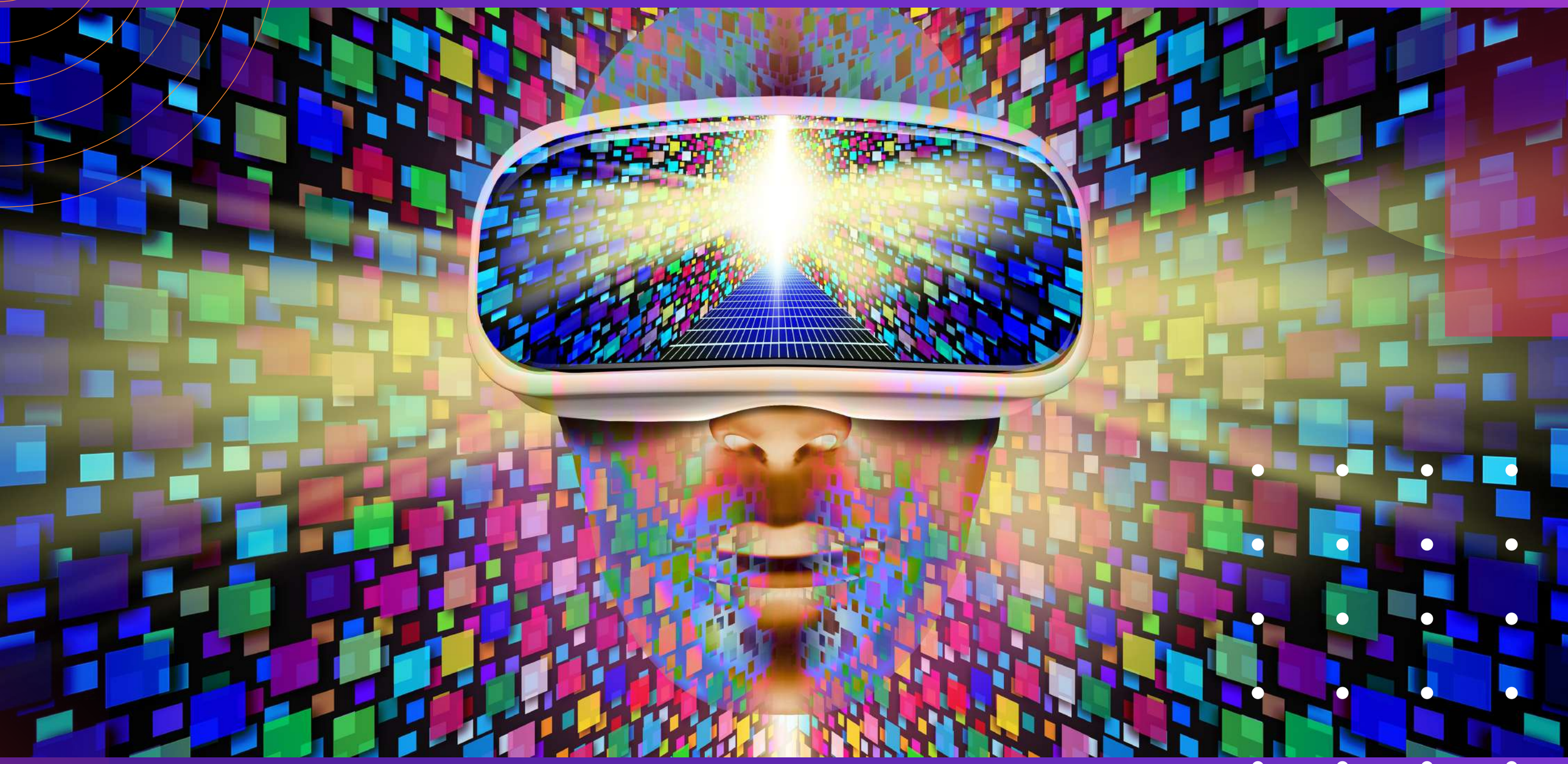
WEB3 GLOSSARY



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BITCOIN

Created in 2009 by the pseudonymous Satoshi Nakamoto, Bitcoin is the world's largest cryptocurrency by market capitalization, though it's gone through several cycles of booms and busts since its inception.

BLOCKCHAIN

A blockchain is a distributed database shared across a large number of computers comprising a computer network. Information is stored and verified on these shared databases in a cryptographically secure way, by keeping data in groups known as blocks that are connected by chains of data. This structure chains data together irreversibly in chronological order and in a decentralized manner, leading some to see it as a more secure and open option for information storage and exchange.

BLOCKCHAIN ETF

Exchange-traded funds invest in a specific bundle of specific stocks. Therefore, a blockchain ETF invests in a specific bundle of exclusively blockchain-based companies.

BLOCK HEADER

A block header is used to identify individual blocks in a blockchain. Each contains three sets of block metadata along with other individual components.

BLOCK HEIGHT

Block height is the number of confirmed blocks preceding a particular block in the blockchain. It's representative of the blockchain's current size or time in existence.

CONSENSUS MECHANISM

A consensus mechanism is used in computer and blockchain systems to validate single data or single states of a distributed computer network. It encompasses any methodology that is used to achieve agreement, trust and security across a decentralized computer network. The two most common in the crypto world right now are proof of work and proof of stake.

CRYPTOCURRENCY

Cryptocurrencies are a form of digital currency that is secured via cryptography, most typically through decentralized networks on blockchain technology. That means that it's distributed across a large number of computers outside of any central authority control. Cryptocurrency is often lauded for its decentralization, as it makes it impossible to counterfeit or double-spend transactions and has faster and cheaper money transfers. However, it has so far come with extreme price volatility, high energy consumption and use for criminal activities.

DECENTRALIZED APPLICATIONS (DAPPS)

dApps are digital applications that operate on a blockchain network of computers rather than on one computer alone. Examples of dApps are BitTorrent, Tor and more that allow for participants to consume, feed and seed content, or do all at the same time. Their decentralized nature makes them free from the control of a single authority, thereby increasing user privacy and offering flexible development.

DECENTRALIZED AUTONOMOUS ORGANIZATIONS (DAOS)

Simply put, a DAO is an organization built with blockchain technology, though they've been described as “crypto co-ops," “financial flash mobs" and “group chats with a bank account." Essentially, it's an organization that forms with a specific end goal, most commonly to make big investments or purchases. Because of the involvement of blockchain technology, members of a DAO use crypto tokens to manage member rights, a common treasury and voting on certain decisions within the group. All of the important decisions from the group will appear on a permanent blockchain ledger shared by all members, making DAOs more democratic than traditional non-crypto organizations.

DECENTRALIZED FINANCE (DEFI)

Decentralized finance, or DeFi, is an evolving realm of the crypto world that aims to use blockchain technology to replace traditional intermediaries and trust or permission mechanisms with an internet-native financial system — essentially a crypto Wild West version of Wall Street. It's been valued at around $77 billion, with trading activity that's grown by over 550% in the last year. Overall, DeFi is still a very much emerging part of the crypto world, and it remains largely unregulated at this point.

DISTRIBUTED LEDGER TECHNOLOGY

Another term for blockchain technology, distributed ledger technology describes a method for securely and accurately storing information using cryptography.

EOS

EOS is a blockchain-based platform launched in 2018 that allows for the development of dApps. Specifically, it has capabilities to support authentication, permissioning, data hosting, usage management and communication between dApps built on its platform and the internet. EOS also has its own cryptocurrency, the EOS token. Ethereum is its main competitor.

ETHEREUM

Known best for its cryptocurrency ETH, Ethereum is a blockchain-based platform that allows for public creation and maintenance of secure digital ledgers. Its cryptocurrency is the second largest in the world by market capitalization, only behind that of Bitcoin. While known for its cryptocurrency, Ethereum is notably different from Bitcoin in its long-term goals of using blockchain technology for a diverse range of applications. Notably, both Bitcoin and Ethereum operate on proof of work protocols, but Ethereum is working to transition to a proof of stake protocol.

HARD FORK

A hard fork is an overhaul of a network's protocol that can validate previously invalid blocks and transactions in a blockchain, or vice versa. Notable examples have occurred with Bitcoin to create Bitcoin Cash and Bitcoin SV, for instance. For a hard fork to succeed, all nodes must upgrade and agree on the new version.

HASH

A hash is a function that solves for a blockchain computation by converting an input of arbitrary length into an encrypted output of a fixed length. Hash functions are one-way, making it impossible to reverse-engineer the input from the output. They are considered a backbone of the blockchain network as their fixed length makes it impossible to guess and crack the blockchain.

HASHGRAPH CONSENSUS MECHANISM

The hashgraph consensus mechanism is based on the use of information about information, called “gossip," and virtual voting to create consensus in verifying new blocks. The crypto community has yet to widely adopt it.

HYPERLEDGER FABRIC

Launched by Linux in 2015, Hyperledger Fabric is an open-source enterprise-grade private permissioned blockchain. It was designed by IBM for industrial enterprise use and has features for faster transactions, smart contract technology and streamlined data sharing, in particular.

HYPERLEDGER IROHA

Hyperledger Iroha is a platform of business blockchain frameworks intended to support infrastructure projects that require blockchain technology. Notably, its capabilities include the potential to build an identity management system, as well as software apps that can help unbanked people have access to financial services.

NONCE

An abbreviation for “number used only once," a nonce is the first number a blockchain miner needs to find before it can solve for a block in the blockchain. They are notoriously difficult to find and miners are rewarded with cryptocurrency after identifying them. Examples of nonces outside of crypto include two-factor authentication, purchase authentication and other form of account recovery and identification.

NONFUNGIBLE TOKENS (NFTS)

It's easiest to understand this concept by breaking it down in two parts. “Nonfungible" describes something that is not easy to exchange or mix with other similar goods or assets, per the Cambridge Dictionary. Meanwhile, a “token" is a thing serving as a visible or tangible representation of a fact, quality or feeling, according to Oxford Languages. By those definitions, a nonfungible token is a visible or tangible representation of something that cannot be easily exchanged for something similar. And that's actually kind of how NFTs really work.

The key here is: These tokens can't be easily exchanged because they are unique cryptographic assets, on a blockchain with unique identification codes and metadata that can't be replicated. Unlike cryptocurrencies, which are fungible tokens, NFTs can't be traded or exchanged at equivalency. They're most commonly represented by artwork or real estate at present, but they have the potential to represent any real-world asset that would benefit from a more efficient buying, selling and trading process (with a reduced probability of fraud for identities, property rights and more).

PERMISSIONED BLOCKCHAIN

A permissioned blockchain is a blockchain that is not publicly accessible and can only be accessed by users that have permission to do so. This access control offers increased security of blockchain systems like Bitcoin, as users are only able to take actions that blockchain administrators allow and must identify themselves digitally.

PROOF OF STAKE

Proof of stake is a decentralized consensus mechanism that requires coin owners to offer their own coins up as collateral (in other words, staking their coins) for a chance to validate blocks in a blockchain. Validators are selected randomly, instead of via the competition mechanism used in proof of work. To have the chance to be a validator, coin owners must stake a certain amount of their coins (i.e. Ethereum's requirement of 32 ETH). Multiple validators must verify the new block before it can be finalized and closed. Proof of stake is known for being far less energy-consuming than proof of work.

PROOF OF WORK

Proof of work is a decentralized consensus mechanism that requires all members of a network (i.e. computer nodes in a blockchain) to complete a significant but feasible amount of work to solve an arbitrary mathematical puzzle.
It's widely used to validate transactions and mine new tokens in cryptocurrency mining, as it doesn't require the need for a trusted third party. However, despite its benefits, proof of work is notorious for requiring huge amounts of energy.

RUG PULL

A rug pull is a scam where software developers raise a huge sum of money in order to fund a crypto project, then take advantage of the nature of DeFi by using the lack of financial gatekeepers or verified third parties to disappear with that money.

SMART CONTRACTS

A smart contract involves the use of self-executing lines of code to outline the terms of agreement in the contract, which exists on a decentralized and distributed blockchain network. Smart contracts allow for agreements between two separate and even anonymous parties, without the need for any third party authority or system. Smart contracts are trackable and irreversible.

SOFT FORK

A soft fork is a change in software protocol for blockchain technology that only makes previously valid transactions invalid. For a soft fork to succeed, only a majority of nodes need to upgrade and agree on the new version.

STABLECOINS

Stablecoins are a type of cryptocurrency that is tied to a reserve asset, like the dollar. They're an attempt to create a more stable option, akin to fiat currencies, while also taking advantages of instant processing and privacy offered by cryptocurrency.

TRON

Tron is a blockchain-based digital platform founded in 2017 with the goal of hosting a global entertainment system digital content sharing. As of August 2021, it had over 50 million accounts. Tron also has its own cryptocurrency, Tronix, and was founded by BitTorrent CEO Justin Sun.

WEB1

This describes the earliest iteration of the internet. Most internet users were consumers, rather than content creators, and most available websites were static informational pages such as Britannica Online, mp3.com and personal websites.

WEB2

This describes the current state of the internet. The shift from Web1, which first began at the turn of the 21st century, indicated an increase in users creating content and more actively engaging with the internet, as opposed to simply consuming information on it. The move from Web1 to Web2 was not signified by any specific technical advancement, but rather a change in internet usage that demonstrated an increase in user information-sharing and interconnectedness.

WEB3

This describes an idea of a future state of the internet. A marked advancement in usage style from Web2, Web3 is “the internet owned by the builders and users, orchestrated with tokens," according to investor Packy McCormick. At the core of Web3 predictions is the idea of a decentralized and open internet with greater user utility. Though the definition of what this will actually look like is still taking shape, experts agree that Web3 will be marked by decentralization, trustless and permissionless interactions, wider use of artificial intelligence and machine learning and, finally, increased connectivity and ubiquity across applications and devices.

0X PROTOCOL

The 0x protocol allows for peer-to-peer exchanges of assets on Ethereum's blockchain. It was launched in 2017 by 0x Labs and is intended to create the infrastructure for new financial applications using blockchain technology.

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