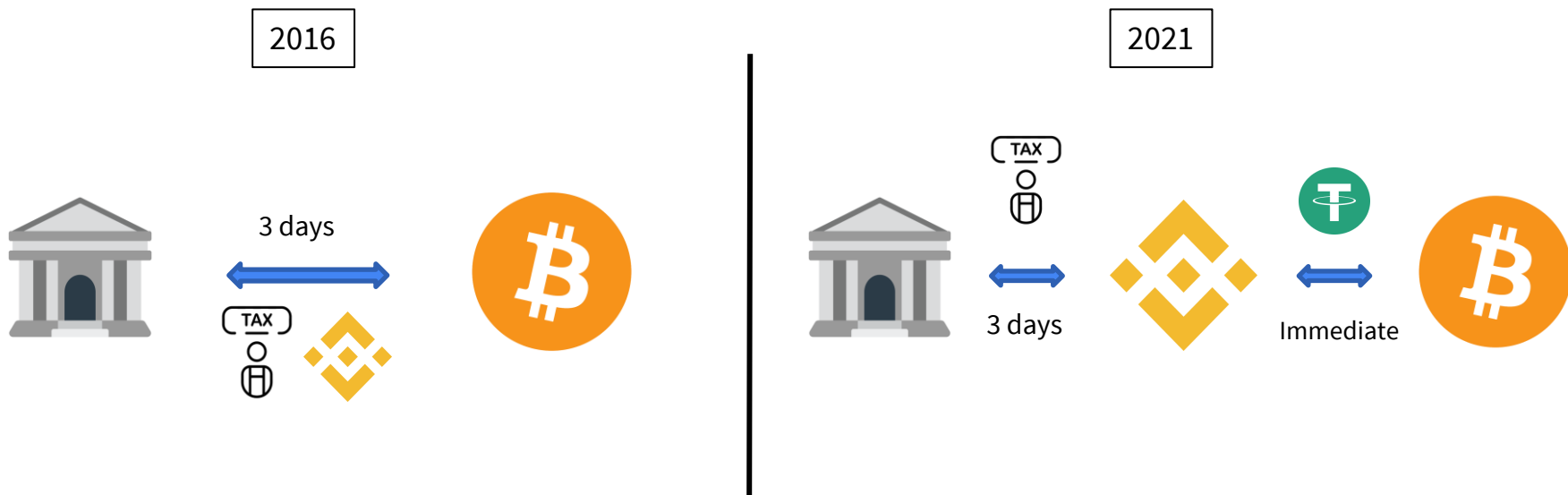
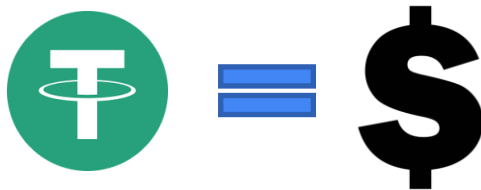
CROSSROAD is an NFT created by acclaimed digital artist Beeple that features anti-Trump messaging.



+100M\$

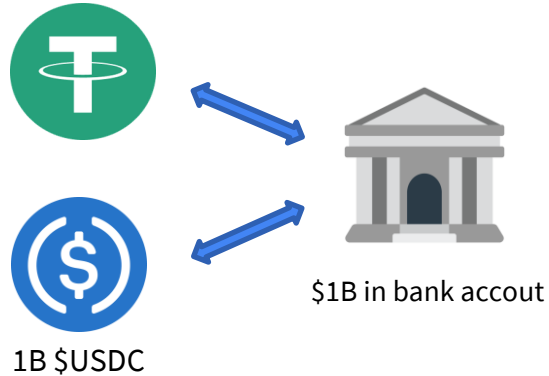
CryptoPunks make up a number of the most expensive NFT sales. They're a randomly generated set of 10,000 unique digital characters.

A stablecoin replicates the value of a real world asset :

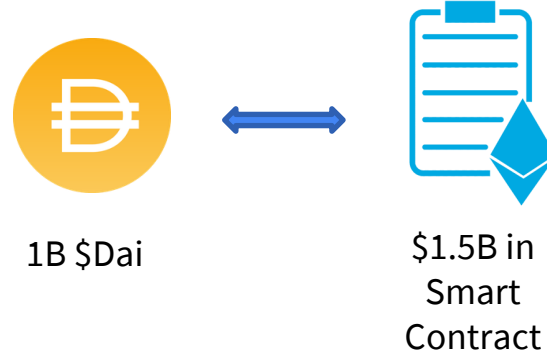


3 types of stablecoins

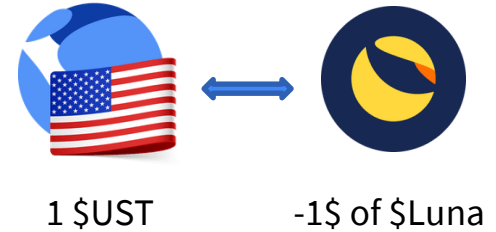
Centralized Collateralization



Collateralization in Cryptocurrencies



Algorithmic stablecoins



Pro and cons

To go further

	Pros	Cons
Unparalleled transparency	✓	✗ Challenges of market fluctuations
Instant and 24h accessibility	✓	✗ No security in case of loss
Absolute anonymity	✓	✗ Not mainstreamed yet

Question

What do you think ?

Do you think **cryptocurrencies** will surpass or even replace traditional currencies ?

Question
Any question ?



Thank you !
#HODL