

721>

How ERC-721 Came Into Being

In the early days of blockchain, tokens functioned predominantly as currencies, stores of value, or forms of equity.

The introduction of ERC-721 by William Entriken and Dieter Shirley, proposed through an Ethereum Improvement Proposal (EIP), revolutionized this notion, creating tokens that were verifiably unique and could be associated with unique content – from art and music to virtual goods.

After undergoing the EIP rigorous review and revision process, the ERC-721 specification was accepted by the Ethereum community and became the foundation for the creation of NFTs.

With the advent of CryptoKitties in late 2017, a game that used the beta version of ERC-721, the potential of ERC-721 tokens and NFTs gained widespread recognition.

Use Cases of ERC-721

The potential applications of ERC-721 tokens extend far beyond digital artwork. Although art remains a prominent use case, NFTs can represent a vast range of unique assets.

In the gaming industry, for instance, ERC-721 tokens can be used to represent [unique in-game assets < https://www.techopedia.com/definition/play-to-earn-p2e>](https://www.techopedia.com/definition/play-to-earn-p2e). For example, the online game Gods Unchained uses NFTs to represent digital cards, which players can trade or use in battles.

Beyond digital art and gaming, NFTs can also have real-world applications. For instance, the deed to a house could be minted as an NFT to streamline real estate transactions and ensure easy ownership verification, or an NFT could be used to represent ownership of high-value physical assets like luxury watches or supercars.

The Future of ERC-721

ERC-721 laid the groundwork for the vast landscape of NFTs that we see today. While it may have its limitations, such as lack of interoperability with other token standards like [ERC-20 < https://www.techopedia.com/cryptocurrency/best-erc20-tokens>](https://www.techopedia.com/cryptocurrency/best-erc20-tokens) (which was solved by ERC-1155), and the potential to cause network congestion due to its size, ERC-721 will undoubtedly continue to play a significant role in the future of NFTs.

In particular, ERC-721 tokens are well-suited to applications at the intersection of blockchain and real-world assets like property, [digital identity < https://www.techopedia.com/definition/23915/digital-identity>](https://www.techopedia.com/definition/23915/digital-identity), and commodities.

This potential to [tokenize < https://www.techopedia.com/definition/13698/tokenization>](https://www.techopedia.com/definition/13698/tokenization) unique assets and enable verification of ownership using blockchain technology marks a significant shift in how value and ownership can be represented, transacted, and stored.

As other blockchains like [BNB Chain < https://www.techopedia.com/definition/binance-smart-chain-bsc>](https://www.techopedia.com/definition/binance-smart-chain-bsc) and Avalanche develop their NFT standards, many of which are based on ERC-721, the future of NFTs is only limited by the ability of thousands of innovative developers to discover new and innovative uses for this transformative technology.

The promise of ERC-721 tokens, therefore, lies in their potential to create entirely new business models and ways of transacting – shaping the future of the blockchain landscape and beyond.

The Bottom Line

In conclusion, the ERC-721 standard has already brought a significant revolution in how we represent, trade, and verify unique assets in the digital world.

The standard's future holds even more potential as more innovative use cases continue to emerge, transforming the very notion of digital ownership.

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Sam Cooling is a crypto, financial, and business journalist based in London. Along with Techopedia, his work has been published in Yahoo Finance, Coin Rivet, CryptoNews, and Business2Community. His interest in cryptocurrency is driven by a passion for leveraging decentralized blockchain technologies to empower marginalized communities worldwide. This includes enhancing financial transparency, providing banking services to the unbanked, and improving agricultural supply chains. Sam has a Master's Degree in Development Management from the London School of Economics and has worked as a Junior Research Fellow for the UK Defence Academy.

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