CC0007 Science and Technology for Humanity

Trustless Trust

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Metaverse

- The metaverse is a 3D virtual space where people interact with each other using avatars, shop, play games, and do business.

- Sounds familiar?
    - The Sims Online
    - Second Life

Metaverse

The Sims Online

Second Life

Metaverse *(beyond → Universe)*

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    - The Sims Online
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- Beyond universe—a good example of how the 4th Industrial Revolution or a fusion between the physical and digital world would look like.

Ready Player One

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https://www.youtube.com/watch?v=rjLVCpE3kuw

Metaverse

Will it be the next big hit?

- Facebook changed its company name to Meta.

- Goldman Sachs estimates US$8 trillion for its market.

Metaverse

Why did the precedents fail?

- Interface issues: Complicated control or stiff learning curve

- Copyright issues: Could easily copy digital assets

- No killer apps

- Maintenance issues: Took hours to update the server

- And usual misbehaviours, such as trolls, cyberbullying, adult content, etc.

Metaverse

What makes the difference in metaverse?

- Interface issues: More intuitive VR

- Copyright issues: NFTs and smart contracts

- No killer apps: A new ecosystem, thanks to the blockchain technology

- Maintenance issues: Still needs to be addressed, but decentralised network has potential

- And usual misbehaviours, such as trolls, cyberbullying, adult content, etc.: Human behaviour is always the issue

WELCOME TO
METAVERSE

Non-Fungible Token (NFT)

The second copy or
double spending issue

- Nature of digital product

- Scarcity is the key

- Now, digital artifacts can avoid
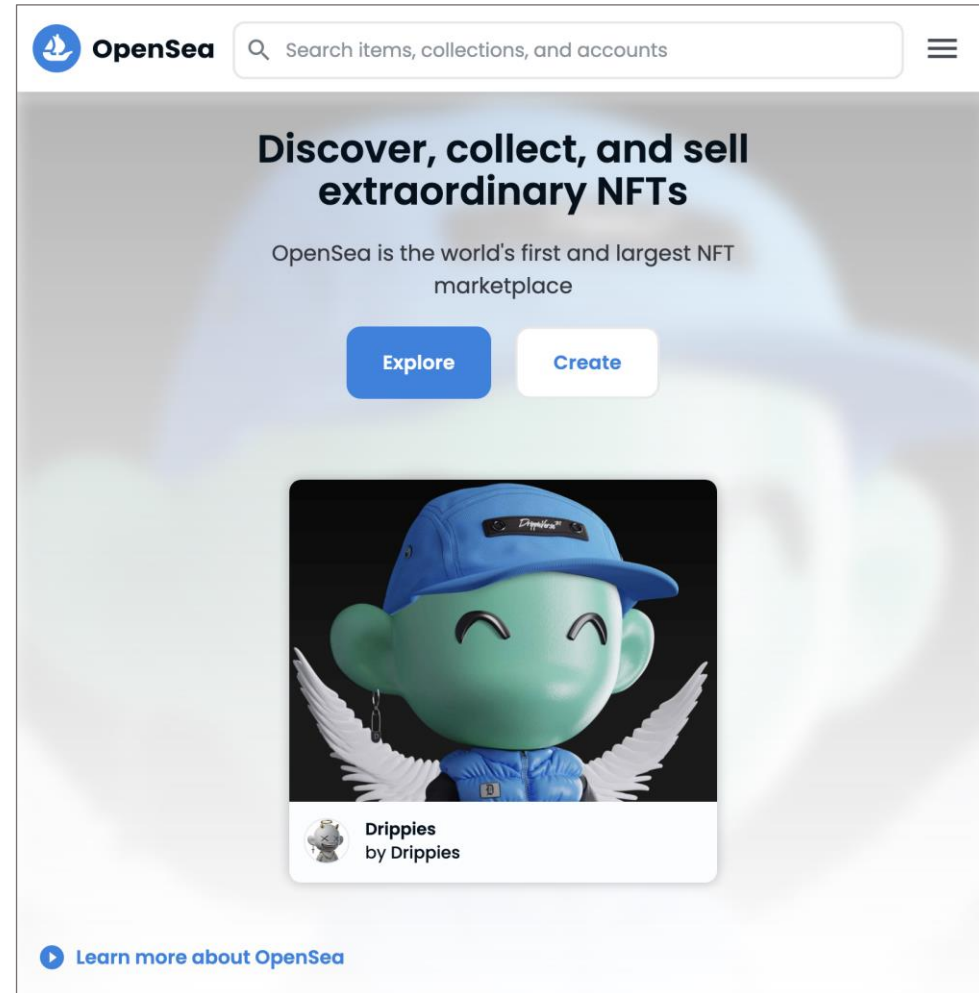 the double-spending issue and
  be unique.

Non-Fungible Token (NFT)

The second copy or
double spending issue

Non-Fungible Token (NFT)

- A record stored on blockchain certifying the ownership and uniqueness of the digital artifact

- Ownership and authenticity

- Can be tied with smart contracts to generate revenues

- OpenSea marketplace: https://opensea.io/

Non-Fungible Token (NFT)

- Characteristics
  - Unique, indivisible, immutable, and auditable

- Desirable characteristics
  - Easy to use
  - Hard to manipulate
  - Ready to verify (the system does not disappear)
  - Transparency
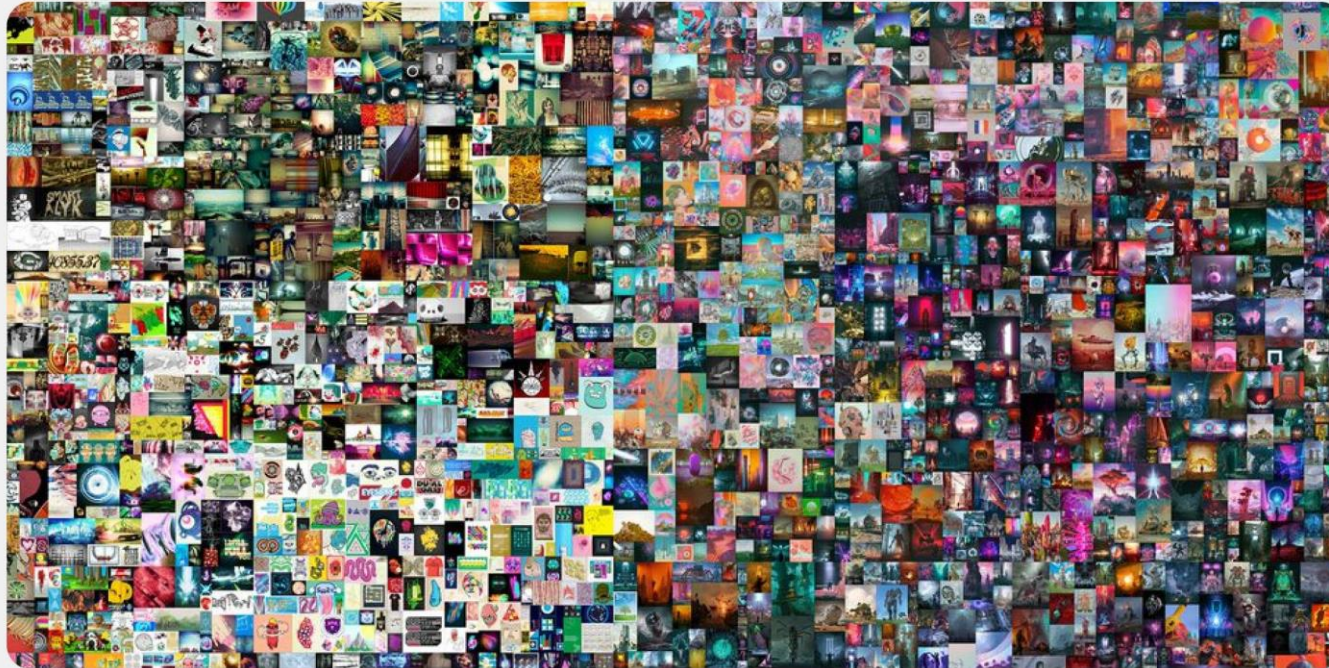 - Auditability or tradability

Smart Contracts

- It is a smart code that can enforce a contract, based on a blockchain technology, bypassing a third party.

- NFTs are created based on smart contracts, recorded in a blockchain.

- Writing a good code is a key for its success.

The Most Expensive NFTs

Courtesy: The First 5000 Days

The First 5000 Days by Mike "Beeple" Winkelmann – $69.3 million

The Most Expensive NFTs

Courtesy: CryptoPunk

CryptoPunk #5822 – $23.7 million
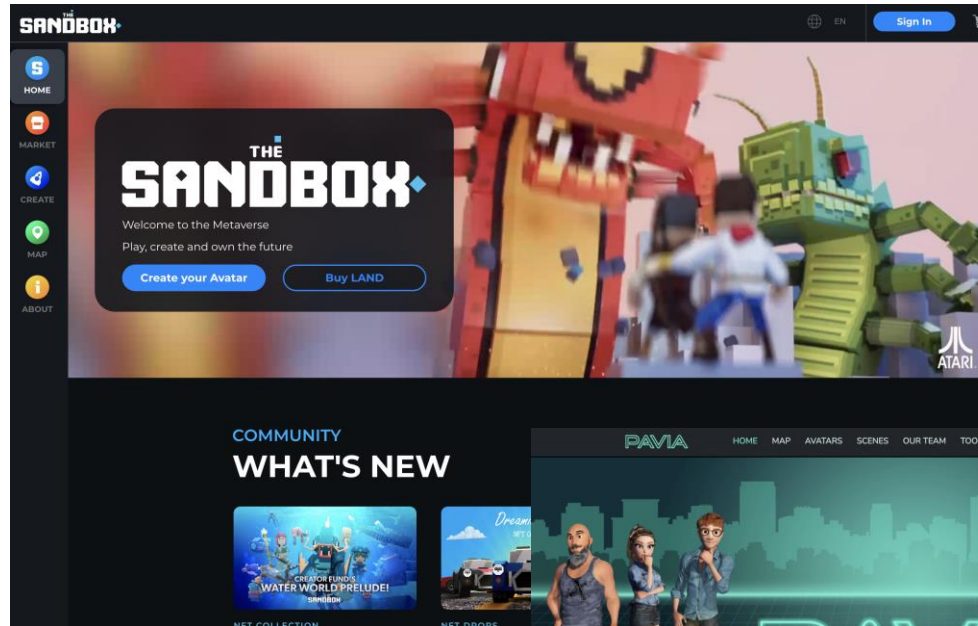
NFT Games

Axie Infinity

NFT Games

CryptoKitties

Metaverse – Current Examples

- Ethereum platform
  - Decentraland, and The Sandbox

- Cardano
  - The Pavia metaverse platform

- Solana
  - The Star Atlas metaverse

Metaverse – The Future

- A full-fledged economy

- Fusion between the physical and virtual worlds

- Decentralised

- One mega metaverse or multiple metaverses?

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