

FOSSIL

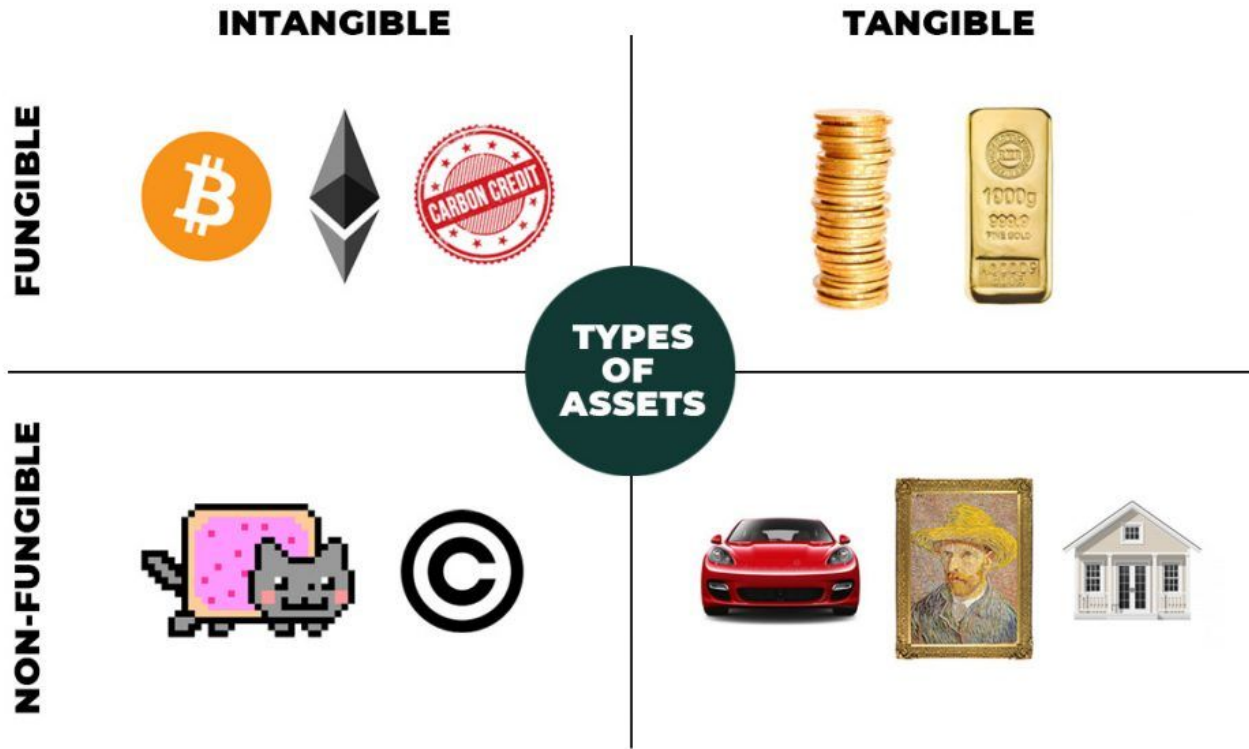
GROUP

NON-FUNGIBLE TOKEN

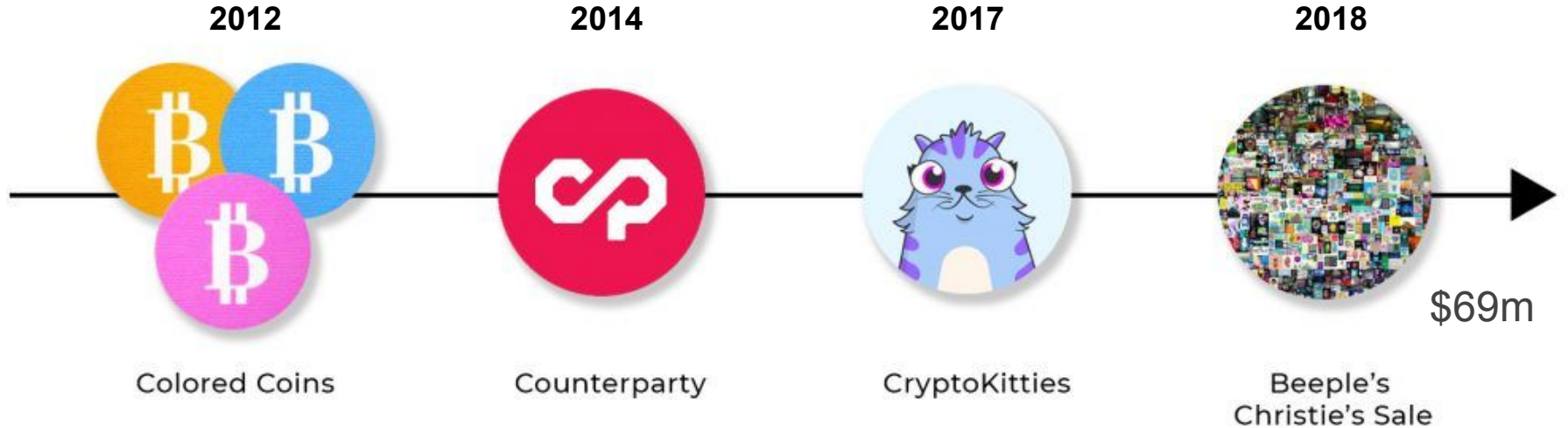
June 4 2021



WHAT IS AN NFT?

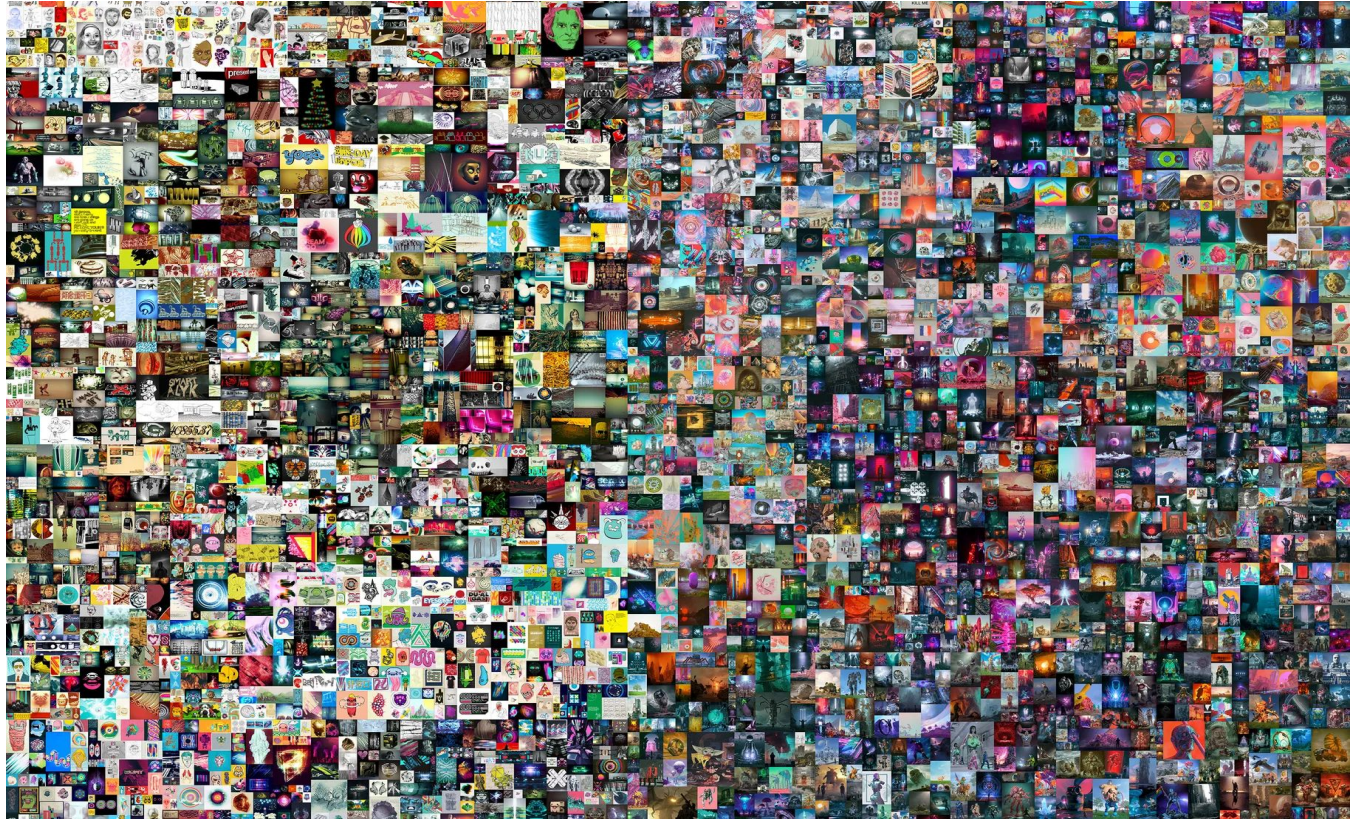


WHAT IS AN NFT?



WHAT IS AN NFT?

An NFT of Beeple



WHY NFT?



Nyan Dogecoin
(150 ETH ~ 410,000\$)

- Transparent
- Scarcity
- Royalty
- Copyright problems

BLOCKCHAIN

1 A wants to send money to B



2 The transaction is represented online as a block



3 The block is broadcasted to every party in the network



4 The network approves the transaction



5 The block is added to the existing blockchain in a transparent and unalterable way



6 The transaction is complete







WHAT CURRENCIES CAN BE USED?



Make an Offer

Price

	WETH ^	Amount	\$0.00
	DAI		
	USDC		
		19 PM	

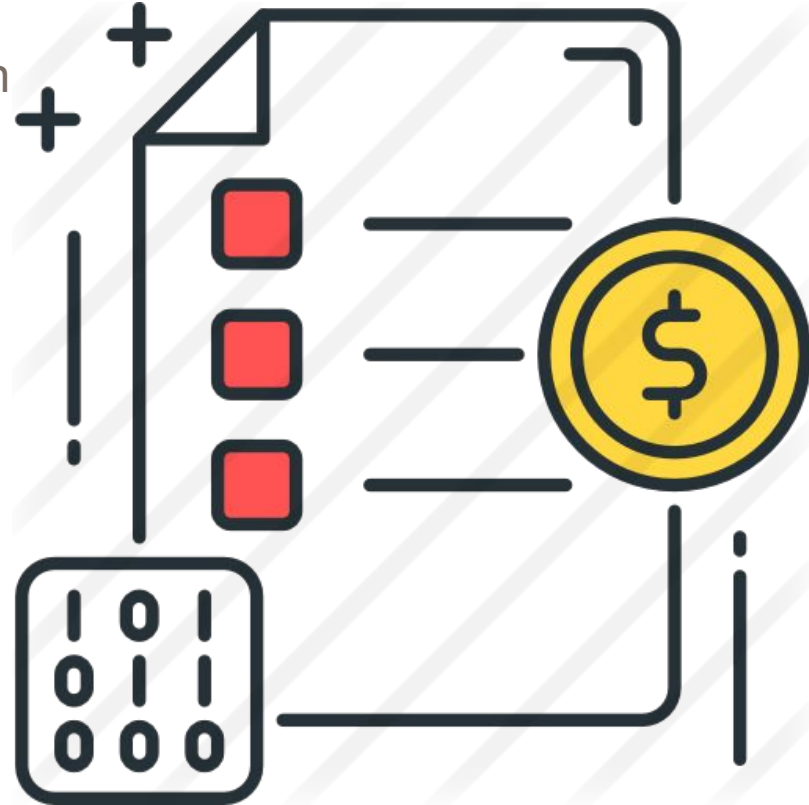
Make Offer

Convert ETH

HOW DOES IT WORK?

SMART CONTRACT

- A program that lives and runs on blockchain
- Keeps track of NFTs, Dapps
- Processed by the blockchain
- The transactions only happen when the conditions in the agreement are met



HOW DOES IT WORK?

TOKEN STANDARDS

ERC-1155

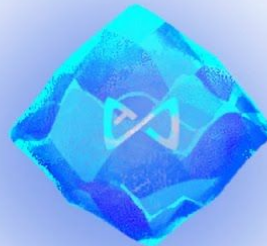


KryptoHerna




ERC-721

ERC-20

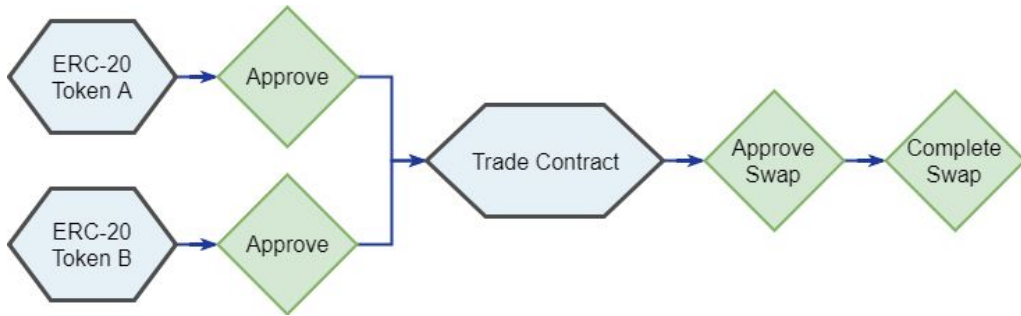


HOW DOES IT WORK?

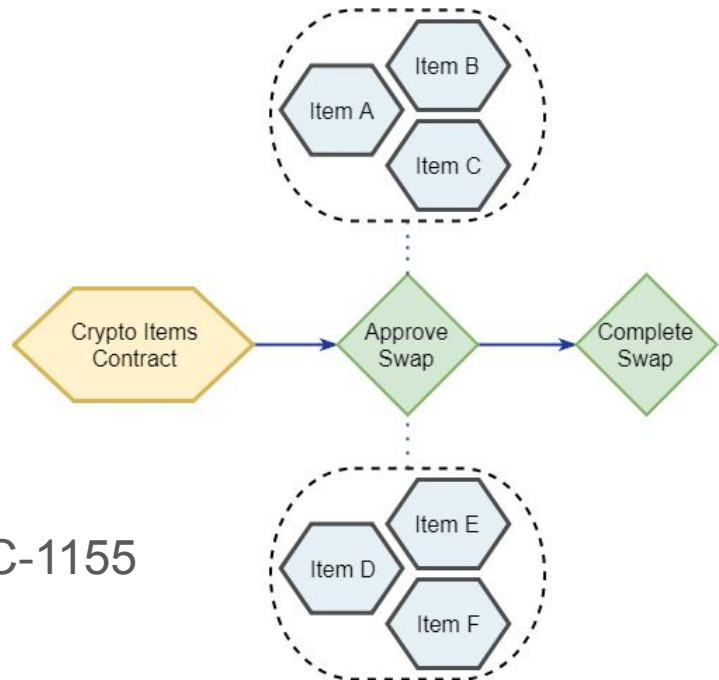
TOKEN STANDARDS

Table courtesy of  NGRAVE	ERC-721	ERC-1155
1. Fungability	Non-fungible only	Fungible, non-fungible, & semi-fungible
2. Transferability	Slow, One token at a time	Fast, Batch transfers of many token Ids in a single transaction
3. Smart contract dependence	New smart contract required for each new type of token	Single smart contract for infinite token types
4. Risk of token loss	Tokens can be permanently lost if non-safe transfer method used	Tokens can only be sent to an ERC- 1155 capable contract, preventing accidental token loss
5. dApp compatibility	Unreliable due to non-safe transfer risk	Reliable due to strict “onERC1155Received” rules
6. Localization	1 language only	Different languages and metadata
7. ID substitution	Only static metadata, each token ID needs its metadata stored in the smart contract	Infinite number of token URIs allow storing without additional data on- chain
8. Event logs	Emits transfers and approvals	Standardized events for burns, mints, transfers, approvals, and metadata changes

TOKEN STANDARDS



ERC-20 and ERC-721



ERC-1155

HOW DOES IT WORK?

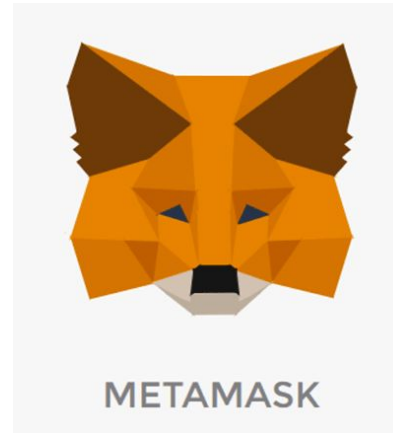
MINT AN NFT

To prepare for the minting, we need:

1. A product
2. A crypto wallet



[Unicorn watch face](#)



METAMASK

HOW DOES IT WORK?

MINT AN NFT

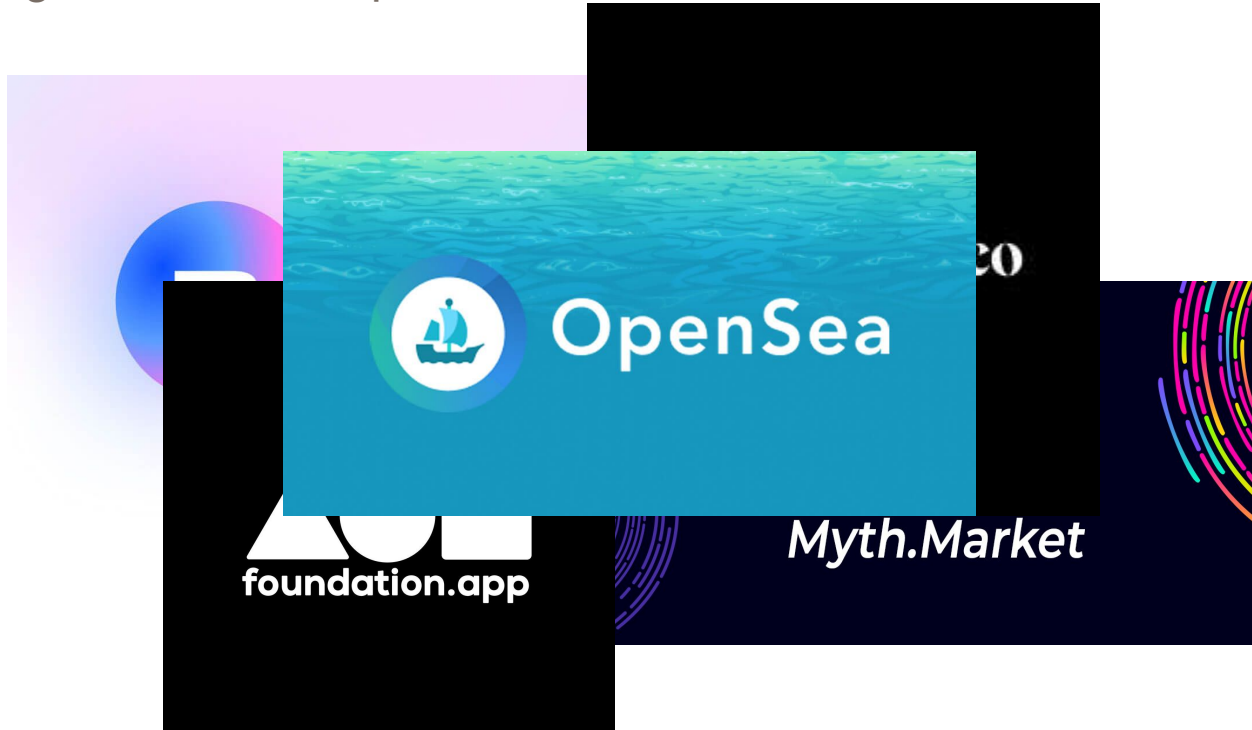
Now, there are 2 ways:

- Use tools integrated in marketplaces.
- Create our own program.

HOW DOES IT WORK?

MINT AN NFT

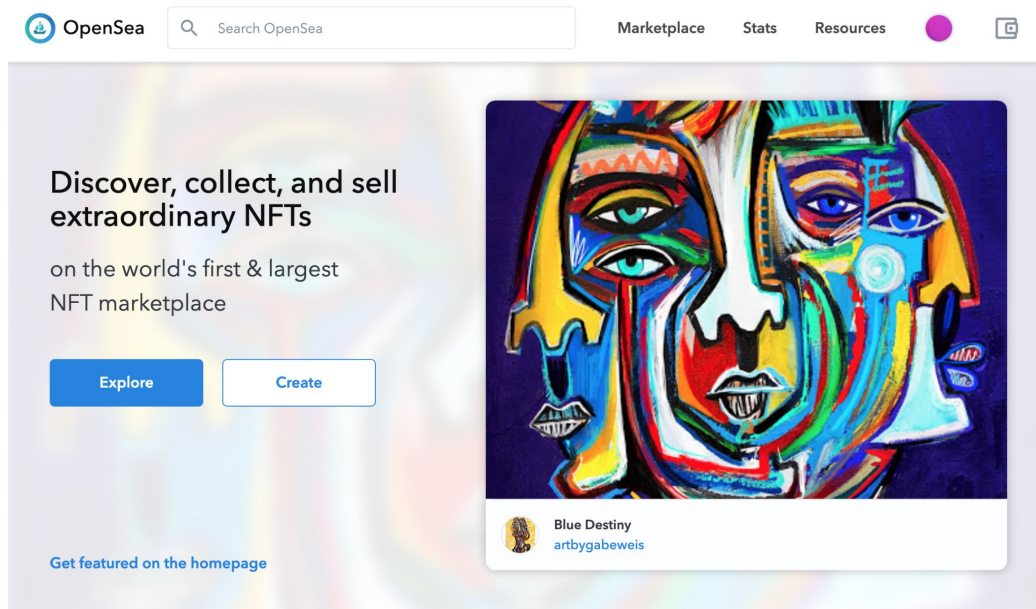
Use tools integrated in marketplaces:



HOW DOES IT WORK?

MINT AN NFT

1. Go to <https://opensea.io/>
2. Link **Metamask** to **Opensea**
3. Create a collection
4. Start uploading your products



HOW DOES IT WORK?

MINT AN NFT

Create our own program:

1. Set up
2. Write a smart contract
3. Deploy the contract to blockchain
4. Store our NFT asset and metadata.
5. Create an instance of smart contract.
6. Create and sign transaction.
7. Finish minting with a transaction hash.



HOW DOES IT WORK?

MINT AN NFT

Now let's have a look!

HOW DOES IT WORK?

METADATA

Offers information that describes NFT, such as regarding supply, origin, and authenticity, etc.

Can we update NFT metadata after it's minted?

- Yes, it will be up to you.

But what are the menu options?



HOW DOES IT WORK?

METADATA

On-chain

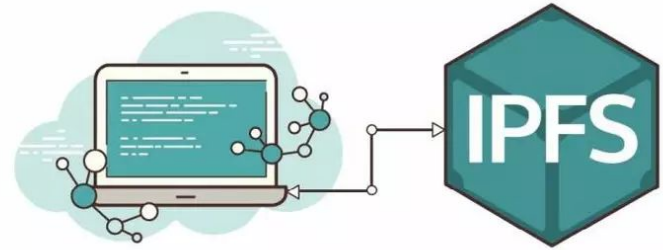
- Located in the smart contract
- Creator decides its mutability
- On-chain logic



HOW DOES IT WORK?

METADATA

Off-chain



HOW DOES IT WORK?

METADATA

Off-chain



Centralized metadata:

- Mutable
- Depends on server's availability
- Services can cache it on their own servers to prevent disappearance

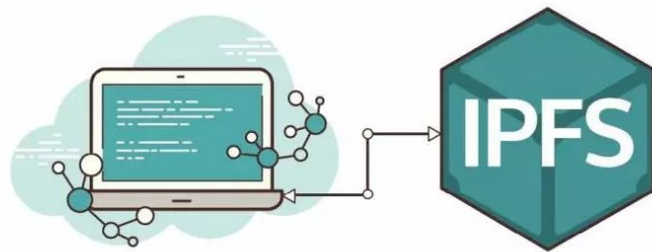
HOW DOES IT WORK?

METADATA

Off-chain

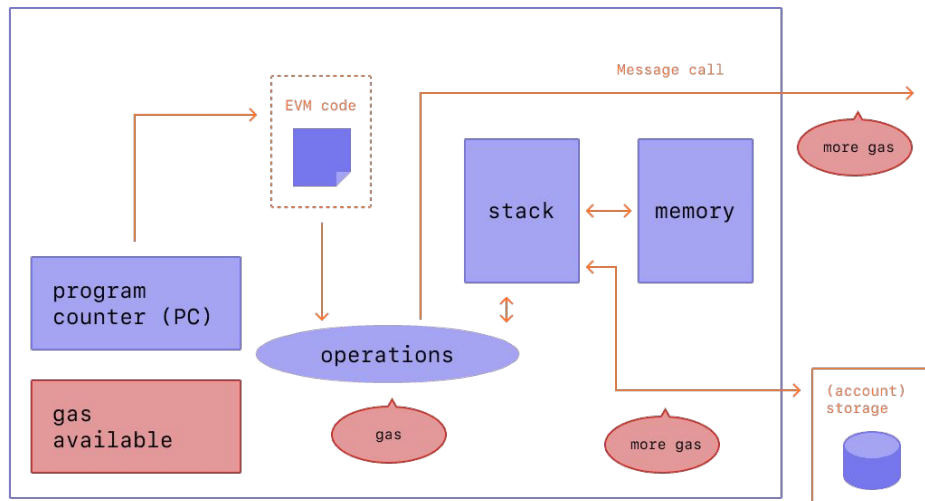
IPFS (Decentralized)

- **InterPlanetary File System**
- Peer-to-peer
- Allows replication in different locations
- Ensures the immutability
- Ensures data persistence



HOW DOES IT WORK?

GAS



The Ethereum network requires gas to execute transactions.

- Required for every computation
- Regardless of whether it succeeds or fails
- Unused gas will be refunded

HOW DOES IT WORK?

GAS

How can we estimate gas price?

- We can use [Ethereum calculator](#) to estimate today's gas price.

HOW DOES IT WORK?

GAS

How can we estimate gas price?

Transaction Inputs

Gas Used*

21000

Gas Price*

- ☐ Fastest (41 Gwei)
☐ Fast (31 Gwei)
☒ Average (25 Gwei)

☐ Cheap (25 Gwei)

☐ Other

(Gwei)

Predictions: Gas Used = 21000; Gas Price = 25 gwei

Outcome

% of last 200 blocks accepting this gas price	76.1061946903
Transactions At or Above in Current Txpool	416
Mean Time to Confirm (Blocks)	4.8
Mean Time to Confirm (Seconds)	70
Transaction fee (ETH)	0.000525
Transaction fee (Fiat)	\$1.43483

TOPICS TO DISCUSS

FOSSIL PRODUCTS AS NFT

CAN FOSSIL PRODUCTS BE NFT?



Physical



Digital

FOSSIL PRODUCTS AS NFT

Watch Faces

Can a **watch face** be an NFT?

- Let's go through the process of an NFT to see if a watch face is potential.

FOSSIL PRODUCTS AS NFT

Watch Faces

Minting

- Token URI: Watch face store
- Centralized server



FOSSIL PRODUCTS AS NFT

Watch Faces

Marketplaces

- Deploy NFT to marketplaces
- WF store as a marketplace



FOSSIL PRODUCTS AS NFT

PHYSICAL PRODUCT

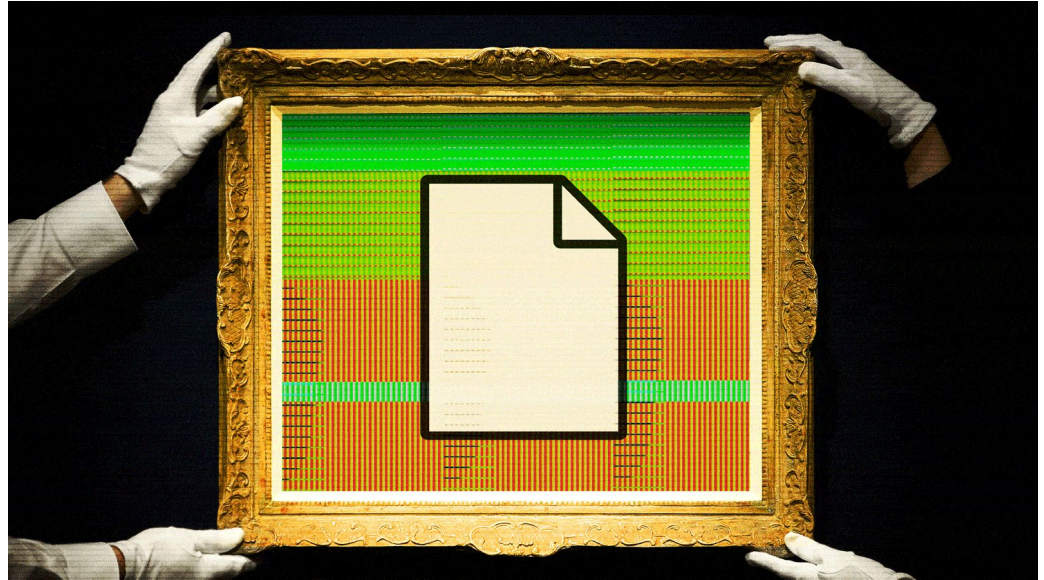


Physical product NFT

- Combination of an **digital nft** and a **product**
- Only NFT is on the chain
- The NFT would be proof of ownership
- Product comes along with **trust**

RESELLING AN NFT

- In case of selling a physical product, how do we use smart-contract/dapp to ensure that the transaction is only finalized once the buyer has received the physical product (and the digital forms of it if included)?
- What about reselling?



CAN NFT WORK ON OTHER APPS?

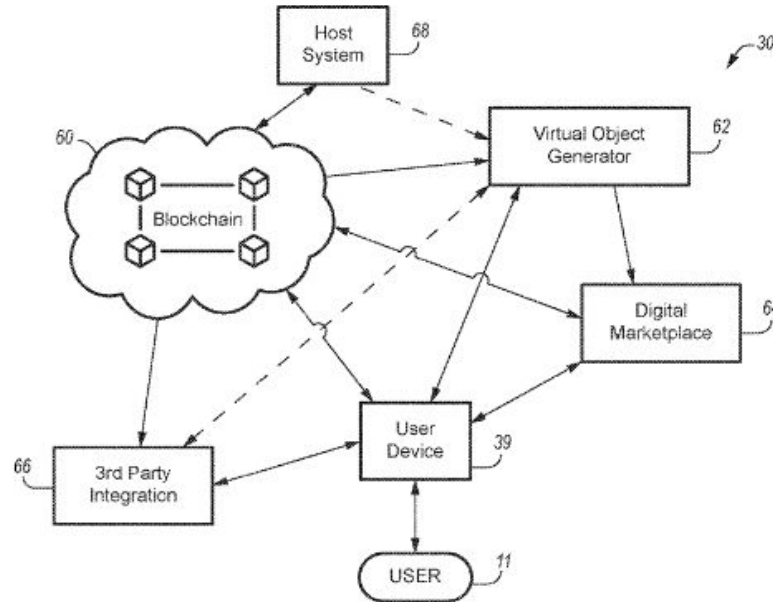


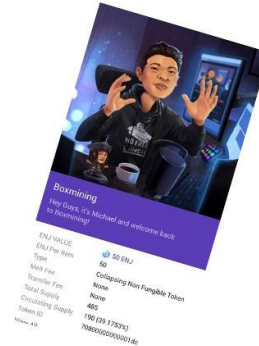
FIG. 3

Nike's platform

EDITING INFO OF NFT

- Once the product/token has been sold, is it possible to expand functionalities on it (e.g. making it available on more apps, games, platforms) or modifying the royalties percentage (unlikely)?
- In general, once the token is sold, is there any link between the product and the original creator?

ERC-1155



THANKS FOR STOPPING BY!