



Blockchain and Cryptocurrency

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What is
Bitcoin?

The background of the slide is a dark blue to black gradient. It features a perspective view of glowing blue lines that recede into the distance, creating a sense of depth. Overlaid on this are patterns of binary code (0s and 1s) in a lighter blue color. The text is positioned on the right side of the slide, separated from the abstract background by a white curved line.

3 important
layers in
Crypto World

TECHNOLOGY

PROTOCOL
/ COIN /

TOKEN

TECHNOLOGY

Blockchain

PROTOCOL
/ COIN /

TOKEN

TECHNOLOGY

Blockchain

PROTOCOL
/ COIN /

Bitcoin

TOKEN

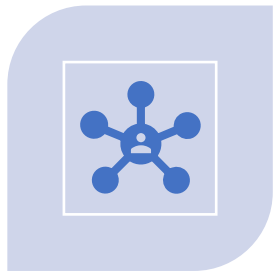


Protocol:

Set of rules that guide how participants of network communicate with each other

e.g: IP (Internet Protocol), HTTP protocols

Bitcoin Protocol:



SET OF RULES HOW PARTICIPANTS
OF BITCOIN NETWORK WILL
COMMUNICATE TO EACH OTHER
AND AGREE ON THINGS



FOR EXAMPLE, PROTOCOL
DICTATES HOW THEY COME TO
CONSENSUS OVER THINGS



HOW PUBLIC KEYS AND
SIGNATURES CAN BE USED FOR
AUTHENTICATION



ALSO DICTATES ON HOW AGREE ON
UPDATES TO THE PROTOCOL ITSELF
ETC.

TECHNOLOGY

Blockchain

PROTOCOL
/ COIN /

Waves

Ethereum

Bitcoin

Neo

Ripple

TOKEN

TECHNOLOGY

Blockchain

PROTOCOL
/ COIN /

Waves



Ethereum



Bitcoin



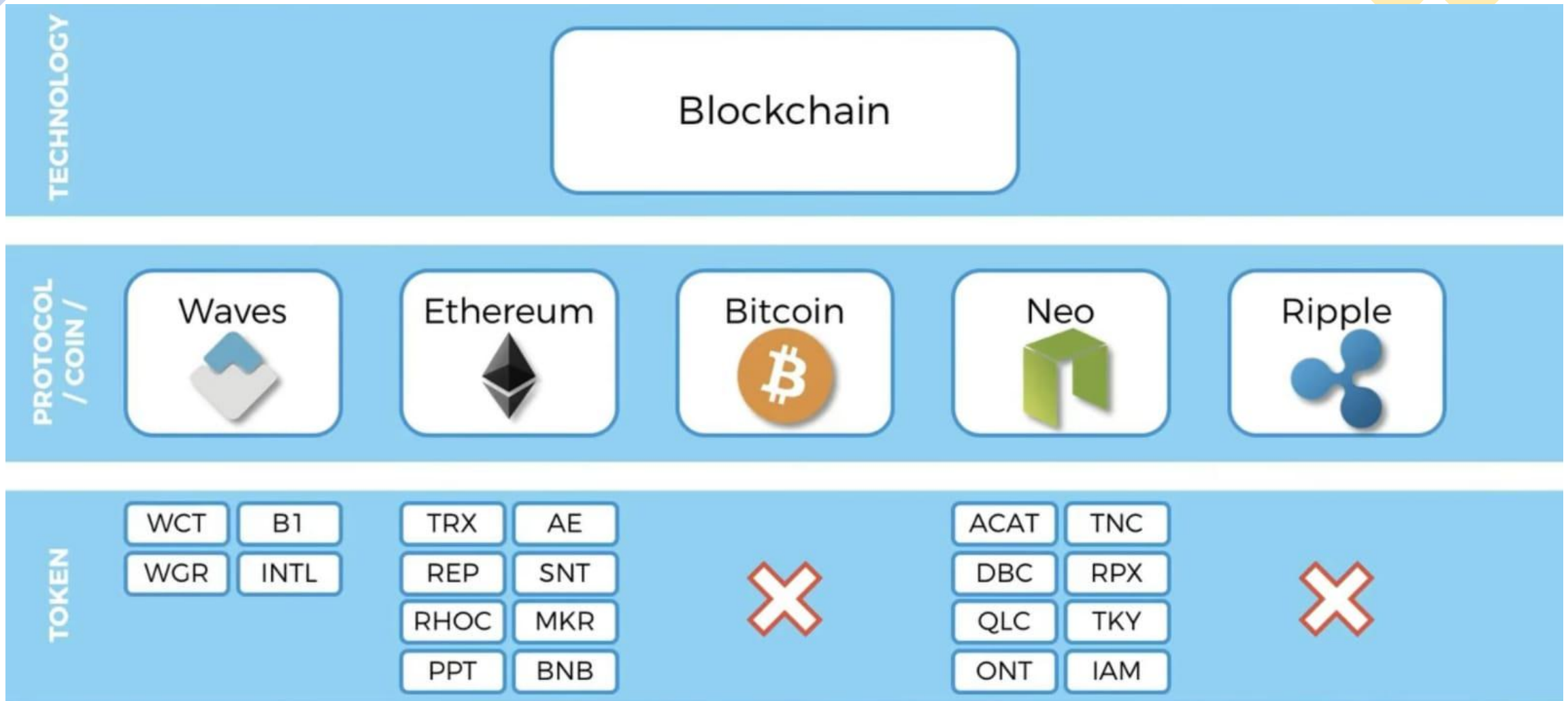
Neo



Ripple



TOKEN



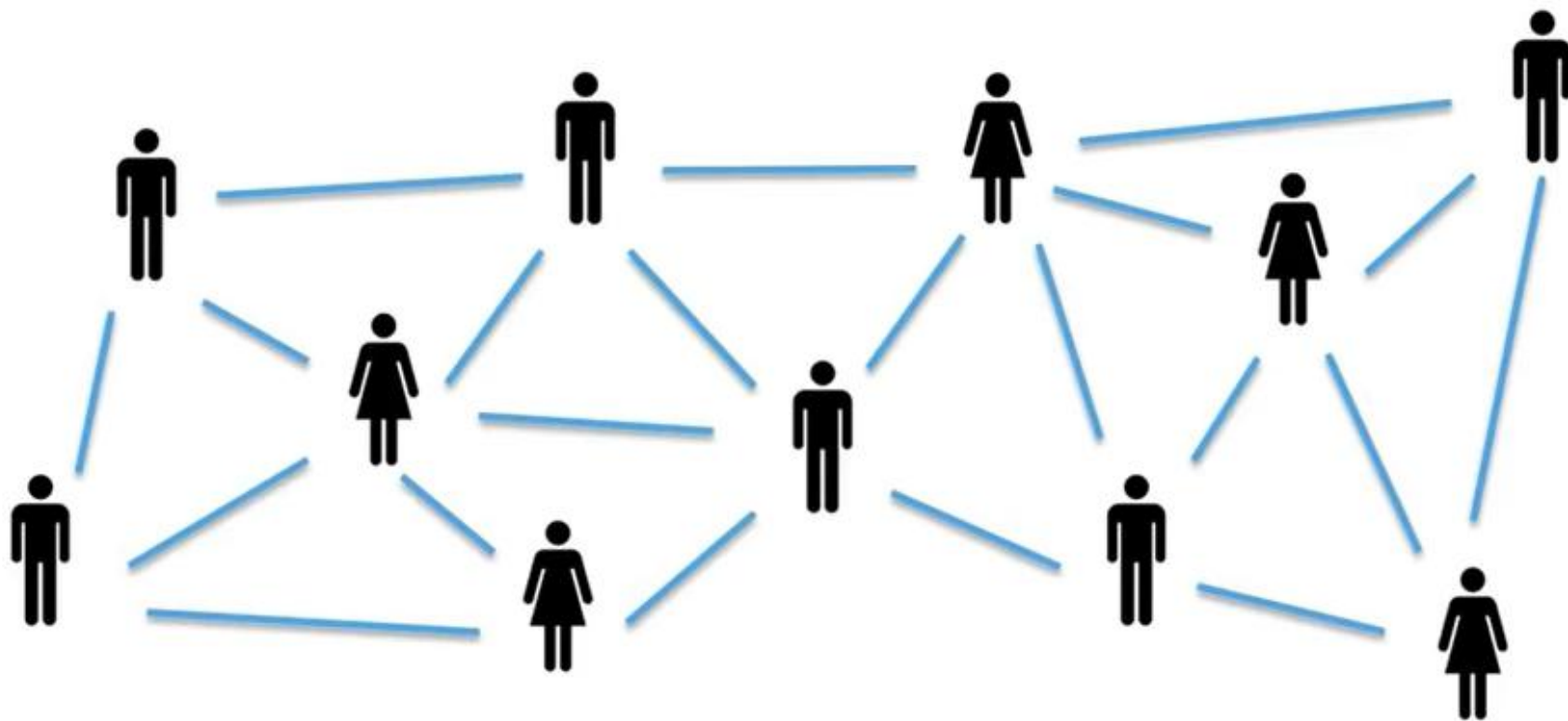
::: ICO: Initial Coin Offering ---term related to tokens



<https://coinmarketcap.com>



Satoshi Nakamoto

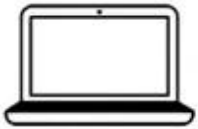


The Bitcoin Ecosystem:

- Nodes



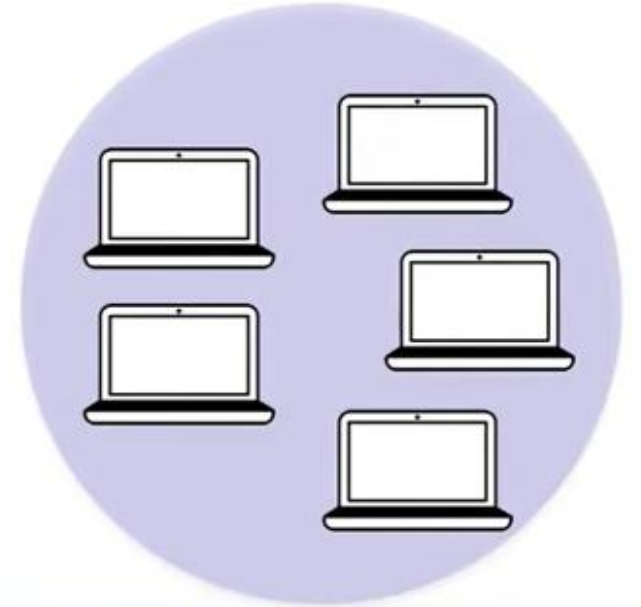
- Miners



- Large Mines



- Mining Pools





Bitcoin Monetary Policy

Bitcoin's Monetary Policy

```
graph TD; A[Bitcoin's Monetary Policy] --> B[The Halving]; A --> C[Block Frequency]
```

The Halving

Block Frequency

The Halving

~2020: 6.25

~2024: 3.125

| Date reached | Block | Reward Era | BTC/block |
|--------------|--------|------------|-----------|
| 2009-01-03 | 0 | 1 | 50.00 |
| 2010-04-22 | 52500 | 1 | 50.00 |
| 2011-01-28 | 105000 | 1 | 50.00 |
| 2011-12-14 | 157500 | 1 | 50.00 |
| 2012-11-28 | 210000 | 2 | 25.00 |
| 2013-10-09 | 262500 | 2 | 25.00 |
| 2014-08-11 | 315000 | 2 | 25.00 |
| 2015-07-29 | 367500 | 2 | 25.00 |
| 2016-07-09 | 420000 | 3 | 12.50 |
| 2017-06-23 | 472500 | 3 | 12.50 |

The Halving

**TRANSACTION FEES ARE MEANT TO
REPLACE BLOCK REWARDS**







Source: <https://bitsonblocks.net>



<https://chart-studio.plotly.com/~BashCo/5.embed>

Block Frequency

| Cryptocurrency | Average block time |
|---|--------------------|
|  bitcoin | 10 min |
|  ethereum | 15 sec |
|  ripple | 3.5 sec |
|  litecoin | 2.5 min |



<https://www.blockchain.com>

Acknowledgement and Source:

- <https://www.udemy.com/course/build-your-blockchain-az/>