

Non-Fungible Token NFT 非同質化代幣

What is NFT?

It is a owner right of a merchant in digital form. It is stored in digital wallet and be sold or bought by using Crypto (mainly Ethereum ETH 以太幣). Although the merchant itself is in digital form, it could be duplicated easily but the NFT of the merchant is not. It is not interchangeable, as the name “Non-fungible” implies. But NFT is a contract (合約) of ownership of the merchant.

Every NFT is unique (獨一無二) and authenticated (認證) and can be easily traced by the owner’s history on the market since its birth (minted). For example a NFT named “MOAR #2265”:



MOAR #2265

↔ Transfer		Animaia	Not_A_B0T	9 days ago 🔗
🛒 Sale	1.76	0F8E1A	Animaia	9 days ago 🔗
↔ Transfer		0F8E1A	Animaia	9 days ago 🔗
↔ Transfer		813E83	0F8E1A	9 days ago 🔗
🏗 Minted		NullAddress	813E83	9 days ago 🔗

In the above, The creator is called “NullAddress” and he transferred the NFT to “83E83”. Then in turn “83E83” sold it to “Animaia” at the price of “1.76 ETH” ...

Since it is called “Token 代幣”, it is created by the process of “Mint 鑄幣”. But unlike normal token dollar where each dollar is the same and can be broken down into smaller values (e.g. cents), NFT cannot.

It is interesting to find out that every NFT transaction could donate a small portion of amount back to the original creator, making it even more attractive for anyone to be the original minter. Say Peter created a NFT, he sold it to Mary. When Mary later sold it out to Paul, Peter can also get a portion. And when Paul sold it out again, Peter can still get a portion....

Future usages of NFT

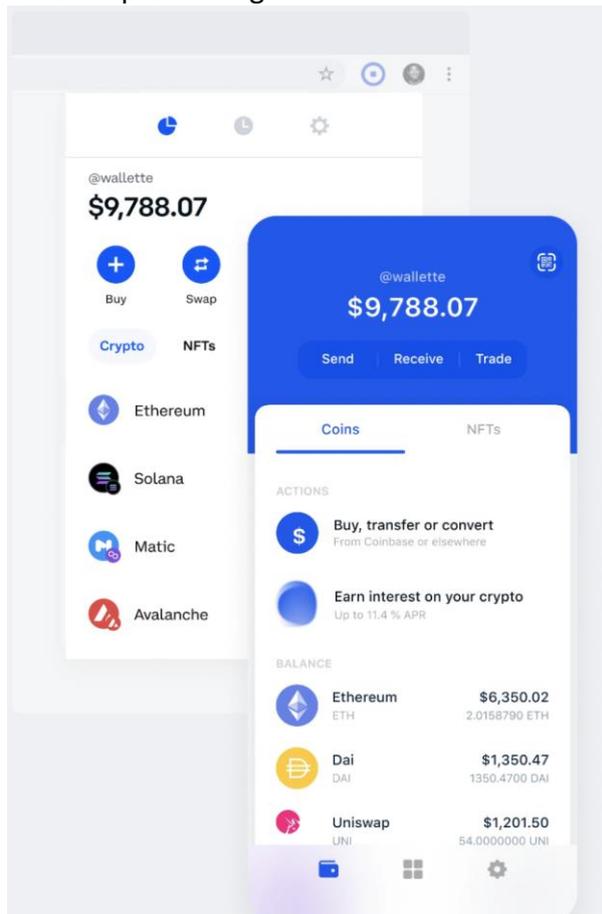
Not confined only to artwork transactions, actually, NFT could be applied to anything on the virtual digital world – any certificates (say education proofs, school qualifications), any

tickets, any contracts could use NFT. Also, it could foresee that in the near future, NFT is used everywhere inside Metaverse (元宇宙).

Steps of creating a NFT

1. Produce a piece of digital work (any text, image, video, sound or animation) and store it into a digital file.
2. Buy or prepare some Crypto (you buy it from Coinbase or other Crypto Exchanges).
3. Prepare a digital wallet (an app or an online account) to store the Crypto and NFT.

An example of a digital wallet



4. Go to a NFT marketplace (e.g. OpenSea) to mint (put it into blockchain to make it traceable and authenticated) your NFT. Open your account and connect it with your wallet. You must put in the basic information of your NFT (e.g. name and price) and pay for the minting fee.
5. If you want to see the transactions of the NFT, you can visit your account later on.

Refer to <https://zipmex.com/learn/nft-minting-explained/>

Blockchain

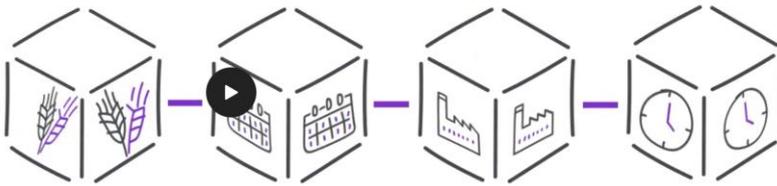
What is Blockchain?

Blocks are information packages. They contain information inside. And these information blocks are connected together one after another in a way like in a chain.

Say a block contains 'Peter'. Another block contains 'Mary'. If they are connected in a chain, resulting as: 'Peter' → 'Mary'. In fact, it may have any information inside a block and as well as any number of blocks inside a blockchain.



Some blocks containing information



These blocks are chained together in a blockchain

Can the order of blocks be changed inside a blockchain?

No, ever since a new block is chained into an existing blockchain, the order of the blocks cannot be changed. Any new blocks can only be added one by one to the end of an existing blockchain. The blockchain can only grow longer and longer.

In order words, if another block 'Dickson' is added into the above blockchain. It will only become 'Peter' → 'Mary' → 'Dickson'.

Can the blocks inside a blockchain be deleted or changed?

No, with some extra checking information added to the end of blockchain to ensure the blockchain is intact (完好). Any other changes will not be allowed. When a new block added to the end of the blockchain, a new checking information will be calculated and added to the end of the blockchain (known as crypto mining 採礦).

Can a blockchain be replaced by another fake blockchain?

No, the blockchain is not just stored in a single place on the Internet. It is duplicated in thousands of copies all through the Internet on many mining servers. These servers communicate and update with each other all the time. Unless the fake blockchain can be stored in the majority number of these servers, any fake blockchain stored on a small amount of servers will not survive under this synchronizing (同步) process.

Usages of blockchain

Once a block is added successfully into a blockchain, it can never be lost or changed. Due to this secure nature of blockchain, it is perfectly used to record business transactions and crypto information on the Internet as a ledger (總帳) of NFT or crypto currencies.

It is predicted to play a currency role in the Metaverse in the future.

Example of verification in a blockchain

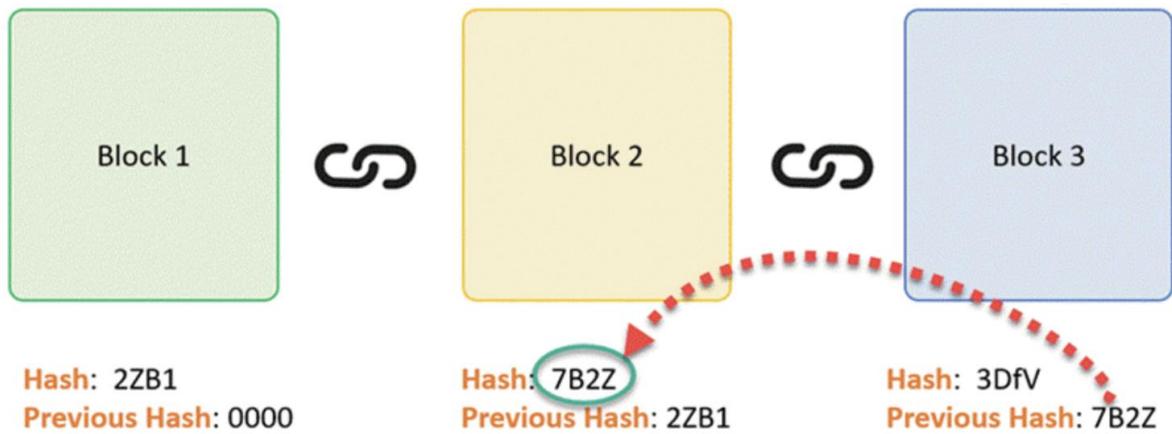


Bitcoin Block Example



Hash acts as a Unique Fingerprint of the Block

Put the block and hash into a blockchain. Each hash value is generated by the current block, the previous hash. Say, "7B2Z" is generated by Block 2 and "2ZB1", and "3DfV" is generated by Block 3 and "7B2Z".



Say If Block 2 is changed, the hash value will no more be "7B2Z". Then it not match with the previous hash in new block. Hence we know that there is something wrong with the blockchain.

