



NON FUNGIBLE TOKEN

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ABSTRACT

Non-fungible token, which is a unique digital asset that is stored on a blockchain, such as Ethereum or Polygon. Unlike fungible assets, such as cryptocurrencies, each NFT is distinct and cannot be replicated or divided into smaller units. NFTs can be used to represent a variety of digital content, including art, music, videos, and even tweets. NFTs are becoming an increasingly popular way for creators to monetize their work & for collectors to own rare & unique digital items. When an NFT is sold, the buyer is essentially purchasing ownership of that unique digital asset which is recorded using a cryptographic technique & ensures transparency and security. The research intends to create an understanding of blockchain technology and NFT operations. NFTs have also raised questions about the environmental impact of blockchain technology, as the process of creating and maintaining a blockchain network can be energy-intensive. However, there are ongoing efforts to address these concerns and make blockchain technology more sustainable.

Keywords: Blockchain technology, NFT, asset tokenization

INTRODUCTION

NFTs are created using blockchain technology, which is the same underlying technology used for cryptocurrencies like Bitcoin and Ethereum. However, currencies are fungible, meaning that each unit is interchangeable with another. This is unique and non-fungible, meaning that each one is distinct and cannot be exchanged for another NFT on a one-to-one basis. This uniqueness is what makes NFTs valuable and allows them to be used to represent digital assets. It is stored on a blockchain, typically Ethereum. This represents a specific asset or piece of content. This makes NFT ideal for representing digital assets like art, music, videos, and other types of media.

NFTs have sold for millions of dollars, making them a potentially lucrative investment for creators and collectors alike. Overall, NFTs offer a new and innovative way to represent and exchange digital assets, providing greater transparency, security, and authenticity than traditional methods. Kevin McCoy, an American artist, and technologist created the first non-fungible token (NFT) in 2014, which he called "Quantum." However, it wasn't until 2017 that the concept of NFTs began to gain traction in the art world. The first major NFT art project was "CryptoPunks," created by Larva Labs on the Ethereum blockchain.

Since then, NFTs have become a significant sector of the Western art industry, with many artists and collectors embracing technology as a way to authenticate and sell digital art. The market for NFTs has exploded in recent years, with sales reaching hundreds of millions of dollars for some individual pieces. NFTs have also expanded beyond the art world and are now being used to sell all sorts of unique digital assets, including music, videos, and virtual real estate. (Fenech, 2018),opinioned that the global market size of NFTs is USD 200 billion.

BLOCKCHAIN TECHNOLOGY

Blockchain stores the details in a publicly distributed ledger that allows secure and transparent record-keeping of transactions or information. With the help of distributed database system that records transactions in a way that is resistant to modification or hacking. Each block in a blockchain contains a cryptographic hash of the previous block, which makes it difficult to change any previous block without also modifying all subsequent blocks. This makes it nearly impossible for anyone to manipulate the blockchain or alter the information it contains without being detected. Smart contracts enable more security in each transaction.

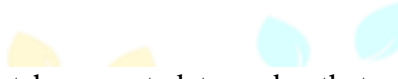
Bitcoin created in 2009, was the first and most well-known cryptocurrency. Ethereum, Ripple, and Litecoin are other popular cryptocurrencies. The blockchain technology that underlies cryptocurrencies has many potential use cases beyond just financial transactions. It can be used for things like supply chain management, voting systems, and even identity verification. However, the crypto space is still largely unregulated and there are concerns about security, volatility, and potential use for illicit activities. It's important to do your research and understand the risks before investing in cryptocurrencies or getting involved in the crypto space.

Blockchain is a decentralized system, it is highly resistant to hacking and other types of cyber attacks. Before validating the transaction, needs approval from a majority of the participants who have a copy of the database. This makes blockchain an extremely secure method of recording and transmitting information.

The main categories of this network are 1. Public blockchains: These are decentralized blockchain networks that are open to anyone to participate in and contribute to. Anyone can view the transactions on the network and join as a participant. Examples of public blockchains include Bitcoin and Ethereum. 2. Private blockchains: These are blockchain networks that are operated by a single organization or a group of organizations for private use. not accessible unknowns. This is typically used for enterprise applications such

as supply chain management or record-keeping. 3. Consortium blockchains: These are blockchain networks that are owned and operated by a group of organizations that have agreed to work together. The network is not restricted to a single organization. Consortium blockchains are typically used for industries such as finance or healthcare where multiple organizations need to collaborate on shared data. 4. Hybrid blockchains: These are blockchain networks that combine elements of public and private blockchains. They may be operated by a consortium of organizations but still allow for public participation, or they may have public-facing components alongside private internal networks. The goal of a hybrid blockchain is to combine the benefits of both public and private blockchains, such as transparency and security. The choice of blockchain depends on the use case & needs of participants.

PROCESS OF NFT



NFTs are unique virtual tokens that have metadata codes that are stored on the blockchain network. This metadata typically contains the name of the art, its description, the creator's information, and other relevant data. Blockchain technology is used to store this non-replaceable token. It ensures that each NFT is unique and cannot be duplicated or altered in any way, which is essential for ensuring authenticity and uniqueness. The immutability of blockchain technology means that once an NFT is created, it remains unchanged, and the metadata codes cannot be edited or altered. It assures higher security and trust for buyers and sellers. NFTs, as they can be confident that they are getting a one-of-a-kind asset that is verified by the blockchain network. NFT cannot be exchanged for another token on a one-to-one basis like traditional currencies or cryptocurrencies.

Through "minting," NFTs are created which assigns a unique digital signature to the asset being represented. This signature is then recorded on the blockchain, providing a permanent and transparent record of ownership and authenticity. Once minted, NFTs can be bought, sold, and traded on various online marketplaces. Artworks initially sell through the primary market where customers can buy and mint. In the primary market whitelist presales & public sales happen. Whitelisted sale helps the creator gets publicity from the promotions done by candidates, in return, these candidates get whitelisted for mint. This will help to get the NFT for the lowest price and the gas fee will be low. In the secondary market, where pre-revealed and revealed phases are there. The worthiness of an NFT is decided by various factors, including the rarity and uniqueness of the asset being represented, the reputation of the creator, and the demand among buyers that NFTs are bought and sold on various marketplaces.

Ethereum has been the leading platform for NFTs, and other blockchains have emerged that also support its creation. Solana, Tezos, Avalanche, Polygon, and Flow are among the many other blockchains that have gained popularity for their capabilities. Ethereum may have been the first blockchain to support NFT creation, but other blockchains have emerged that offer different advantages and capabilities for NFT creators and buyers. The competition between these blockchains is likely to continue, with each blockchain trying to differentiate itself and attract users with unique features and capabilities. To create a profile of a Non-Fungible Token the person has to choose a platform to create and sell her NFT. Popular platforms include OpenSea, Rarible, and SuperRare.

And create an account on your chosen platform by providing your email address and creating a password then the person has to connect the crypto wallet to the platform. This will allow you to pay for the creation of your NFT and receive payments when it is sold.

Create your profile on the platform, & navigate to your account settings. You can add a profile picture, biography, and any other relevant information. Once your profile is set up, you can create your NFT by uploading your digital asset (such as an image or video) and setting its parameters, such as its name, description, and price. Finally, you have to list your NFT for sale on the platform, and potential buyers can view it and make offers. Once it is sold, you will receive payment in your connected crypto wallet.

Growth of the NFT Market

The market for NFTs (Non-Fungible Tokens) is growing rapidly. It is secured as a way to represent ownership & authenticity of digital art, music, videos, and other digital assets. The projection of US\$3,546.00m in revenue for the NFT segment in 2023 would indicate a substantial enlargement in the adoption and use of NFTs in the coming years. This growth could be driven by several factors, including increased acceptance and understanding of blockchain technology, more widespread use of cryptocurrencies, and a greater demand for digital art and other digital assets. The NFT market is expected to experience prominent multiplication in the coming years. The projected value of \$231 billion by 2030 is a massive increase from the current market size and would represent a significant shift in the digital asset landscape.

CONCLUSION

Non-fungible tokens have indeed been touted as a new and innovative path to unlock the market for collectibles. By creating distinctive, technological assets that can be traded on blockchain platforms, & offer a fresh path for collectors to own and display one-of-a-kind items in the digital realm. The market for collectibles is estimated to be worth around USD 200 billion globally, and NFTs have the potential to tap into this market by offering collectors a new way to own and trade unique items. However, the value & popularity of NFTs is still very much in flux, and to see whether this lasting impression will remain on the collectibles market. It's also worth noting that NFTs have been subject to some controversy and criticism, with some people arguing that they represent a bubble or a fad rather than a sustainable market. NFT minting consumes a big amount of electricity and causes environmental damage, there are efforts underway to reduce their carbon footprint. For example, some NFT marketplaces are exploring more sustainable blockchain networks that consume less energy, while others are investing in renewable energy to power their operations. Additionally, some artists and collectors are offsetting the carbon emissions associated with their NFT transactions by purchasing carbon credits or making donations to environmental causes.

Overall, while NFTs may offer new opportunities for collectors and the wider market for collectibles, it's important to approach them with a critical eye and a thorough understanding of their potential risks and benefits. While NFTs have gained a lot of attention and worth recently, it is significant to mention their use cases and potential impact on various industries are still being explored and debated.

REFERENCES

1. Wang, Q., Li, R., Wang, Q., & Chen, S. (2021). Non-fungible token (NFT): Overview, evaluation, opportunities, and challenges. *arXiv preprint arXiv:2105.07447*.
2. Lee, J., & Kwon, K. H. (2022). Novel pathway regarding good cosmetics brands by NFT in the metaverse world. *Journal of Cosmetic Dermatology*, 21(12), 6584-6593.
3. Ante, L. (2022). Non-fungible token (NFT) markets on the Ethereum blockchain: Temporal development, cointegration, and interrelations. *Economics of Innovation and New Technology*, 1-19.
4. Vasan, K., Janosov, M., & Barabási, A. L. (2022). Quantifying NFT-driven networks in crypto art. *Scientific reports*, 12(1), 1-11.
5. Taherdoost, H. (2023). Non-Fungible Tokens (NFT): A Systematic Review. *Information*, 14(1), 26.
6. Peres, R.; Schreier, M.; Schweidel, D.A.; Sorescu, A. *Blockchain Meets Marketing: Opportunities, Threats, and Avenues for Future Research*; Elsevier: Berlin/Heidelberg, Germany, 2022.
7. Wang, Q.; Li, R.; Wang, Q.; Chen, S. Non-fungible token (NFT): Overview, evaluation, opportunities, and challenges. *arXiv Prepr.* **2021**, arXiv:2105.07447.
8. Corbet, S.; Hou, Y.G.; Hu, Y.; Larkin, C.; Lucey, B.; Oxley, L. Cryptocurrency liquidity and volatility interrelationships during the COVID-19 pandemic. *Finance. Res. Lett.* **2022**, 45, 102137.
9. Sarkodie, S.A.; Ahmed, M.Y.; Owusu, P.A. COVID-19 pandemic improves market signals of cryptocurrencies—evidence from Bitcoin, Bitcoin Cash, Ethereum, and Litecoin. *Finance. Res. Lett.* **2022**, 44, 102049.
10. Bao, H.; Roubaud, D. Recent Development in Fintech: Non-Fungible Token. *MDPI* **2021**, 1, 44–46.
11. Yue, Y.; Li, X.; Zhang, D.; Wang, S. How cryptocurrency affects the economy? A network analysis using bibliometric methods. *Int. Rev. Financ. Anal.* **2021**, 77, 101869.
12. Chohan, U.W. Non-fungible tokens: Blockchains, scarcity, and value. *Crit. Blockchain Res. Initiate. (CBRI) Work. Pap.* **2021**, 1, 1–14. Available

13. Franceschet, M. HITS hits art. *Blockchain Res. Appl.* **2021**, 2, 100038.
14. Chalmers, D.; Fisch, C.; Matthews, R.; Quinn, W.; Recker, J. Beyond the bubble: Will NFTs and digital proof of ownership empower creative industry entrepreneurs? *J. Bus. Ventur. Insights* **2022**, 17, e00309.
15. Mathew, A. Cryptocurrency New Eras Digital Asset or Legal Tender. Eureka Publications 2022,1,74-84.

