

# **Bitcoin & Blockchain Technology: Will they be more disruptive than the internet?**

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## Topp Jirayut Srupsrisopa

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# Cars

# Electricity

# Bitcoin

## 2018: "Bitcoin คือการพนัน" - xxx.

**1876** *"This 'telephone' has too many shortcomings to be seriously considered as a means of communication."* - William Orton, President of Western Union.

**1903** *"The horse is here to stay but the automobile is only a novelty – a fad."* - President of the Michigan Savings Bank advising Henry Ford's lawyer not to invest in the Ford Motor Company.

**1946** *"Television won't be able to hold on to any market it captures after the first six months. People will soon get tired of staring at a plywood box every night."* - Darryl Zanuck, 20th Century Fox.

**1966** *"Remote shopping, while entirely feasible, will flop."* - Time Magazine.

**1981** *"Cellular phones will absolutely not replace local wire systems."* - Marty Cooper, inventor.

**1995** *"I predict the Internet will soon go spectacularly supernova and in 1996 catastrophically collapse."* — Robert Metcalfe, founder of 3Com.

**2005** *"There's just not that many videos I want to watch."* - Steve Chen, CTO and co-founder of YouTube

**2007** *"There's no chance that the iPhone is going to get any significant market share."* - Steve Ballmer, Microsoft CEO.

**2017** *"Bitcoin is a fraud and will blow up."* - Jamie Dimon, chief executive of JPMorgan Chase & Co

# What is Bitcoin?

Why is Bitcoin so  
Disruptive?



# Remittance

# Micro-payments

Unbanked

# Payments

# Content Monetisation

# Email Spam

# Donation

# Blockchain Technology



# Disruptive Technologies

**1975**

Personal  
Computers

**1990**

Internet  
TCP/IP

**2009**

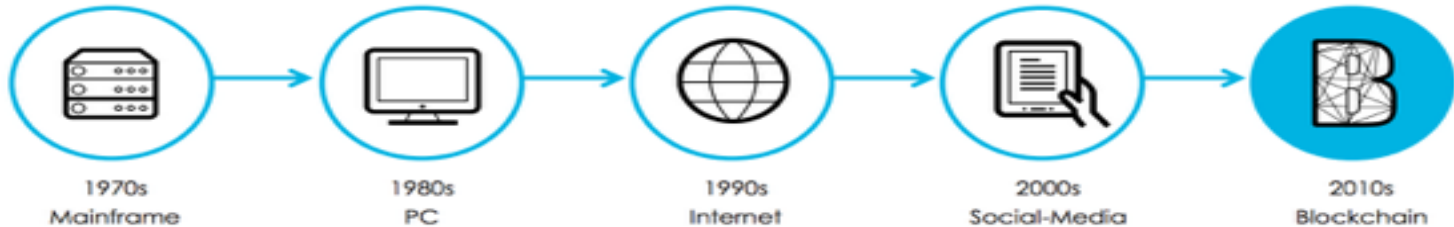
Blockchain

# TCP/IP

- First layer of the internet
- Allows Instant information transfers
- **Internet of information**

# Blockchain

- Second layer of the internet
- Allows Instant value transfers
- **Internet of Value**



# Internet of Information



**COPY**

# Internet of Value



**Ctrl + C**



**Ctrl + V**

**Solved Double Spent Problem!**

# How Blockchain works?

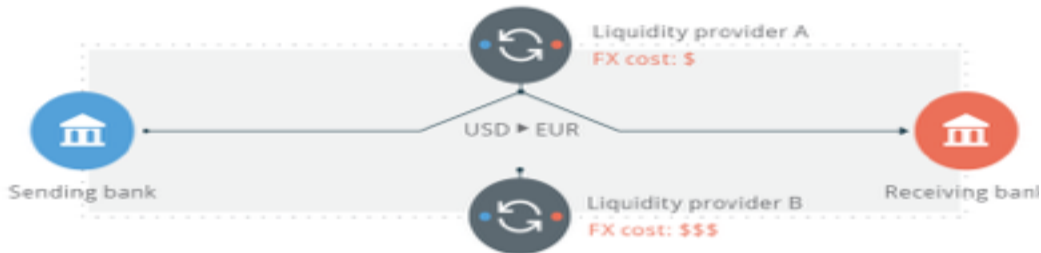
# 4 Development Stages

# Internet of money

- Solve pain points in remittance, finance
- Bitcoin, Zcash, Litecoin, Monero



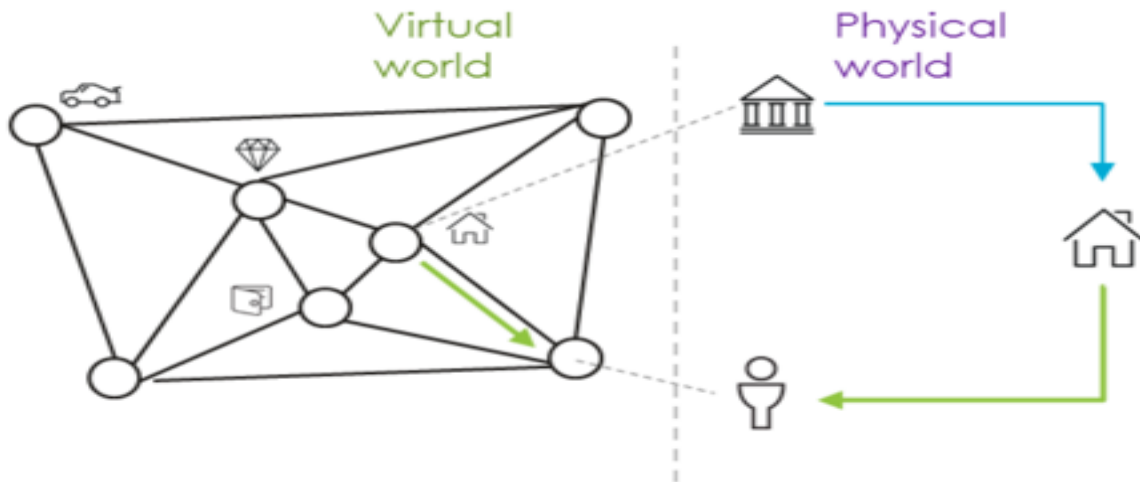
VS



# Internet of Assets = Value Registry

## FACTOM

- Honduras country - History of land rights abuse/corruption on property rights
- Push blockchain beyond finance. (land, condos, gold etc..) - Register anything of value!
- Permanent record of important things. More efficiency in storing and sharing data.





# Internet of Assets

- Painting,
- Diamonds (Everledger)
- Food traceability (Alibaba),
- E-KYC - Identity (Government of Estonia)
- Health care record
- Bond registry
- Stock registry
- Insurance industry
- Gambling
- Trade finance (Wave)
- VR

# Internet of entities = Value Ecosystem

- Blockchain infrastructure that is as generalised as possible
- A platform easy to set up your own Blockchain
- Users can interact with other people's infrastructures sitting next to each other
- Facebook is a platform for you to set up your own group to market your products (You can also interact with other groups on the same Facebook platform)
- Amazon - platform that allows you to set up shop easily
- Wordpress - platform that allows you to set up website easily
- Ethereum - platform that allows you to make your own blockchain easily

# ICO

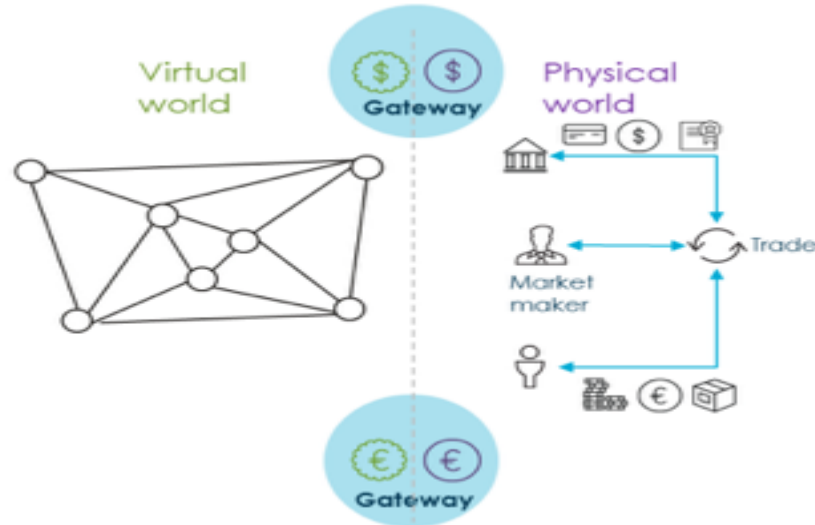
Initial coins offering

# Interoperable Ledgers = Value Web

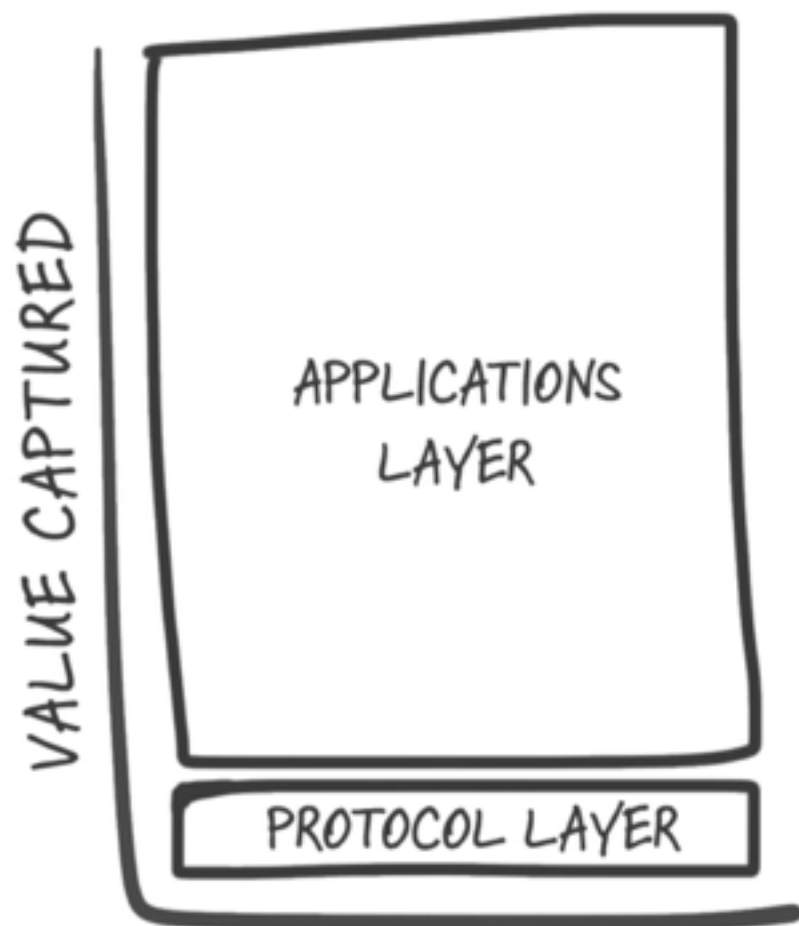
- Internet of money (cryptocurrencies) - **Phase 1**
- Internet of assets (Value registry) - **Phase 2**
- Internet of Entities (Value ecosystem) - **Phase 3**
- **Value web** = Interoperable blockchains **1 + 2 + 3**

# Value Web

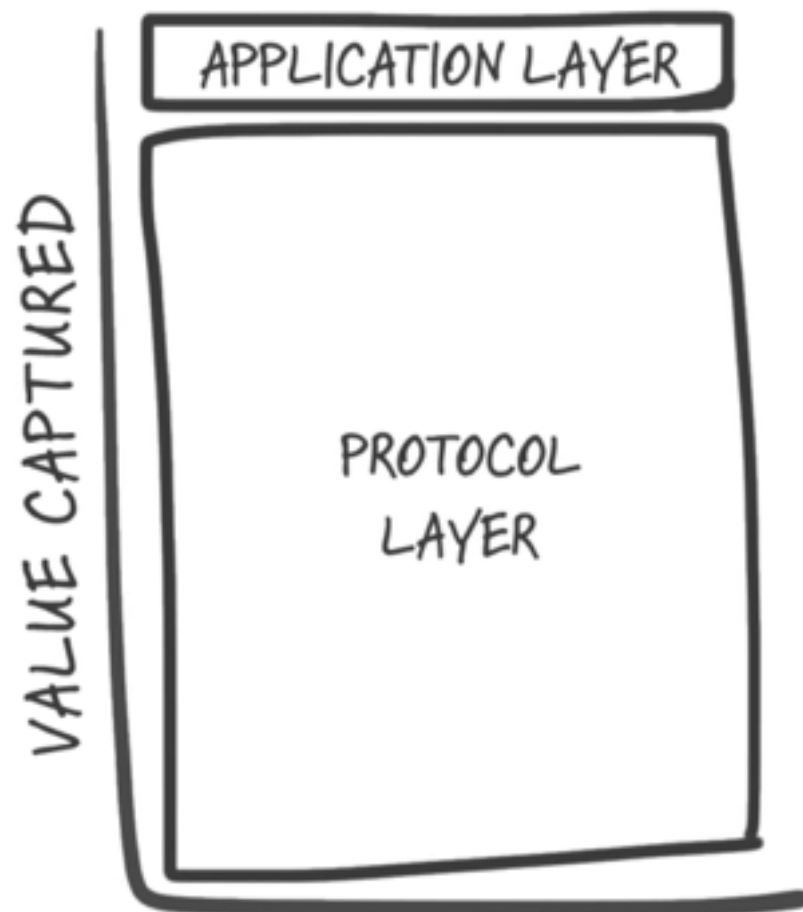
- Value can be transferred between different types of blockchains.
- Devs are now working on the interoperable ledgers.
- Kyber Network, 0x, Airswap, OmiseGo, ICON, Wanchain etc..



## The Web



## Blockchain



# **3 types of Blockchain**

# Public Blockchain

- Validator/Nodes are public
- Users/Participants are public
- Bitcoin blockchain - The biggest blockchain
- **Internet of value**
- NASDAQ (coloured coins - Private market)





- Private Market (NASDAQ)
- **Bitcoin Blockchain** (Public Blockchain)
- Coloured coin innovation built by blockchain startup - [chain.com](http://chain.com) (2015)
- Issue shares in the form of coloured coins - essentially a micro transaction (a hundred-millionth of a bitcoin)
  - Each transaction would only move a tiny fraction of bitcoin encoded with the number of shares
  - A currency custodian's wallet tasked to hold shares

# Private Blockchain

- Validator are private - preselected (trusted groups)
- Users/Participants are private - preselected (trusted groups)
- **Intranet of value (Industry level systems of record)**
- R3CEV Groups (25 biggest banks, JP morgan, HSBC, Citi)
- No tokens needed to incentivise other actors to keep the system secured.
- Benefits
  - Cheaper/free transaction costs
  - Greater privacy/security (more than one single point of failure)
  - Faster validation process
  - Enhance Intra-bank infrastructure - reduce operating expenses

## Partnerships of R3CEV

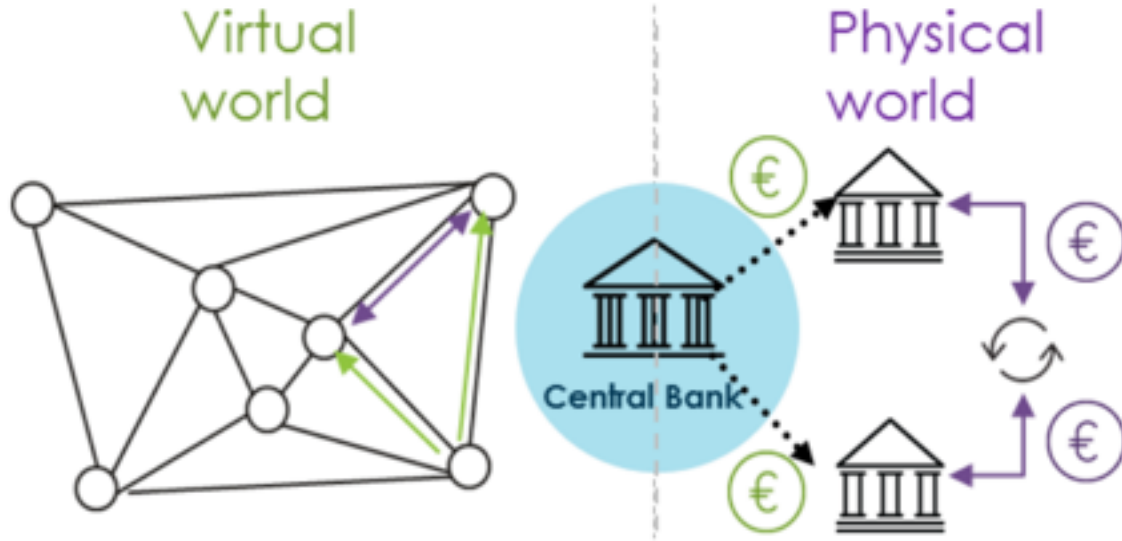


# Central Banks Usecase

E.g. **BAHTNET**

- Inter-bank payment/clearing are resource-intensive steps between banks, clearing houses, and the central bank
- The next day transfer as a result of processing cycle, not executed at a constant basis.
- Cryptoeuro - blockchain solution where central bank issues allowing for real-time settlement between banks
- 1:1 cryptocurrency to thai baht representative (cash ledger) - control money flows
- Bank of England puts 10 million pounds into cryptocurrency research

# Real time settlements between banks



# Consortium Blockchain

- Validator/nodes/miners are preselected trusted groups
- Users/participants are public
- **Extranet of value**
- e.g. NASDAQ - LINQ

# Capital Markets

- Asset ledger - Securities custodian:  
Licensed to create a certain asset  
(private)
- Cash ledger - Currencies custodian (1:1  
ratio - safe liquidity provider) (Private)
- Trade - data available to the people  
(Public), transparency
- NASDAQ - LINQ (2016 - Consortium  
blockchain)



# Towards the Digital Economy



“The Electric light did not come from the  
continuous improvements of Candles”

Thank you!

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