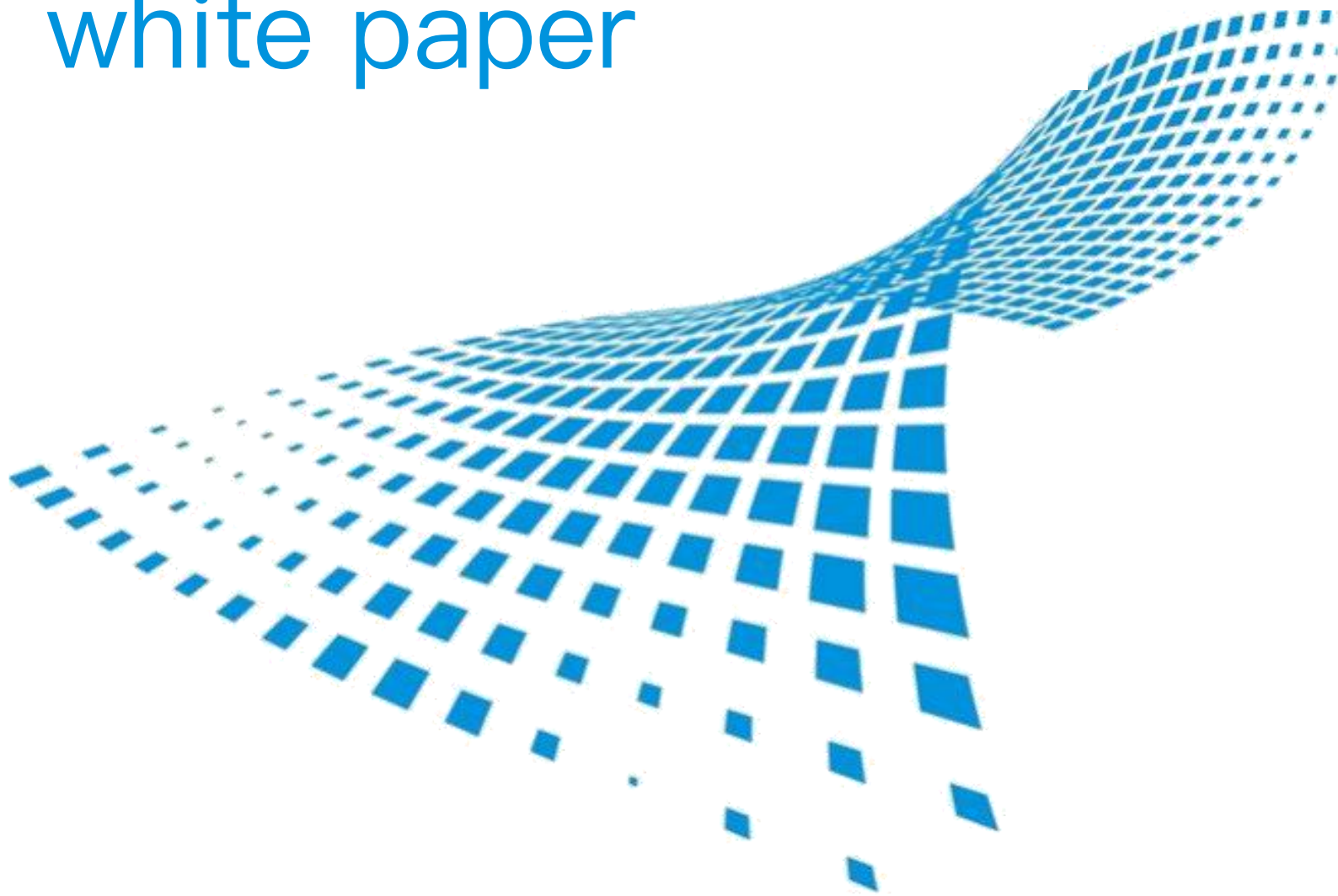


MetaverseLinker white paper



MetaverseLinker Platform Introduce

Website: metaverselinker.eth.link

V 1.0

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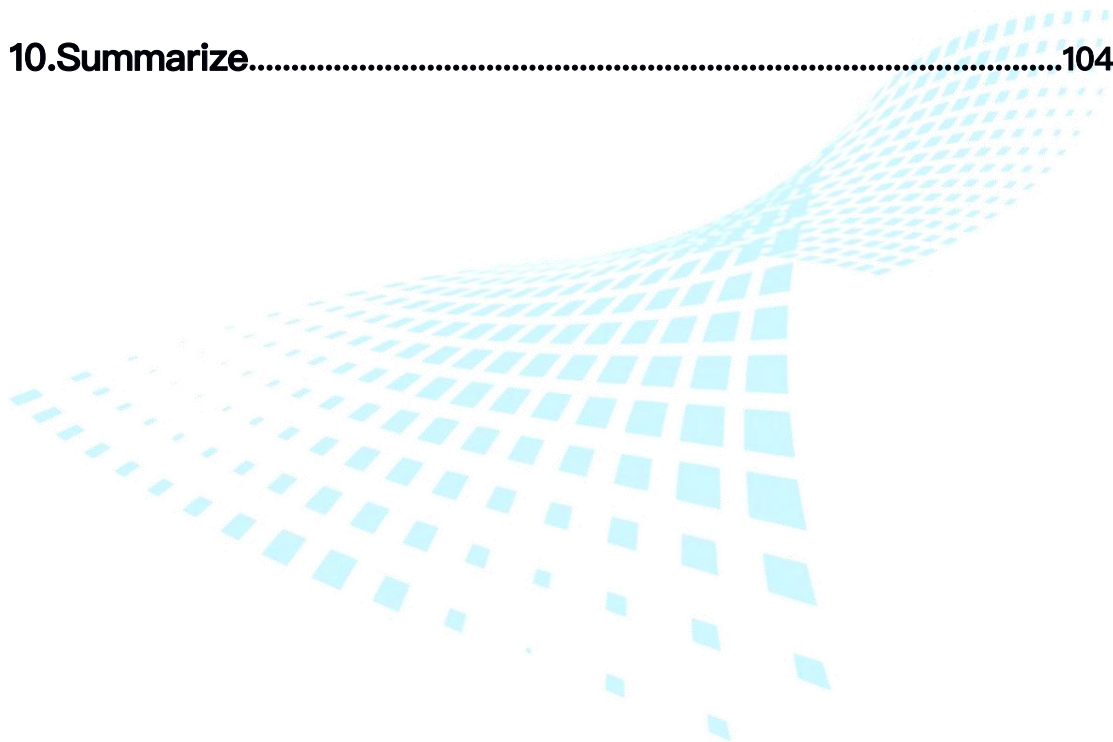
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Summary

Gamefi stands for "+Finance", which refers to blockchain meta-universe link applications (such as games) that introduce Defi and NFT mechanisms. Its biggest feature is "Play to earn". Gamefi, which is typified by Axie Infinity, has changed the profit model of the production team, binding the interests of the production team to the long-term ecological development of meta-universe link applications (such as games), and players can also share meta-universe link applications (such as games).) Dividends from development. The production team of this meta-universe link application (such as a game), except for the first NFT meta-universe link application (such as a game) digital asset release, no longer intervenes in the resources of meta-universe link applications (such as games), and relies on transaction fees to achieve profitability. , And issue governance tokens to gradually realize community governance. The resources of meta-universe link applications (such as gam

Axie Infinity, the head project of blockchain-based meta-universe link applications (such as games), has reached one million daily activities, and players' income from meta-universe link applications (such as games) has reached as

high as \$1,600/month. In blockchain meta-universe link applications (such as games), players can "make money while playing" to supplement their lives, and the boundary between the virtual world and the real world gradually melts away. Resources are produced by players and freely traded. Players can obtain resources of meta-universe link applications (such as games) by playing meta-universe link applications (such as games). The monthly income can be as high as \$1,600, compared to reality. The work has been quite attractive. In fact, gold mining and free markets in traditional online games have long existed, and the essence of Gamefi gold mining has not changed. The essence of meta-universe link applications (such as games) is to obtain resources from meta-universe link applications (such as games) and sell them to other players. This kind of demand for meta-universe link applications (such as games) resources ultimately comes from two types Situation: Players are willing to pay for the experience; more players enter and the demand for resources increases. Thanks to the openness of the blockchain, the business model based on the virtual economy of meta-universe link applications (such as games) will be more active and enriched. Because of the data openness of blockchain projects, any individual or organization can use the

data of digital assets, and can explore business models based on digital assets, such as digital equipment leasing and trading. In the Gamefi mode, these third-party organizations based on digital assets based on meta-universe link applications (such as games) stepped out of the gray area, became important participants in the virtual economy, and maintained a good relationship with the production team.

gh token economy. The decentralized gamefi model directly distributes the money earned by meta universe link application (such as games) companies to participants to form a distributed business economy, which explores a way for the large-scale promotion of Web3.0 business model in the next step. The application form of Web 3.0 will change from product leading users to user centered open source products. In terms of benefit distribution, the community will be the core, and the relationship between developers, users and investors will be bound throu

1. Project background

1.1 The rise of the meta universe

on August this year, the blockchain meta universe circuit broke out, and the investment in the blockchain field exceeded

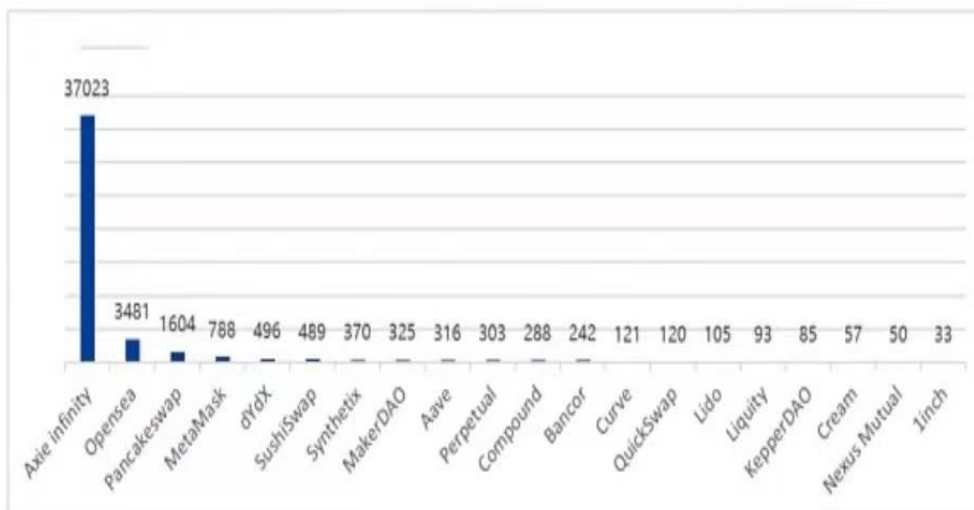
US \$1 billion, compared with only US \$72 million last year.

The term meta-universe was born in the science fiction «avalanche» in 1992, which portrays a huge virtual reality world. People use digital avatars to control and compete with each other to improve their status. Until now, it still describes the super future world. As for the "meta universe", the more recognized source of ideas is Professor Vernor Vinge , an American mathematician and computer expert. In his novel «Real Name, Real Name» published in 1981, he creatively conceived a virtual world that was entered and obtained sensory experience through a brain-computer interface. Blockchain technology has promoted the realization of the meta-universe concept. For example, blockchain meta-universe link applications (such as games) designed by introducing Defi mode, NFT mode and governance token mechanism have the characteristics of "playing and making money". This kind of meta-universe link applications (such as games) are especially common in Southeast Asia, which is deeply affected by the epidemic, with an average monthly income of up to 1,000 US dollars.

Axie Infinity, the leading project of Meta-universe link applications (such as games), has exceeded other applications

in recent months. The production team disclosed to the outside world that the daily active users of Meta-universe link applications (such as games) reached 1 million in early August. According to statistics from Token Terminal, in the past 30 days, Axie Infinity's revenue of US\$370 million has far surpassed other applications, and has exceeded the sum of all current mainstream project revenues. Due to the possibility that on-chain transactions and active addresses on the chain are untrue, it cannot be denied that Axie Infinity has received widespread attention from players and capital in recent times.

Chart1:Revenue from on-chain applications in the past 30days



Source:
tokenterminal.Guosheng
Securities Research Institute

1.2 Meta universe application -- upgrading of traditional app

The free market has long been reflected in traditional online games, but it has lost its competitiveness in the online game model because of its poor profitability and high operational difficulty. The way to make money is to obtain digital assets in traditional games and sell them to other players. This demand for digital assets ultimately comes from the game experience and the increased demand for digital assets. As early as 2001, when the "Legend" was popular, the trading of equipment had become popular. In the early days of the legend, only card fees were charged. Krypton players who are looking for game experience need to find gold coins and digital assets inside the game to buy gold coins and digital assets in the game. Later, NetEase independently developed the "Fantasy Westward Journey" to expand the open virtual economy. After opening the Point Card Justice Office and the Treasure Pavilion, players have a more reliable monetization platform for their labor income, and it has become possible to make a living based on games

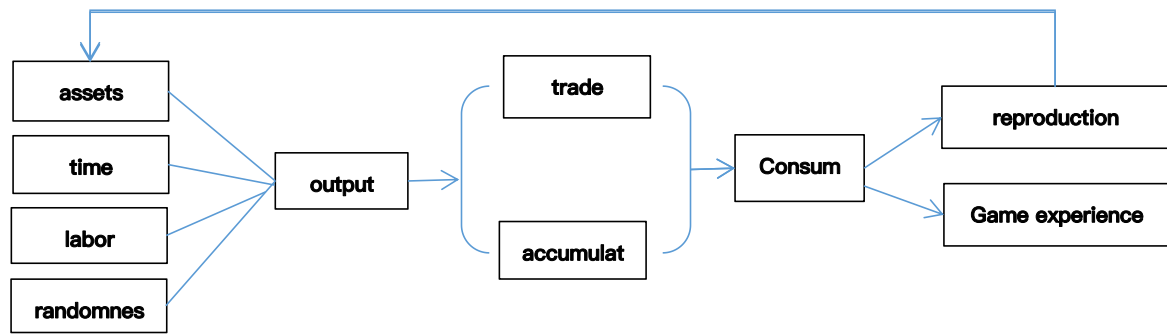


Figure 9: Game economic model

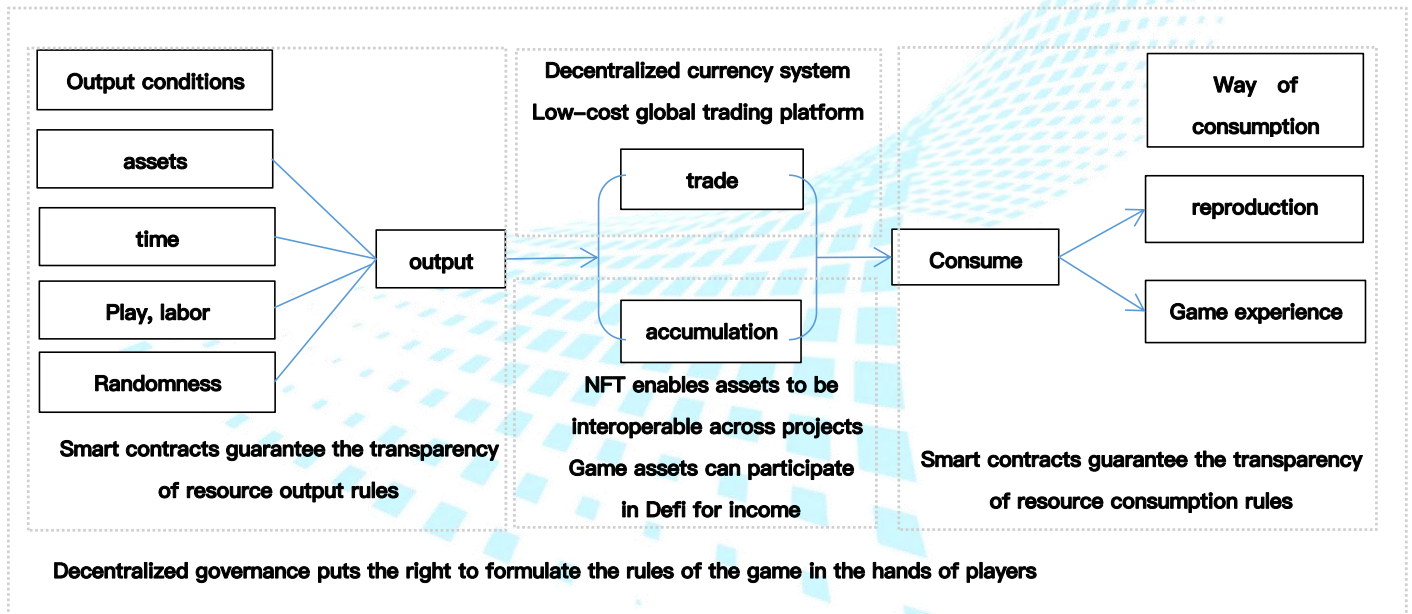
Source: Guosheng Stock Exchange

In recent years, in online games, the open and free market is gradually shrinking, replaced by strict restrictions on the circulation of digital assets in meta-universe link applications (such as games), and the blind box model of bundling random sales. The ebb of the open market is mainly due to the following reasons: the open market is not as profitable as the closed market business model. Compared with the open free market, transaction restrictions and blind box purchases can sell digital assets to the player to the greatest extent and have better profitability. . It is more difficult to open the market. When a bug related to digital assets occurs, it can be transmitted to the entire economy through the free market, thus causing systemic risks.

Based on blockchain technology, the application production team, players, merchants and studios have achieved a new balance of interests in a brand new business model. Each

participant in the ecology built by each application in the metaverse can reap their own benefits from the long-term development and active growth of the ecology, and it also makes it possible to have a virtual world with a realistic open and free economy.

Exhibit 12: Blockchain empowers the game economy



Source: Guosheng Securities Research Institute

Blockchain can be upgraded in all links of the meta universe link application (such as game) economic system, so as to realize the decentralized meta universe link application (such as game) mode and realize a more reliable and efficient economic system:

① The up chain of digital asset output steps can increase players' trust in the virtual economic system. By linking the output conditions of digital assets, including time, required resources, probability, etc., it can effectively stabilize players' expectations for the world economic system of meta universe link applications (such as games).

② Blockchain can provide a freely circulating currency system for meta universe link applications (such as games).

③ Blockchain can reduce transaction costs and provide perfect solutions for global digital asset circulation transactions.

④ Decentralized governance will hand over the operation and development of meta universe link applications (such as games) to players.

⑤ The accounting method of NFT enables digital assets of different projects to be interconnected.

1.3 The open business ecology will promote the economic development of meta-universe link applications (such as games)

Thanks to the openness of the blockchain, the business model based on the virtual economy of meta–universe link applications (such as games) will be more active and enriched. We found that some third–party commercial organizations based on digital assets have begun to realize some innovative economic activities.

In a free and open virtual economy, the emergence of merchants and gold–making studios in meta–universe link applications (such as games) is an inevitable phenomenon, but traditional virtual merchants and studios are often in a gray area. In a free and open market, commercial organizations can reduce the cost of resource exchange, and professional division of labor also makes the output of resources more efficient. Merchants and gold–making studios in meta–universe link applications (such as games) are an inevitable economic phenomenon. Traditional gold–making studios and virtual merchants are often in a gray area because of conflicts of interest with the production team. These commercial organizations increase internal economic activity, but they will also disrupt the economic order, disrupt the experience of meta–universe link applications (such as games), affect the life of meta–universe

link applications (such as games), and infringe meta-universe link applications (such as games) Company's equity.

The blockchain has changed the relationship between the production team, players, and gold-making studios of meta-universe link applications (such as games), and changed the ownership of player asset data, so that business organizations based on the digital economy will be more formal and standardized. The production team relies on the platform to charge fees, and its profit point no longer relies on the sale of digital assets but is bound to the long-term ecology of meta-universe link applications (such as games), and the business activities of studios and merchants promote meta-universe link applications (such as Games) vitality to promote the development of meta-universe link applications (such as games). We have seen that in the Gamefi mode, these studios based on the meta-universe link application (such as games) economy stepped out of the gray area, became important participants in the virtual economy, and maintained a good relationship with the production team.

At the same time, because of the decentralization of blockchain projects, any individual or organization can read other project

data, and can explore business models based on digital assets, such as equipment leasing and trading. The decentralized guild headed by YGGGAMES has lowered the investment threshold and cognitive cost for players to make money, and at the same time served the ecosystem of meta-universe link applications (such as games) and the player community. Let us see the future of the development of business ecology based on the assets of Meta Universe link applications (such as games).

1.4 The development of AI will transform

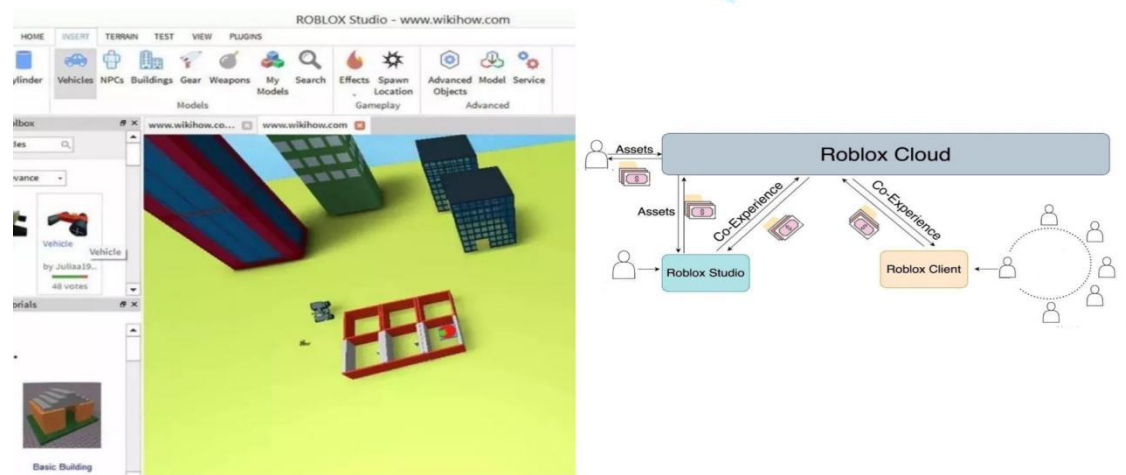
Play-to-earn into Create-to-earn

Whether it is traditional online games or blockchain meta-universe link applications (such as games), program scripts have always been the most important factor in destroying their economy. Players harvest digital assets by playing, and program scripts produce digital assets through automated execution and multiple openings, which reduces the labor value of digital assets. Automated programming scripts exploit the labor of players, and the development of AI will completely replace the mechanical labor of players in meta-universe link

MetaverseLinker

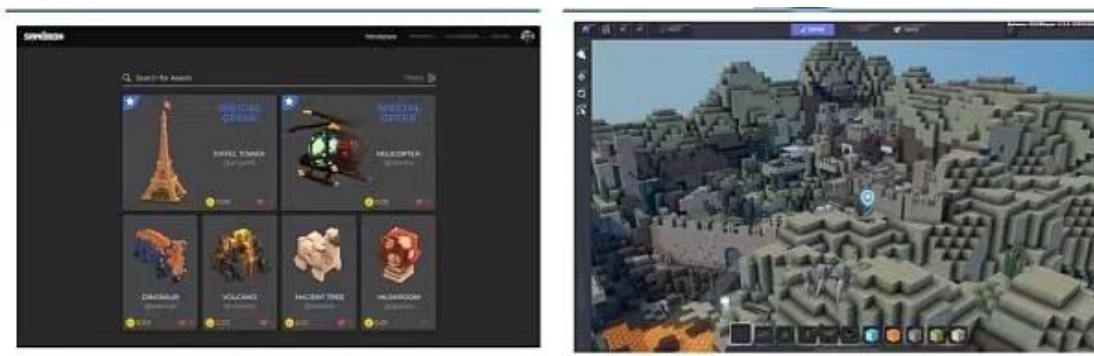
applications (such as games), and even replace intellectual activities such as PVP.

From Roblox, we can see another direction of play to earn, the create to earn mode of virtual creation to bring new services to players. In Roblox, the money making effect is mainly realized by the creator providing value-added services for players, that is, create to earn. Creators create a meta universe linked application (such as games) world, build skin and sell digital assets to players, so as to enhance the player's experience. This enables creators to obtain real benefits through virtual creation. Under the economic incentive, users' creation is stimulated. At present, the platform has more than 18 million created digital assets. This is dominated by player creation, which has brought immersive experience and social scenes, and has seen the prototype of the meta-universe.



MetaverseLinker

Blockchain meta-universe link applications (such as games) ensure the ownership of digital assets, while programmable assets bring more economic vitality to Create-to-earn. This means that users have a creative space with private property rights in the virtual world, and works can also be circulated on the chain in the form of NFT. The Sandbox is a community-driven platform, where creators can get income through pixelated assets on the blockchain and meta-universe link applications (such as games). Players can transfer, exchange, sell, trade, or use their NFT without seeking the consent of The Sandbox or any central entity. This kind of protection for creators' rights has made the game more than 30,000 creators before it is online, LAND land sales reached 144 million U.S. dollars, and cooperation with a number of well-known IPs. We will also see the emergence of more combined applications of NFT and creator economy.



1.5 Exploration of Web3.0 business model

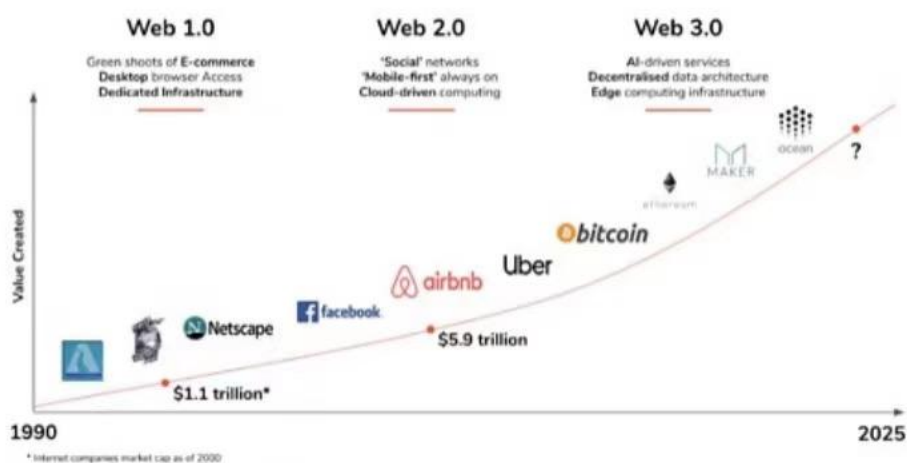
The decentralized model directly distributes the money earned by the meta-universe link application (such as games) companies to the participants, forming a distributed meta-universe link application (such as games) business economy, which is the next step for the Web3.0 business model. Scale promotion has explored a way.

The Web1.0 era is the early Internet. Website operators publish information. Users input information passively and rarely interact with information. With the birth of the mobile Internet on the mobile phone, Web2.0 allows users to interact with the platform a lot. At the same time, the birth of WeChat, Weibo, and Douyin allows users to upload and publish content by themselves, so that the amount of information on the Internet can be obtained. Unprecedented growth. However, both Web1.0 and Web2.0 rely heavily on "information intermediary", which includes social networking platforms such as Twitter and Facebook, as well as centralized servers such as Alibaba Cloud and AWS.

While the Internet platform under Web2.0 improves efficiency, it also brings a monopoly economy. Internet platforms capture

market shares by lowering prices and cannibalizing the profits of competitors, lowering prices and redistributing value to users—always the core economic driving force for the development of the Internet. However, with the monopoly of user data, high replacement costs, strong network effects and user experience have become barriers for Internet giants, and the service costs of platforms are also rising.

The Evolution of the Web



2. Metaverse linker is the link platform of meta universe -- meta chain

MetaverseLinker is the world's leading decentralized traffic virtual economy aggregation system, which integrates aggregated identity authentication, aggregated mining,

aggregated transactions, and aggregated traffic. Relying on the blue ocean of decentralized virtual economy, the system creates an aggregated traffic pool through innovative economic models, and is committed to becoming a super traffic gathering place and value fission aggregator in the GameFI field, realizing a decentralized meta-universe world in which everyone can participate.

Metachain provides DAPP application developers with an easy-to-use and complete Y-universe link infrastructure, including a visual development kit and an on-chain ecological environment. Developers do not need to pay attention to the implementation of blockchain technology, but can directly use graphical methods. , Complete DAPP application development quickly and efficiently with low threshold.

Metachain provides a fair, just, and open DAPP link to the Metaverse environment with transparent data, transparent rules, no background manipulation, and malicious induction, so that digital assets can be stored in a long-term, safe, and decentralized manner

Metachain's digital asset economic model achieves better consistency of interests: helps developers to capitalize the

content they produce, so that they can continue to obtain benefits during the use, management and transaction of assets, and provide convenient and decentralized DAPP Application distribution channel; convert the data formed by the time and energy of all participants and the digital assets obtained by consumption into assets that can be safely stored and circulated, and have the rights to manage and commercialize them.

MetaverseLinker uses cross-chain technology based on public chains such as Ethereum, tronchain, Binance ecological chain BSC, Huobi ecological chain Heco, OKEx trading chain OEC and other public chains. The anonymous technical team provides the global metaverse link application economic system The automation protocol of smart contracts provides Turing's complete economic system bottom layer, helping developers to easily create smart contracts that include state and complete logic, greatly reducing the development cost and technical threshold of DAPP application projects, and enabling the distribution of blockchain The mechanism of trustlessness and trustlessness is widely used in various fields such as intellectual property protection, supply chain management, public management, and public welfare in the Yuanchain ecosystem.

Most links in the meta-universe link application (such as games) industry are purely digital and virtualized. There are user communities, virtual commodity transactions, and token settlements in the meta-universe world, which also coincide with many elements of blockchain applications. The operating principle of the blockchain determines its spontaneity and immutability. The transaction information of the blockchain adopts asymmetric encryption to ensure the accuracy and security of the transaction information. In addition to ensuring the security of information, asymmetric encryption can also perform identity verification to ensure the accuracy of information.

We hope to use the "open, fair, and fair" characteristics of blockchain technology to solve the problem of distrust of the participants in the operator caused by the black box, hidden change, and player status in the DAPP design. At the same time, Using the concept of block chain, participants will experience the functions and mechanisms related to block chain ledgers and smart contracts in the acquisition and transaction of DAPP digital assets.

MetaverseLinker uses blockchain technology from data trustworthiness, digital asset confirmation, the actual role of blockchain digital assets in applications, the inheritance and permanent record of the application process through the blockchain ledger, security protection, and the introduction of media nodes. In all aspects, the DAPP experience has been improved. In general, compared with the digital asset in the DAPP is just a number on the operating company's server, MetaverseLinker uses blockchain technology to create, confirm, save, and trade. Even if the DAPP operator's database is invaded, it will not cause users Loss or embezzlement of DAPP property. At the same time, it allows players to establish an emotional connection with the digital collection in the DAPP, which can be retrieved and interacted at any time, and become an eternal memory of the player.

MetaverseLinker aims to build a distributed, open, free, and transparent decentralized traffic virtual economy aggregation system that does not need to rely on third-party institutions, open to everyone, without permission, and open to use such as: player virtual identity, meta universe Link applications (such as games) roles, NFT virtual items, transactions, storage and other meta-universe link applications

(such as games) derivative systems, and create a lightweight, open and free virtual finance that everyone can participate in through the virtual economy system. The mission of the world is to establish an autonomous system of digital asset management in an inclusive, reliable and transparent way. The goal is to help different asset managers, not creators, investors, collectors, no matter developers, participants, or intermediate services. People, institutions or individuals can benefit from the establishment of compliance and security in the MetaverseLinker network, and manage their virtual assets safely, quickly and efficiently. The platform automates virtual asset management operations through smart contracts, effectively reducing the fixed costs of managing the investment portfolio. All participants on the platform can effectively track data and achieve participation goals more clearly.

In addition, developers can also participate in the MetaverseLinker project. MetaverseLinker protocol consists of two parts: MetaverseLinker core and MetaverseLinker module. The core of MetaverseLinker is implemented by a set of smart contracts, which is the cornerstone of the platform. It cannot be changed by users and can be regarded as the basic rules recognized by platform users. The MetaverseLinker module is

self-selected by the developers of the metaverse link application (such as games) ecology. Defining tools, ecological developers can investigate the use of various system modules in MetaverseLinker, and create metaverse link applications (such as games) that conform to their own ideas and gameplay.

2.1 Ownership and liquidity of digital assets in the meta chain

On MetaverseLinker, players can own assets in metaverse link applications (such as games), and these assets have a broader sense of liquidity. The points, digital assets, weapons, and roles in the traditional virtual world are often all owned by developers. Therefore, centralized developers have greater power to make drastic changes to these assets, or even dispose of them at will. Virtual assets are often limited to circulation within this virtual world. Outside of this virtual world, they seem to have no reuse value, and it is difficult to be given application scenarios again from the technical level. Under the blockchain logic of MetaverseLinker, once the assets in the metaverse link application (such as games) are on the chain, the created tokens (points in traditional metaverse link applications (such as games)), digital assets, weapons, and characters It can be fully

attributed to the player's blockchain address, and the player has ownership of this address and the assets below it. Then we can imagine several application scenarios:

2.1.1 Digital assets in Metachain can be traded anytime, anywhere

A large number of games do not have the function of item trading. Of course, the original intention of this design is often to avoid the chaos of the economic mechanism in the game, extend the user's game time, and increase the income of the developer. Assuming that the above is not a problem that developers are worried about, then "props on the chain + mobile wallet" can enable two users to go online and offline anytime, anywhere. You and your friend chatted about a recent PC game during dinner. Open the mobile wallet to see what weapons and equipment each other has. The experience of completing a transaction is as simple as a WeChat scan code payment. Go home at night and turn on the PC. , Log in to the game, and the items that have been traded are already lying in your equipment column. In short, the transaction is not necessarily limited to games on Gameficonnector. Players can exchange a peerless sword used in game A for a dragon-slaying knife in game B, as long as the

player recognizes the value of the exchanged item. Trading is not necessarily limited to a single project, and account packaging will even be provided in the future. All assets of a game will be packaged into a token, and a one-time transaction will be given to another player, and the token will be unpackaged into specific game assets.

2.1.2 The reuse of digital in the meta-chain

After the assets are linked to the address of each player, developers can easily reuse the digital assets of other meta-universe link applications (such as games) for secondary transformation or realize cross-meta-universe link applications (such as games).) Multiplexing.

Under the logic of MetaverseLinker, the virtual assets in metaverse link applications (such as games) are stored on the chain in the form of on-chain rules, and hung under each user's own address. Different virtual assets are developed by different developers. The interesting point is that they are all based on the reuse of a type of virtual asset in MetaverseLinker. As long as the user owns such virtual assets in MetaverseLinker and uses the same Ethereum address to log in to different MetaverseLinker-based metaverse linking applications (such as

games), they can read directly from the blockchain to the player in MetaverseLinker. Players can use the same type of digital assets in different meta-universe link applications (such as games). That is to say, in these different meta-universe link applications (such as games), the characters of meta-universe link applications (such as games) reuse the characters in phenomenon-level meta-universe link applications (such as games), but meta-universe link applications (Such as games) logic is independent of each other.

For MetaverseLinker ecology or metaverse link applications (such as games) under IP, asset reuse is the easiest. For example, you have several of different metaverse link applications (such as games) developed by a certain developer in MetaverseLinker. For this role, in the next meta-universe link application (such as a game) with the same IP, developers can naturally allow players to import digital assets they previously owned.

2.1.3 Acquisition method of new users in the meta-chain

Under traditional meta-universe link applications (such as games), new meta-universe link applications (such as games) often need to reacquire users, or use old meta-universe link

applications (such as games) to divert new meta-universe link applications (such as games) . Blockchain can break this method and reduce the cost of customer acquisition. The users of the MetaverseLinker platform are all users of metaverse link applications (such as games) that can be directly converted. If the direct reuse of assets involves IP issues, developers can also design this way. As long as users who have virtual characters in MetaverseLinker, they can directly obtain certain rewards directly in this metaverse linker application (such as games), which can be characters, treasure chests , Digital assets, etc., the verification method only needs to log in with the address to read the data on the chain.

In this way, a new meta-universe link application (such as a game) can be used to attract users from existing popular meta-universe link applications (such as games). The gameplay is actually similar to forked coins to send candy and new token airdrops. In this way, using the currency with the largest number of token holders such as ETH or EOS, airdrop their tokens to token holders at a 1:1 ratio, thereby acquiring users at a very low cost.

2.2 The relationship between developers and players in meta-chain

Most of the time, app players and developers are often on opposite sides. One party wants to find the imbalance of the app to earn prestige and pleasure in the app, while the other party keeps adjusting the parameters by modifying the app mechanism. Wash users again and again, squeeze the value of users. The blockchain has changed the relationship of production, in which the relationship between developers and users will undergo essential changes. Traditional applications run on centralized servers, developers specify rules, and users try to break the rules.

In MetaverseLinker, Metaverse Link applications (such as games) run on multiple nodes, and some nodes are run by users and give certain incentives. Developers and Metaverse Link applications (such as games) users form a community and a consensus. When some nodes are delivered to KOL in meta-universe link applications (such as games), part of the interests of meta-universe link application (such as games) manufacturers will be highly consistent with the interests of the meta-universe link application (such as games) community, and

loyal users will spontaneously To maintain the balance of meta-universe link applications (such as games), help developers acquire users, extend the life cycle of meta-universe link applications (such as games), and build the entire community together.

Many Metaverse apps have to face the doom of the official service suspension due to improper operation, profit problems, poor income and other factors, but the app itself may have gathered a number of diehard fans, they have built their own communities and discussion groups, and KOL record videos , There are even non-governmental offline competition communities.

In MetaverseLinker, metaverse link applications (such as games) are completely operated on the blockchain. On the one hand, in terms of the mechanism and operation strategy of metaverse link applications (such as games), node operators represent players and have a certain right to speak. , Can offer suggestions to developers. On the other hand, if the developer issues a version of the update that the community cannot accept, then the users of the community can vote with their feet, fork from the original meta-universe link application (such as games), and link the meta-universe according to the wishes of the

community Applications (such as games) take a new direction, just like "private servers" run by community nodes. To some extent, blockchain may bring unprecedented freedom and democracy to meta-universe link applications (such as games).

2.3 Transparency of the mechanism in the meta-chain

The fair and just mechanism, and the update of meta-universe link applications (such as games) that are agreed by the community, bring users a purer experience.

In MetaverseLinker's metaverse link applications (such as games), the core mechanisms need to be on the chain. Users can view the rules of metaverse link applications (such as games) that were only hidden in the centralized server in the past. This is for developers and users. Established a stronger bond of trust. Of course, technically smart contracts are not "unmodifiable". Some meta-universe link applications (such as games) rules can be parameterized to provide users with a way to view parameters. Through multiple contract interactions, the main contract is used to store data and call sub-contracts. , Multiple sub-contracts write the core rule mechanism of meta-universe link applications (such as games). If the mechanism needs to be

updated, the core data is placed in the main contract and does not need to be migrated, only the address of the sub-contract needs to be changed, so that the migration cost is lower.

Under the transparent logic of the metaverse link application (such as game) mechanism in MetaverseLinker, users can clearly know and believe in the probability of a certain event, whether a certain digital asset is truly rare, and whether the promised by the developer is truly fulfilled. In the case of the traditional program source code black box, these can be adjusted at will by the operator.

2.4 New gameplay and new mechanism in Meta-chain

Just like in every technological change and the birth of tools in the past, some innovative gameplay and mechanisms can be seen in the application. The same is true for MetaverseLinker. As a new blockchain technology, its characteristics can be used and integrated into metaverse linking applications (such as games), and explore some new gameplay and new ideas? It is foreseeable that a Russian geek boy, or an independent developer in a certain software park in Chengdu, or you who are reading the white paper at the moment, is brewing a great idea,

or is on the road to put it into practice, it will define A new way to play blockchain meta–universe link applications (such as games). And this point, once discovered by the first person and announced to the world, everyone's ideas will be immediately stimulated. This may be the turning point of the next blockchain meta–universe link application (such as games).

2.5 Creation—Participation Income—Generation in the meta–chain

Developers of MetaverseLinker applications (such as games) also need to survive, and developers of MetaverseLinker applications (such as games) also need to realize the company's commercial value. Perhaps most people in the industry, after reading the above four points, their first reaction is, how can this make money? Due to the increased liquidity of digital assets in meta–universe link applications (such as games), the original N shares of money may only earn 1 share. The rules and routines of the original black box lure users to keep krypton gold, and now they are all made public, everyone is not stupid who will pay the bill? Indeed, from the perspective of the developer, these questions are real. But the problem is that we are still applying the money–making logic of traditional meta–universe link

applications (such as games) to a new thing. We need to break the underlying assumptions of this thinking. Past historical experience can only be used as a reference for us, and we cannot give a clear plan for landing.

We have experienced the baptism of free customer acquisition on the Internet, value-added charges, and flow monetization. We have also experienced the change from a buyout to a subscription method. Every iteration of a new technology will more or less impact the original system in the way of monetization. Similarly, blockchain may be no exception.

In addition to the income of traditional treasure box and card package opening, a realizing method that is closer to the blockchain is transaction rake. The regional cross-chain itself gives the meta-universe link applications (such as games) extremely strong liquidity, and the transaction of assets anytime and anywhere and the cross-IP circulation of cross-metauniverse link applications (such as games) have also been mentioned above. If a meta-universe link application (such as a game) provides users with a strong creative space and generates a large amount of UGC content, and the value of the content itself is reached by consensus among players, under this framework, developers provide the bottom layer of content

generation Logic, the producer creates valuable content, realizes the content transaction between players, and the developer collects a certain transaction fee in it.

For example, countless players in each metaverse link application (such as games) in MetaverseLinker have become architects, creating and creating countless metaverse link applications (such as games) characters and creating countless virtual assets. Many people hope to In other meta–universe link applications (such as games), the experience is continued, and even secondary processing. However, meta–universe link applications (such as games) themselves do not provide a way to trade assets across meta–universe link applications (such as games). We can only watch other people's worlds through videos, what a pity! In MetaverseLinker, users and communities are given greater freedom to achieve greater commercial value. Any virtual asset in a meta–universe link application (such as a game) is provided to developers or players of other applications across applications.

2.6 Numerical Planning and Token Economy in

Meta–chain

Numerical planning is a science that guarantees application balance and prolongs application time by adjusting parameters and algorithms in traditional applications. It is already very complicated. When encountering a blockchain, the complexity and difficulty will increase exponentially. The economic system in MetaverseLinker applications (such as games) no longer only considers a closed ecology, but considers the interaction with the economic system on the entire blockchain. The core rules of MetaverseLinker revolve around the macro and micro, combined with the gameplay mechanism in metaverse link applications (such as games), how tokens are generated, how to distribute, how to consume, how to destroy, and how to link to metaverse applications (such as games). Asset consideration, how to exchange for other ecological general tokens, can bring more incentives to players, so that meta-universe link applications (such as games) asset circulation and appreciation, on the other hand, combined with various methods such as transactional liquidation , It is possible to increase the total transaction volume in meta-universe link applications (such as games), similar to Taobao's GMV. At the same time, in the numerical design of digital assets, parameters such as transaction amount, number

of transactions, and NFT rules are added to encourage transaction behavior between users.

3. The technical goals of the MetaverseLinker

The technical goal of MetaverseLinker is to develop, operate, manage and trade decentralized applications and in-app digital assets on the blockchain ecosystem—MetaverseLinker Expedition (referred to as "MLE platform"). We will implement it in stages: an application development framework that supports multiple operating systems and multiple blockchain environments; fully scripted, componentized and data-driven application development tools; a high-performance application-oriented, blockchain-based system and Related functional components can support developers to program, debug, and release decentralized applications and hybrid architecture applications oriented to the blockchain environment. At the same time, the platform integrates a distributed user account system, wallet and digital asset trading system based on blockchain, which can realize off-chain permanent storage and cross-application use of in-app assets.

3.1 The first stage: direct payment with token as a settlement method

The use of tokens as the settlement of digital assets produced by applications in the Metachain mainly realizes the transparency of the output and circulation of digital assets; the circulation of tokens in the Metachain applications; and the diversification of token exchange channels. Tokens at this stage are homogenized and can only express the value of points and gold coins, which are used as the settlement of applications in the meta chain.

3.2 The second stage: disintermediation and de-agent transactions of digital assets

Regardless of the digital assets, equipment, and user accounts in meta-universe link applications (such as games), their value can be expressed by non-homogeneous tokens. All generalized transaction behaviors in DAPP (including but not limited to digital asset purchases and user transactions) Scenarios such as the drop of digital assets) are finally settled in the form of Token (homogeneous and non-homogeneous), and specific DAPP content (such as MOD) can even be issued and

circulated separately as a Token. It is precisely because the content in the meta–universe link applications (such as games) has a unified standard value carrier, all the content of the meta–universe link applications (such as games) docked with the blockchain system has a basic value system that can be circulated, so The DAPP docked with the chain has cross–platform transaction capabilities. For users, the migration of one set of DAPP assets to another set of DAPP assets can be completed through homogenous and non–homogeneous tokens. Compared with the first stage, this stage puts digital assets as non–homogeneous unique identifiers in the records of the blockchain. The output and circulation paths of digital assets and gold coins are transparent, but the operating rules in the metachain are outside the chain. Execution, the production logic of digital assets and gold coins is still in the dark, and requires flexible solutions. MetaverseLinker has realized all the features of this phase, and is trying the next phase of the solution.

3.3 The third stage: key rules run on the chain

At this stage, the basic settings and key rules required on the metachain will be written into the block in a contract or other form that is convenient for disclosure, for the whole network to

witness, to ensure the fair disclosure of DAPP rules and output logic in the metachain . For example, numerical logic such as the occurrence probability of digital assets in the gashapon, the setting of encounters on the RPG map, the setting of opening treasure chests, the rules of licensing, and other numerical logic will be written into the chain to realize the openness, transparency, and non-tampering of the rules. , To ensure fairness, enhance user experience and community confidence. This feature effectively relieves the user community's worries about the fraudulent operation of meta-universe link applications (such as games), can improve the confidence of the player community and attract more players to participate, which is more conducive to the construction and development of the community. It takes time to run and witness the contract. If you take the treasure chest refresh logic in the SLG meta-universe link application (such as a game) map as an example, two operating ideas can be summarized:

3.3.1 All contents in the contract are generated at one time when loading

In this mode, the loading of the contract in the scene is executed once, and the network pressure is less. In addition to

recording the acquisition of props, there is no need to perform other time-consuming operations during the run, which can bring a smoother game experience; but the disadvantage is that it is less flexible, lacks versatility, and cannot respond to the plot context in the map scene.

3.3.2 Real-time running contract generates content for each game behavior

In this mode, the contract will be executed every time the treasure chest is opened, and the output logic of the game props will be calculated immediately. The number of times the contract is run has brought a lot of pressure to the network on the chain, but the use and operation of the contract is relatively flexible and can be related to the context of the plot in the map scene.

At this stage, many rules and data of blockchain games are already running on the chain, and the growth of users will lead to a sharp increase in network pressure on the chain. Until a new breakthrough is found, this stage can only be used in games with a cooldown in the enemy-friend round.

Decentralization and high performance are contradictory, high-performance consensus and contract virtual machines are

the main tasks of the next stage. Technologies with less delay such as DAG may become a breakthrough, but there is still a distance from the ultimate solution.

3.4 The fourth stage: The fourth stage: the application runs on the chain as a whole

The final form of MetaverseLinker is that the linked DAPP runs on the chain as a whole. All the logic codes of the DAPP in the meta chain are executed in the chain environment, and the data is carried and stored by the decentralized blockchain network. In this scenario, credibility is achieved , High-efficiency and no-delay running containers are synchronized with lightweight nodes for the operation of DAPP in the meta chain.

MetaverseLinker was originally designed to run on the entire chain of Metaverse Linker applications (such as games), but due to the throughput performance of the blockchain network, both data interaction and content carrying are greatly restricted, and most of them finally chose to compromise. , That is: the strategy of "interaction on the data chain, operation outside the application chain"—that is, the "key rules on the chain" of the previous stage.

The idea for the next stage of MetaverseLinker is:

- ① The user has a lightweight full-node environment;
- ② The service stack runs in the blockchain environment;
- ③ Metaverse link application (such as game) engine is used as one of the node's infrastructure;
- ④ Provide a joint development/debugging environment including engine, visual IDE, and chain network interactive interface;
- ⑤ There is a set of asynchronous consensus tasks between nodes to ensure the credibility of the engine environment. The consensus may be based on the feature code identification of the engine's key function target code;
- ⑥ The code (contract) of the meta-universe link application (such as game) is executed by a secure virtual machine controlled by the engine. The key numerical calculation part of the contract may adopt the "trusted execution environment" scheme and be executed separately from the contract body;
- ⑦ The key process of the contract is witnessed by the consensus of neighboring or related nodes (like players in a copy).

4. Link platform and architecture of metauniverse

MetaverseLinker will create a complete multi-platform metaverse link application (such as games) operating environment, to provide developers with development convenience and a complete ecological environment to the greatest extent, and at the same time will bring users a brand-new experience and beyond the previous form— Users will have the autonomy of digital assets, and the meta-universe link application (such as games) environment will be fair, open and just as much as possible.

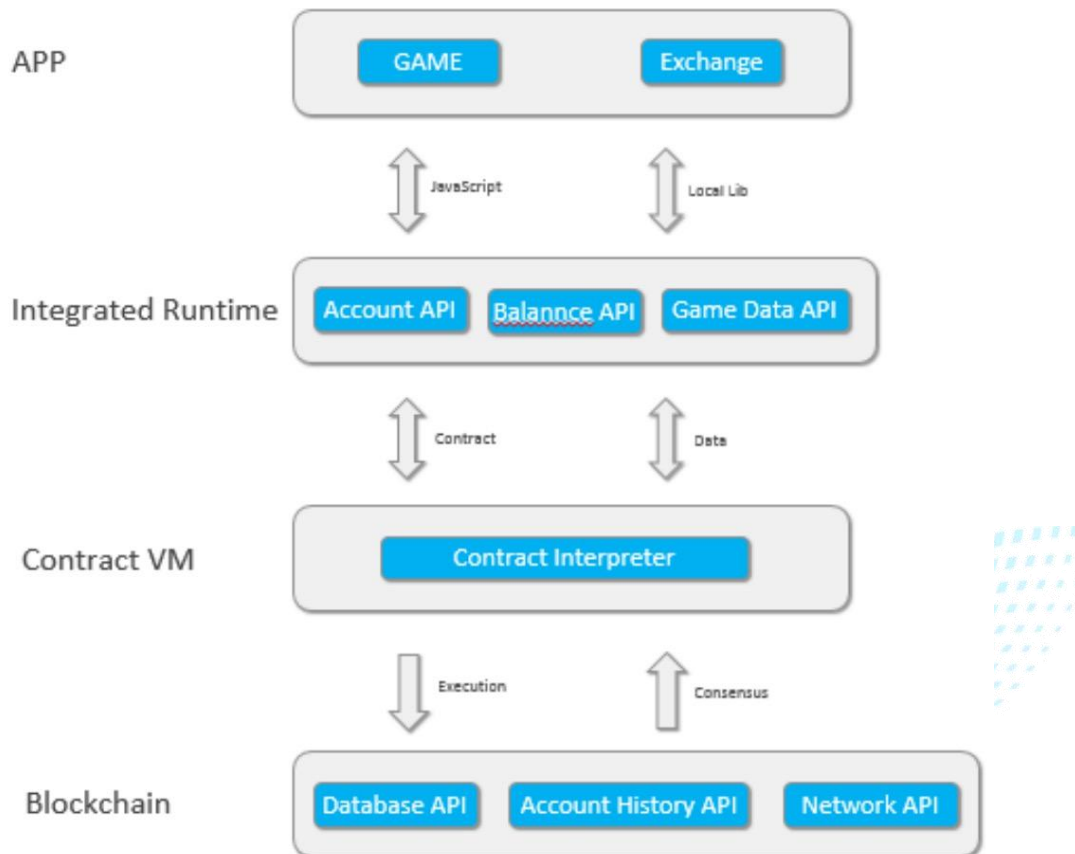
In order to achieve the above goals, MetaverseLinker will provide technical features including but not limited to the following:

- ① Operating environment for multi-platform meta-universe link applications (such as games) with blockchain system interoperability interfaces;
- ② Cross-chain acceptance gateway that supports homogenous and non-homogeneous tokens;
- ③ Improved high-speed consensus based on DPOS, and commissioned witness mode;
- ④ Support grammatical level consensus tasks;
- ⑤ Test chain including high-efficiency chain network and high-speed contract virtual machine;

- ⑥ Support the commissioned transaction mechanism;
 - ⑦ Smart contracts that can be executed across blocks;
 - ⑧ Support timer, support Standby mode, contract operation mode with heartbeat support;
 - ⑨ Support the trusted random process in the chain network. At the same time, it provides functions including but not limited to the following:
 - ① Go to the intermediary asset (digital asset) transaction interface;
 - ② Examples of digital asset trading markets;
 - ③ Support of player autonomy and blacksmith shop mechanism;
 - ④ Visual IDE (including visual editing of meta-universe link applications (such as games) programs and contracts);
 - ⑤ Complete wallet, user system and blockchain browser;
- At present, the theoretical throughput of the MetaverseLinker test chain can reach 100,000 tps, the actual throughput is close to 3,500 tps, and the block generation time is 3 seconds, that is, the entire network information broadcast is completed every 3 seconds. The actual throughput of MetaverseLinker will be further improved after the completion of the partition consensus, multi-chain association and "witness delegation" that can be set

by the contract, which is sufficient to support the key logic of most metaverse link applications (such as games) to run on the chain. "Delayed transaction confirmation" technology will further improve the transaction experience. The wallet attached to the MetaverseLinker test chain directly integrates the asset trading market. Users can evaluate the Metaverse Link based on the exchange rate of the Metaverse Link application (such as games) Token and the main chain base currency in the trading market. The value of digital assets and accounts in applications (such as games).

4.1 MetaverseLinker metaverse application operating environment

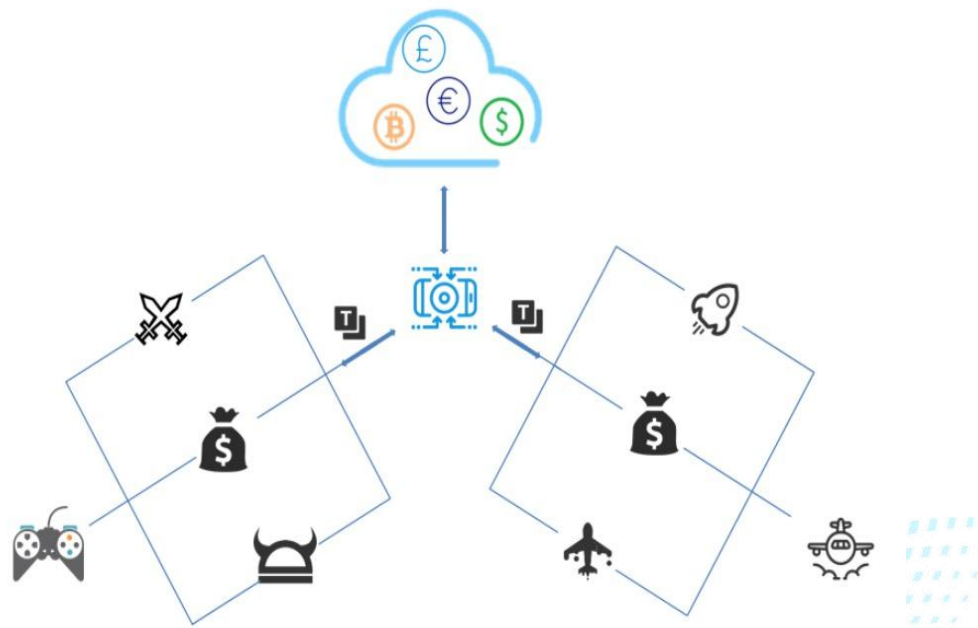


In order to simplify the developer's use process, MetaverseLinker has designed a set of integrated operating environment that can be adapted to multiple types of APP, as well as supporting interoperability interfaces. Simplifies the docking process of meta-universe link applications (such as games) and the blockchain, and makes the interactive work in the chain transparent to developers, so that traditional developers can also develop or migrate blockchain meta-universe link applications without any barriers. (Such as games). At the same time, the operating environment will be compatible with systems and environments such as native

Android, IOS, PC Web, and mobile H5. Metauniverse link applications (such as games) in the operating environment will have native cross-platform capabilities to achieve the feature of barrier-free operation of on-chain metauniverse link applications (such as games) on multiple platforms.

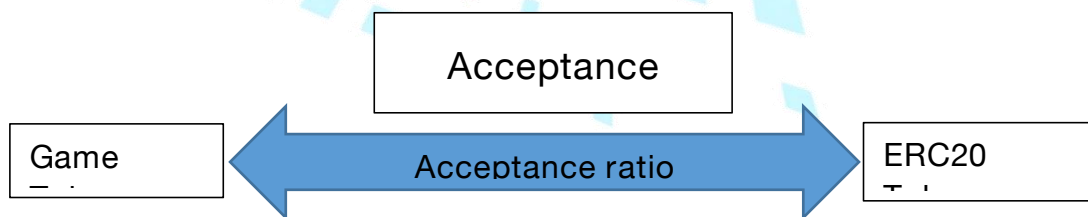
4.2 Cross-chain acceptance gateway that supports homogeneous and non-homogeneous tokens

MetaverseLinker provides a set of acceptance gateways for the automated acceptance of tokens and digital assets of Metaverse Link applications (such as games). Under a unified value measurement system, it can realize the exchange of content between different Metaverse Link applications (such as games) and different platforms on the chain. Smooth transition, the content that can be used for acceptance includes various digital asset data, etc.



4.2.1 Acceptance of Token in Meta-chain

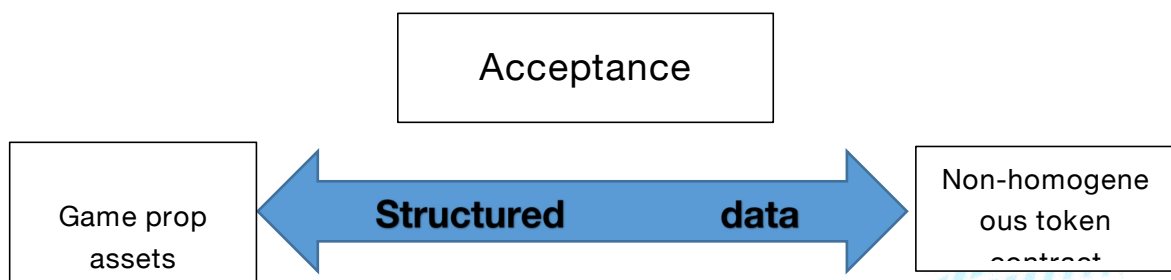
Metaverse link applications (such as games) digital asset Token and Ethereum ERC20 and other digital Token acceptance are shown in the following figure:



Metaverse link applications (such as games) tokens support asset transfer with other alliance chains and independent chains through acceptance gateways.

4.2.2 Acceptance of digital assets in applications

in Meta-chain



Both ERC875 and ERC721 Token standards are standard protocols for non-homogeneous Tokens. By further expanding the Token technology supported by the acceptance gateway, the gateway will be able to support non-homogeneous composite contracts represented by ERC721 and ERC875 in the future, and the acceptance gateway will accept digital assets and non-homogeneous contracts in meta-universe link applications (such as games). Similar to a dedicated compiler, through the translation and conversion of structured data, it realizes the two-way acceptance of digital assets from non-homogeneous contracts to in-chain meta-universe link applications (such as games), which is compatible with more types of digital asset

circulation inside and outside the chain. Provide richer content and user experience.

4.3 Meta-chain's optimization and expansion of the blockchain system

At present, the maximum block size of the blockchain network is 2,000,000 bytes/block, and the actual size is less than 2M, making it difficult for structured data to be efficiently read and written in such a small block. The existing blockchain network is completely unable to read and write. Responsible for the storage requirements on the structured data chain for the on-chain operation of Metaverse link applications (such as games). Therefore, MetaverseLinker takes into account the need for block capacity of metaverse link applications (such as games) on the chain at various stages in the future, and expands and optimizes the block volume of the blockchain package to provide more data for interaction on the chain. Hardware foundation.

In the end, chain games need to put more content on the blockchain network. The traditional blockchain data structure did not fully consider the scalability at the beginning of the design, resulting in the inability to accommodate large-scale data and lack of flexibility. The structure design leads to the

on-chain data structure under the existing blockchain technology only suitable for the circulation of digital currency. In addition, the lack of an extended contract interpreter further exacerbates the limited use of data structures on the blockchain.

MetaverseLinker started to modify from the bottom of the blockchain, redesigned the original structure, and added a custom data structure to the original chain structure to accommodate possible future metaverse link application (such as games) data and expanded content. At the same time The key processes of consensus, witness, block generation and other related chain structure data processing in the chain have also been adjusted accordingly to match the newly designed data structure. The modified data on the chain, including every transaction, data file, rule data, etc. in the block, can be queried by the block number and corresponding ID. The change history of the data archive can also be traced back from the block, and there is no longer any deletion. Risk of file or data loss. Content transactions can also trace the content circulation process on the chain through the block to ensure the security of users' digital assets.

The digital asset data in MetaverseLinker is only fully recorded in the block data when it is generated and attribute changes.

During ordinary transactions and circulation, only the hash pointer is recorded to ensure that the volume of the block data will not be too fast due to long-term transactions. increase.

4.4 Improved DPOS consensus mechanism in

Metachain

The consensus layer of the MetaverseLinker test chain uses the DPOS consensus algorithm.

The DPOS algorithm predicts the block producer and block generation time through predetermined witnesses and specified time slots. Usually, the time slot interval is 5 seconds. In actual use, for faster network broadcast speed and greater network throughput Set the time slot interval to 3 seconds. If the scheduled witness arrives at the specified time slot, due to network reasons or equipment hardware failure, there is no normal block generation, then the time slot will not generate blocks, and the network will Wait for the arrival of the next time slot to select another scheduled witness for block production.

MetaverseLinker, all scheduled witnesses are voted by all shareholders from among the witnesses. The scheduled witnesses are collectively referred to as active witnesses, and the number of active witnesses is usually 11–21. All active

witnesses have the same block generation probability in the witness reservation algorithm of the DPOS consensus algorithm, which ensures that the block generation probability of all witnesses is consistent with the block generation reward. The voting update time is usually 24 hours, but due to security, stability, and fairness considerations, the initial online voting update time of the project is usually shorter, and may be 12 hours or even shorter.

characteristic	POW	POS	DPOS
Higher throughput	×	√	√
Faster confirmation	×	×	√
High efficiency and low	×	√	√
Community incentive	×	√	√

In the DPOS algorithm, the block producer and block generation time are estimated by predetermined witnesses and specified time slots. The main chain always has more active witnesses than the branch chains, so the block height of the main chain must be higher than that of the branch chains. At the same time, the entire network voting mechanism avoids the centralization of witnesses and ensures the security of the network. The comparison between the advantages and disadvantages of different witness mechanisms is shown in the figure.

4.5 Metachain uses modern cryptography to ensure the security

Modern cryptography technology is a cryptography technology based on mathematical principles. It has been widely used in many industries in the Internet field. Common symmetric encryption technologies include AES encryption used by WiFi and asymmetric encryption algorithms (public and private key encryption systems) RSA, ECC, etc., among which ECC is a commonly used encryption algorithm in the blockchain field. These algorithms use mathematical principles to design an encryption and decryption system with unacceptable solution consumption to prevent encryption from being destroyed. Without obtaining the correct key, attempts to crack such encryption algorithms will take a long time (usually it takes nearly a hundred years to crack/guess the key system). And lose the value of cracking behavior. The full name of ECC algorithm is elliptic curve encryption algorithm, which was proposed by Neal Koblitz and Victor Miller in 1985.

4.6 Low bifurcation and multi-chain attachment in meta chain

MetaverseLinker uses the DPOS consensus mechanism and does not require miners to use mining machines for mining, which can effectively avoid the impact of centralized computing power on the entire basic chain, thereby reducing the risk of forks. Under the DPOS mechanism, if there are witnesses who want to fork through voting, it is possible to ensure that more than 1/3 of the witnesses violate the mechanism at the same time. At the same time, users can also vote to remove active witnesses to reduce possible fork problems. Compared with the high fork risk under the POW consensus mechanism of Bitcoin and Ethereum networks, MetaverseLinker has a lower fork risk, which can effectively ensure the data security of developers and users of Metaverse Link applications (such as games). In addition to the cross-chain acceptance gateway, MetaverseLinker will support more direct multi-chain linking solutions in the future. For example, in the next stage of upgrade, MetaverseLinker will support the use of IPFS to store large segments of contracts and some metaverse link applications (such as games) data.

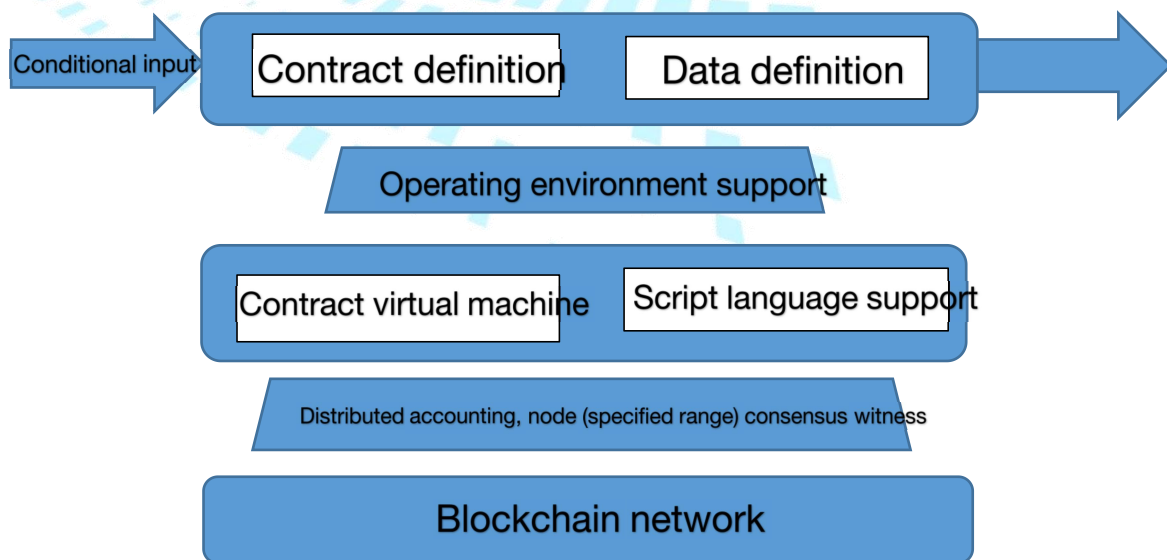
4.7 MetaverseLinker Metaverse Link Platform

Test Chain

MetaverseLinker

MetaverseLinker has enough high concurrency processing capabilities.

MetaverseLinker adopts an improved DPOS consensus, theoretical throughput is about 100,000 TPS, and its high concurrent processing performance is sufficient to support the development and normal operation of existing metaverse link applications (such as games) under a reasonable data management mode design, which basically meets the needs of large-scale networking. The operational demands in the platform ensure that the user experience is almost the same as the existing centralized procedures.



Metaverse linker's virtual machine uses the same language and API system as the meta universe link application (such as game) SDK, and provides an interoperability interface between the

chain and the execution environment of the meta universe link application (such as game), which will completely change the current situation of single blockchain contract environment, poor flexibility and poor customization ability. The application scenario of smart contract will no longer be limited to currency description, but will begin to accept more content directly related to meta universe link applications (such as games), including possible basic rules, settings, units, scenarios, and even maps. The improved virtual machine not only supports more complex and flexible contract forms, but also greatly improves the operation efficiency of the existing smart contract.

5. Business and Operation Design in Meta-chain

5.1 Digital asset trading market in Metachain

Unlike traditional Metaverse Linker exchange applications (such as games), MetaverseLinker's decentralized exchange does not have intermediaries. On the one hand, it improves the efficiency of transactions between buyers and sellers, and on the other hand, it allows direct payment of fees to intermediaries. The payment is made to the seller, achieving the effect that the seller makes more money and the buyer pays less. Players can complete the order, sale and purchase of digital assets in the

digital asset trading market. In the entire transaction process, in order to more efficiently help users with sales and purchase services, the exchange will use smart contracts for automatic transaction matching.



5.2 Creation mechanism of digital assets in meta chain

The creation of digital assets is a series of accounts and a series of contracts with the authority to produce digital assets and equipment. As one of the core functions of the world of all meta-universe link applications (such as games), the creation of digital assets can be managed by developers and operators, or by User associations and designer studios are operated. Users can create digital assets or directly purchase digital assets. The process of creating digital assets is open and transparent, as unique as other digital assets in Metaverse Link applications

(such as games), and can be retrieved and inquired from the blockchain browser.

In the entire process of "creating digital assets", the core part includes: the user submits the materials to the contract, and the completed digital asset transaction to the user according to the contract, the two can be regarded as a complete transaction.

Both parts of the transaction information will be on the chain to ensure that the user's transaction information is true and reliable and cannot be tampered with, and that the digital assets that users trade will not be manipulated and lost in the dark like the previous centralized systems, which can effectively protect the interests of users.

5.3 Complete wallet and blockchain explorer in Meta-chain

The MetaverseLinker project provides digital asset wallets to multiple operating platforms, including operating systems such as Android, iOS and Windows, to ensure that users in mainstream operating environments can participate in asset transactions. Through the digital asset wallet, users can store all meta-universe link application (such as game) tokens and ERC20 Token imported through the acceptance gateway, which

MetaverseLinker

is more convenient for consumption and transaction in the meta-universe link application (such as game) gold coin trading market. On the other hand, MetaverseLinker has carried out financial-level algorithm encryption on the digital asset wallet, and will also combine the KYC authentication service of the running platform to ensure the security of the user's digital assets stored in the wallet.

MetaverseLinker provides the blockchain browser function directly in the wallet. The blockchain browser is the main window for browsing the blockchain information, and the content recorded in each block can be consulted on the blockchain browser. Each independent blockchain system has a corresponding blockchain browser. MetaverseLinker provides a complete blockchain browser with query and jump functions. For example, when a user produces a treasure-level digital asset in a metaverse link application (such as a game), the corresponding metaverse link Digital asset data of applications (such as games) will be generated in the main chain, and users can query the corresponding transaction information in the blockchain browser. MetaverseLinker's blockchain browser supports atomic operations. The blockchain browser allows users to more transparently understand the distribution of their

assets, all data is recorded on the chain, and the truth cannot be tampered with.

5.4 Flow chart of digital asset transaction

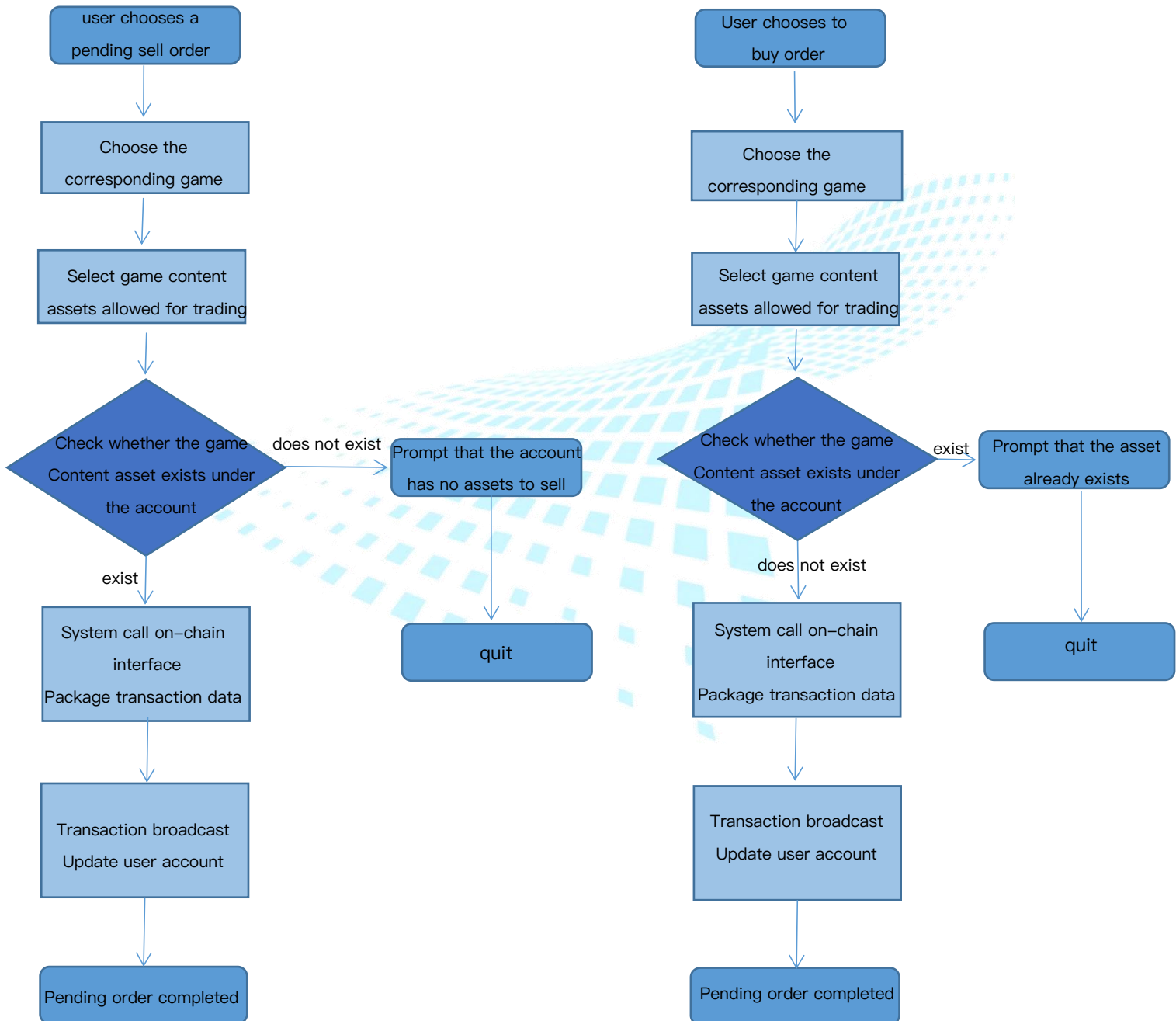
example in Metachain

In the trading market, free transactions of MetaverseLinker token MLC, independently issued "tokens in metaverse link applications (such as games)" and digital asset assets can be completed.

When a user submits a pending sale order on the trading market, the digital asset corresponding to the order will be locked and cannot be used anymore. The pending order contains the seller's main chain account ID and the content of the items to be sold.

When the pending order is sold, the system automatically completes the transfer of digital assets and pays the seller MetaverseLinker token MLC or gold coins to complete the transaction. The transfer operation of digital assets in the buying and selling is atomic. The payment of MetaverseLinker token MLC or other tokens and the acquisition of digital asset assets will be packaged into a transaction. The states of the two actions are consistent. The normal completion of the transaction

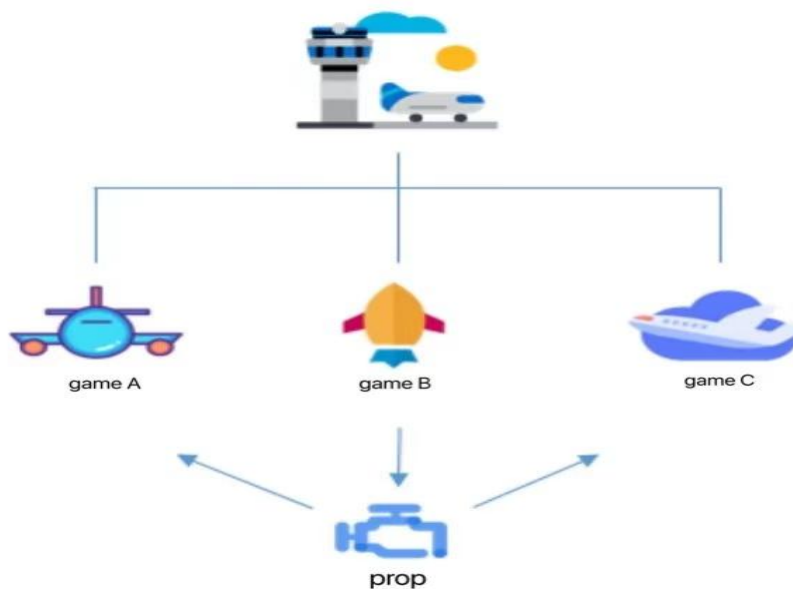
will generate a unique chain Checkable transaction ID. The process is shown in the figure.



5.5 Digital asset transaction structure in

Metachain

In the current system, many digital asset designs are widely used. In order to reduce repeated design and increase development efficiency and interest, metaverse linker introduces the concept of world view. Digital assets with the same world view can be interconnected, such as the digital assets of meta universe link application (such as game) B in the figure can enter meta universe link application (such as game) A is used in the world of meta universe link applications (such as games) C



The characters, digital assets and setting systems in various works within a world view are usually common. In reality, several manufacturers often develop various works in one world view. Metaverse linker allows developers to declare their world outlook at the time of creation, allow the world outlook to have its own governance committee (and consensus committee), and will allow the world outlook to have its own independent chain environment in the future.

5.6 Player autonomy and asset security in the meta chain

MetaverseLinker public nodes can be toolkit game developers, operators, player guilds, designer studios, etc. They can all become nodes and participate in the election of director nodes. Due to the open and transparent nature of the blockchain network, the digital asset information obtained by the player in the game can be accessed by anyone through the blockchain browser. In the game world, accounts with high-value prop assets are often the first choice for hackers to ransom. MetaverseLinker attaches great importance to the asset security of player accounts, and provides the following security guarantee mechanisms for the security of game assets:

① Operation rights restriction—all the disposal rights of the props in the game belong to the player only, and the operation of destroying the items can only be handled by the user's authorization;

② Prop transaction operation atomization—when a transaction occurs, the buy/sell is submitted to the exchange in the form of a pending order, and the payment of fees and the update of the item data are regarded as a synchronous and inseparable operation, that is, the behaviors of both buyers and sellers need to be agreed upon Recognition, if either party is not recognized by the main chain block in the payment action or account item data update action, the entire transaction will be rolled back to avoid abnormal transactions;

③ Scalable multi-step verification—In addition to blockchain transaction verification passwords, game companies provide further secondary password verification and random code verification to further improve the security of player assets.

6. MetaverseLinker Project development technical key solutions

6.1 Lightweight nodes in the MetaverseLinker

In the design of MetaverseLinker, a lightweight node (hereinafter referred to as "light node") is essentially an environment capable of interoperating with the chain. Unlike full nodes, light nodes do not need to synchronize the data of the entire network, instead of contract information and environmental data necessary for synchronization operation, this design can greatly reduce the amount of data and synchronization time for node synchronization, It makes it possible for the on-chain software to have the actual capacity and time cost for use.

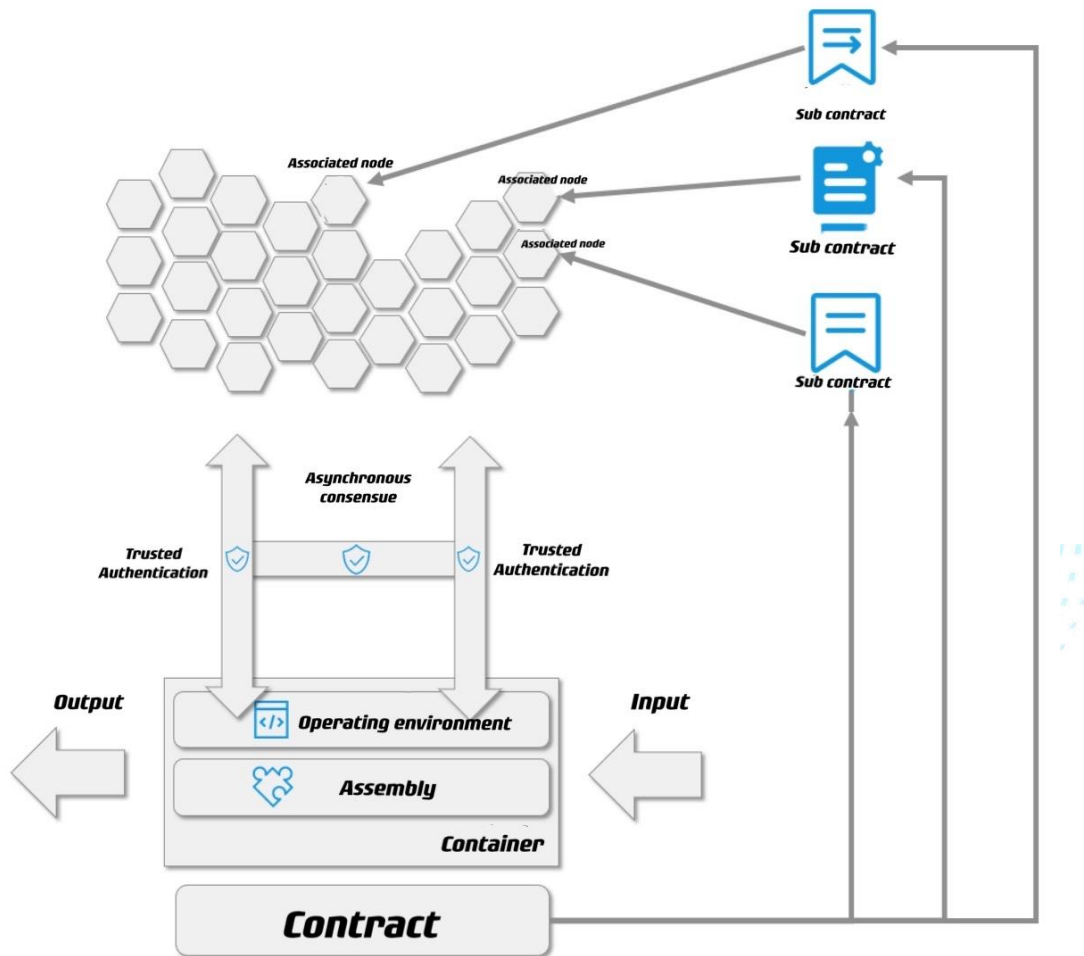
MetaverseLinker developed MetaverseLinker applications (such as games) as a whole to run locally on light nodes in the form of contracts, but the parts identified in the contract that require consensus will be separately split into one or more sub-contracts and released to relevant nodes for consensus.

This design allows huge contracts to run in a more efficient and delay-free manner. The principle is shown as shown in Fig, The consensus and non-consensus parts of the contract can be handled separately and maintained as reliable as traditional block chains while safeguarding the user experience as possible.

At the same time, the verification of light nodes is no longer the verification of the process and results like the traditional blockchain, but the verification of the node's operating environment and input data (trusted execution environment verification), which further improves the overall operating efficiency.

6.2 MetaverseLinker supports consensus tasks at the grammatical level

MetaverseLinker proposes a design that allows contracts to support consensus tasks at the grammatical level. By modifying the parts of the script that require consensus with specific keywords, the contract interpreter can identify and split the contract parts marked as requiring consensus when running the full-text scan. The sub-contracts are divided into sub-contracts and sent to the relevant nodes of the chain network for consensus.



When a contract is running, the contract is executed locally as a whole, and when it reaches the part that requires consensus, the consensus result returned by the chain network is obtained and continues to be executed. In this case, the operation process of the main body of the contract and the consensus process are two relatively independent asynchronous processes, which make the operation of the contract smoother, and the possible blocking wait is lower and the time is shorter.

In addition, a portion of a contract that needs to be agreed upon is distributed and executed as a sub-contract after it has

been split, and the sub-contract content should have a complete context and no additional dependency on the design so that the results can be correctly obtained on other nodes.

6.3 Continuation of contract in MetaverseLinker

By means of light nodes, it is possible to realize the idea of meta-universe link applications (such as games) running as a contract as a whole. Locally running contracts can run this process and block generation cycle or block size in light nodes for a long time and continuously. It is irrelevant, it is only the sub-contract content that contains the consensus in the contract.

Metaverselink application (such as game) contracts and sub-contracts use an "asynchronous consensus and synchronous return" method, while continuing to run, they also continue to complete the verification and synchronization of key steps, realizing the continuous operation of the contract and the result of consensus witness mechanism.

6.4 Contract Conversation Mechanism in

MetaverseLinker

Chain provides session–building interface, which establishes a list of user sessions with valid restrictions in the contract public data area. Users in the same session area will have the right to push data to other users in the same session area. Other users can get corresponding data in time when they receive notification of data changes.

6.5 Concurrent Processing Mechanism for Transactions in MetaverseLinker

In the concurrent transaction processing mechanism, transactions can be processed first according to the set priority processing rules. Witnesses will extract transactions from the pool of transactions that have completed concurrent processing in order of priority to complete the package, and perform block broadcast. This mechanism is an improvement on the traditional transaction serial packaging, which can avoid the deadlock and infinite recursion within the contract causing transaction packaging blockage. In the traditional block–chain network environment, such blocking often results in blocking or even complete crash of the entire chain network.

6.6 Delegated Transaction Mechanism and Random Process Implementation in MetaverseLinker

Delegated transactions are mainly used to deal with transaction types with high randomness and different results (such as generating a set of random numbers) when executed by different nodes, but this type of transaction is limited to transaction requests related to non-personal data. After receiving the entrusted transaction, the trustee who has passed the trusted execution environment certification will verify the feasibility of the transaction and execute the entrustment. After completion, the transaction result will be broadcast to the chain. Under this mechanism, random processes in the chain become possible, users can delegate trusted nodes to generate a random number, delegate trusted nodes to maintain contract public data, and so on. Further, the developer of the contract may implement a function callback mechanism within the contract.

6.7 Timers and heartbeats in MetaverseLinker

Almost all Metacosmic Link applications, such as games, require online detection. In MetaverseLinker design, timers and

heartbeats were introduced to solve the problem of user state detection and continuous session mechanism.

The realization of timers in the blockchain network first requires the realization of a time synchronization mechanism, and the traditional time synchronization mechanism is usually implemented by an external time service or trust center, and under the logic of blockchain de-trust, the external time service or trust center There are defects that cannot be self-certified, so the synchronization of the time on the chain can only be done within the chain.

The time synchronization scheme proposed by MetaverseLinker is: using block data timestamps, when the block producer node publishes the block, it is equivalent to time synchronization broadcast, and each node completes the time synchronization operation after receiving the block broadcast, and finally the entire network is synchronized in one block. The time synchronization process is completed once in the cycle.

Based on this design, the timer can be realized logically: the timer uses the block period as the minimum timing granularity and works according to the preset timing goal. Since the block data timestamp is a standard time count, there is no deviation of factors such as time zone, it can be considered as a unified

timing standard for the entire network, and the timer can be executed normally in any network area and time zone with the same timing rules.

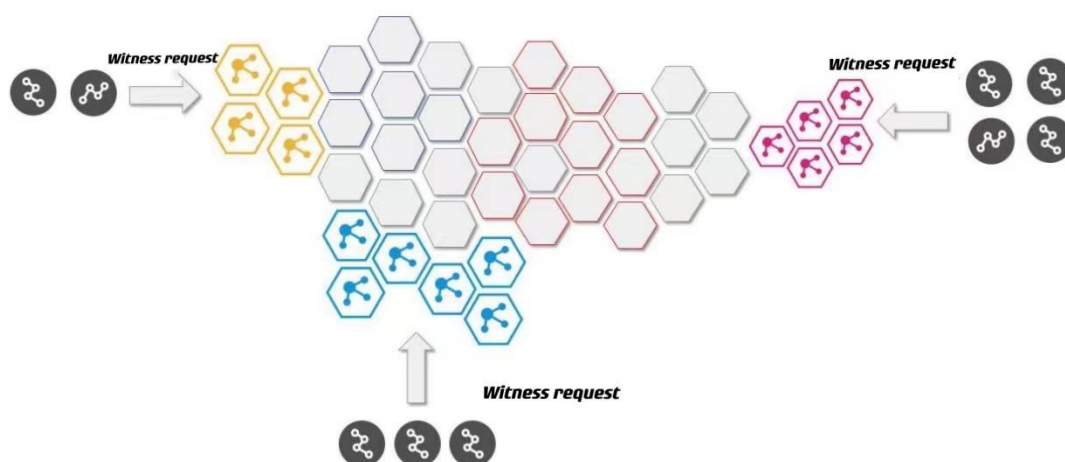
6.8 Minimal Latency Transaction Response in

MetaverseLinker

MetaverseLinker proposes an asynchronous confirmation method, that is, when the user sends a transaction request to the node, the node will immediately send a transaction broadcast to the network and return the transaction hash value to the user at the same time. Under this design, in fact, the final transaction recording cycle is not much different from the traditional design, but the response of the transaction is almost without delay. The node will complete the transaction submission in the first time, and the block generation and transaction submission/confirmation process become a mutually asynchronous operation, which greatly improves the response speed of the transaction.

To further improve node utilization and processing efficiency, MetaverseLinker proposed a partition witness design based on delegated witness, that is, some nodes focus on

specific types of contract requests, and the principle is shown in the diagram:



The significance of partition witness in the industry application of Metaverse link applications (such as games) lies in the ability to specifically optimize the processing capabilities of related nodes for different request types. Request to focus on strengthening storage IO capabilities, etc., and finally achieve the overall efficiency and optimal configuration of benefits.

6.9 Trusted Random Process in MetaverseLinker

Whether blockchain meta-universe link application (such as game) rules can have practical application value is closely related to whether a random process can be realized on the chain. Through research, it is found that a complete random process on the chain needs to solve a key problem: the rules of the random process on the chain are described by smart

contracts, and the process of the contract is public. If a random result that cannot be estimated by a third party needs to be generated, the contract is required to run. Sometimes the noise of nodes participates in the input of this process, but the noise of different nodes cannot be the same, that is, other nodes cannot verify whether the result of this random process is correct by running the contract again, which ultimately leads to the failure to complete the consensus.

To solve this problem, we propose two implementable solutions:

6.9.1 Data pool solution in MetaverseLinker

Maintains one or more random datapools in the block chain dynamic data area, where the blocker wraps the results of the random process in the encrypted data section of the block, and the code for the encryption process is published in a closed-source, non-public format. At this time, all nodes will have the same random data pool. The data structure of the random data pool is in the form of a pipeline, with a read end and a write end encapsulation, and only allow access by the read and write end that conforms to the rules, with a first-in first-out feature.

Because the transaction processing of all nodes of the blockchain is consistent, the application can read from the random data pool when applying for the random process result. Under the random process generation and distribution mechanism, the security of the process and the result can meet the security requirements of the blockchain network for the random process: Any access (read, write) behavior will cause the random data pool to change and cannot be restored; The behavior of writing random data is completed by the dynamic encryption function library, and the function library is closed source and unpublished; The producer of random data cannot know where the results of this random process will be placed in the random data pool and who will use this random process; the implementation of this random process is suitable for chain networks to have consistency in the order of transaction processing. For example, in RPG meta-universe link applications (such as games), players open map treasure chests to obtain random digital assets.

6.9.2 Solution of delegation mechanism in

MetaverseLinker

Through the delegation mechanism, part of the transaction is allowed to be delegated to a single trusted node to complete the processing. After the trusted node completes the processing, the random process result is recorded, and the notification or polling mechanism allows the principal to obtain the result.

Because this scheme is based on the chain transaction delegation mechanism, the changes to the chain will be less than scheme 6.9.1, but to ensure the feasibility of the scheme, the following requirements should be met: the trustee should pass the trusted execution environment verification to ensure that it is trustworthy; the trustee When running a random process and publishing the results, it should be done with the same secure encryption function library; The transmission of encrypted data needs to prove the identity of the entrusted party through "zero-knowledge proof" or other reliable certification schemes and can be identified by the entrusting party to ensure that the data obtained by the entrusting party is not forged by a third party. This random process implementation scheme is suitable for application scenarios where multiple parties participate in a transaction but only need the same batch of random results, such as the shuffling sequence of each game in chess and cards, etc..

7. The economic system in the MetaverseLinker

metaverse link platform

7.1 Essential changes brought by blockchain to the industry

From the perspective of user experience, "blockchain metaverse link applications (such as games)" and ordinary applications are no different to users. But blockchain may have a fundamental impact on the application market. The current business logic of the game industry is "pay for service", that is, users pay money, time and behavior data to get the game experience in the form of one-way expenditure. Based on the characteristics of open, irreversible, and permanent existence of data on the blockchain, the props in Metaverse Link applications (such as games) can be managed and transferred by users, transforming from experience services to experience assets. We believe that "Pay for Services" and "Purchase and Use Assets" are distinct value representations for developers and players, resulting in different behaviors and business models. These changes can be summarized in the following four points:

7.1.1 Digital asset attributes in the

MetaverseLinker

Assets are resources formed from past economic activities, controlled by one party, and capable of obtaining future economic benefits. Metaverse link applications, such as games, have two characteristics that make them assets in a blockchain:

① Independent existence and continuity, and can also exist in different blockchain systems under the cross-chain mechanism. Theoretically, the part of the asset on the chain of a metaverse link application (such as a game) can persist indefinitely and not be controlled or affected by any chain or node;

② Independent and open pricing: Any participant in the blockchain ecology can price game assets in different dimensions by using, trading, and searching, without the control and influence of any chain and node. Digital content has the right to be owned and the mechanism to be evaluated, and has truly become an asset;

7.1.2 Game attribute in the MetaverseLinker

Under the current business model of "paying for services", publishers (including user traffic platforms and publishers) have a large control over user consumption, and have a large Pricing) and user scale (traffic promotion) have the greatest bargaining power. At the same time, rules and data are not disclosed to users. All parties play a non-cooperative imperfect information game around the matching degree of experience and price in a limited time interval. Take an Action RPG mobile game with a channel rating of B in the Chinese market as an example: The issuer selects products, tests, launches, and conducts centralized promotion within a few days based on its own interests; In order to convert users to pay within a limited time, developers begin to set charging points after a few hours of game time, and expect the life cycle of most accounts not to exceed 75 days; A large number of users are forced to choose between experience and payment, knowing that the probability of operation will not exceed 12 months. In the long run, the game among developers, publishers, and users encourages the maximization of short-term benefits, reduces the overall experience of the application, and has a negative effect on the development of the industry.

For a long-term existence, pricing can not be affected by centralization (such as the issuer), data transparent digital assets, the game model of developers, players and other related parties may change, that is, it is longer than the original model, and the cooperation and information are perfect. In the case that Metaverselinker applications (such as games) can exist independently in the blockchain environment for a long time, are managed by copyright mechanisms, and are tokenized, developers continue to benefit from the constant transaction of assets, which will be more willing to improve content quality and increase the long-term overall value of meta-universe link applications (such as games); Users pay money, time and privacy in exchange for assets that can be used, modified and sold instead of pure user experience, and their willingness to buy and exchange assets may be strengthened; At the same time, any token holders of meta-universe link applications (such as games) will benefit from the asset appreciation of meta-universe link applications (such as games) and will have the motivation to discover, promote and assist in the promotion of high-quality meta-universe link applications (such as games) content. Developers, users and third parties will play games around the goal of maximizing the value of assets in the

long-term, which is conducive to improving the level of the meta-universe link application (such as games) industry.

7.1.3 Asset pricing and pricing behavior motives in the MetaverseLinker

From a financial perspective, the aforementioned game process is the pricing behavior of digital assets. Under the current industry structure, publishers choose to market digital content. Users of digital content are not price makers, and the efficiency of market pricing has not been maximized. In addition to the centralized nature of traditional technology, operations and business models, the lack of motivation for users to participate in pricing behavior is another important factor. It is difficult for users to find and promote excellent content to have a substantial return. They can only get the satisfaction of spreading reputation in the sense of consumer psychology, and the limited economic rewards given by developers or publishers based on the results (such as introducing a registered user to send digital assets, etc.).

However, in the blockchain economic system, the price of digital assets is reflected in the relevant tokens in real time. Participants can determine the extent of their participation in

pricing behavior by adjusting the amount of tokens and digital assets held in Metaverse link applications (such as games) and platforms. For example, after a player discovers a metaverse link application (such as a game) developed using the MetaverseLinker platform, they can buy a limited amount of digital assets, tokens, and even MetaverseLinker platform token MLC, and promote it spontaneously. Gain from appreciation, Capitalization and tokenization provide sufficient motivation and a flexible medium for the asset pricing behavior of market participants.

7.1.4 Summary of MetaverseLinker Economic Model

In summary, “blockchain meta–universe link applications (such as games)” can be more accurately defined as “applications that use blockchain technology and have blockchain economic mechanisms”. From an economic point of view, the development path of blockchain meta–universe link applications (such as games) can also be regarded as four stages in which market parties participate in asset pricing and the interests are gradually unified. It is the result of changes in business models that promote developers and users. Is bound to bring

fundamental changes to the industry. The above assetization path is also applicable to generalized digital assets other than Metaverse Linker applications (such as games). We will support more types of assets in the subsequent development of the MetaverseLinker platform.

7.2 Design Principles of MetaverseLinker

Economic Model

By providing a complete set of functional components such as the underlying public chain, digital property management, and exchanges, the MetaverseLinker platform carries the asset value of Metaverse Link applications (such as games) created by developers. As more meta-universe link applications (such as games) and digital assets are produced, managed and exchanged, the total economic volume of the platform continues to expand.

MetaverseLinker is based on the blockchain standard technology and governance architecture design, and has the economic attributes corresponding to the DPoS consensus mechanism. The platform has the characteristics of non mining, trust consensus, low bifurcation possibility and definable transaction cost. Developers and users can invest their main

resources in the creation and exchange of digital assets, and the overall consumption cost of system resources is low.

In a real business environment, the economic behavior and psychology of the participants have both macroscopic laws and microscopic discreteness. We believe that MetaverseLinker's economic, governance, product and technical rules should be fully considered and compatible with the complexity and imperfections of various behaviors. The platform only provides the smallest feasible and flexible tools and rules to help and promote participants to carry out highly free economic activities and community governance according to their own interests. Each ecological role forms a game relationship and self-incentive mechanism without mutual trust, thereby enhancing the overall efficiency and value of the industry. At the same time, the global developer community has a long history and mature values. We hope to reflect this value to the greatest extent in the design of the economic system.

Live independently: The platform itself has a clear business model and can survive stably;

Autonomy and consensus: Communities and sub-communities (such as the ecology under the same world view) gradually establish a joint decision-making mechanism,

and finally operate according to the consensus principle, and establish a development decision-making system based on participant voting;

shared: Part of the value generated by the community is used as common wealth for the survival and competitiveness of the community;

Self-evolution: Establish a reward mechanism to encourage members to continue to challenge the technical and economic mechanisms of the community in the future.

7.3 MetaverseLinker Coin MLC: the original pricing medium for global and generalized decentralized digital assets

In order to realize the above vision, we created the platform token MetaverseLinkerCion ("MLC" for short) as the circulation medium and governance certificate for platform ecological economic activities. Including MetaverseLinker's value exchange carrier and proof of community participation, MLC will likely be used as a basic pricing token, which will play a key role in the digital asset ecosystem. A large number of decentralized digital assets will exist in multiple blockchain ecosystems under

different standards in the future, and it is necessary for asset pricing media across the chain ecosystem to exist. Based on the following reasons, MLC can become the original pricing medium for blockchain ecological digital assets:

① The MetaverseLinker platform natively supports the exchange of global, homogeneous/non-homogeneous decentralized digital assets in terms of underlying technology, consensus mechanism, application functions, etc. MLC has the technical foundation to become a basic pricing medium;

② In the process of asset creation on the MetaverseLinker platform, production behaviors (such as entrusted consensus block generation) and production factors (such as purchasing design materials in metaverse link applications such as games from the platform application store) use MLC as the native pricing medium. The MLC price of the produced assets reflects the value confirmation of production costs and profits, rather than the nominal price. MLC has the economic foundation to become a basic pricing medium;

③ The MetaverseLinker platform supports and encourages the circulation of assets under the same worldview and related worldviews, and establishes a real user-use value connection among digital assets across the domain, rather than just

representing the nominal exchange rate between assets。 MLC has the circulation foundation to become the basic pricing medium.

④ Based on MLC, developers and users can evaluate, compare, trade and manage digital assets with different chain ecology, worldview content, and technical standards. At the same time, as a native and basic pricing medium, MLC is a necessary condition for the development and trading of digital asset financial products and derivatives in the future blockchain industry.

7.4 Basic usage model of MLC token

The platform token MLC has three functions:

① The value exchange medium within the MetaverseLinker platform ecosystem.

② Representative of the entrusted consensus equity share of MetaverseLinker public chain.

③ Measurement of community participation and contribution of MetaverseLinker platform.

MLC is generated from the process of platform consensus work contribution rewards (such as block generation) and developers' asset output, and is transmitted to users through

currency and digital assets and exchanges in meta-universe link applications (such as games). Users and developers also exchange MLC through platform token circulation facilities.

As the value exchange medium of the platform, MLC can be used to pay for resource consumption in the community, purchase platform functions, consume and trade digital assets, and pay for the consumption, transaction, and resource exchange of the cross-chain ecosystem (for example, GAS required for publishing Ethereum applications through the platform).

As the delegated consensus equity representative of MetaverseLinker public chain, MLC holders directly participate in consensus proxy voting.

As a proof of platform participation, MLC can be used as a voting representative for future community matters and an incentive to complete platform tasks. For example, use MLC as a bounty to solicit developers to develop or optimize specific functions of the platform.

We issue MLC Tokens based on the HERC-20 standard. The number is set to 1,000,000,000 (one billion), and the total amount remains unchanged. Deflation is achieved through combustion, and the total amount is finally maintained at 100

million. After we launch our own public chain, users who hold HERC-20 MLC tokens can obtain the same amount of self-owned public chain MLC tokens based on the certificate, and their HERC-20 Token will be recycled.

7.5 The basic usage model of MLC token

Participants have the same identity permissions in the MetaverseLinker platform. Both players and developers of ordinary meta-universe link applications (such as games) can make full use of platform functions to create their own digital assets, and obtain benefits in this way.

① Value Creation: Including (A) Contributions to the creation of digital assets, that is, the development of meta-universe link applications (such as games) and the production of digital assets. The amount of incentive issued by the platform is directly proportional to the value of the asset created by the participants, and inversely proportional to the duration of the metaverse linker platform and the total asset value of the system. There is an upper limit on the total amount of incentive; (B) Contribution to the creation of digital asset value, that is, MLC can be obtained when the created asset reaches a certain fee and transaction scale. The amount of

incentives issued is proportional to the total transaction volume of the asset created by the developer;

② Platform contribution reward: Users who contribute to the MetaverseLinker community can get MLC. In the initial stage, we issued MLC based on the historical contribution of the developer community (code contribution points to the MLC engine, online community interaction points, etc.). In the later stage, the platform will adopt various forms such as bounty tasks, free digital assets (for example, free gifts of developers' meta-universe link applications (such as games) digital assets) and other forms to encourage developers to develop new functions, upgrades, error corrections, and make changes to the platform. Community behaviors such as testing. This part will be allocated from the platform foundation's token reservation and platform division;

③ Market transaction: Sell digital assets acquired in Metaverse link applications (such as games) to obtain MLC. The incentives for this part are related to the gameplay and economic system of Metaverse Linked Applications (such as games), and are determined by the developers of Metaverse Linked Applications (such as games) and market laws. In

principle, the platform does not impose rules and quantitative restrictions;

④ Behavioral incentives: A variety of effective behaviors on the MetaverseLinker platform, community and platform will be converted into MLC according to a certain degree of contribution. For example, users can register for platform accounts and participate in various interactions in the community to obtain MLC. The platform confirms whether the user's behavior is effective by analyzing the dimensions of access effectiveness, information integrity, and behavioral rationality, and provides incentives for MLC. The number of incentives in this part is directly proportional to the interactive content (such as posting, likes, replies, etc.), and inversely proportional to the total number of users on the platform and the duration of the platform;

⑤ MetaverseLinker public chain consensus work contribution reward.

7.6 MLC Consumption and application scenarios

MLC usage scenarios:

- ① Purchase development resources from third-party developers (such as meta-universe link applications (such as games) character images, etc.);
- ② Purchase value-added services such as development function components from the platform;
- ③ Purchase digital asset assets from Metaverse Link applications (such as games) or asset trading markets. Based on the asset rights management mechanism of the platform, the developer pays a certain fee to the developer for every transaction of the digital asset in its complete life cycle;
- ④ Post reward tasks in the community, initiate and participate in community affairs voting;
- ⑤ In each transfer of MLC, the platform will extract a certain percentage of fees and lock it into the common wealth of the community. After a certain period of time, the platform will release the resources that use this part of the wealth for ecological construction.

7.7 MLC usage allocation

we suggest:

10% of MLC is used to donate the rebate for the start of this project.

10% of the MLC provision is used for platform community construction in various ways, including but not limited to witness block rewards, platform ecological developer incentives, global community construction, marketing and promotion, industry alliances, ecological investment, research, and finance Compliance with laws, etc.

10% of the MLC is used to initiate team research and development, incentives, and employment industry consultants. We expect that the global blockchain community will have key developments in the next 3 years, and hope that the commercial and social value of the project will be gradually verified within 3 years. Therefore, the incentive part will be locked, and will be unlocked gradually within 3 years after the Token is in circulation.

70% of MLC is exchanged for contribution through consensus work (mining) to maintain platform data recording, reading, storage and interaction. This is the continuation of the platform's distributed architecture operation.

purpose	Percentage	illustrate	Lock condition
Donation rebate	10%		40% is released immediately, and the rest is divided into 120 days for daily release
Team motivation	10%	Used for team research and development, incentives and employment industry expenses	Locked for three years, release for the first time every three months, release 12% for the first time, and release 8% for the remaining 11 times
Ecological Fund	10%	Used for rewards for ecological application developers, global community construction, marketing promotion, industry alliances, etc., issued through DAO voting	
Mining	70%	Output in the form of pledge mining, halved every 180 days	
total	100%		

8. MetaverseLinker milestones plan



Preparation (2019/12) : Complete the original team building and recruit development and operation personnel in various blockchain communities around the word.

Complete technical research on distributed ledgers, consensus mechanisms, smart contracts, and cryptography. At the same time, the initial establishment of the metachain global community was initiated.

MetaverseLinker and various application examples internal testing (2021/11~2022/06) : Launched the internal beta version, and launched the game application example "ML's StarCards", financial application example "ML's OTC", social application example "ML's Social", NFT application example "ML's Blind Box", etc. Landing application scenarios.

Airdrop and project fundraising (2021/12~2022/02) :
Participate in the internal testing of various applications of metaverlinker, give MLC, solicit the rules for sharing income from metaverlinker ecological partners, and stipulate that after the smart contract is determined to be written into the smart contract, the fundraising activities of the metaverlinker project will be carried out in stages.

Online pledge mining MLC (2022/3) : First, MLC will be listed for staking MLC for mining, and other currencies will be listed for single currency staking for MLC to increase MLC users.

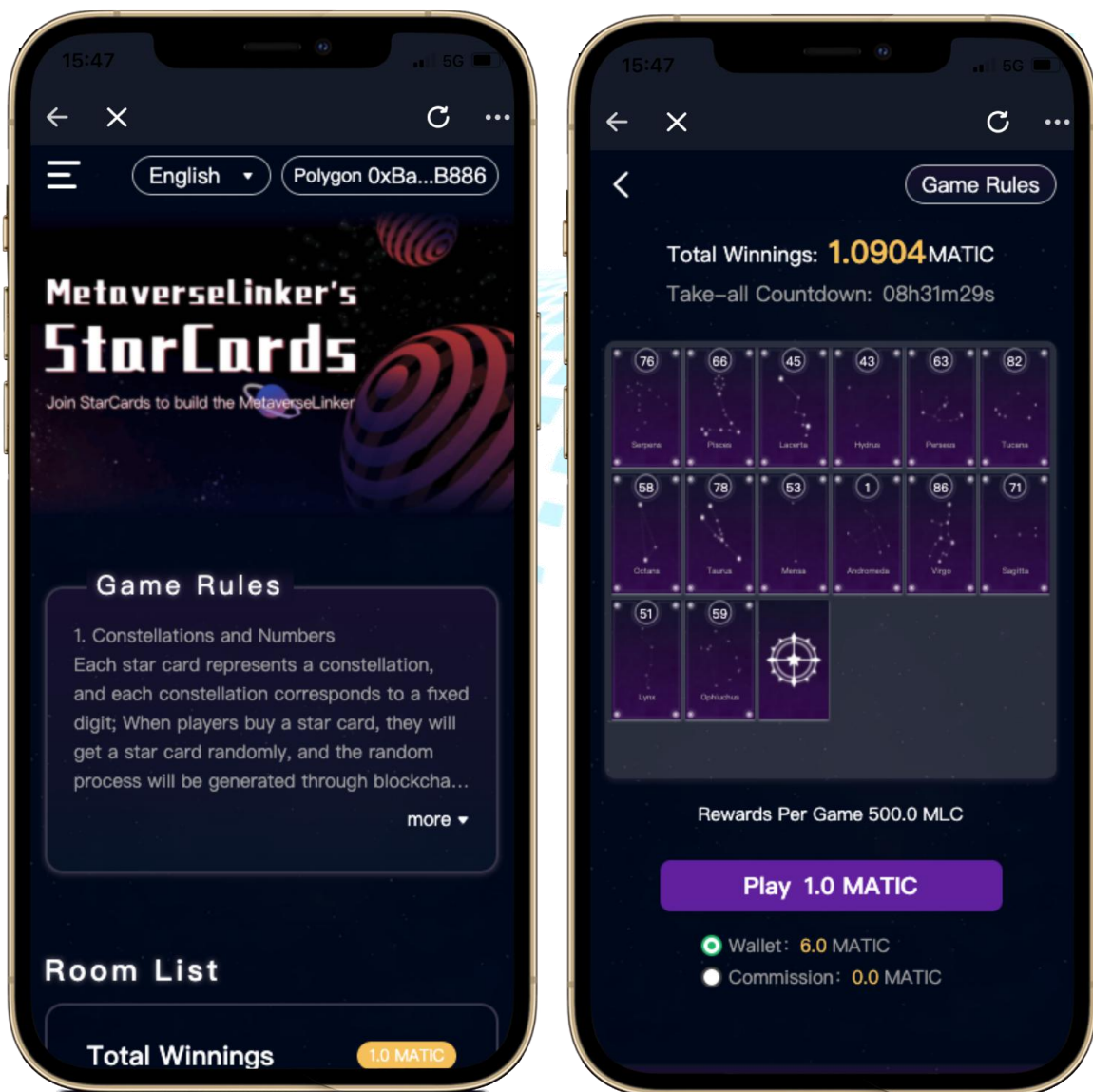
Open the board (2022/4): The board of directors will allocate the funds of the total prize pool, such as dividends, MLC repurchase, burning rewards, etc.. When the funds of the board of directors reach the community disposable threshold, the board of directors will be opened, and the funds will be used in accordance with the established ratio and according to the rules, which is higher than the donation price to repurchase part of the MLC.

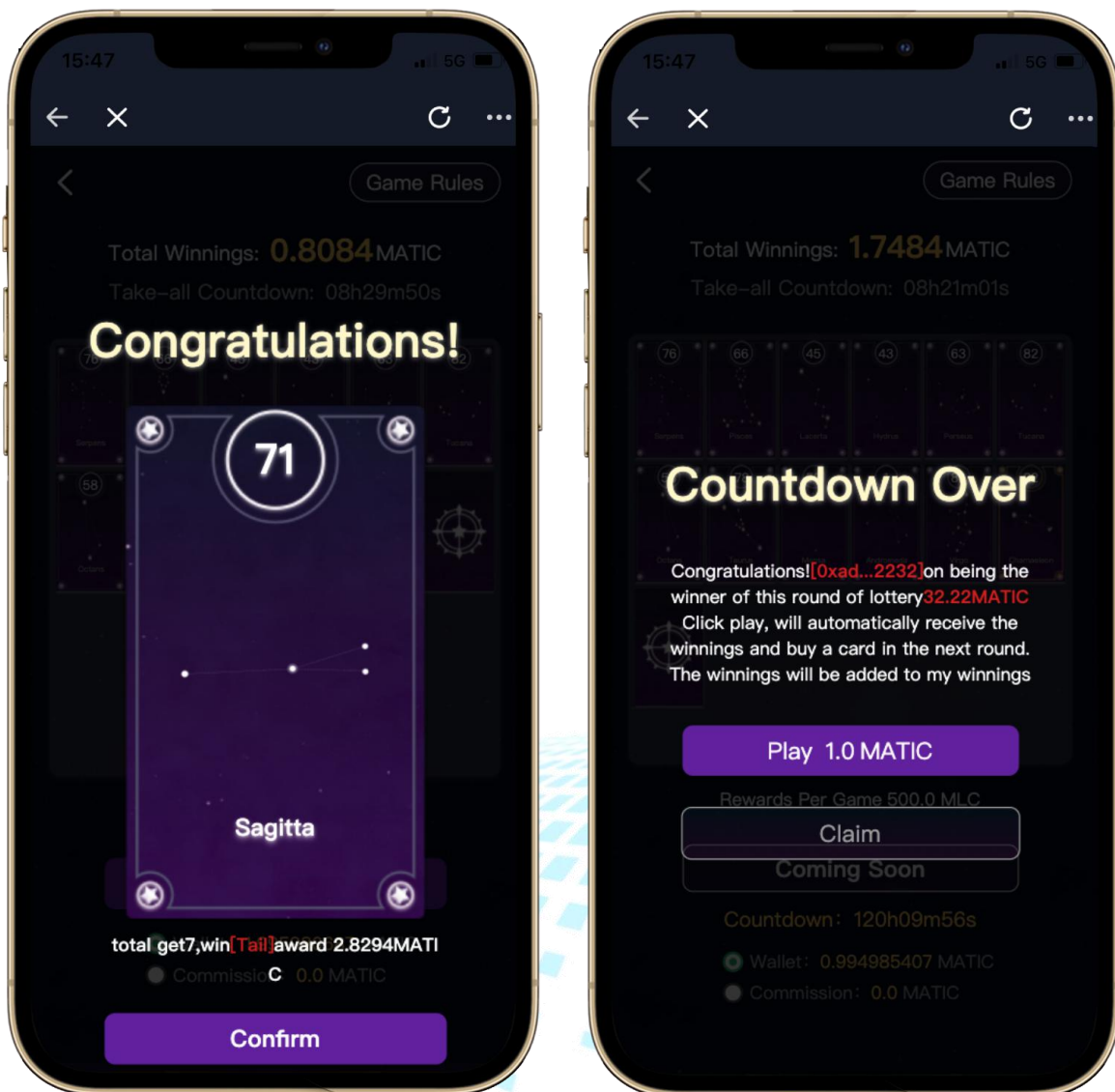
Dao Online (2022/5) : The control of the project is handed over to the community and executed by the code. Future board fund distribution, mining pool output distribution, and ecological rewards will be carried out through voting by MLC token holders.

Open ecology (2022/6) : Open the entire ecosystem and provide a variety of functional suites, which can make it more convenient for developers of external meta-universe link applications (such as games) to develop meta-universe link applications (such as games). At the same time, obtain platform traffic and provide ecological fund support for high-quality projects. Launching the meta-universe link applications (such as

games) in the lobby while simultaneously launching multiple meta-universe link applications (such as games), and developing meta-universe link applications (such as games) NFT and peripheral products.

9. Application examples in metaverlinker 《ML's StarCards》





Application instance name in Metaverlingker: ML's StarCards

"ML's StarCards" game steps:

① Purchase constellation cards by paying tokens. The constellation cards will be generated in 88 constellations through a credible random process. After purchase, place it on the desktop to form a queue with the previous constellation card, If the same constellation card is already in the queue when

placed, the holder of the starcards of the same constellation will get the bonus corresponding to all the starcards between the two starcards, the former gets 30%, the latter gets 70%.

② After the start, after the last person has issued the card, no one has issued the card again for a period of time (for example, 6 hours). The last person will get all the constellation star card rewards in the room and the game ends.

③ Users who purchase the first 8 constellation cards in each round of the game will receive a discount.

④ The purchase of constellation card requires payment of a certain amount of service fee, and the service fee will enter the total prize pool of the platform for ecological governance.

"MLs Star Cards" technical points:

① Games are developed using smart contracts on the blockchain and the code is publicly available. Guarantee the fairness, justice and openness of the game.

② Trustworthy, randomly generated: The actual application value of the game rules after they are on the chain is closely related to whether the random process can be realized on the chain. Through research, it is found that a complete random process on the chain needs to solve a key problem: The rules of the random process on the chain are described by the smart

contract. The process of the contract is public. If a random result that cannot be estimated by a third party needs to be generated, the "noise" of the node is required to participate in the input of this process when the contract is running, but different nodes The "noise" cannot be the same, that is, other nodes cannot verify whether the result of this random process is correct by running the contract again, which ultimately leads to the inability to complete the consensus.

Solution:

One or several random data pools are maintained in the dynamic data area of the blockchain. The block producer encapsulates the results of the random process in the encrypted data segment of the block, and the code of the encryption process is released in a closed source and undisclosed form. At this time, all nodes will have the same random data pool. The data structure of the random data pool is in the form of a pipeline, with the encapsulation of the read end and the write end, and only allows access by the read and write end that meets the rules, and has a first-in first-out characteristic.

Because the transaction processing of all nodes of the blockchain is consistent, users can read from the random data pool when applying for random process results. Under the

random process generation and distribution mechanism, the security of the process and the result can meet the security requirements of the blockchain network for the random process.

Any access (read, write) behavior will cause the random data pool to change and cannot be restored; the behavior of writing random data is completed by the dynamic encryption function library, and the function library is closed and not publicized. The producer of random data cannot know where the results of this random process are placed in the random data pool and who will use this random process.

10.summary

The launching team of MetaverseLinker are all senior Israeli blockchain R&D programmers. Have the complete skills, knowledge and industry experience required for the project (blockchain technology development, engine and IDE, developer community operation, blockchain application production and distribution, entertainment community operation, financial market mechanism, asset pricing, and multinational enterprise operations).The core sponsor of the project has entrepreneurial experience in two business cycles. Has a wide range of business networks and visibility in the fields of global information

technology entrepreneurship and meta-universe link applications (such as games), and has the decision-making power, execution experience and industry resources to establish an ecological platform.

We believe that digital assets are the most in line with the nature of the blockchain economy and have broad development prospects. As a huge market, meta-universe link applications (such as games) are the first step in the large-scale application of blockchain. To help developers produce assets in a blockchain environment on a large scale, we launched a platform for application development and digital asset management and trading. The platform supports the creation of large-scale digital content, the integration of blockchain mechanisms, and the necessary components for the assetization, management and circulation of digital content. Through prototype verification, we have initially realized the public chain infrastructure linking Meta Universe, making the complete process of DAPP development, digital asset creation, release, chaining, and transaction simpler, faster and more efficient.