



The image features the Cosmos logo, which consists of the word "COSMOS" in a bold, black, sans-serif font. The letter "O" is replaced by a stylized "Ø" symbol, which is a circle with a diagonal slash through it. This logo is centered over a light gray background that includes a faint, circular map of the world. Surrounding the central logo are several faint, light gray text elements: "XMR" in the upper left, "BTC" in the upper right, "EXCHANGE" on the right side, and "DOGE" on the left side. The overall design is clean and modern, with a focus on the central logo and the global theme represented by the world map.

# CØSMOS

Internet of Blockchains



**A blockchain represents:**

- Ø Sovereignty**
- Ø Community**
- Ø Governance policy**
- Ø Fiscal policy**
- Ø Experiment**

**It is its own economic zone.**

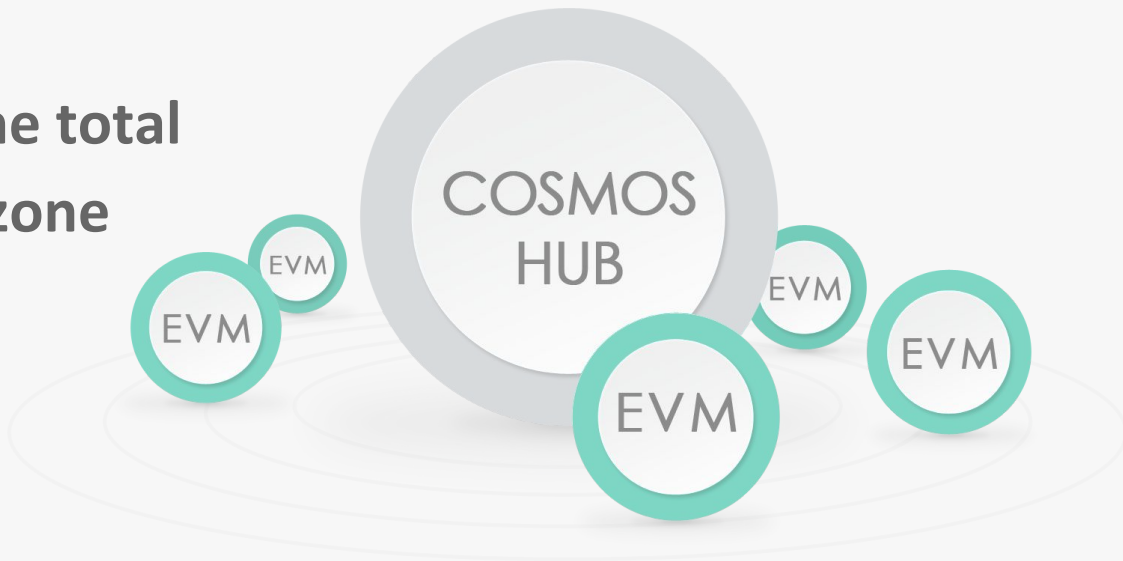
**Tendermint BFT** makes inter-blockchain messaging (IBC) fast and easy.

- Ø No 1 hour wait; instant.
- Ø No rollbacks; simple.
- Ø Short light-client protocol



This makes it possible to scale blockchains.  
For example, **Ethereum**.

The hub keeps track of the total  
number of coins in each zone  
(aka sidechain).





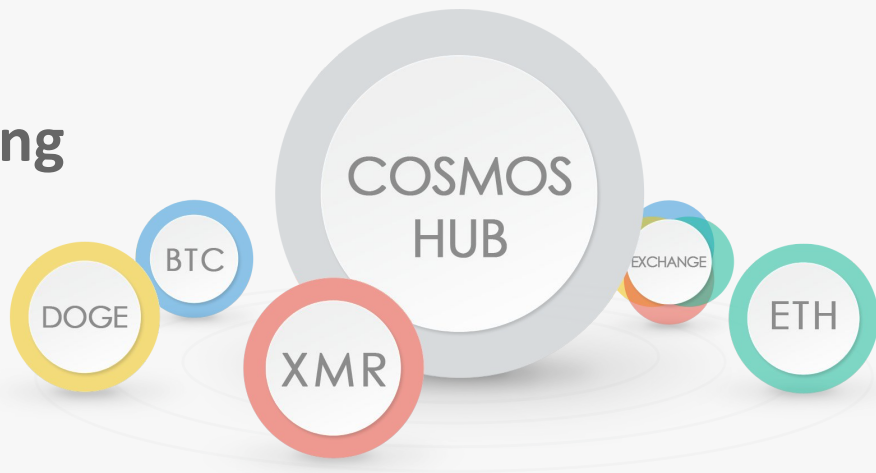
## Upgrades become seamless.

- Ø No hard-forking necessary
- Ø No coordination necessary
- Ø Plug in new zone & let users migrate slowly.

The **Cosmos Hub** is multi-asset (many coins).

The **Cosmos Dex** (distributed exchange) will have:

- Ø Distributed custody
- Ø Centralized order matching
- Ø Best of both worlds



- Ø Multi-asset hub designed to connect with others
- Ø **Tendermint BFT**  
**Proof-of-Stake**
- Ø On-chain governance



# CØSMOS

Internet of Blockchains







<demo>

# CØSMOS

Internet of Blockchains

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<http://cosmos.network>

<http://tendermint.com>

**(we're hiring)**





# History of Byzantine Fault-Tolerance

## **“Impossibility of Distributed Consensus with One Faulty Process”**

- Fischer, Lynch, Paterson (1985) (FLP)

## **“Consensus in the Presence of Partial Synchrony”**

- Dwork, Lynch, Stockmeyer (1988) (DLS)

## **“Practical Byzantine Fault Tolerance (PBFT)”**

- Castro, Liskov (1999)

## **“Bitcoin: A Peer-to-Peer Electronic Cash System”**

- Satoshi Nakamoto (2008)



# Tendermint Blockchain Engine

- **Fast & secure**
  - 10,000 txs/sec
  - Subsecond finality
  - Optimal Byzantine Fault-Tolerance
- **Compatible w/ existing systems**
  - Go-Ethereum
  - Hyperledger?
  - ZCash?
- **Free software**
  - Apache2.0
  - Available now on Github



# Blockchain Programming in Any Language



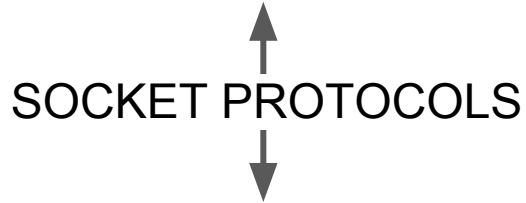
WORDPRESS



APACHE  
HTTP SERVER



APPLICATION  
PLATFORMS



SECURITY & NETWORKING  
PLATFORMS

C Ø S M O S





# Traction

**Used today by: Monax(Eris), FXCH, Omise, Votem,  
Blockfreight, LO3 Energy, Stratumn, Vidroll, ...**

“You gentlemen built a strong hammer by getting the  
division between Tendermint and the app just about  
perfect.” - *CTO Kloudery*



# Tendermint: Also for Public Blockchains

- **Proof of Work**

- Expensive energy expenditure
- Takes an hour to confirm (or more)
- Difficult to scale

- **BFT Proof of Stake**

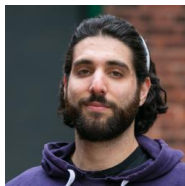
- Based on public/private key cryptography
- Instant finality
- Scaling is easy (see Cosmos Network)





## **Jae Kwon** (Founder/CEO)

Lead Yelp mobile app developer. Inventor of Tendermint algorithm. Bachelor in Computer Science, Cornell.



## **Ethan Buchman** (Co-Founder/CTO)

Lead blockchain engineer at Monax Industries. Masters in Computer Engineering, Guelph.



## **Peng Zhong** (CDO)

Front-end engineer. Designer who can code (“unicorn”). Built PRISM-Break.

