BLOCKCHAIN AND NFTs : FUTURE OF VIDEO GAMES

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Abstract- Over the past ten years, there has been a tremendous shift in how people see money and finances. Blockchain technology was created ten years ago, paving the way for cryptocurrencies. Video game sales are now soaring and don't seem to be slowing down. The gaming business is becoming more and more interested in the blockchain sector and utility tokens. Blockchain technology and non-fungible tokens are driving the most intriguing shifts in digital assets and ownership (NFTs). NFTs, or Non-Fungible Tokens, are distinctive, valuable, and advantageous. Their manufacturing and trade have been made possible by the introduction of blockchain technology. The epidemic has had a tremendous impact on all aspects of our life, including the top Play-to-Earn (P2E) games for players looking to influence public opinion in exchange for money. P2E has enabled game makers to flourish in this ecosystem by focusing on blockchain and NFTs. This paper explores the background, the nature of NFTs, and their attempts to alter video games.

Keywords - Blockchain technology, NFTs, P2E Gaming, Metaverse, Decentralized Finance (DeFi),

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1. INTRODUCTION

New technologies are always being sought after by humanity. Humans are unable to satiate their cravings in any way. Everything that exists today was once only a dream. In 2008, a person or group of people known as Satoshi Nakamoto made the Blockchain widely recognised[6]. The identity of Satoshi Nakamoto is currently unknown. Digital assets and ownership have undergone an extraordinary metamorphosis as a result of blockchain technology and non-fungible tokens (NFTs).

A blockchain is a distributed database, as opposed to other popular databases. A central authority controls changes to the data in a traditional database, while users control changes in a blockchain, therefore there is no such central authority. The most well-known cryptocurrency, Bitcoin, is one example of a blockchain.

Instead of being kept on a single server, the data in the blockchain is spread across millions of computers throughout the world. The video game industry is currently growing more fast than in previous years. Additionally, there are now more participants. The market for play-to-earn (P2E) video games is growing, which benefits users as well. NFTs significantly affect this. Online trading is possible for non-fungible tokens, or NFTs. For a person's online assets, it serves as a digital receipt or ownership certificate. Players may now make money while having fun and selling digital things. To put it another way, innovations are something that everyone wants or needs in every industry, and gamers have always embraced them. Even humans are able to adapt to change so easily.

When players have the opportunity to own in-game objects thanks to NFTs, their anticipation and expectations are enhanced. In certain ways, NFTs live up to these expectations. On a blockchain, NFTs are securely stored. As their name implies, non-fungible tokens (NFTs) are distinct and cannot be traded for any other kind of token. Around Blockchain and NFTs, the digital world is becoming more and more exciting. NFTs have expanded since 2020, and there are many opportunities for them to continue doing so. Numerous new startup platforms and cryptocurrency exchanges have been made possible by the recent rise in NFT usage.

HISTORY

Blockchain

The first blockchain was installed in 2008 by Satoshi Nakamoto, a person or group of persons who claimed to be from Japan and were well known for establishing Bitcoin and popularising the technology.

Satoshi Nakamoto revealed the blueprint for a block chain in a white paper in 2008.

In 2009, Nakamoto published a block listing every bitcoin transaction using the original block chain.

In 2014, block chain 2.0 is released. a reference to non-cash uses.

In the Ethereum blockchain technology, computer programmes are added to blocks to represent financial assets like bonds. These are referred to as smart contracts.

The second generation

Ethereum : the second largest blockchain implementation after bitcoin. Ether is the native currency in this platform, second to bitcoin among cryptocurrency.

Non-fungible tokens(NFTs)

Non-fungible tokens or NFTs are unique.[5]

Quantum, the first-ever NFT, was developed by Kevin McCoy in may 2014 and purchased by Anil Dash.

In October 2015 , the first NFT project Etheria was launched[3]

The term NFT only gained currency with the ERC-721 standard, first proposed in 2017 via the Ethereum GitHub, following the launch of various NFT projects that year.[2]

Public awareness(late 2017-2021)

NFTs gained public recognition with the success of CryptoKitties ,it is an online game where players adopt and trade virtual cats.[2]

In 2018,Decentraland, a blockchain based virtual world which first sold its tokens 2017,raised 26 million dollar in an initial coin offering , and had a 20 million dollar, internal economy as of September 2018[2].

Following Cryptokitties success , another similar NFT based online game Axie Infinity was launched in March 2018.[2]

In 2019, Nike patented a system called CryptoKicks that would use NFTs.[4]

In early 2020, the developer of CryptoKitties, Dapper Labs, released the beta version of NBA TopShot, a project to sell tokenized collectibles of NBA highlights.[2]

The NFT market experienced rapid growth during 2020.[2]

In the early months of 2021, interest in NFTs has increased. NFT sales in February 2021 included digital art created by Grimes, an NFT of Nyan Cat meme, and NFTs created by 3LAU to promote his album Ultraviolet. More publicized NFT sales were made in March 2021. By mid-April 2021, demand appeared to have substantially subsided, causing prices to fall significantly. In June 2021 an NFT of the source code of the world wide web, credited to internet inventor computer scientist Tim Berners-Lee, was auctioned.[2]

BLOCKCHAIN

Systems for keeping records could be vulnerable to cyber attacks and fraud. As a participant in a members-only network, you can be confident that you are receiving timely and correct information from blockchain and that only the network participants you have specifically granted access to will have access to your private blockchain records. The usage of a distributed ledger that is shared among network users speeds up time-consuming record reconciliations. An automated set of instructions called a "smart contract" can be added to the blockchain to expedite transactions.

Different methods can be used to build a blockchain network. They could be made by a collaboration and could be private, public, or permissioned[1]. In a public blockchain, anyone can participate and contribute. A private blockchain network is comparable to a public blockchain network in that both are decentralised peer-to-peer networks. Businesses that build private blockchains frequently build permissioned networks. Blockchain networks with permissions are also possible. A consortium blockchain is the best choice for business when each party to a transaction needs to have authorisation and share responsibility for the blockchain.

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The Ethereum Project was established as a result of a white paper by Canadian-Russian developer Vitalik Buterin that outlined a platform that included standard blockchain capabilities with one key distinction: the running of computer code. Programmers may create intricate, interconnected systems thanks to the Ethereum blockchain. A token can be used to represent any kind of digital asset, and Ethereum programmers can use that token to monitor ownership and perform certain tasks.

Decentralized finance (DeFi)

A broad phrase used to describe a multitude of applications and projects in the public blockchain arena is "decentralised finance," or "DeFi." DeFi refers to financial applications built on blockchain technologies, generally employing smart contracts, and is inspired by blockchain technology. Anyone with an internet connection can access smart contracts, which are automated enforceable contracts that do not require middlemen to execute. Decentralized blockchain networks are used by peer-to-peer applications and protocols known as DeFi to make it simple to lend, borrow, and trade financial instruments. The Ethereum network is now used to build the majority of DeFi apps, but a number of new open networks are gaining popularity because of their greater speed, scalability, security, and affordability. Hyden Adams established Uniswap, a well-known decentralised exchange, in 2018.[7]

Non -Fungible Tokens(NFTs)

Non-fungible tokens (NFTs) are cryptographic assets on a blockchain that can be distinguished from one another by their distinctive identification codes and metadata.
NFTs, like Bitcoin, also include ownership information allowing straightforward token holder identification and transfer. In NFTs, owners can additionally include additional metadata or asset-related features.

Play -To-Earn (P2E) Gaming

Play-to-earn games, often known as P2E games or just crypto games, incorporate NFTs and cryptocurrencies into the action. Numerous changes were brought forth by the outbreak, which also affected how people saw games. P2P gaming is leading the charge to change how consumers view their revenue. The P2E was drastically increased because people were frequently without their typical source of income owing to the pandemic while also being bored at home. P2E, which has a blockchain basis and NFTs as its key areas, has allowed game developers to thrive in this new ecosystem.

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METAVERSE
When the idea was first presented in the early 1990s, it wasn't wholly novel. In the early 2000s, two of the forerunners of the meta-early world were Second Life and the Habbo Hotel, both created by Sulake. The concept wasn't widely explored when it initially surfaced, but it still exists today. There are 200,000 people using Second Life right now. The idea of the metaverse is enormous and pervasive, and it has the power to open up the world of reality to the boundless possibilities offered by contemporary technology.
Metaverses are interactive ecosystems that employ game-level graphics (which may also incorporate AR/VR components) and game engine interactions to boost user engagement. Through the use of a blockchain ledger, these ecosystems produce X2E economies, where "X" may stand for "play," "learn," "give," etc. A supply of tokens—which power the economy—is released into the ecosystem as more users sign up.

CONCLUSION

Gaming is growing more and more relevant in the modern, digital world. As more gamers developed an interest in purchasing in-game goods from NFTs, the gaming business began to flourish. Numerous P2E games are now being built on the blockchain. Players' ability to play and make money depends on NFTs. Thanks to NFTs, players can now possess in-game goods, giving P2E games a more flexible economic foundation. Blockchain does provide something new, and it also makes enough money to support someone.

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