

INNOVATIONS IN BLOCKCHAIN

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GAMING**

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BLOCKCHAIN GAMING

BLOCKCHAIN GAMING



In a recent 2021 study, Accenture estimated that the gaming industry is a \$300+ billion revenue generating industry including hardware and software components



Blockchain or Crypto gaming is simply decentralized games being developed to run using blockchain technology. This is the same technology that is behind Bitcoin, Ethereum, Ripple and other popular cryptocurrencies

CURRENT GAMING INDUSTRY



Using the popular example of Fortnite we can see the elements of the current gaming industry and the pitfalls of the current gaming ecosystem

Most players spend their fiat(real) money to buy in game assets(Fortnite calls this V-Bucks. V-Bucks are used to buy clothes, weapons,props, art, etc).

Gaming companies offer assets in limited amounts for free (typically through missions.--Too time-consuming for game players.)



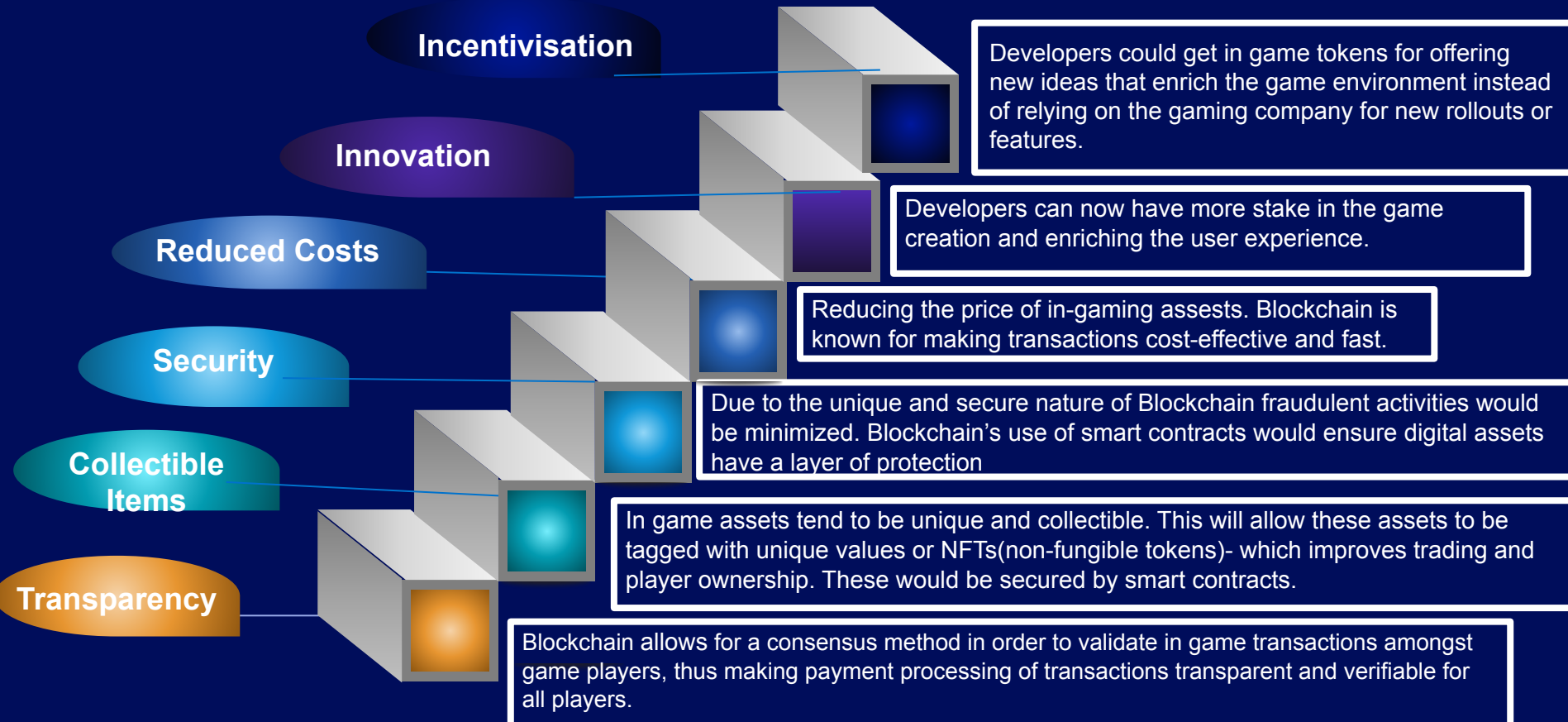
Players do not have ownership of in game assets(Epic Games organizations owns character's skins)

Players typically play multiple games. Profiles would need to be shareable across games or game accounts.(Having multiple Fortnite accounts)

Virtual game assets need to always be secure. Currently, these assets are stored in centralized servers of the gaming company. If the company is hacked, there goes the users data. (My account was hacked, calling Epic to recover)

Players can only trade digital assets or exchange on third party platforms (such as OpenSea,Wax.) not in game.

HOW BLOCKCHAIN REVISES THE PROBLEMS IN THE GAMING INDUSTRY





LIQUIDITY POOL & ARBITRAGE TRADING

WHAT IS A LIQUIDITY POOL?



A **liquidity pool** is an essential part of decentralized finance(Defi). A liquidity pool is a pool of funds that are locked in a smart contract to facilitate trading, lending, and yield generation in a decentralized manner.



Terms to know:

Arbitrage trading- Trading that exploits tiny differences in price between identical assets in two or more markets. The aim is to buy low and sell high.

Ordered book trading technique- an electronic list of buy/sell orders according to the current market price(traditional stock market)

Automated Market Makers- allow digital assets to be traded without permission and automatically by using liquidity pools instead of traditional market of buyer/sellers.

Automated Market Makers Constant Product Formula- simple mathematical formula that allows equilibrium within the trade. Does not change based on the size or assets that an investor is trading

Let's create a liquidity pool containing assets of two different tokens



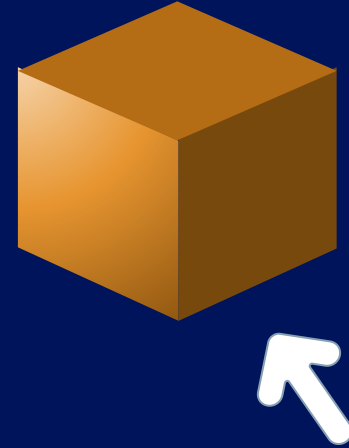
Liquidity Pool



In this example let's say we want to swap 5
Crypto\$hare tokens for our Ethereum tokens.



Let's create an [ERC-20] token. Call it
Crypto\$hare (C\$E) token



Ethereum Token(ETH)

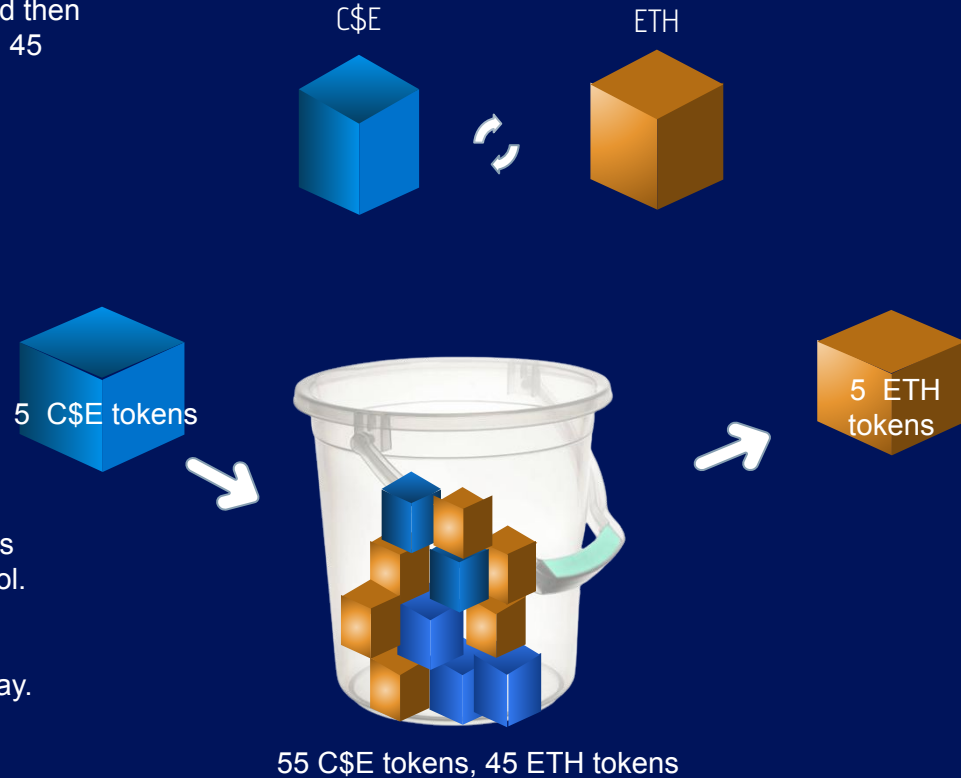


For simplicity sake let's say we have 50 of each token. And the price of each token respectively is the exact same. In order to do the swap, a liquidity provider comes along and adds all the tokens to the liquidity pool.

So say someone places 5 Crypto\$hare tokens into the liquidity pool and then takes out 5 Ethereum tokens. This leads to 55 Crypto\$hare tokens and 45 Ethereum tokens.

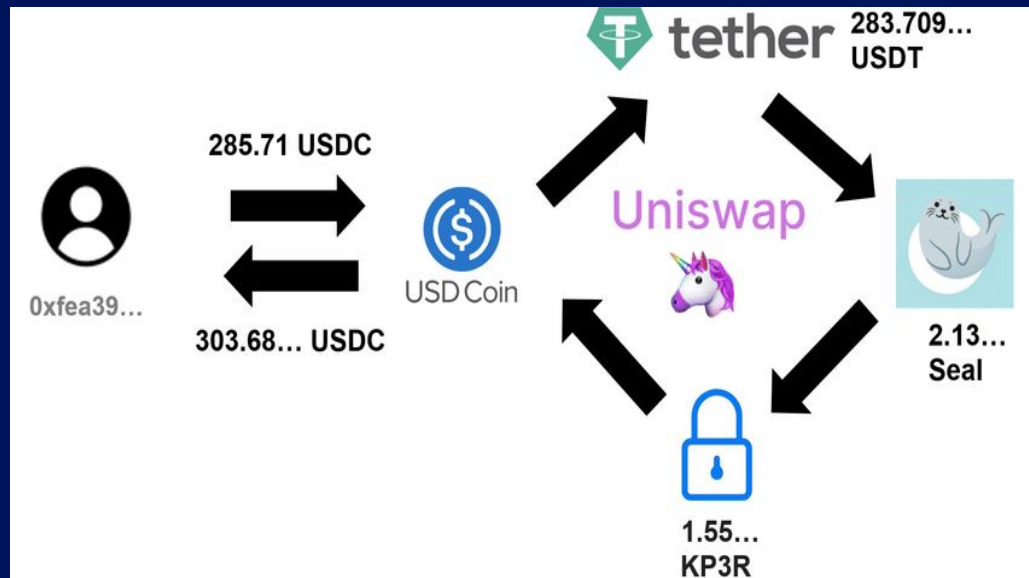
In this example, we are trying to maintain an equivalent ratio of C\$E tokens to ETH tokens. This equivalent or 50/50 balance is called the automated market maker equation (AMM). What happens is as we add more Crypto\$hare tokens it feels like the price (value) of Ethereum is going up in our liquidity pool. ETH is becoming fewer, thus driving up the supply so the demand is now high in this liquidity pool.

If someone added more Crypto\$hare tokens and more Ethereum was taken out, Ethereum's price would rise even more in this liquidity pool. However, the price of ETH would be more in this liquidity pool than general price of ETH on major crypto exchanges like Coinbase and Gemini. This is where a phenomenon called arbitrage comes into play.



UNDERSTANDING ARBITRAGE IN DEFI

- The premise of arbitrage is buy low and sell high
- In order to make profits, arbitrage traders look to liquidity pools to assess differences in the price from the market average on the major exchanges.
- They buy these assets at lower prices, drive the demand upward and thus bring them in line with the market.
- In a decentralized exchange like UniSwap (pictured to the right) we can see the cycle of arbitrage.



An example cyclic arbitrage. Transaction 0xcfc7094. . . in Uniswap V2, executed on 30th October 2020.



QUANT NETWORK & OVERLEDGER



OVERLEDGER

Overledger is the world's first blockchain operating system(OS) developed by Quant.

Overledger is the only OS platform for bridging multiple blockchains at once and currently supports blockchains, such as Ethereum, Hyperledger Fabric, Corda, Bitcoin, Ripple,etc.

Overledger is a layer over the blockchains and not a standalone blockchain. It uses its patented technology (Trusttag) to hash a message in the overlayer and add it as metadata to the input / output of a transaction on the source or destination blockchain

WHY DO WE NEED A BLOCKCHAIN OPERATING SYSTEM?



Blockchains are proprietary closed networks



- Users of one network can not interact and talk to other networks
- Users are limited to only the network and its technology
- No management for cost and fees



No Inflation, No new tokens minted

Tiny Total Supply of 14.6 Million QNT

Market Cap of \$41 Million

With Overledger Network the success of other connected chains will result in increased demand of QNT.

Connected blockchains benefit from the network of network effects of being part of Overledger Network

Gateway operators can stake QNT with the launch of Overledger Network. The more you stake, the more you can process and transact



QNT is one of very few tokens that is needed even for enterprises using permissioned blockchains

QNT used for licenses is taken out of circulating supply, further increasing scarcity

QNT is needed for Licenses, Consumption fees, Gateways, Signing of messages on Overledger and minimum holdings of QNT

Quant Treasury enables direct FIAT on ramp so Enterprises can pay in FIAT which then gets converted to QNT via the treasury

12 Million QNT already in Circulation so no huge amounts of tokens to be released by the team / advisors like other projects.



Connect any network to any network at scale without overhead or limits

Enterprise and Institutional grade Multi-Chain Oracles

Treaty Contracts - deploy, query and execute multi-chain smart contracts.

Overledger Network is a scalable p2p network with Layer 2 Payment Channels



Create Applications that deploy and connect across multiple blockchains

Multi-Chain Applications

Multi-Chain Applications

Multi-Chain Applications

Multi-Chain Applications

Multi-Chain Applications

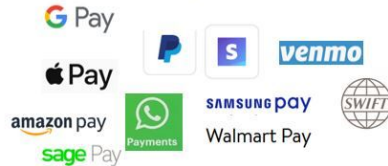
Multi-Chain Applications

Overledger OS

IFTTT

zapier

Payment APIs



Blockchains



Enterprise Blockchains



Banking APIs



IOT APIs
CISCO IOT SYSTEM





INTERNET OF VALUE



INTERNET OF VALUE

The Internet of Value(IoV) has no clear definition, but is a concept proposed by Ripple that will enable the “exchange of any asset that is of value to someone, including stocks, votes, frequent flyer points, securities, intellectual property, music, scientific discoveries, and more.”

Financially, the Internet is projected to surpass bank coverage globally with 1.7 B adults still underbanked and 4.1 B of the world population connected to the internet. Access to the internet in the future will mean access to finance.

The IoV would allow blockchain to make instantaneous transactions from one party directly to another, with no intermediary service enabling billions to make fast transactions.

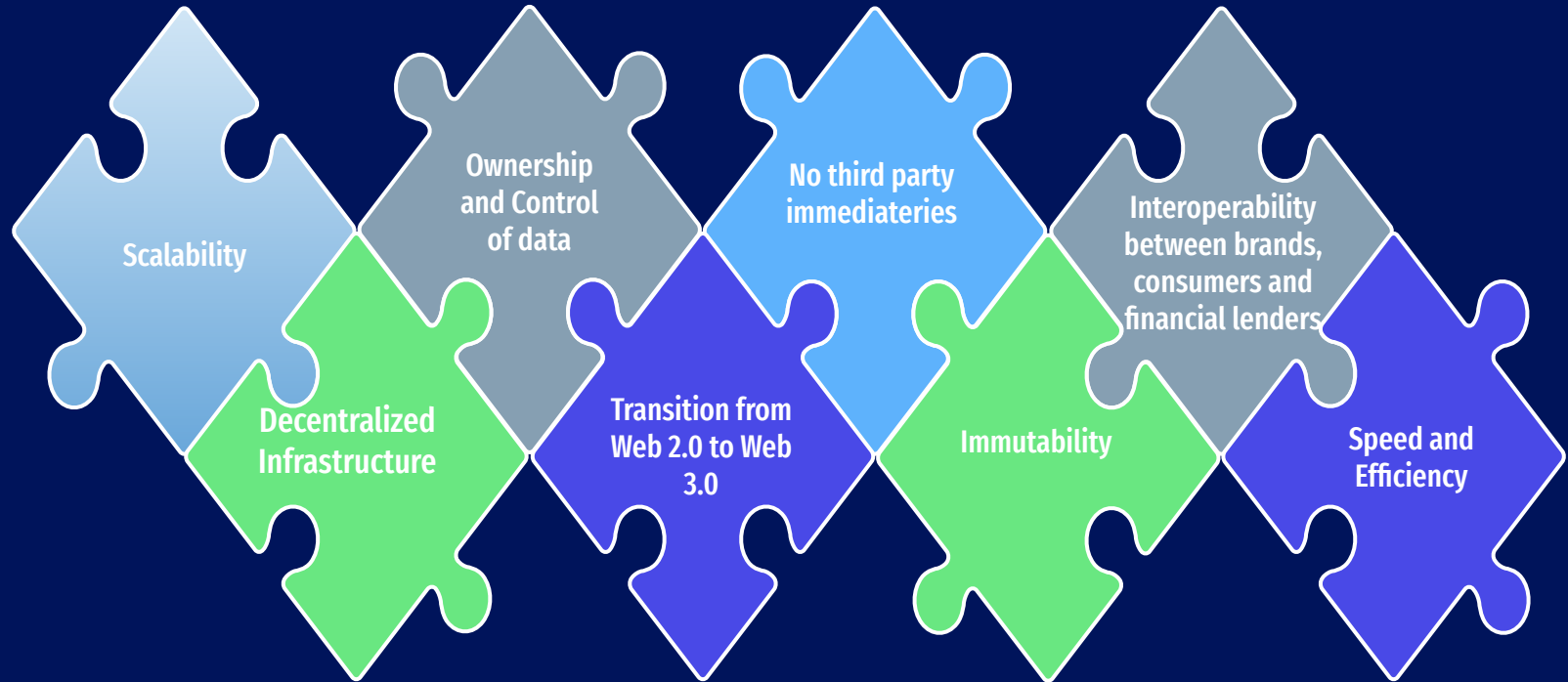


The internet of value is going to interoperate blockchains and networks and provide instant, friction free micro-transactions as well as instant, friction free high value transactions.

Web 3.0 is already in its early of development, but tools like Brave and MetaMask are paving the way for the boom of the internet of value. These tools allow you to connect your Ethereum wallet and interact with Web 3.0 applications.



ELEMENTS OF THE INTERNET OF VALUE



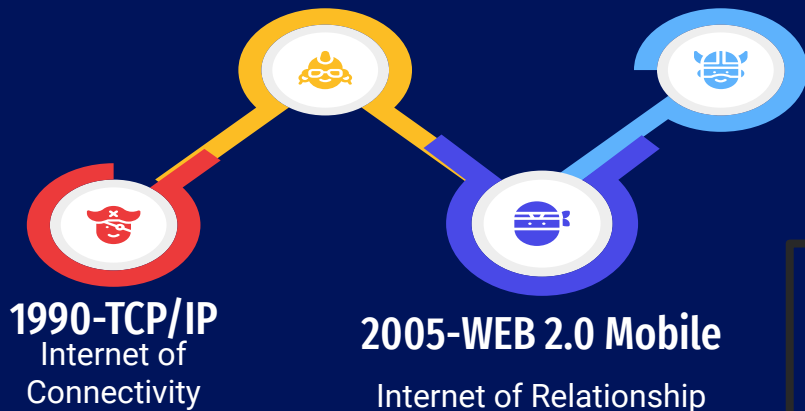


1995-HTTP/HTML

Internet of Information

2010+-Blockchain

Internet of Value



“Anything that can conceive of as a supply chain, blockchain can vastly improve its efficiency- it doesn't matter if its people, numbers, data, money.”

Ginni Rometty, CEO IBM





READING BLOCKCHAIN USING ETHERSCAN



What is etherscan?

Etherscan or Etherscan.io is a tool used to search Ethereum blockchain

Etherscan keeps track of blockchain transactions on the Ethereum networks

Users connect an existing crypto wallet to Etherscan to track the transaction activity on a specific Ethereum wallet address



The Ethereum Blockchain Explorer

All Filters

Search by Address / Txn Hash / Block / Token / Ens


ETHER PRICE
\$2,989.60 @ 0.07528 BTC (-2.23%)

TRANSACTIONS
1,542.52 M (12.6 TPS)

MED GAS PRICE
24 Gwei (\$1.51)

ETHEREUM TRANSACTION HISTORY IN 14 DAYS

1 150k


MARKET CAP
\$355,242,388,826.00

DIFFICULTY
13,420.90 TH
HASH RATE
1,045,600.01 GH/s

Latest Blocks

Bk	14606027	Miner Miner: 0xb7e...707	2.01073 Eth
	41 secs ago	15 txns in 20 secs	
Bk	14606026	Miner F2Pool Old	2.09362 Eth
	1 min ago	233 txns in 7 secs	
Bk	14606025	Miner Ethermine	2.02076 Eth
	1 min ago	77 txns in 22 secs	
Bk	14606024	Miner F2Pool Old	2.13706 Eth
	1 min ago	241 txns in 8 secs	
Bk	14606023	Miner K1POOL.COM	2.03578 Eth
	1 min ago	15 txns in 20 secs	

Latest Transactions

Tx	0xd25239c43e9a...	From 0x7961076f6130092c1...	0 Eth
	42 secs ago	To 0x153cddd727e407cb95...	
Tx	0x16ea8ca6c94d...	From 0x4d8ec62d46a695d715...	0 Eth
	42 secs ago	To 0x98b82d9efc577b1c3a...	
Tx	0xe8f6e56c9be6...	From 0xeb12c3ee3b7bc618fd...	0 Eth
	42 secs ago	To 0x99c9fc46f92e8a1c0de...	
Tx	0xbba239d3df40...	From 0x9611cbb707eb03055d...	0 Eth
	42 secs ago	To 0x3eed641562ac83526d...	
Tx	0xb51c2f13f9f6...	From 0xba5cb77deb343d3308...	0.5 Eth
	42 secs ago	To 0x...	

Ether Price- current price of ether

Transactions-Volume of transactions

Market Cap- how much Ethereum is worth in tota

Gas Fee- transaction fee(GWEI-Giga Wei, Wei-small amount of ETH)

Hash Rate- measures the capability of minors to verify transactions and secure the network(how hard for blocks to be verified)

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