METAMINERS NETWORK WHITE PAPER

--Infrastructure of the Meta-universe World

V1.01

METAMINERS NETWORK Team

The world you see,

It could all be fake.

Directory

Chapter I Background

We live in a chaotic era.

The traditional physical world is rapidly moving towards the digital age, and we are decarburizing into silicon. As a social species, the next milestone we face is that billions of people exist online at the same time and participate in the virtual economy in an influential way. More online time investment will create more digital value.

Outside the physical world, there will be a virtual universe without delay, which can provide individuals with a sense of dominance in life, a sense of social existence, a sense of shared space, and also give everyone the ability to participate in the virtual economy. We define this upcoming new world as the meta-universe.

Meta-universe: The Vast World of Virtual Space. Meta-universe is the general name of Virtual Reality (VR), Augmented Reality (AR) and Mixed Reality (MR). Cloud on content, cloud on rendering, cloud on spatial computing, etc. in cloud based XR technology will be significantly reduced the calculation load and energy consumption of XR terminal equipment; by getting rid of the shackles of cables, XR terminal equipment will become lighter, more immersive, smarter and more conducive to commercialization.

Facing the future, the improvement of network and XR terminal capability will push the XR technology into the era of full immersion. The cloud based XR system will be combined with new generation networks, cloud computing, big data, artificial intelligence and other technologies to enable the digital transformation of various industries in the fields of business creativity, industrial production, culture and entertainment, education and training, medical and health, etc. Future cloud based XR systems will realize complex services such as voice interaction, gesture interaction, head interaction, eyeball interaction between users and the environment. It needs to meet ultra-low delay and ultra-high bandwidth in a relatively certain system environment to bring the ultimate experience to users.

With the continuous development of wireless network capability, high-resolution rendering and terminal display equipment, holographic information transmission in the future will realize three-dimensional dynamic interaction among people, things and their surrounding environment through natural and realistic visual restoration, greatly meeting the communication needs of human beings for people, people and things, as well as people and environment. In the future, holographic communication will be widely used in many fields such as cultural entertainment, medical health, education, social production, etc., so that people cannot be limited by time and space, and break through the boundary between virtual scene and real scene, so that users can enjoy the immersive experience of the real world.

The new era of virtual existence will usher in the next great milestone marking people as networked species, and blockchain technology is the most reasonable way to the meta-universe. The greatest significance of meta-universe integration into blockchain technology lies in mapping real people and real assets to the digital world using NFT or DID, thus forming a real virtual dreamland digital world.

We all stand at a critical crossroads, which values and human qualities can be inherited, which ideas will be preserved and integrated, has become a subject we must face.

METAMINERS NETWORK (abbreviated as MNC) is not only a bridge linking the physical world and the meta-universe, but also hopes to become an infrastructure facing the meta-universe world. METAMINERS NETWORK will provide individuals in the meta-universe with virtual fields, digital doppelganger, economic systems and recognized community standard protocols, all of which are also the basic elements of the meta-universe.

We chose "Minions", which is popular all over the world, as the main image of METAMINERS NETWORK. Minions, who were born as miners, evolved in an optimistic way in the world of natural selection. This is a special group, and it is also the epitome of the meta-universe of human society.

Each of us is a member of Minions. Minions are small and insignificant, just like every human individual; Minions are also great. As a consensus group, they live, perceive and experience the world.

I hope every “Minions” can tap their wealth and value in the meta-universe.

Project Vision: Calculating force is freedom.

Our Mission: Break through the limitation of time and space and become a bridge linking the physical world and the meta-universe.

Chapter II **Pain points and problem challenges: Distributed Autonomous Network Architecture of Meta-universe**

Meta-universe will be a ubiquitous network with huge scale, providing ultimate network experience and supporting diversified scene access, and realizing the whole scene oriented. Therefore, it is necessary to study the architecture of access networks and core networks. For the access network, the architecture of on-demand capability should be designed, and the design concept of software and service should be introduced. For the core network, it is necessary to study the distributed, decentralized and autonomous network mechanism. Distributed network architecture involves multi-dimensional key technologies, including: Decentralized control and management; Deep edge networking technology; Demand-driven light architecture design, smart control mechanism and radio resource management; Sharing and building of network, computing and storage; Support task-centered smart connection and smart endogenous architecture with self-growth and self-evolution capabilities; Support architecture design with privacy protection, reliability and high throughput blockchain; Trusted data governance, etc.

The improvement of network autonomy and automation will depend on new technical concepts, such as the application of digital twin technology in the network. Traditional network optimization and innovation often need to be tried directly on the real network, which takes a long time and has great impact. Based on the concept of digital twins, the network will further develop towards more comprehensive visualization, finer simulation and prediction, and smarter control. Digital twin network (DTN) is a network system with physical network entities and virtual twins, and the two can perform real-time interactive mapping. Twin networks map and control physical networks through closed-loop simulation and optimization. Among them, the effective utilization of network data and the efficient modeling of network are urgent problems to be overcome.

The change of network architecture affects the whole system. It is necessary to consider how to introduce new technological elements as well as the coexistence and symbiosis with the existing network.

Chapter III MNC Features

We need to design a self-evolving blockchain system based on value incentive, so that each role in the meta universe ecological chain has a fair voice, and let the value return to the dedicators. Specifically, the MNC ecosystem will have the following characteristics:

1. *De-centralized Platform Entrance*

MNC platform only provides the underlying data access interface and service API, and the portal is designed by third-party developers according to their own needs. Theoretically, anyone can provide access. Without a unique centralized entrance, the problems faced by the centralized platform are fundamentally eliminated.

2. *Developer Definition Sharing Rules*

The distribution ratio of the income generated in the system is freely defined by developers, and the platform can judge which can appear on its own platform according to the consensus of players. Developers and platforms have the right to choose in both directions and freely to ensure fairness and justice.

3. *MNC Community Autonomy*

MNC community supervises the quality of the project. Products with inferior quality or fraud to users will be punished by the consensus rules of the community. In addition, this information will be permanently recorded on the blockchain and cannot be tampered with, making the cost of doing evil huge, thus promoting developers to make high-quality products to serve players.

MNC community is constrained by community consensus and operates under the rules of community public agreement. It is a completely decentralized organization, and no individual can decide the behavior of MNC community.

4. *Asset Blockchainization*

The core assets in the meta-universe system can be generated by developers through MNC to make the assets public. Players' assets will be protected by MNC platform, and its transaction transfer will be publicly recorded on the blockchain. In the future, we will develop an asset exchange according to demand, so that players' assets can be freely traded to ensure the interests of players.

5. *Industrial Public Chain Design*

We will design a set of public chains customized for the meta-universe industry to solve the basic problems of the industry and facilitate developers to make better use of MNC platform to develop intelligent contracts, high-quality products and provide better user services suitable for the industry.

Chapter Ⅳ MNC Public Chain Design

1. *Open Ecosystem*

1.1 Open Source Code and Open Design

The code of MNC system will be open source on GitHub for everyone to supervise and review. We will carry out open design, support different development languages, be compatible with different operating systems, different devices and different development environments, and welcome the open source community to contribute more to improve the entire ecology of MNC.

1.2 Open Benefit Sharing Mechanism

Players, developers, publishers and traffic parties who contribute to the community will all obtain their own reasonable benefits through MNC's benefit sharing rules.

1.3 Token Design

We will set up our own token, Metaminers Network Coin (MNC), which plays a central role in the MNC ecology: MNC can be used to pay for various economic behaviors in the ecology, such as purchasing props, developers placing advertisements, and can also be used to stimulate distributed bookkeeping behaviors. MNC holders also have the right to vote in the community.

2. *Introduction to the Role of Ecosystem*

2.1 MNC Core Development Team

The responsibility of the MNC core development team is to be responsible for the research and development of MNC core systems, including the development of MNC public chain, MNC open platform, MNC developers and player communities.

2.1.1 Player

Players are the core elements of MNC. They are the key to the prosperity of the entire ecosystem. Serving players well and bringing fair and just experience to players are the core responsibilities of MNC.

2.1.2 Developer

Developers of the MNC ecosystem, including:

- Developers of smart contracts
- They contribute various intelligent contracts to MNC Ecology, such as ranking statistics tools, image compression tools, etc.
- Developers of blockchain
- They develop a variety of things that are available to players
- Developers of various applications in the meta-universe

Based on MNC ecological data, various player applications can be developed, such as initial world, cosmological constant definition, etc.

2.2 Other Partners of Ecology

These partners include: Other blockchain projects, advertising platforms, traffic partners, etc.

2.3 MNC Value Scale MV

2.3.1 Definition of Value Measure MNC Value

MNC defines a weight for each entity in the chain by analyzing its behavior, activity and correlation. We call it MNC Value, or MV for short. MV, as the underlying value measurement index of MNC, plays a very important role:

It exists as the bottom algorithm among community voting, formula algorithm DPOS and contributor incentive mechanism DIP. It can be said that it is the basis of all consensus mechanisms in MNC.

It leads the value trend of the community, rewards the behaviors that have positive impact to the community, and punishes the behaviors that destroy the normal ecology of the community and the attempts to cheat, thus making the whole MNC ecology develop continuously and healthily.

2.3.2 Entities with a Scale of Value

- User Value Scale: Activity, consumption and dissemination of community concepts.
- Value Scale: Operation time, active retention of players, evaluation obtained, feedback from the community
- Developer Value Scale: Activity, comprehensive quality of developing Dapp, and reputation
- Value Scale of Other Partners: Activity and reputation.

2.3.3 The Inherent Relationship of Multiple Value Scales

Various value scales are interrelated and complement each other to form the value scale of the entire MNC ecology:

- The player's behavior in the community determines the player's MV
- The comprehensive value and evaluation of players' MV in the game determine the MV of the game
- The MV of the system will determine the developer's MV, and the developer's MV will also give the new game the initial MV

2.3.4 MV Algorithm Design

We choose the data on the chain as the data source for calculation to ensure openness and transparency, and choose the open source algorithm LeaderRank to calculate the MV of each entity. Let's take the value scale as an example. The entities associated with evaluating its quality include players, developers, smart contracts and so on.

The idea of LeaderRank algorithm is to add a background node and the bidirectional edge between the node and all nodes in the network to a network containing N nodes to replace the jump probability in PageRank algorithm. The specific calculation is as follows as Formula (1):

$$FV_i(t) = \sum_{j=0}^{N+1} \frac{a_{ij}}{k_j^{out}} FV_j(t-1)$$

At the initial time, each node (except the background node) is given a unit resource, that is, $FV_i(0)=1, \forall i \neq g; FV_g(0)=0$. Resources are allocated to neighbor nodes through directed connections, iterated through formula (1) until steady state, and finally the score value $FV_g(t_c)$ of the background node is transferred equally to that other N nodes. The whole process is equivalent to a random walk in a directed network, which can be represented by a random matrix P, and its elements, such as representing the next step, are represented by i the probability of going to j, if node i points to node j, a_{ij}

$$p_{ij} = \frac{a_{ij}}{k_j^{out}}$$

= 1, otherwise a_{ij} = 0; k^{out}represents the outdegree of node j. The calculation of LeaderRank can be completed by iteration. Due to the sparsity of the network, the complexity of matrix operation is not high and there is no performance problem.

2.4 Dedicator Incentive Agreement

2.4.1 Design Objectives

In order to better establish the ecological environment of blockchain application, in MNC, we propose DIP (Dedicator Incentive Protocol) for developers, to thank the excellent smart contract and Dapp developers who help ecology through MNC rewards.

2.4.2 DIP Award Allocation Algorithm

The normal operation of an ecosystem cannot be separated from the contribution of every entity in the ecosystem, so our incentive plan benefits every role in the ecology. We will reward outstanding dedicators to the ecosystem on a weekly basis.

DIP is conducted once in a cycle. For smart contract A, assume that the set of active account addresses for this week is W, where the ranking is obtained according to the value of calculated MV (TopX, the value is 1-X), and the sum of MV of weekly active addresses is calculated as the contribution S to the contract A, with the following formula:

$$S(A) = \sum_{i \in M} (max\{X+1-FV(i), 0\})$$

According to the weekly contribution value S from high to low, the contribution ranking of smart contracts is obtained. Take TopN smart contracts (as an example), their corresponding developers will divide M MNC as rewards in proportion. In order to avoid malicious brushing, DIP distribution curve is designed to be relatively even, but Top1 revenue is still guaranteed to be twice TopN revenue to reflect the difference in contribution.

Players: Senior players have obvious influence on the community ecology. We select players with high activity through MV algorithm, encourage them to participate in community voting and give reasonable rewards.

Smart Contract Developers: The more high-value users use a smart contract, the better the contract could be, and MV, as a measure of user value, can be applied to the evaluation of high-value contracts. DIP design uses the sum of weekly active users' value scales to measure the value scales of smart contracts, and then uses the value scales to evaluate the contribution of developers to obtain a contribution ranking, and then awards are issued according to the ranking.

Dapp and Developers: They provide user-oriented products and are the core force for MNC to connect with users. We encourage them to develop

high-quality applications and fun ones, rank them according to MV, and reward outstanding developers.

MNC Eco-Partners: Eco-partners can bring additional resources to MNC, such as content and users, and their contributions will be reasonably rewarded according to the ranking calculated by MV.

DIP rewards will be calculated and distributed separately by each node. Assuming that MNC produces one block every S seconds on average, all nodes will calculate DIP rewards every 24*7*3600/S blocks and send them to the corresponding smart contract's coin withdrawal address. In order to encourage the diversity of MNC ecological smart contracts and encourage the outstanding achievements of more new developers, DIP stipulates that each smart contract can only receive up to K awards.

2.4.3 Cheating Analysis

Let's take the reward of smart contracts as an example. Smart contracts can only be invoked passively and cannot actively establish transactions with non-contract accounts. Therefore, if a cheater wants his smart contract ranking to rise, he must find enough high MV ranking accounts to invoke his contracts.

First of all, it is impossible for cheaters to improve DIP ranking at zero cost. Suppose the cheater wants to improve the ranking of contract A, and forges a large number of accounts for this purpose, but when calculating S, only the call contribution score of TopX in MV ranking greater than 0 will be effective, and the newly forged account MV ranking will be outside TopX, so even the contract call has no effect on DIP ranking.

Secondly, if the cheater is willing to pay a certain cost for the DIP ranking of the contract to rise, then he/she has two ways to choose. First, he/she spends money to forge a high MV account to call Contract A and improve the ranking of Contract A. However, in order to forge an account with high MV, every time an account is upgraded, a large sum of money needs to be invested to forge the special topology of the account. Moreover, due to the periodic update of MV, the cost of maintaining high MV for a long time will be huge. Second, cheaters find a large number of high MV accounts and persuade or bribe them to call Contract C. This kind of off-chain behavior is difficult to scale up. The high MV accounts that cheaters spend a lot of energy to find will only account for a small part of TopX and have no impact on truly excellent contracts.

2.5 Delegated Proof of Stake Algorithm, DPOS

2.5.1 Introduction to DPOS

Delegated Proof of Stake (DPOS) is a blockchain public knowledge algorithm adopted by BitShares. In encrypted currency technology, consensus algorithms are used to ensure the safety and reliability of the entire blockchain network. Famous consensus algorithms include the PoW used by bitcoin network and the PoS used by Peercoin and NXT. However, none of these consensus algorithms can solve the transaction performance problem, especially PoW algorithms that consume a lot of power needed for calculation. DPOS solves the problems of performance and energy consumption well.

2.5.2 Principle of DPOS Algorithm

Witness mechanism is used to solve the centralization problem in DPOS algorithm. A total of N witnesses signed the block, and these witnesses were voted by the entities using the blockchain network. Due to the use of decentralized voting mechanisms, DPOS is more democratic than other systems. DPOS does not completely remove the requirement for trust. Trusted entities who sign blocks on behalf of the entire network ensure correct behavior without bias under the protection mechanism. In addition, each signed block has proof that the previous block was signed by the trusted node. DPOS eliminates the time consumption that transactions need to wait for a certain number of blocks to be verified by untrusted nodes.

By reducing the requirement of confirmation, DPOS algorithm greatly improves the transaction speed. By trusting a small number of honest nodes, unnecessary steps in the block signature process can be removed. DPOS blocks can accommodate more transactions than PoW or PoS, thus making the transaction speed of encrypted digital currency close to centralized clearing systems such as Visa and MasterCard.

DPoS systems still have centralization, but this centralization is controlled because each client has the ability to decide which nodes can be trusted. DPOS enables such a blockchain network to retain some key advantages of centralized systems while ensuring certain de-centralization. Through fair elections, the system makes it possible for everyone to be the principal representing the vast majority of users.

2.5.3 The Rational Logic of DPOS

- Enable equity owners to vote on the bookkeeper
- Maximize the dividend of equity owners
- Minimize the consumption of ensuring network security
- Maximize network performance
- Minimize the cost of running the network

2.5.4 Owners of Equity Have Control

The fundamental feature of DPOS is that the owner of equity retains the control right, thus decentralizing the system. Just as the voting mechanism is flawed, DPOS is the only feasible way to manage the common property rights of companies. Fortunately, if you don't like the people who run the company, you can leave by selling your equity. This feedback mechanism can make equity owners more rational than ordinary users when voting.

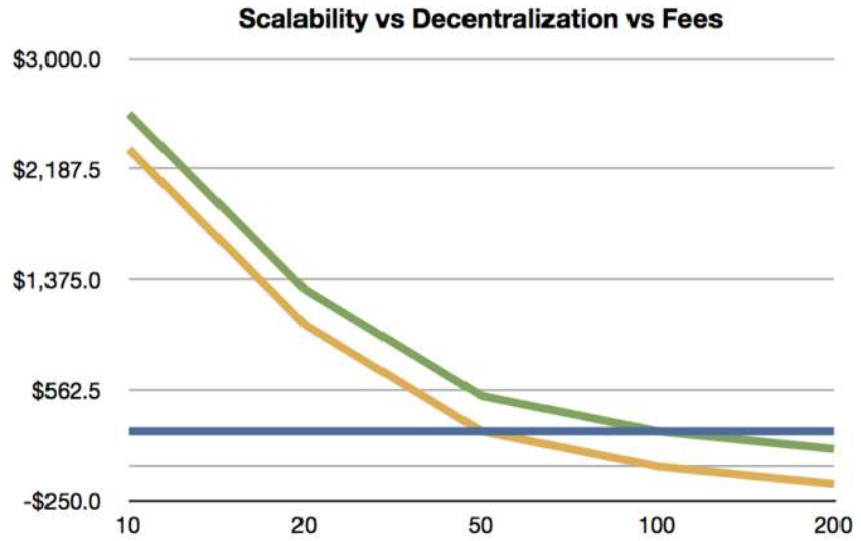
Each equity owner could decide the signature verifier of the block by voting, and anyone with more than 1% of the votes can participate in the board of directors. All representatives form a "board of directors" and sign blocks in turn. If a director misses the opportunity to sign a block, the customer will automatically vote for others. Eventually, those directors that missed the opportunity to sign were disqualified, and others could join the board. Board members will receive a small amount of tokens as rewards to encourage online presence and participation in the election. Each director has to deposit 100 times the average reward of a single block, so as to ensure at least 99% of his online time.

2.5.5 Reasons for Not Randomly Selecting from All Users

Ordinary users are not online most of the time; Attackers can use their equity to control the network without the approval of others; Since there is no mining, it is impossible to generate random numbers in the decentralized network.

2.5.6 Scalability of DPOS

Assuming that the confirmation cost and handling fee for each transaction are fixed, the number of decentralized transactions is also limited. Assuming that the verification cost is equal to the handling fee, the whole network is completely centralized and can only support one verification node. Assuming that the handling fee is 100 times the authentication cost, the network can support 100 authentication nodes.



Scalability, De-centralization, Cost

PoS needs a large amount of handling fees to ensure its reasonable operation, and the appointment mechanism is the only way for PoS to work efficiently. The equity pool can be used in PoS, but this becomes some form of DPoS. Appointed representatives cannot get actual benefits from the mine pool, because the cost of verification will devour most of the transaction fees.

The cost of decentralization is proportional to the number of verification nodes, and this cost cannot be eliminated. From the perspective of scale, the existence of this cost will eventually centralize the system, and the appointed representative system is the only solution. This centralization should be designed at the early stage of system construction, so as to facilitate users to have superb control, instead of passively evolving into unexpected results.

2.6 Community Voting Rules

In order to avoid malicious destruction of the consensus process, which leads to the failure of the consensus process and hinders ecological development, community voting would refer to Casper's

penalty rule to restrict the consensus activities of verifiers. Voters are entities selected by MV algorithm that conform to voters' rights, and the selected entities participate in voting behavior according to their free will. Voters need to pay a deposit before voting. As long as there is no violation in the voting process, voters will receive a voting reward (the reward is greater than the deposit) after voting.

Assume that the structure of Prepare and Commit votes in the consensus process is as follows:

- Prepare (H, v, vs), where H is the current block hash, v represents the current block height, and vs represents the height of an ancestor block of v
- Commit (H, v), where H is the current block hash and v represents the current block height. The DPOS algorithm has formulated the following four basic rules for the entire voting process
- There is a strict sequence in the two-stage consensus process of a single block. Only when the total weight of the first-order Prepare (H, v, vs) votes reaches 2/3, the verifiers can vote for the second-stage Commit (H, v) votes
- The consensus of the next block can only be started after the consensus of one block is not forced among multiple blocks. Interwoven consensus is allowed, but it cannot be completely out of order. Only after the height vs completes the first stage process and has 2/3 of the Prepare (Hanc, vs, vs'), can it vote for its descendant blocks based on vs. (H, V, vs) to ensure that interweaving moves forward steadily
- In order to avoid malicious cross-block voting by nodes using interwoven consensus, it is required that after the Prepare (H, w, u) vote is cast based on the height u, the Commit (H, v) vote cannot be cast for all blocks with a height between the span u and w, ensuring the efficiency and order of the consensus process
- In order to prevent the node from using the same deposit to bet on multiple branches at the same time, which leads to the problem of nothing at stake, it is required that after casting the Prepare (H1, v, vs1) vote at a high level, it is not allowed to cast different Prepare (H2, v, vs2) votes. Once the verifier who violates the above rules is reported and verified, all the deposits will be fined, the informants will share 6% of the fine as a reward, and the rest of the fine will be destroyed.

2.7 User Authentication

The unique identification of a user's identity is identified by his wallet address and secret key verification, but remembering the address and frequently using secret key input are tedious and extremely unsafe behaviors for users. In order to facilitate users to use their accounts, we have created a user nickname/password login system on top of the user's wallet address, which is convenient for users to use, and use this system to uniquely correspond to the user's wallet. At the same time, the user identity login and payment are isolated:

Login Verification: Use nickname/password to log in, which is convenient for users to log in to various applications.

Payment Verification: MNC will provide a wallet system for users to pay, improving the convenience of payment and ensuring the security of users' private keys.

Chapter V MNC Ecology

Public chain ecology is not only mining and bookkeeping, but its ecological perfection represents MNC's self-driving ability, self-growth ability, self-improvement ability and self-evolution.

1. *Asset Management & Wallet*

MNC will develop asset management wallets for users to use, including web versions and mobile phone client versions.

2.8 Developer Community

MNC will build a fair development platform for developers, including an encapsulation interface for the underlying protocol of the blockchain, user login interface, payment capability and user resources. The developer platform provides Dapp with:

- Public Chain Basic API and SDK: Mainly connect Dapp to MNC public chain bookkeeping function. Dapp only needs to connect with economy, rules and world outlook according to the interface scheme. Internal token exchange, settlement, recording and query no longer need to be completed by a self-built central database, but are completely handled by a public chain.

- User Login Interface: The user login interface includes the physical digital address created by the user based on MNC, the one-to-one mapping of the physical address of the user's concrete account, the name, skin, signature, grade, friend relationship of the concrete account, and the authorized public information between the account and its users as well as between users. Developers can connect the Dapp concrete account with the MNC account through the user login interface, thus obtaining direct user resources.

- Smart Contract Interface: Token transactions in the blockchain are executed by smart contracts, which stipulate under what conditions two or more parties will transfer the agreed quantity according to what distribution method. The developer community provides a smart contract submission mechanism. After the developer community votes, it is written into the public chain to become a public contract. The developer community provides services such as code query, contract description and contract call of the contract. Dapp developers can directly retrieve open-source contracts from victory rules, transaction rules, production rules, consumption rules, and distribution rules.

The above contracts are all written on the public chain and are open to users. After developers connect the contract combination with their own Dapp engine framework, the execution logic and process of the race are as follows:

2.9 Player Community

The player community is an important part of the main network, and the player community constitutes the voting member structure of the main network. We believe that players should be the owners and maintainers of the meta-universe, and the prosperity of the community will promote the acceptance of the main network by wider users. The role played by the player community in the main network mainly includes:

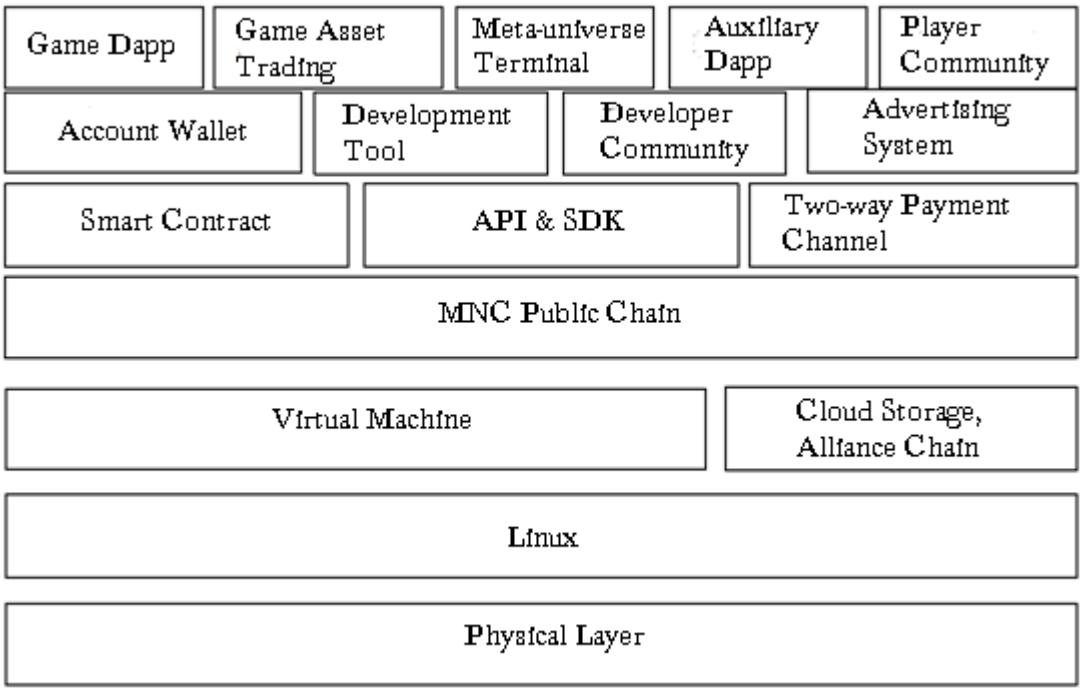
- Vote on permission to put on shelves
- Evaluate those that have been put on the shelves
- Vote on the smart contract of the main network
- Suggestions for the improvement of the main network
- Player community is a management organization that must be configured in every main network.

Chapter VI MNC Structure and Economic Model

1. *Relationship with Ethernet*

The smart contract programming language in MNC is fully compatible with the Solidity of Ethernet in the initial stage, which facilitates the seamless migration of smart contract applications developed by developers for Ethernet to MNC. We add some instruction sets related to MNC to the Solidity language to facilitate developers to obtain the MV value of any user. Later, we launched various programming language support based on MNC platform, so that developers can program in their favorite high-level languages, such as Java, Python, Go, JavaScript and so on.

2.10 Structural Stratification



2.11 Circulation and Economy

MNC is not a closed economic model, nor is it an output economic model, but an input economic model. MNC will continuously produce content and exchange it with economies outside the ecology.

Chapter VII Introduction to MNC Foundation

1. *Establishment of MNC Foundation*

Based on positioning and influence of the MNC public chain, MNC Foundation (hereinafter referred to as Foundation) is an overseas BVI company. The Foundation is committed to the development and construction of the system platform of the public chain, advocating transparent governance and DAO mode management, making the foundation truly belongs to the participants and enthusiasts of digital asset management and value chain, and promoting the safe and harmonious development of the open source ecological society.

2.12 Governance Structure of MNC Foundation

The governance structure of MNC Foundation includes operational procedures and rules for daily work and special circumstances. MNC advocates the DAO governance mode of natural disintermediation, and believes that all MNC project participants are organizational members and natural employees of MNC Foundation, and share the development value and decision-making power of MNC. Major issues of MNC are jointly decided by all members, and for development and decision-making issues, MNC participants can initiate or organize followers to jointly initiate them at any time.

The Decision-making Committee of the First MNC Public Chain Foundation consists of three core founding members with a term of four years. The core founding members have rich industry experience in the fields of blockchain, technology, finance and media. After the term of office expires, the community will calculate the weight according to the holding share and asset age of MNC public chain digital assets, in order to elect 50 community representatives, and finally elect 5 members of the decision-making committee.

2.13 Transaction Security and Audit of MNC Foundation

MNC public chain provides financial-level secure data storage, efficient integration of network, platform and other resources, integrates data, applications and transactions into blockchain cloud, and builds a secure transaction network environment. Build secure transactions with the most trusted trading platforms and technical experts.

The MNC Public Chain Foundation Investment Committee will maintain high standards of integrity and ethical business conduct; Abide by relevant laws, regulations and the principle of industry self-discipline. MNC Public Chain invites well-known third-party audit institutions to conduct regular audits and evaluations of the Foundation every year; MNC will publicly release the evaluation and audit results of third-party organizations without reservation.

Chapter VIII MNC Token

MNC has several functions in the network:

- Behavioral mining incentives;
- Community Autonomy and Ecological Construction;
- Liquidity reward on the chain.

MNC was initially issued on HECO platform, and will be issued in multi-chain form and mapped to its own main chain. The specific issuance mechanism is as follows:

MNC Tokenomics

Name	Metaminers Network Coin (MNC)
Total Supply	128.8 billion
Network	Heco
Initial Circulation	23.8 billion
Initial MNC Allocation Rules	Social mining: 21.4 billion DEX liquidity pool: 2.4 billion
Block Time	3 seconds
Rewards per Block	3,000
Rewards Adjustment	Halve every 45 days
Phase II Circulation	105 billion
Phase II Network	Metaminers Network Chain, ETH, BSC
Phase II MNC Allocation Rules	Social mining and liquidity output: 97.9 billion Crowdfunding: 5 billion (unlocked in 12 months after the main chain goes online) Project Team: 2.1 billion (unlocked in 48 months after the main chain goes online)

Chapter IX Disclaimer

This statement does not involve risks related to securities tenders and MNC operation. It does not involve any controlled products under judicial control:

This document is a conceptual document "White Paper" for project elaboration, and it is not for selling or soliciting tenders with MNC products and shares, securities or other regulated products of related companies. The fundamental document cannot be used as a prospectus or any other form of standardized contract document, nor does it constitute advice or solicitation of investment proposals for securities or any other regulated products in any jurisdiction. This document shall not constitute any sale, subscription or invitation to others to purchase and subscribe to any securities, and any contact, contract or commitment based on this form. This white paper has not been reviewed by judicial regulators in any country or region.

Does not constitute any representation or warranty:

This document is used to explain the MNC ecology and general certificate MNC proposed by us, but: 1) There is no statement or guarantee for the accuracy or completeness of any content described in this document, or the content related to the project published in other ways; 2) Without preconditions, no statement or guarantee can be given to the achievement or reasonable content of any forward-looking and conceptual statement; 3) Nothing in this document shall be used as the basis for any promise or statement about the future; 4) It shall not bear any losses caused by relevant personnel or other aspects of the White Paper; 5) Within the scope of legal liability that cannot be exempted, it shall be limited to the maximum extent permitted by applicable laws.

Projects that not everyone can participate in:

Not everyone can participate in MNC's network system and platform. Participants may need to complete a series of steps, including identification information and documents.

The unauthorized company has nothing to do with the project:

Except for MNC, the use of the name of any other company or organization or individual does not mean that any party is associated with or approved by MNC, but only for the purpose of explaining the relevant content.

Matters needing attention related to digital general certificate MNC:

MNC is the virtual cryptographic token in MNC network.

MNC is not a virtual currency:

During the unfinished period of this document, MNC cannot exchange goods, services and transactions on the Exchange, nor can it be used outside the MNC network.

MNC is not an investment:

No one can guarantee, and there is no reason to believe that the MNC you hold will appreciate to a certain extent, and there may even be the risk of depreciation.

MNC is not proof of ownership or control:

Holding MNC does not grant the holder ownership or equity of MNC or its network system, nor does it grant it the right to directly control (or replace) METAMINERSCOIN and its community to make any decisions.

Risk caused by user's personal wrong behavior:

Before the MNC is assigned to the participant, the participant will obtain the public key account associated with the MNC. The MNC public key account can be entered through the private key randomly assigned by the participant. Forgetting the private key may lose the MNC in the associated public key account. It is recommended to practice how to operate so that participants can safely back up their private keys in multiple local devices, preferably in a non-network environment.

The risk of private key disclosure to third parties:

Any third-party individual or institution may process the MNC of its corresponding account after obtaining the private key of the participant's public key account. Participants are advised to protect relevant equipment, prevent unauthorized login and reduce risk probability.

Possible Risks Due to Voting: MNC holders may lose MNC due to malicious or irresponsible voting behavior during voting.

Risks of Unofficial MNC Network Substitution:

After the MNC network system is developed, it is very likely that the open source code and protocol will be copied by others and similar network systems will be established. The official MNC network system may need to compete with these plagiarized network systems, thus bringing negative impacts on the MNC network system that all users need to bear.

Risk of Illegal Intrusion from Malicious Third Parties:

Malicious third parties, such as hackers, other teams or organizations, may try to interfere with the development of MNC network system, and may adopt but not limited to the following methods: DDoS, Sybil, spoofing, smurfing or attacks based on consensus mechanisms.

The Risk of Infrastructure Software Security Vulnerabilities in MNC Network Systems:

This network system is an open source system. MNC developers or other third-party organizations may intentionally or unintentionally introduce bugs into the network core system, which will lead to the risk and losses of MNC.

Risk that Participants Cannot Get Insurance when Facing Losses:

MNC's certificate public key account is different from bank account, other financial institution account or other social service account. MNC is an operating system, and the voting community will not purchase insurance for the network system. When the MNC is lost or the network system loses value, no insurance institution will be able to claim against the holders of MNC.