



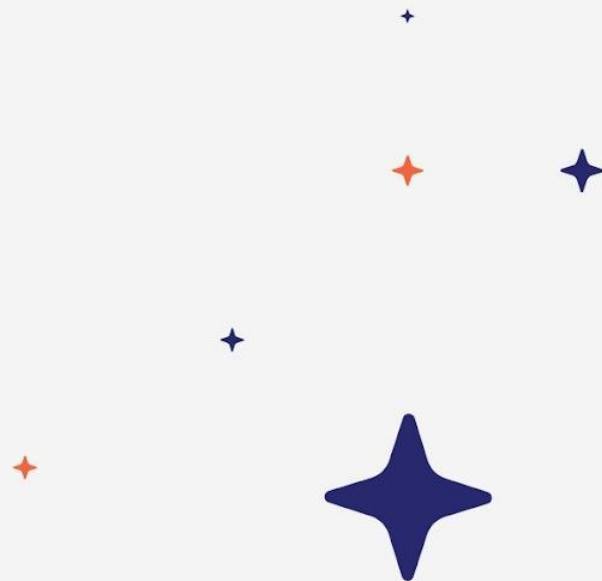
STARKSCAN



NFTs on StarkNet

Sean from Aspect.co & Starkscan.co

★ Oct 2022



What is an NFT? Bitcoin Analogy

- Bitcoin blockchain is numbers tied to an address on the blockchain.
- Instead of numbers, NFTs are URLs and other metadata.

Can't I copy and paste the JPEG?

- You can take a picture of the Mona Lisa, but do you own it?
- NFTs are the only verifiable version of the digital asset, as minted by the original artist
- The value of the NFT is attached to the ownership on the blockchain.

My Journey with NFTs

- 2017 - University of Waterloo interns building Crypto Punk only marketplace
- End of 2017 - CryptoKitties
- Bored Ape Yacht Club took over a ranking site we built

Economics

- Artists set & earn royalties in perpetuity: ~**10%** on every secondary sale
- Marketplaces earn 2 - 5% on every sale
- NFTs peaked in 2021

Marketplace Overview

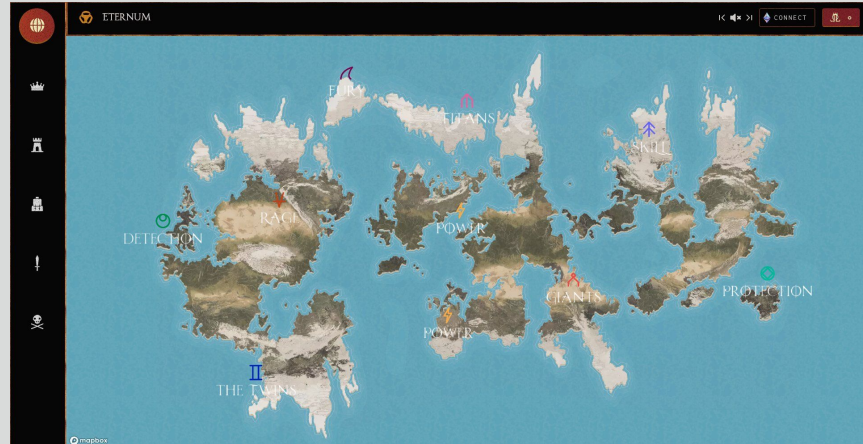
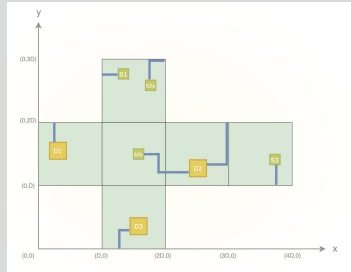
- General marketplaces (Aspect, MS, OS, RARI, LR, X2Y2, ME)
- Aggregators (Gem, Genie, Hyperspace)
- Art (SuperRare, Foundation)
- NFT AMM (SudoSwap, NFTx)

NFT Genres

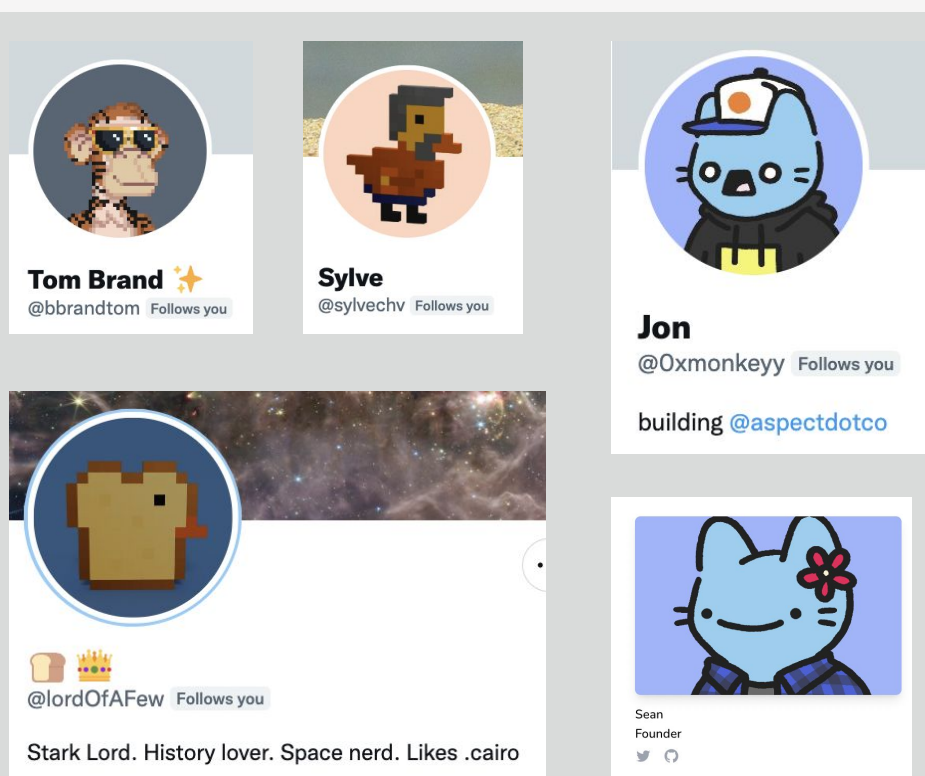
- Art & 1 of 1s
- 10k PFP
- Generative Art
- Physical Goods & Services
- DAO Tokens
- Brands & Celebs
- Virtual Goods
- Loot

Use Cases

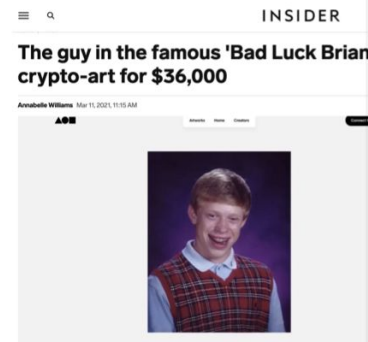
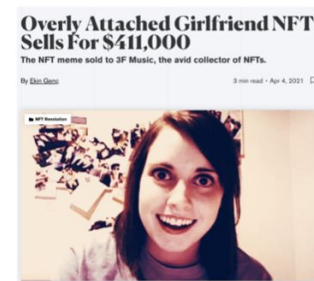
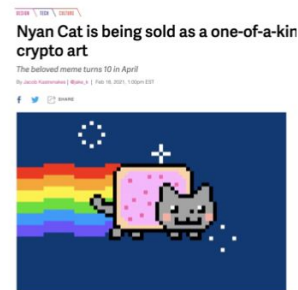
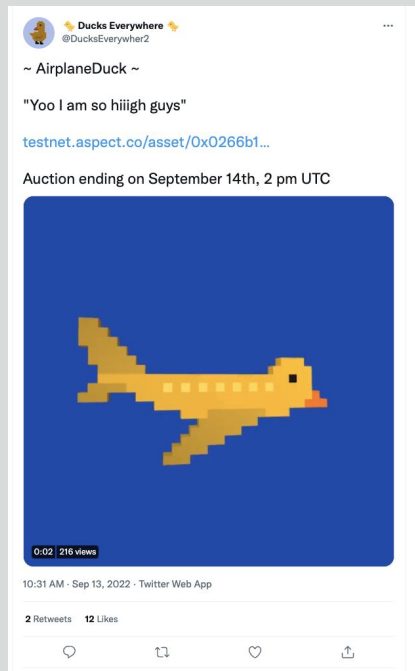
Games



Signaling



Digital Monetization and Creator Tools



Considerations

Plagiarism

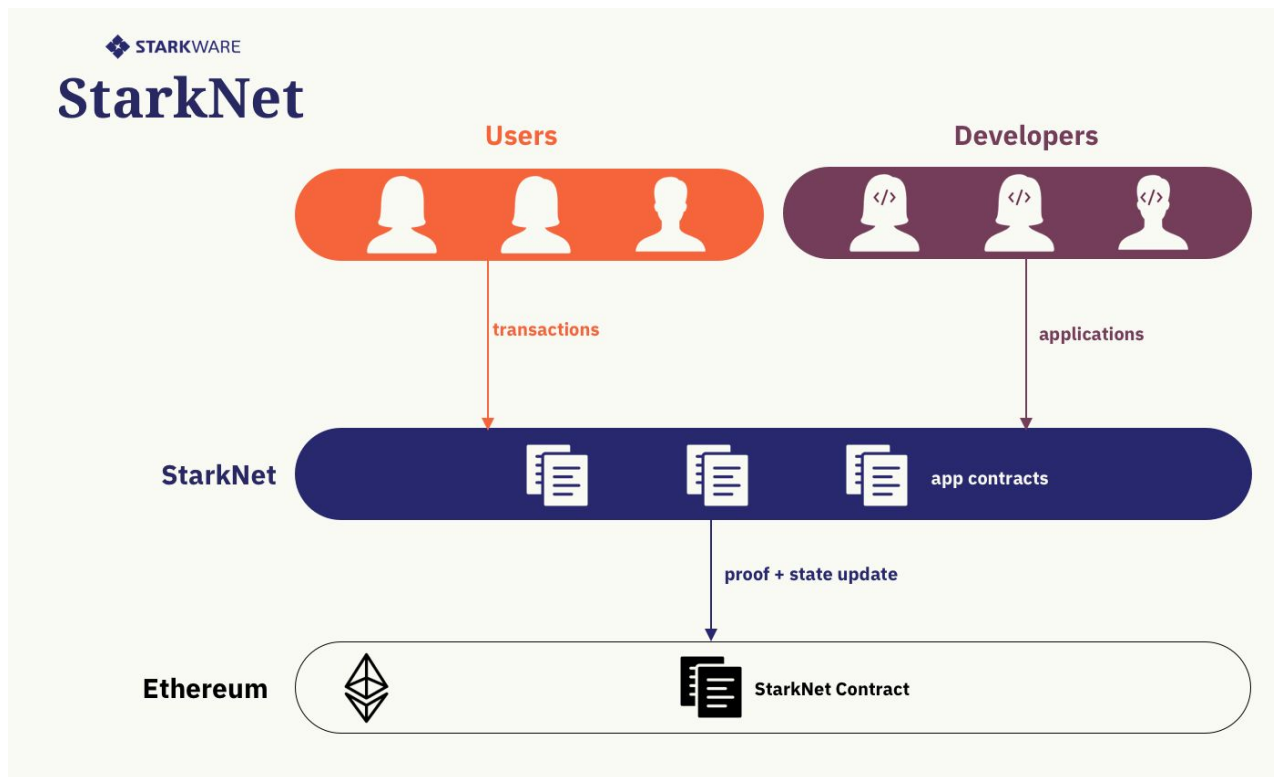
- Anyone can mint any digital file as an NFT
- Wallet addresses are mostly verified on Twitter
- Marketplaces also try to verify

Scalability

- Tx's were costing over \$200+ for NFTs during bull market
- Limits for high supply collections and games

How does StarkNet solve scalability?

Batching transactions into single proof



100x

Up to 100x Transaction Fee Savings vs. ETH

NFT StarkNet considerations

- Currently does not support long strings
- Need to use Array of felts for tokenURI
- Use a proxy pattern to migrate for Regenesiis and Cairo 1.0

Demo NFT Collection

Link: <https://testnet.aspect.co/collection/0x1416d82dd293e0d6bec7b501a2d9c6c3891a8912f723c58040d48ae3cf9f72f>

Helpful Links

- <https://github.com/0xs34n/ERC721-StarkNet-workshop>
- <https://github.com/starknet-edu/starknet-erc721>
- <https://github.com/OpenZeppelin/cairo-contracts/blob/main/src/openzeppelin/token/erc721/presets/ERC721MintablePausable.cairo>
- https://github.com/immutable/imx-starknet/blob/main/immutablex/starknet/token/erc721/presets/ERC721_Full.cairo

Thank You

• <https://aspect.co>
<https://starkscan.co>

