MNC
WHITE PAPER

THE WORLD'S FIRST METAFI + NFT + APPLICATION ECOLOGY

GATEWAY TO METAFI VIA METAVERSE

CONTENTS
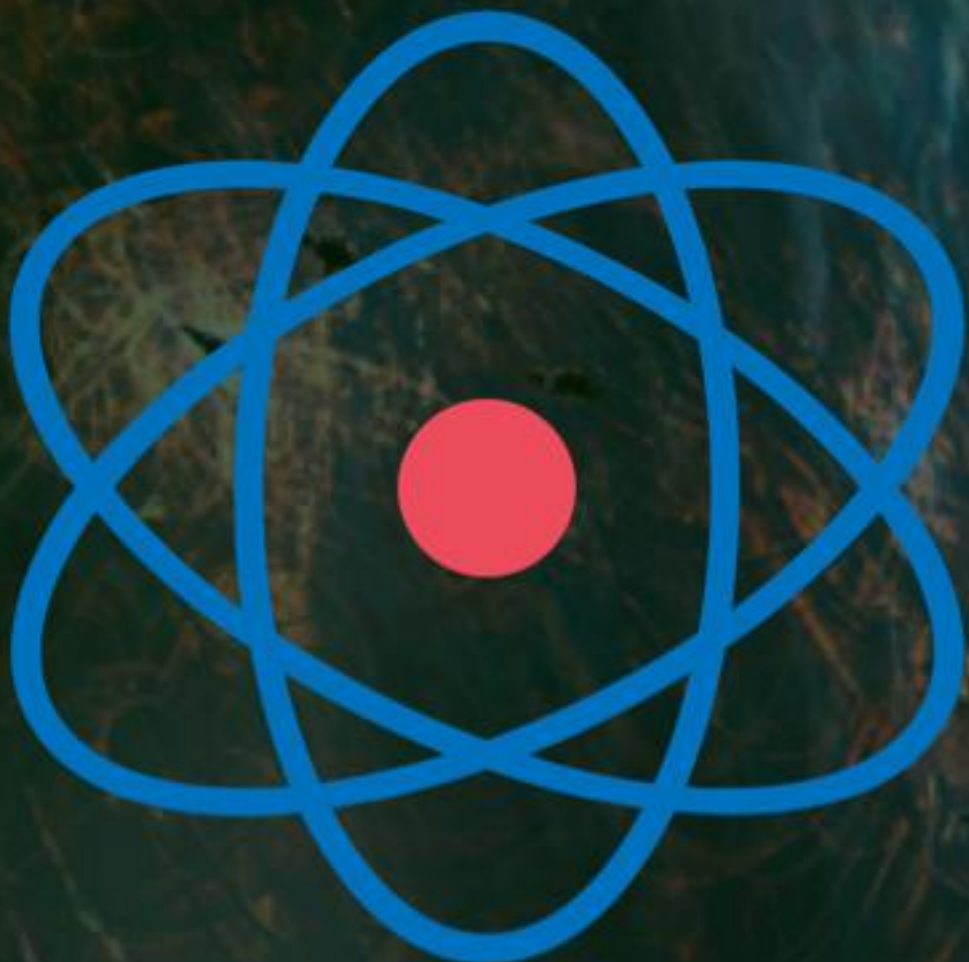
MNC

01 ABSTRACT

The epidemic in 2020 has impacted countless industries, but the "house economy" has emerged. Games have become one of the important means for people to maintain social and enrich their lives. Players' longer game time, richer game types, higher game expenditure and the popularization of game live broadcasting are beneficial to the game industry, A new social group has gradually emerged: generation Z, people born since 1995. At present, they account for 35% of the global population.

As soon as they were born, they seamlessly connected with the network information age and were greatly affected by digital information technology, instant messaging equipment, smart phone products, etc. the representatives of the five circles of generation Z: E-sports circle, secondary element circle, national style circle, model game hand running circle and hard core technology circle.

Faced with such a group of "nomadic" ethnic groups with a high degree of autonomy and higher mobility, they advocate selfishness, interest in meeting friends, are keen to pursue house culture, their pursuit of material life is weakened, and pay more attention to personal interests, emotional demands and self realization. This generation is more open-minded and easier to accept new things. Therefore, Metaverse Network LLC has been committed to creating a technology application scenario that seamlessly switches between virtual and reality, familiarity and strangeness.

Founder Prof. CHEUNG WY, after years of preparation and research and development, set up the company team and MNC project in 2021 to shape the world's first Metaverse + NFT + defi and circulate virtual games in the real world through digital finance. MNC is the ark to the virtual world.

The future Metaverse is a globally unified trust economic system based on algorithmic trust. The decentralized financial industry formed by a large number of decentralized organizations is dominant and can affect and determine the primary, secondary and tertiary industries of the global reality.

GATEWAY TO METAFI VIA METAVERSE
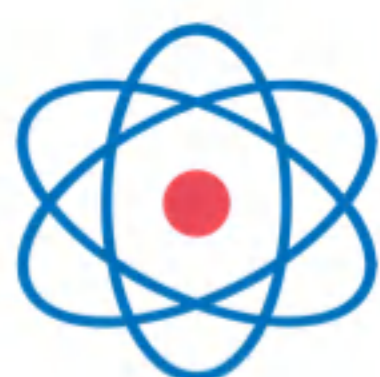
The large-scale deployment of NFT and defi technologies and applications has laid the foundation for the Metaverse. Defi is decentralized finance. In the meta cosmic economic system, it is dominated by the decentralized financial industry, which can affect and determine the primary, secondary and tertiary industries in the global reality. NFT is the meta cosmic identity system, which maps the real society and forms the meta cosmic social network.

The three infrastructure of the core of the Metaverse: identity, mapping and experience have not been really launched.

The current algorithmic governance is still in its infancy for human society. Displaying NFT and verifying ownership online can now be part of the new reputation system. The NFT verification function announced by twitter may be followed by other social media, such as Facebook, discord, telegraph, etc.

The application of NFT will have a strong relationship with social and interpersonal relationships. Human workload proof is the main mode of NFT consensus mechanism. The current invitation and chat can not be algorithmized, which is a very early rough practice. However, I think algorithmic human workload proof will appear soon. In fact, the essence here is decentralized identity. Intellectual property pledge, good idea pledge and IP pledge may be solved through NFT defi mode in the future. The key is that they can be quantified through tokens and solved the liquidity problem through defi.

Through research and technology accumulation in recent years, MNC has learned that the application of explosive money flow password and Metaverse in the next three years will be an unprecedented new field that connects blockchain technology with real finance in the most reasonable and maximum value.

Then, through this article, we will expand the mysterious and energetic new field

Defi started in 2018. With the rise of defi, code, that is, law, has begun to penetrate into our world and become more and more important. Defi has made many attempts and explorations in the professional and complex financial field.

Introduction to defi

Decentralized finance is to complete the business of "savings, loans, transactions and insurance" without centralized entities (such as banks and financial institutions) and rebuild the traditional banking services.

- Objective: to provide an open alternative for people with internet connection in the world.
- Current situation: it is more suitable to be called "distributed finance" or "open finance", because at present, most defi products and services are a combination of centralization and decentralization.
- Understanding: defi is a financial concept.

Defi token type

At present, the market of defi is mainly divided into three types: mortgage lending (leverage) Decentralized exchange tokens and derivatives (option futures market).

Three advantages of defi:

a. Individuals with asset management do not need to trust any intermediaries, and the new trust is rebuilt on the machine and code;

b. Everyone has access, and no one has central control;

c. All agreements are open source, so anyone can cooperate on the agreement to build new financial products and accelerate financial innovation under the network effect.

Defi also includes: currency issuance, currency trading, lending, asset trading, investment and financing, etc.

#	Name	Market Cap	Price	Change 24h	Change 7d	
1	Wrapped BTC Bitcoin	$13,417,831,068	$60,716.05	-4.32%	-0.48%	Trade
2	Uniswap Uniswap V2	$13,298,568,650	$25.58	-2.54%	-2.54%	Trade
3	Dai MakerDAO	$7,360,022,105	$1.00	0.67%	-2.00%	Trade
4	Compound Ether Compound	$6,255,231,073	$79.13	-3.83%	1.65%	Trade
5	Curve stETH Pool Curve	$4,851,112,069	$3,945.24	1.84%	11.63%	Trade
6	Compound Dai Compound	$3,939,936,615	$0.02	0.68%	-1.95%	Trade
7	Compound USD Coin Compound	$3,594,118,626	$0.02	0.71%	-2.09%	Trade
8	Curve 3 Pool Curve	$2,986,773,597	$1.02	48.81%	44.28%	Trade
9	Compound Wrapped BTC Compound	$2,750,999,440	$1,255.86	-6.06%	9.00%	Trade
10	Maker MakerDAO	$2,283,740,992	$2,533.80	-1.82%	-2.32%	Trade

Market value data of the top 10 defi

Landing application value

Defi applications have successfully explored some basic operation modes, reducing the organizational role and intermediary costs of centralized institutions, and eliminating regional and financial regulatory restrictions.

Low threshold and high interest rate

The participation threshold of defi is low, the operation of pledge lending is not difficult, and the blockchain network provides a transparent investment environment for participants.

Market environment

The value of the digital trading market fluctuates too much, and the demand for financial management of the lending platform has been improved, attracting external funds

Hot speculation demand

Defi has market potential and practical applications. In addition, finance itself is the easiest application direction for blockchain. After the heat rises, speculators naturally flock to it.

Defi risk status

- Technical risk: a smart contract or a code set that executes a set of instructions on the blockchain is crucial to the operation of the defi application. However, if there is a problem with the developer's code, there may be a weakness in the defi protocol.

- Asset risk: when you borrow on the defi application, you usually provide other encrypted assets as collateral. For example, the defi agreement maker requires the borrower to pledge 150% of the loan value.Due to the volatility of cryptocurrency, its value fluctuates frequently. If there is a downturn, the encrypted assets used as collateral may depreciate significantly, and some people's positions may be closed.

- Product risk: Although the defi loan is mortgaged by other encrypted assets, the borrower using the defi agreement cannot bear any responsibility if it cannot effectively repay the loan.

At present, defi is not only applied in mobile mining, but also other application ecology is gradually taking shape. Defi has made many outstanding changes in the encryption world. Its integration with NFT makes NFT credible and has a great impact on the real-time liquidity of NFT. Decentralized finance has various advantages in favor of users.

The NFT concept in defi makes NFT stand out and promotes the survival of NFT in exchanges and trade. Defi enhances NFT interchangeability by helping to manage NFT transactions and maintain ownership and immutable transaction records in NFT space. NFT in defi improves the development of all NFTs. Defi will appear in all NFT development to help and improve the function and scope of NFT development services.

03 ABOUT NFT

The birth of NFT is based on a pixel avatar project called cryptopunks in Ethereum in 2017. The total amount of these pixel avatars is limited to 10000. No two characters can be the same. People with Ethereum wallet can receive them free of charge and trade them in the secondary market.

Six months later, the blockchain game cryptokitties (infatuated with cats) became popular rapidly, which is a game of cat rolling in Ethereum. Cryptokitty is a virtual cat. If buyers have two or more, they can cultivate new cats. The price of cultivating rare features will be more expensive. This virtual cat has experienced several rounds of sharp price increases and falls, but also let NFT be known by more people.

The starting point of cryptokitty design is to popularize the playing methods of NFT. As a result, people opened a zoo on the Ethereum blockchain. Virtual rabbits and virtual dogs were popular one after another, and then there was a virtual tree. Mining, buying cats, selling cats to earn money to buy mining machines, and then mining may be a new way of life in the virtual world.

A DIGITAL SPACE RUNNING PARALLEL TO THE REAL WORLD

Definition of NFT

NFT: non fungible token, which is indivisible, irreplaceable and unique.

On the blockchain, digital cryptocurrencies are divided into two categories: native currency and token. For example, bitcoin and ethercoin have a main chain and use transactions on the chain to maintain ledger data; Tokens are attached to the existing blockchain and use smart contracts to record the ledger, such as tokens issued on Ethereum. Tokens can be divided into homogenization and non homogenization.

Ft (fungible token), which can replace each other and can be nearly infinitely split. For example, there is no difference between a bitcoin in your hand and a bitcoin in my hand. This is homogenization, that is, homogenization coin.

NFT is the only and inseparable token, such as encrypted cat, tokenized digital ticket, etc. There won't be two identical NFTs in the world.

Therefore, compared with ft, the key innovation of NFT is to provide a method to mark the ownership of native digital assets (i.e. assets existing in or originating from the digital world), and the ownership can exist outside the centralized service or centralized library.
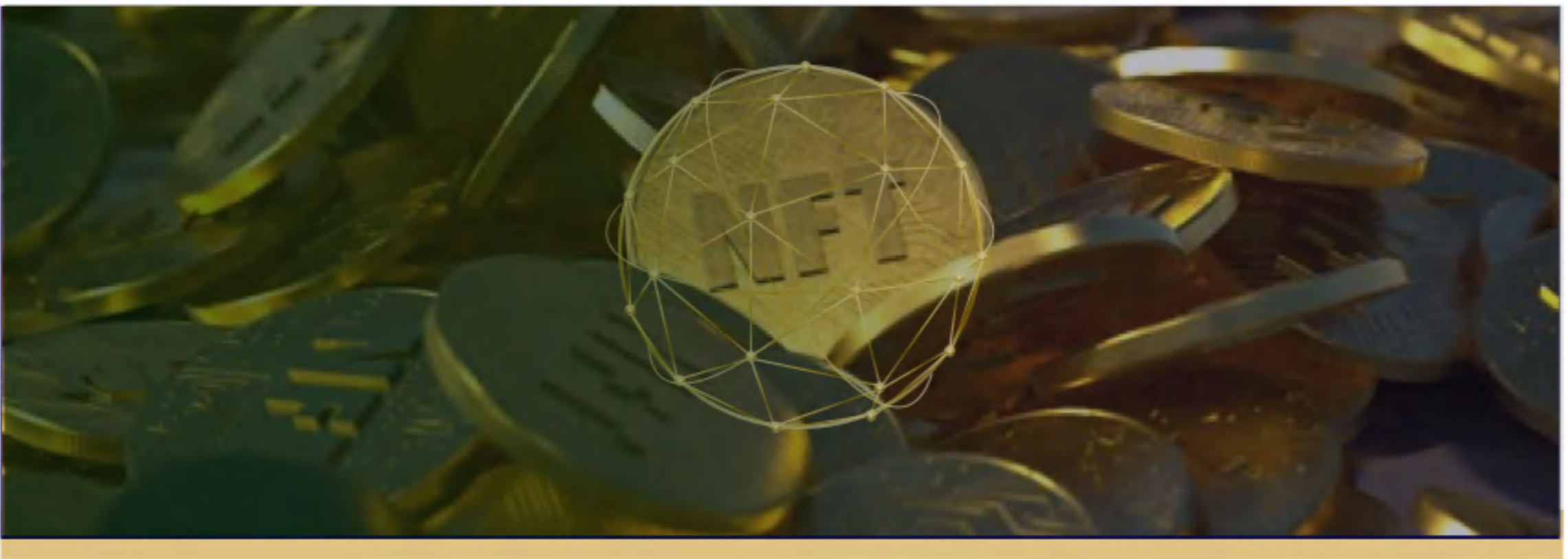
The ownership of NFT does not prevent others from inspecting it or reading it. NFT does not capture information and then hide it. It just captures information and then finds the relationship and value between the information and all other information on the chain.

At the same time, NFT can be bound with some commodities in the real world because of its non homogeneity and indivisibility. In other words, it is actually a digital asset issued on the blockchain. This asset can be game props, digital artworks, tickets, etc., and is unique and non reproducible. Because NFT has natural collection properties and is easy to trade, encryption artists can use NFT to create unique digital works of art.

In August 2021, Stephen curry, a popular NBA star, updated his avatar (a bayc NFT in a rough flower suit). He spent $180000 (55 ethers, about 1.16 million yuan) to buy the avatar and joined the discord group of the project. Curry also released a self portrait of himself imitating the avatar's shape in the avatar's community (bayc community).

NFT is a digital collection based on blockchain, and 180000 people have purchased the copyright of the work. This monkey is the work of a bayc club. There are 10000 monkeys in the club. Each monkey is different and the price is different.

APENFT
@apenftorg

It is really amazing! We are pleased to announce that we have received the Justin Sun @Tpunks_official avatar donated by @justinsuntron, who bought it with 10.5 Million dollars. @Tronfoundation Thanks for the generous support! Love the punk style avatar so much. 🎉🎉

Justin Sun ● 🙂 ✔ @justinsuntron · 31m
I just bought Tpunk #3442 for 120 million #TRX 🔵 equivalent to $10.5 million and donated it to @apenftorg as a collection. Excited for my new punk avatar and #TRON 🔵 #NFT community strength! twitter.com/TpunksB/status...

6:23 PM · Aug 31, 2021 · Twitter for iPhone

In addition to changing the avatar of curry, sun Yuchen, founder of Tron, said on twitter that he bought a Justin sun tpunks numbered 3442 at the price of 120 million TRX (equivalent to US $10.5 million). NFT avatars also set off a wave. Sun Yuchen photographed Picasso's masterpiece the naked woman with a necklace and Andy Warhol's three self portraits at the price of US $20 million and US $2 million respectively, and then successively purchased the works of beeple, Pak, kaws, Boris artzybasheff and other artists.

Sun Yuchen has photographed nearly 20 collections with a total value of more than 200 million. Including rock ID 87 of etherrock series, my mama's dream of digital artist fewocious, and tpunks 3442 for us $10.5 million. According to the official website of tpunks, tpunks is the first NFT avatar project in Tron ecology, benchmarking cryptopunks, including 10000 unique avatars. Each avatar is randomly cast by algorithm.

Most NFTs are issued, traded and circulated based on Ethereum network, but Ethereum network congestion and high handling charges restrict the further development of NFT. At present, the application field of NFT is still relatively single, focusing on the small circle of games, encrypted works of art and card collections, and large-scale application has not been realized.

When people's expectations for the value of NFT gradually become stable and the risk of holding NFT is reduced, more people will join the market to contribute liquidity.

NFT It can be used not only to support transactions, but also to borrow and support partial ownership (e.g Nifex) or as collateral for loans (e.g NFTfi）。 The combination of NFT and defi can create unlimited possibilities. For example, aavegotchi is a game that combines defi and NFT. Each character represents a deposit on the loan platform AAVE. The game characters can fight, upgrade and configure equipment.

Everything in the current world can be connected to the blockchain world through NFT, which is the value of the hardest core of NFT; It means that NFT allows us to create a real parallel Metaverse in the blockchain world. Here we relate to the core of this paper, the application system of defi + Net + metaMetaverse.

04 METAVERSE

The concept of metaverse was first popular in the science fiction "breaking snow" by American writer Niels Stevenson

The story takes place in Los Angeles in the United States in the early 21st century. Stephenson created a three-dimensional digital space - metaverse, which is not the Internet as previously imagined, but closely connected with the society. It is parallel to the real world. In the real world, people isolated from each other can communicate and entertain through their own "avatars";

In the novel, the protagonist Hiro protagonist's job is to deliver pizza to the Mafia, which has controlled the territory of the United States. When not working, Hiro protagonist will enter metaverse: a networked virtual reality. In this virtual reality, people behave as "avatars" designed by themselves and engage in secular (conversation, flirtation) and extraordinary (sword fighting, mercenary espionage) activities. Like the Internet, metaverse is a collective and interactive effort that is always ongoing and not controlled by anyone. Just like in games, people live and control characters moving in space

METAVERSE

Virtual world parallel to the real world

The development stage of metaverse can be realized very early. You can generally understand "metaverse" as a virtual world parallel to the real world. What people can do in reality is realized in metaverse.

This concept is very common in today's game and film creation. From matrix to number one player, metaverse has become one of the important elements of the film space-time architecture.

Metaverse

Facebook: from space to horizon,

VR social platform

Since 2015, Facebook has begun to lay out the VR social platform: in 2017, it released the first VR social application space to provide players with interactive small game scenes. Subsequently, three VR applications with different themes were released: rooms focusing on game entertainment, oculus TV focusing on video and audio, and Venus live broadcasting of sports, trying to integrate social concepts into each scene;

At the oc6 conference in 2019, Facebook released the new VR social platform Facebook horizon, which was tested online in 2020

Facebook's description of horizon is "an expanding virtual experience universe designed and built by the whole community". Users can

In horizon, use customized VR avatars to chat with others, or experience games and activities created with built-in tools.
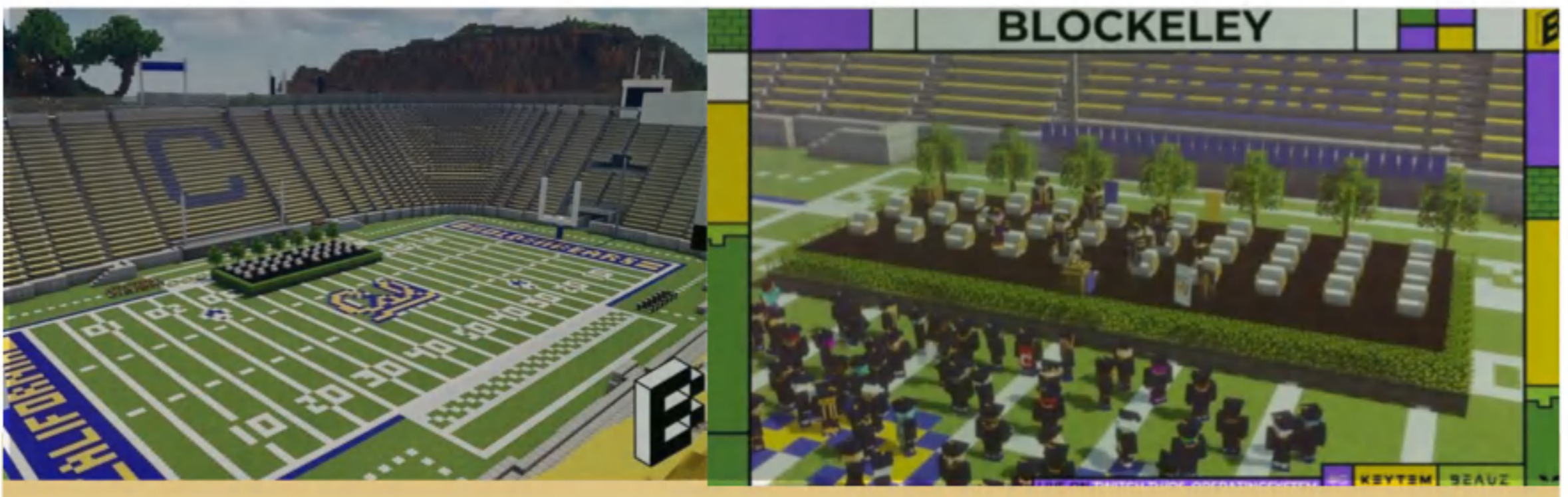
Minecraft: copy the entire campus

This virtual Berkeley campus is jointly built by more than 100 students and alumni in my world, with more than 100 buildings. On the day of the ceremony, the graduates of Berkeley, California jointly participated in an unforgettable "virtual" graduation ceremony in my world, including the president's speech, degree awarding, hat throwing and so on.

Animal forest birthday party, roblox birthday party

On July 24, the AI field summit AIAC 2020 was held in animal forest
On the day of the ceremony, the workshop was divided into four themes, namely "people and AI", "natural language understanding", "computer vision" and "game AI", and a total of 17 speeches were held

Roblox Metaverse

Metaverse feature

That is, identity, friends, immersion, low friction, variety, anywhere, economy and civilization. Among them, civilization is the ultimate development direction.
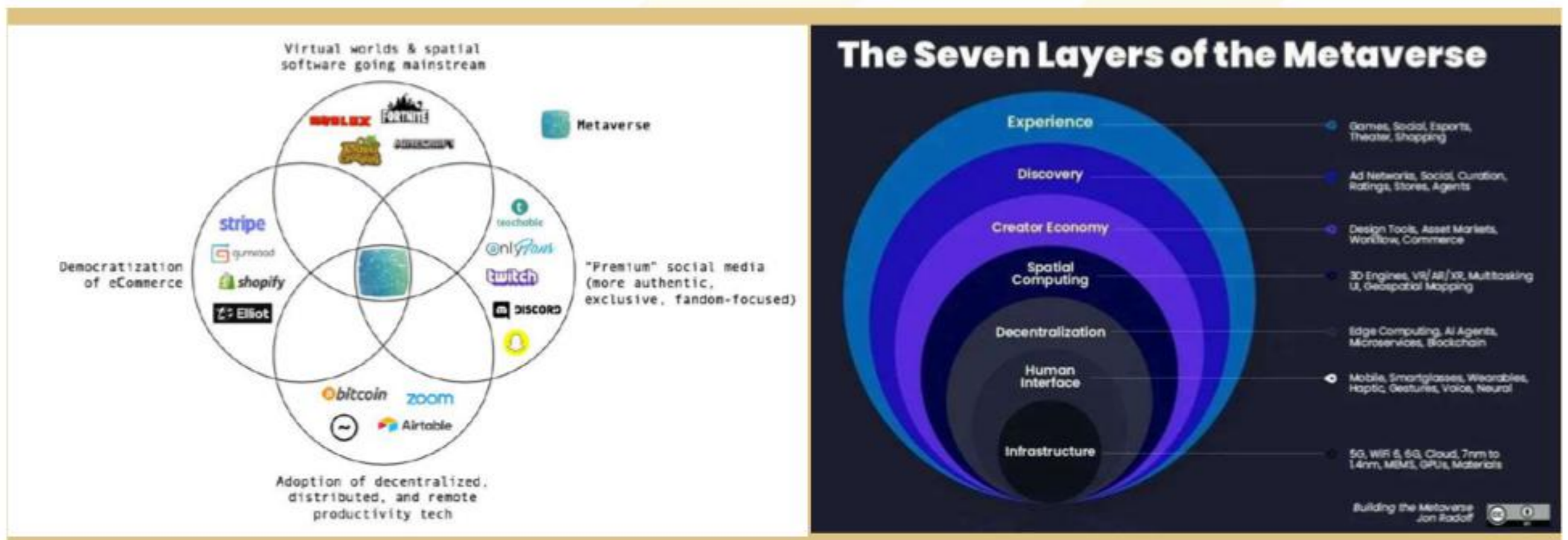
"Metaverse" is used to describe the persistent, shared and three-dimensional virtual space in the virtual universe. With the emergence of more and more powerful computing devices, cloud computing and high bandwidth Internet connections, "metaverse" will gradually become a reality.

MNC is an application project of the foundation under Metaverse Network LLC, which is founded by Prof. CHEUNG WY and registered in Texas, USA in 2021. MNC is built by the financial transaction and block technology teams.

June 2018 Prof. CHEUNG WY prepared and founded. The original intention is that in metaverse's virtual world, people can establish another identity to socialize, entertain, consume and produce. Using blockchain technology, we can confirm the ownership of various digital assets and make the virtual world have economic significance. We can conduct transactions similar to real life in metaverse, and exchange or buy and sell land, pets, collections, etc.

MNC builds a digital, valuable and circulating metaverse + NFT + defi virtual and reality connected ecosystem with diversified assets. Game the defi rules, NFT the game props, and a digital space running parallel to the real world with "metaverse" as the core.
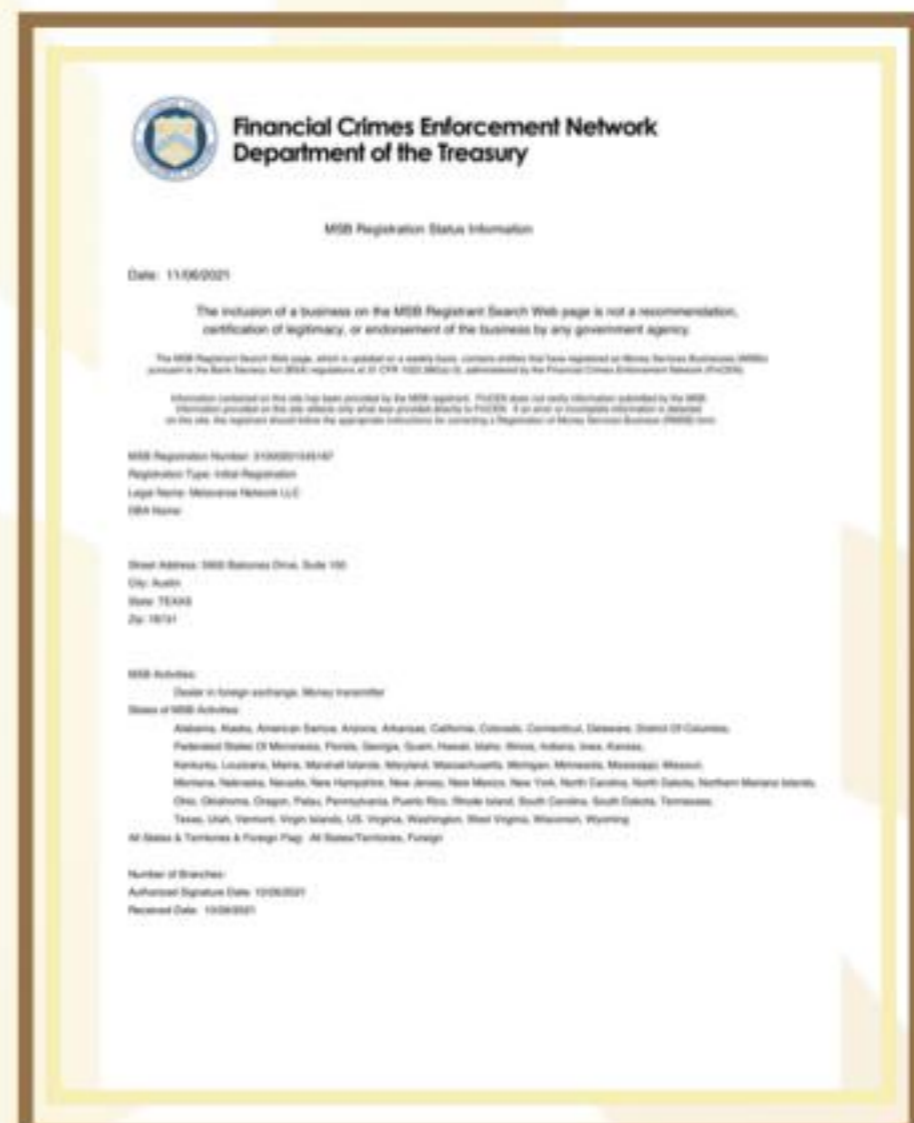
MNC Metaverse+NFT=MetaFi

The company build a world's most cutting-edge breakthrough and highly centralized game industry. In the MNC ecosystem, various assets of NFT will be projected into the metaverse to maintain their value, and the realization of the confirmed number will never lead to the problem of work centralization and unit weight.

NFT has the characteristics of "irreplaceable, imitation ability and tracking source, so as to create a more real" virtual experience for users. Explore the combination of different types of assets and blockchain to improve the liquidity, security and value of assets.

Metaverse Network LLC will ensure the non securities nature of the token issued by the project, and record the project strictly abide by the SEC regulatory standards.

"Metaverse +" seems to have become a new outlet. Metaverse is an extended concept of blockchain. Look at metaverse from a higher perspective and explore the development of metaverse. Metaverse will become the key to the next generation Internet.

What MNC can do is to integrate MetaFi, an application of blockchain technology, into metaverse, which is its greatest value.

MNC：Metaverse"Natural parent"

Metaverse truly realizes what cannot be realized by blockchain, while MNC realizes what metaverse wants to achieve, which makes people truly witness the greatness of blockchain technology.

MNC can connect new technologies such as big data, cloud computing and artificial intelligence, and can play the effect and role of "1 + 1 > 2". In this context, MNC is more like a "polymer" of many new technologies than an independent individual. Under the ecology of MNC, new technology can become a highly integrated individual.

MNC integration and accommodation of relevant new technologies, and the connection of relevant processes and links, metaverse has changed from an illusory concept to an existence that can be landed in a real business category. Therefore, MNC will be the "mother" for hatching and maintaining metaverse.

MNC：Metaverse"Capillaries"

The application in the game realizes the seamless connection between the virtual world and the real world through metaverse, so as to essentially improve the user experience. Indeed, metaverse has opened up a new world for us. In this new world, there is no clear-cut connection between the virtual world and the physical world, but a unified individual.

However, if the value and significance of metaverse are only limited to the optimization and promotion of experience without real business as a footnote, then the so-called metaverse is still just an existence lacking real foundation. Just like the current digital money market, it only has collection and investment value, and has no connection with the real economy. In addition, it has no other significance. Therefore, one of the important reasons why metaverse is so popular is that it comes with a complete set of business closed loop and really constructs its own ecological closed loop.

One of the important reasons for this is the important role played by MNC. Different from the blockchain technology considered in the past, MNC realizes the unity of virtual value and real value on metaverse. In other words, those meaningless digital currencies we thought originally have now become the subject of real industry value. Through MNC, metaverse can build the connection between the real industry and the virtual world, and truly realize the free flow between the two. From this perspective, MNC is the "capillary" of metaverse.

MNC

Metaverse"Key to open the door"

The combination of MetaFi of MNC is directly related to the future development and evolution of metaverse. Then, if there are "the second universe" and "the third universe", the underlying technology that really leads to the emergence of these new species must be the evolution and evolution of the dimensional combination of MetaFi + metaverse.

New technologies such as big data, cloud computing, artificial intelligence, 3D and VR / AR are evolving, and a new relationship is built with the real business. The combination of new technology and real business has constantly derived new species.

MNC really connects new technologies together to form a commercial closed loop. From this perspective, we also need to continuously evolve and evolve MNC technology. Only in this way can MNC keep up with the evolution of other new technologies, so as to continue to play its function and role of aggregation and accommodation.

The three-dimensional combination technology of MNC is the key to open the door of metaverse. Every new thing itself inevitably needs a new blockchain technology as a footnote and propeller. When metaverse becomes more and more popular, we see that more and more people begin to deeply bind to it. Some even say that MetaFi is metaverse, which is the greatest value and significance of the existence and development of MNC.

IMMERSE

Use the digital technology of Metaverse Network LLC to create scenes (AR, VR, etc.) to create almost realistic scenes, so that users can fully sense and interact.

TO OPEN UP

Including "low power" and "everywhere", let most people join metaverse and let users in and out of the world freely.

SOCIAL CONTACT

"Sociality" can enhance the sense of link with users in the meta ring.

EXTEND

Metaverse should maintain "sustainability" and accept the needs of "diversity".

Gateway to MetaFi via Metaverse

The basic features of MNC based blockchain include non tampering, openness and transparency, P2P payment, etc. The "decentralized value transfer" feature of MNC will provide metaverse with a payment and clearing system that fits seamlessly with the network virtual space.

Based on the openness and transparency of Tron network itself, MNC makes the smart contract have excellent characteristics such as automation, programmability, openness and transparency, and verifiability, so that the trusted interaction on the chain can be carried out without the premise of a third-party verification platform. The financial system in metaverse is built on MNC, and the contract is decentralized in a procedural, unmanaged, verifiable, traceable and trusted manner by using the characteristics of smart contract.

Create a verifiable and secure MNC

Fair result of the game

The participants of the smart contract driven game are selected by random numbers, and the fairness of the contract is ensured by allowing everyone to verify the random numbers on the chain.

Trusted distribution of NFT

Rare NFTs are provided as in-game rewards according to the distribution scheme, and players are allowed to verify the tamper proof randomness of such NFT collateral.

Interact closely with players

Create thrilling and unpredictable settings to improve the game experience, and use random numbers to determine the results of PVP battles and other scenes to strike a balance between strategy and fun.

Build nodes on MNC

Run and release your own oracle. If they are used by developers, you will be rewarded

Price service

Get reliable prices directly from thousands of data providers and contracts.

VRF randomness solution

Fast access to secure, fair and verifiable random numbers.

TRON

MNC main network token based on Tron protocol

MNC is the basic account unit on the Tron blockchain

MNC connects the entire TRON ecosystem. Rich application scenarios provide power for chain transactions and applications.

Tron is one of the largest blockchain based operating systems in the world.

High throughput

High throughput is achieved by improving the TPS in Tron to the practical level of daily use, which has surpassed bitcoin and Ethereum.

High expansion

Tron's scalability and efficient smart contracts enable wider deployment of applications and support a large number of users.

High availability

More reliable network structure, user assets, intrinsic value and a higher degree of decentralized consensus are accompanied by improved reward distribution mechanism.

MNC DAPP runs on Tron with lower energy consumption, faster speed and higher security, providing unlimited capacity for the main network of Tron.
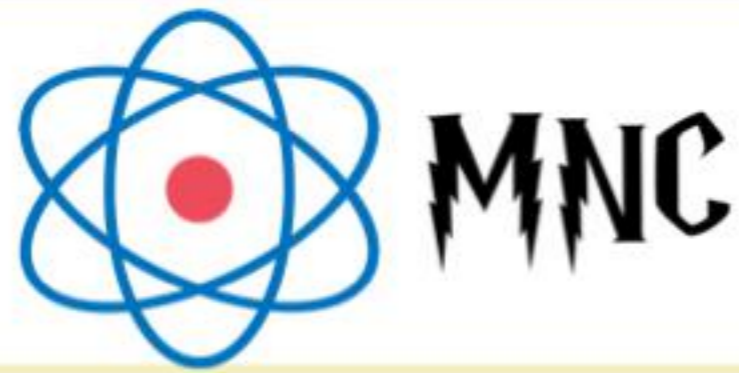
MNC: Tron network

Tron has good scalability and low cost. Compared with the current congestion and high cost of Ethereum, it shows great advantages. Tron's current ecological projects involve wallets, browsers, infrastructure, Oracle machines, expansion schemes, etc. at the defi level, it also has stable currency, Oracle machines, DEX, lending, derivatives, insurance and other projects. Although it is still small, it has begun to emerge. There are some functions of def on eth, both on TRX and EOS. The JST on TRX will be the home run of TRX - defi. Decentralized pool trading, digital asset lending, synthetic issuance of mortgage assets.

Tron positioning

Tron is a decentralized blockchain platform that supports smart contracts and high throughput.

Tron features

• users can reduce costs, enjoy convenience and create wealth by using different DAPP functions deployed in Tron.
• Developers have a wide range of rights, including deploying DAPP in the Tron network, expanding business and gaining the traction of influence and thought leaders.
• Network witnesses demonstrated their support for Tron and its rich returns. Whether users, developers or Tron network witnesses, everyone will be committed to the construction of Tron ecosystem and benefit from helping Tron construction.

Tron architecture

Storage layer, core layer and application layer.
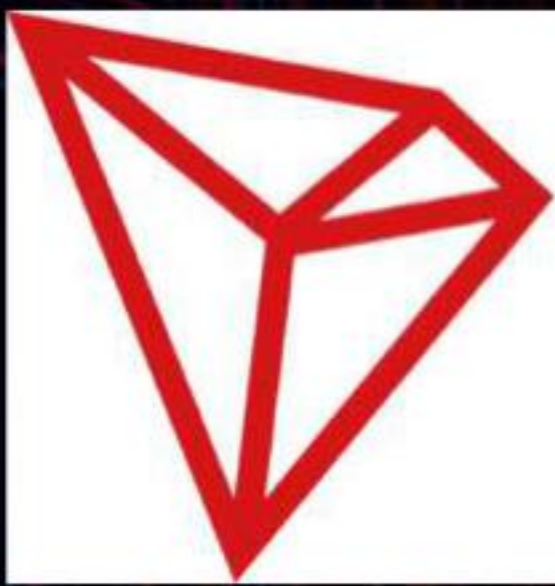
TRON：NFT Technology

Tron's first non homogeneous token (NFT) standard protocol trc-721

We note that NFT standards are widely used in various fields of blockchain. Some layer 2 solutions, such as plasma, try to use NFT data structure to solve data security problems.

Some dapps, such as cryptokitties, show the great economic value of NFT.

In TBTC and other projects, NFT plays a key role in verifying the pledge ownership.

The above applications give more value to NFT tokens. More and more defi projects try to combine NFT tokens to realize ecological value-added. We believe that standardized NFT will also create unlimited possibilities for Tron.

Through the standardized interface, Tron application can track and transfer NFT. A simple trc-721 smart contract is listed below to track large-scale NFT tokens. Since each trc-721 token is unique, the trc-20 token standard does not meet the requirements of the NFT. The trc-721 standard of Tron will be instructive. It is as important as trc-20.

Technical Specifications

Each contract conforming to trc-721 standard must implement trc721 and trc165 interfaces (the following "precautions" must be followed):

```solidity
pragma solidity ^0.4.20;

/// @title TRC-721 Non-Fungible Token Standard
/// @dev See https://eips.ethereum.org/EIPS/eip-721
///  Note: the TRC-165 identifier for this interface is 0x80ac58cd.
interface TRC721 /* is TRC165 */ {
    /// @dev This emits when ownership of any NFT changes by any mechanism.
    ///  This event emits when NFTs are created (`from` == 0) and destroyed
    ///  (`to` == 0). Exception: during contract creation, any number of NFTs
    ///  may be created and assigned without emitting Transfer. At the time of
    ///  any transfer, the approved address for that NFT (if any) is reset to none.
    event Transfer(address indexed _from, address indexed _to, uint256 indexed _tokenId);

    /// @dev This emits when the approved address for an NFT is changed or
    ///  reaffirmed. The zero address indicates there is no approved address.
    ///  When a Transfer event emits, this also indicates that the approved
    ///  address for that NFT (if any) is reset to none.
    event Approval(address indexed _owner, address indexed _approved, uint256 indexed _tokenId);

    /// @dev This emits when an operator is enabled or disabled for an owner.
    ///  The operator can manage all NFTs of the owner.
    event ApprovalForAll(address indexed _owner, address indexed _operator, bool _approved);

    /// @notice Count all NFTs assigned to an owner
    /// @dev NFTs assigned to the zero address are considered invalid, and this
    ///  function throws for queries about the zero address.
    /// @param _owner An address for whom to query the balance
    /// @return The number of NFTs owned by `_owner`, possibly zero
    function balanceOf(address _owner) external view returns (uint256);

    /// @notice Find the owner of an NFT
    /// @dev NFTs assigned to zero address are considered invalid, and queries
    ///  about them do throw.
    /// @param _tokenId The identifier for an NFT
    /// @return The address of the owner of the NFT
    function ownerOf(uint256 _tokenId) external view returns (address);

    /// @notice Transfers the ownership of an NFT from one address to another address
    /// @dev Throws unless `msg.sender` is the current owner, an authorized
    ///  operator, or the approved address for this NFT. Throws if `_from` is
    ///  not the current owner. Throws if `_to` is the zero address. Throws if
    ///  `_tokenId` is not a valid NFT. When transfer is complete, this function
    ///  checks if `_to` is a smart contract (code size > 0). If so, it calls
    ///  `onTRC721Received` on `_to` and throws if the return value is not
    ///  `bytes4(keccak256("onTRC721Received(address,address,uint256,bytes)"))`.
    /// @param _from The current owner of the NFT
    /// @param _to The new owner
    /// @param _tokenId The NFT to transfer
    /// @param data Additional data with no specified format, sent in call to `_to`
    function safeTransferFrom(address _from, address _to, uint256 _tokenId, bytes data) external payable;

    /// @notice Transfers the ownership of an NFT from one address to another address
    /// @dev This works identically to the other function with an extra data parameter,
    ///  except this function just sets data to "".
    /// @param _from The current owner of the NFT
    /// @param _to The new owner
    /// @param _tokenId The NFT to transfer
    function safeTransferFrom(address _from, address _to, uint256 _tokenId) external payable;

    /// @notice Get the approved address for a single NFT
    /// @dev Throws if `_tokenId` is not a valid NFT.
    /// @param _tokenId The NFT to find the approved address for
    /// @return The approved address for this NFT, or the zero address if there is none
    function getApproved(uint256 _tokenId) external view returns (address);

    /// @notice Query if an address is an authorized operator for another address
    /// @param _owner The address that owns the NFTs
    /// @param _operator The address that acts on behalf of the owner
    /// @return True if `_operator` is an approved operator for `_owner`, false otherwise
    function isApprovedForAll(address _owner, address _operator) external view returns (bool);
}

interface TRC165 {
    /// @notice Query if a contract implements an interface
    /// @param interfaceID The interface identifier, as specified in TRC-165
    /// @dev Interface identification is specified in TRC-165. This function
    ///  uses less than 30,000 energy.
    /// @return `true` if the contract implements `interfaceID` and
    ///  `interfaceID` is not 0xffffffff, `false` otherwise
    function supportsInterface(bytes4 interfaceID) external view returns (bool);
}
```

Wallet / broker / auction application interface.

```
/// @dev Note: the TRC-165 identifier for this interface is 0x150b7a02.
interface TRC721TokenReceiver {
    /// @notice Handle the receipt of an NFT
    /// @dev The TRC721 smart contract calls this function on the recipient
    ///  after a `transfer`. This function MAY throw to revert and reject the
    ///  transfer. Return of other than the magic value MUST result in the
    ///  transaction being reverted.
    ///  Note: the contract address is always the message sender.
    /// @param _operator The address which called `safeTransferFrom` function
    /// @param _from The address which previously owned the token
    /// @param _tokenId The NFT identifier which is being transferred
    /// @param _data Additional data with no specified format
    /// @return `bytes4(keccak256("onTRC721Received(address,address,uint256,bytes)"))`
    ///  unless throwing
    function onTRC721Received(address _operator, address _from, uint256 _tokenId, bytes _data) external returns(bytes4);
}
```

The enumeration extension of trc-721 smart contract is optional. The contract publishes all NFT lists and can be found.

```
/// @title TRC-721 Non-Fungible Token Standard, optional enumeration extension
/// @dev See https://eips.ethereum.org/EIPS/eip-721
///  Note: the TRC-165 identifier for this interface is 0x780e9d63.
interface TRC721Enumerable /* is TRC721 */ {
    /// @notice Count NFTs tracked by this contract
    /// @return A count of valid NFTs tracked by this contract, where each one of
    ///  them has an assigned and queryable owner not equal to the zero address
    function totalSupply() external view returns (uint256);

    /// @notice Enumerate valid NFTs
    /// @dev Throws if `_index` >= `totalSupply()`.
    /// @param _index A counter less than `totalSupply()`
    /// @return The token identifier for the `_index`th NFT,
    ///  (sort order not specified)
    function tokenByIndex(uint256 _index) external view returns (uint256);

    /// @notice Enumerate NFTs assigned to an owner
    /// @dev Throws if `_index` >= `balanceOf(_owner)` or if
    ///  `_owner` is the zero address, representing invalid NFTs.
    /// @param _owner An address where we are interested in NFTs owned by them
    /// @param _index A counter less than `balanceOf(_owner)`
    /// @return The token identifier for the `_index`th NFT assigned to `_owner`,
    ///  (sort order not specified)
    function tokenOfOwnerByIndex(address _owner, uint256 _index) external view returns (uint256);
}
```

NFT Identifier

Each NFT token is identified by a unique uint256 ID in the trc-721 smart contract. The identification number shall not be changed during the contract period. This pair (contract address, uint256 tokenid) will become globally unique and fully qualified identifiers for specific assets on the Ethereum chain. Although individual trc-721 smart contracts may mark the first NFT as ID 0 and then add "1" one by one for convenience, the caller must (must) treat it as a "black box" instead of assuming that the ID number has any rules to follow.

Trading mechanism

Trc-721 defines a secure transaction function safe transfer from (overloaded with or without bytes parameters) and a less secure function transfer from. The transaction may be initiated by:

- Owner of NFT
- Approved address of NFT
- Authorized operator of the current owner of NFT

The following is "trc721 metadata JSON schema"

```
{
    "title": "Asset Metadata",
    "type": "object",
    "properties": {
        "name": {
            "type": "string",
            "description": "Identifies the asset to which this NFT represents"
        },
        "description": {
            "type": "string",
            "description": "Describes the asset to which this NFT represents"
        },
        "image": {
            "type": "string",
            "description": "A URI pointing to a resource with mime type image/* representing the asset to which this NFT r
        }
    }
}
```

TRC-165 Interface

The standard interface detection (trc-165) displays the interfaces supported by the trc-721 smart contract.

Future EIPs may create a global registration interface for contracts. The trc-721 implementation scheme implements trc721enumerable, trc721metadata or other interfaces.

Privacy

The wallet / broker / auctioneer in "project motivation" identifies the type of NFT held by the NFT owner.

Metadata selection (metadata extension)

Metadata extension must include name and symbol functions.

If you object to using this mechanism, an empty string is also a valid response to name and symbol. At present, this standard does not define the way for the client to confirm whether a trc-721 smart contract is recognized (standardized).Through the mechanism of associating NFT with URI, there will be more implementation schemes to use this mechanism to provide metadata for each NFT.Alternative: put all metadata of each asset on the chain (too expensive); Use the URL template to query some original data (the URL template is not compatible with all URL schemes, especially P2P URLs); Multiaddr network address

Backward compatibility

We have adopted the semantics of balanceof, totalsupply, name and symbol in the trc-20 technical specification. If the purpose of the implementation is to support this standard and be more compatible with trc-20, you can also (possibly) add a decimal function to return uint8 (0). However, we find it unrealistic to require all trc-721 implementations to support decimal functions.

The ontc721 receive function is specific to the deployed old contract. In some cases, these contracts may unexpectedly return 1 (true) without implementing the function (see solid delegatecallreturnvalue error). By returning and checking magic values, we can distinguish between real positive responses and meaningless real results.
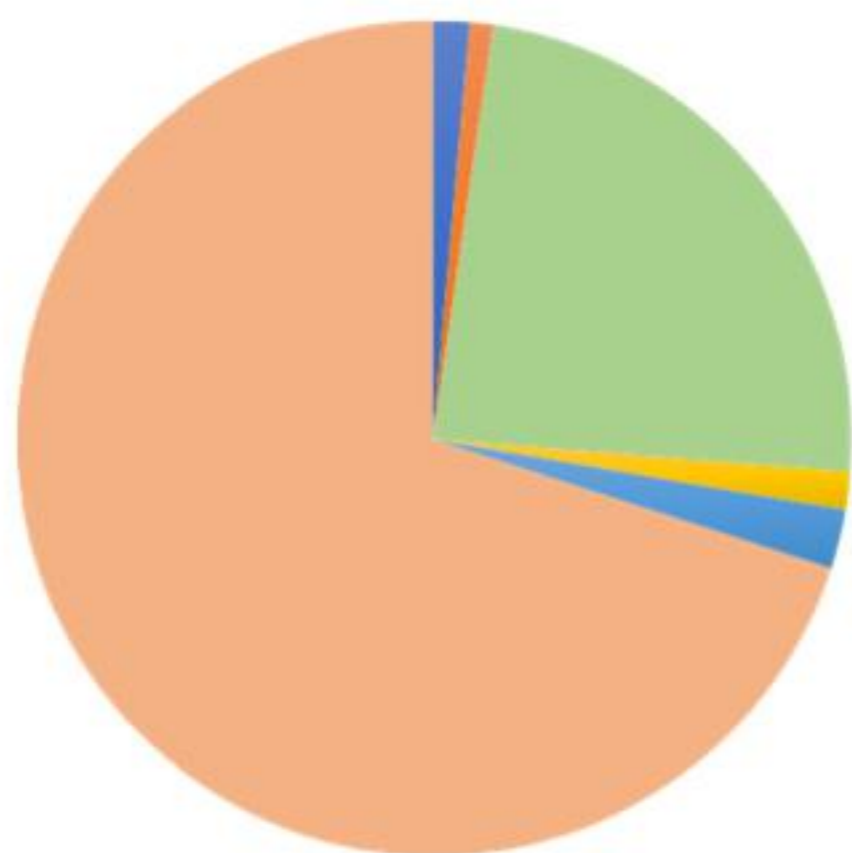

TRON&MNC
TRC-721 Technology

MNC TOKEN

MNC is a token in MNC ecology. It has pledge model, mining model, payment and circulation, voting governance attributes, etc. it has complete market attributes. The value of MNC changes with the change of market supply and demand relationship.

Release plan

A total of 5.6 billion pieces have been issued. Based on Tron technology, rich application scenarios provide power for transactions and applications on the chain

Foundation	80000000
Founding team	52000000
Node autonomy	1338000000
IPO	82000000
Public Ido	128000000
Ecological ore pool	3920000000

■ Foundation　　■ Founding team　　■ Node autonomy
■ IPO　　■ Public Ido　　■ Ecological ore pool

Digital collection

Representative projects: cryptokitties, cryptopunks, NBA top shot, etc.

NBA top shot is the most popular NFT project in the near future. The card collection project launched by the original encryption cat team in cooperation with the NBA has packaged the wonderful moments of NBA stars playing on the court into an NFT based card. NBA top shot surpassed cryptokitties this year and became the largest NFT project in history.

Game assets

Representative projects: gos unchained, axie infinity, my crypto heroes, etc. God unchained is a card game; Axie infinity is a virtual pet development game; My crypto heroes is a role-playing blockchain game.

Virtual world

Representative projects: decentraland, the sandbox, etc. Decentraland is a virtual world built entirely by NFT. The land and equipment in it are in the form of NFT.

Encrypted artwork

Representative projects: async art, superrare, etc. Encrypted artwork means that the expression form of artwork itself is digital, such as art paintings, and then packaged into an NFT to become an encrypted asset. Digitization enriches the expression forms of art. A painting can be dynamic or even interactive, which can not be done in the physical world. Async art is a programmable encryption art platform based on Ethereum; Superrare is a social networking platform for art creators and collectors supported by blockchain technology.

Finance

Representative projects: aavegotchi, yInsurance, etc. Aavegotchi is a gamfi project integrating defi + NFT + game + Dao; YInsurance uses NFT to implement insurance policies.

Payment

The core application field of MNC is to build a blockchain third-party payment system. MNC will meet the free conversion and payment of multiple currencies among different users (usdt, BTC bitcoin, ETH Ethereum, EOS, Tron, etc.)

- Facing business users: provide a commercial platform to realize payment and cross-border payment solutions.
- Facing individual users: provide many functions customized for users of encrypted digital currency, such as mobile DAPP wallet, communication module encrypted based on RSA algorithm, over-the-counter guarantee transaction, speed transaction, etc.

NFT Mall

In the future, MNC will open the NFT mall. The application scenarios include games, entertainment, financial services, hotels, resorts, catering, tourism, luxury shopping, digital assets, electronic assets, virtual games, auctions, etc.

MNC is the platform pass of NFT mall, If you hold MNC, you can exchange NFT blind boxes in MNC mall to obtain official original NFT content works of the platform. The original NFT works obtained by the user will be permanently owned by the user, and all advertising traffic revenue and transaction transfer fee obtained by the work on the platform will be owned by the user.
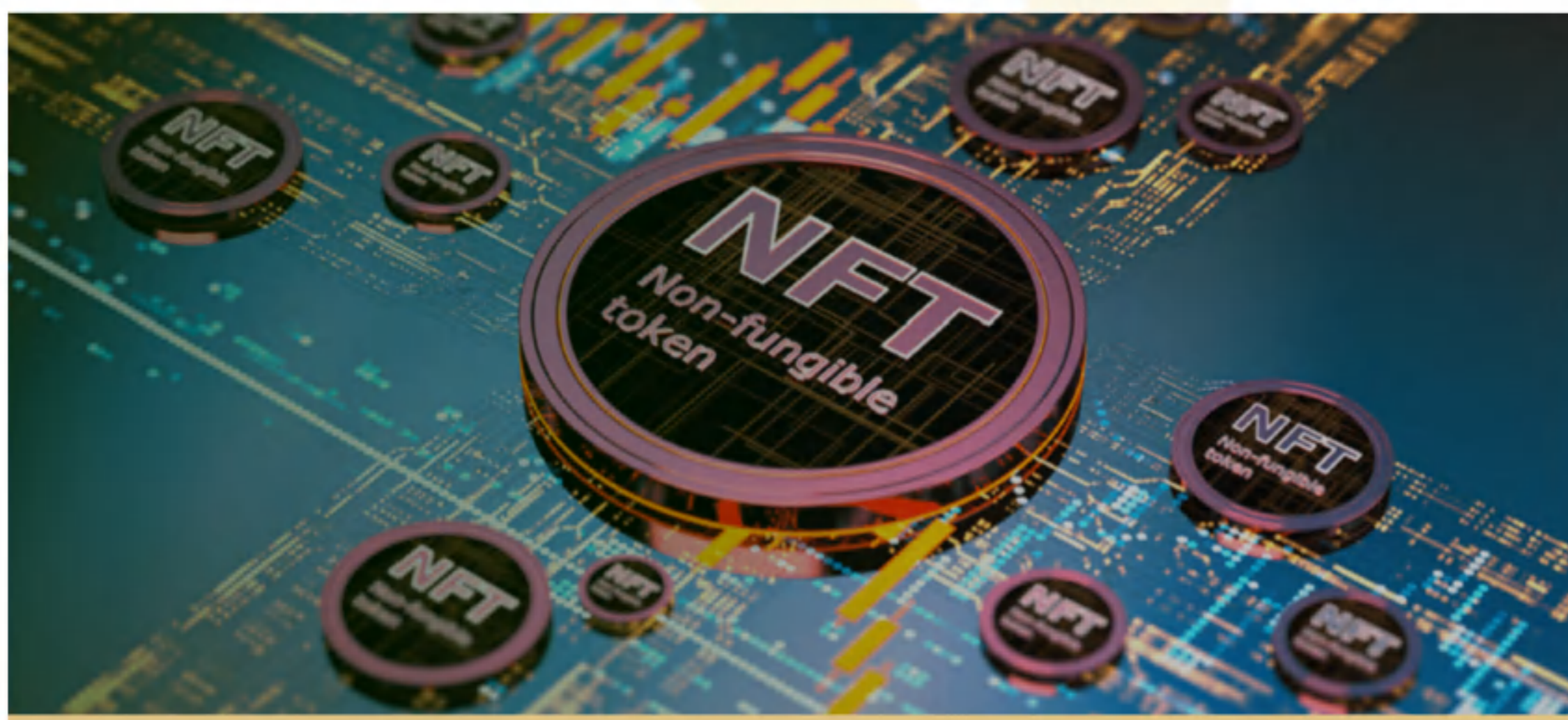
11 PLATFORM

MNC's application trading and exchange platform: SWAP.

swap is a Tron based exchange protocol that can be used to exchange trc20 tokens. Any two trc20 tokens can be exchanged, with system pricing and convenient transaction. Moreover, the protocol will not draw handling charges, and all handling charges will be provided to the liquidity provider of the protocol. The decentralization and security of the protocol are reliably guaranteed.

swap is a decentralized exchange based on Tron network and an automated market maker.

swap is an automated liquidity protocol. There is no need to bid, match transactions, and there is no centralized organization and facilities to ensure transactions. Each trading pool is controlled by smart contracts and supports operations such as exchanging tokens and increasing liquidity. Each fund pool essentially uses the formula $x * y = k$ to ensure the rationality of transactions.

MNC: Swap Technology

1. Solve the problem of counterfeit money

swap officially opened the counterfeit currency audit to ensure that the tokens in the list are real coins, and launched the counterfeit currency reporting channel (report sunswap. ORG).

2. Invite and reward quality projects

Tron announced a US $10 million defi fund, focusing on supporting and encouraging high-quality defi projects and developers

3. Reward liquidity market making

swap will reward all transaction pair liquidity market makers with all handling fees of each transaction pair free of charge, and swap will create the highest quality liquidity ecology.

4. Strengthen cooperation with data display providers

Strengthen cooperation with CMC / coingecko / non Trumpet / mytoken and other header data display platforms to improve swap's brand awareness. The exchanges launched in swap will also support the header data platform.

5. Strengthen cooperation with top industry wallet providers

swap has cooperated with the wallet of Tron Ecology: imtoken, bitkee, tokenpocket, trustwallet, tronlink and huobiwallet all support swap as the portal to further optimize the portal experience.

6. Improve user experience

Optimize the overall transaction experience, the experience of each wallet entrance, web page end and plug-in end, and ensure the seamless connection of the whole transaction process.

12 DEVELOPMENT

01 MNC

Create MNC metaverse, provide price service and operate the community.

02 MNC

Create a developer community. Form MNC metaverse ecology, implement SLA system and reward excellent developers
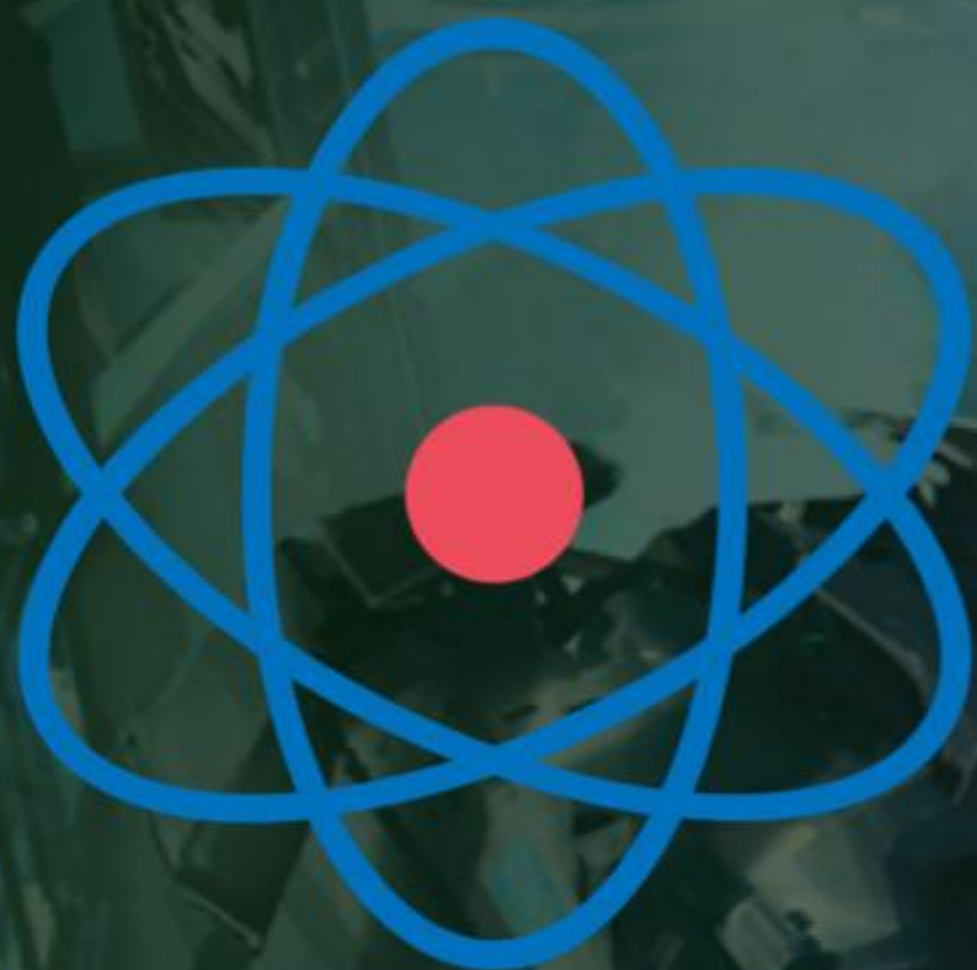
03 MNC

Establish a mature and sound anti fraud system and secure transmission system

04 MNC

Build a reasonable governance platform and expand the ecological boundary of MNC & Tron.

13 AFFIRMS

- This document is only for the purpose of conveying information and does not constitute opinions on trading project shares or securities. Any similar proposal or levy will be made under a trusted clause and permitted by applicable securities laws and other relevant laws. The above information or analysis does not constitute an investment decision or specific proposal.

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MNC
WHITE PAPER

THE WORLD'S FIRST METAFI + NFT + APPLICATION ECOLOGY

GATEWAY TO METAFI VIA METAVERSE