M-Tatrix

WHITE PAPER

WHITE PAPER V1. 0

Redefining the way of computing power
New mining revenue model

High cost performance

Safe and transparent

M-Tatrix

Worry-free mining

Multiple benefits

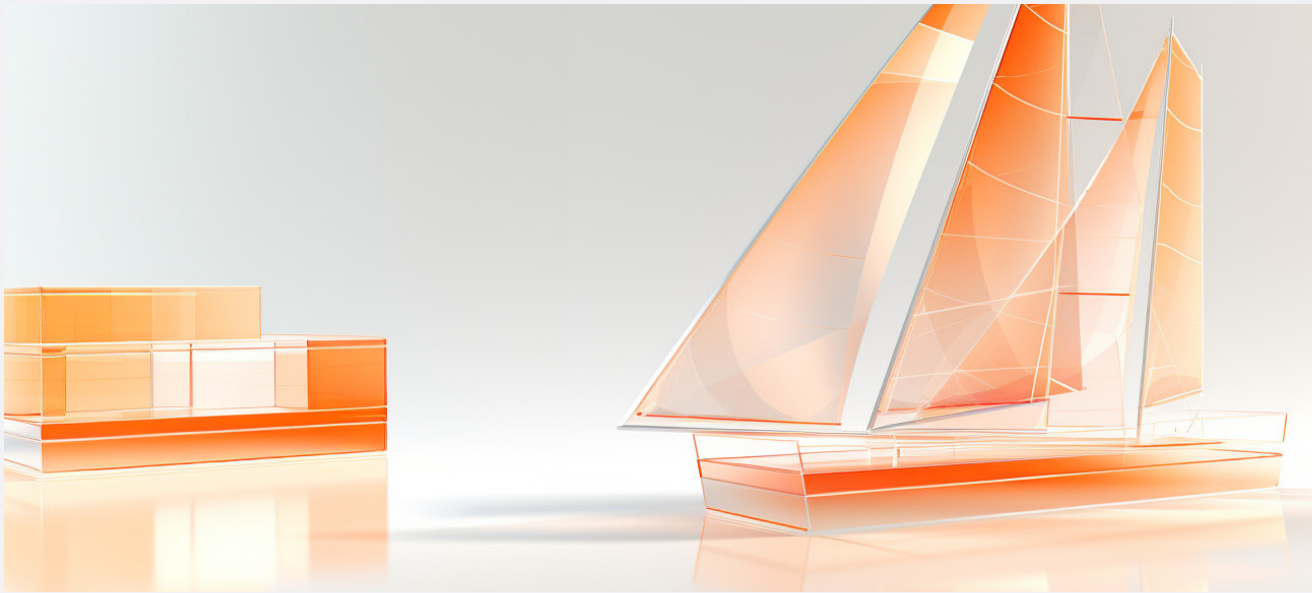
Create a one-click computing power leasing mining system Opening a new road to wealth in the I PFS era

In 2009, Satoshi Nakamoto published the Bitcoin white paper , ushering in an era of trustless electronic cash based on the Internet . However, due to the processing power of the Bitcoin network , Bitcoin has deviated from the original vision of electronic cash and has been pushed to the status of electronic gold by the wheel of history. Ethereum has given more flexibility and programmability to transfers and transactions based on the idea of Bitcoin , and introduced the concept of smart contract virtual machines. By providing more powerful processing power different from scripting languages , Ethereum has achieved vigorous development, but it still faces huge development constraints .

Whether it is Bitcoin or Ethereum, in essence, both achieve consistency in computing and data in a peer-to-peer network. Due to the extreme scarcity of resources on the chain , the Bitcoin network can only process transactions of Bitcoin itself, and the Ethereum network can only process transactions of Ethereum itself and various Ethereum token symbols and limited logic. In a sense, you can regard the existing blockchain network as an extremely closed network. Whether it is Bitcoin or Ethereum, the full- node hardware devices they rely on have huge limitations, which inevitably restrict the processing capacity of the Ethereum network. If you regard Ethereum as a micro cloud, then it is a cloud service with global consistency but very limited processing capacity.

IPFS is the first to break the barrier between the blockchain world and the physical world. Through time and space proof, it links a large number of high-end servers and hardware resources, and also breaks the internal cycle of the blockchain world. M-Tatrix will provide computing power mining incentives based on IPFS . Unlike IPFS, which only encourages everyone to build distributed storage infrastructure, M-Tatrix will be committed to building distributed storage, verifiable computing and measurable bandwidth infrastructure at the same time, and is committed to serving all blockchain projects in the future. For example, a large number of Ethereum Rollup proofs in the future can be verified on M-Tatrix . M-Tatrix will provide computing power services in the IPFS field, but it is not limited to the investment in mining machines. It also serves as an ecological service provider in blockchain, wallets, information websites, and node construction.

CATALOG



01. Project Background

Cloud Storage Overview

As a fast, efficient and low-cost storage deployment method, cloud storage has always been regarded as the mainstream storage model for coping with the massive growth of data in the future digital economy era, and has gradually been recognized and accepted by users. In 2017, the number of registered cloud storage users reached 1.3 billion ; the size of the cloud storage market is also showing a rapid growth trend.

The market size of hundreds of billions is also sought after by major domestic manufacturers, and the competition in the cloud storage market is unprecedentedly fierce. However, since 2016, there has been a wave of closures of major cloud storage network disks . The user storage threshold is low , the review mechanism is imperfect, and a large amount of illegal content involving vulgarity, pornography, violence, etc. is widely spread through network disks. The cloud platforms are unwilling to bear the crime of spreading bad content and shut down their cloud storage businesses.

High service prices **Limited service content** **Data security and privacy**

The user's choice space is compressed, and some excellent content worth sharing is also implicated and cannot be shared. This, to a certain extent, goes against the original intention of cloud storage and also provides opportunities for the development of distributed encrypted storage.

Introduction to I PFS

IPFS (InterPlanetary File System) is a global, peer-to-peer distributed hypermedia file system that aims to connect all computing devices with the same file system. It uses content-based addresses instead of domain-based addresses, which means that users are not looking for a certain place but for content stored in a certain place. They do not need to verify the identity of the sender, but only the hash of the content. This makes web pages faster, safer, more robust, and more durable.

The existing Internet is a centralized network that uses the HTTP protocol, which is extremely dependent on central nodes in terms of access, storage, security, and privacy. IPFS can help the World Wide Web achieve decentralization .

Web addressing Access efficiency Data storage There will be changes in aspects such as privacy -preserving data transactions.

In addition, its role in network security, data network "over-redundancy" and privacy protection will become increasingly significant. It can be said that IPFS has upgraded the Web to a higher level and is a trend in the future development of the Internet with a promising future.

Introduction to Filecoin

Filecoin is an incentive layer on top of IPFS , a combination of IPFS and blockchain.

On October 15, 2020 , the Filecoin mainnet was highly activated at 148888 , announcing the official launch of the most anticipated decentralized storage network in the industry .

Filecoin proposed a storage proof mechanism through a series of technical innovations such as Proof of Replication (PoRep) and Proof of Spacetime (PoST).

Based on this technology, Filecoin has attracted a large number of miners with high-end servers to join the network through a set of economic incentive mechanisms , and to a certain extent has integrated a large amount **of high-performance computing, storage and bandwidth resources .**

The core concept behind the Filecoin protocol provides an important reference for the future development direction of blockchain + Internet infrastructure and is a milestone innovation in the industry .

Filecoin Pain Points

However , behind the innovation of the Filecoin protocol, the Filecoin project still has some regrets in its implementation, which may hinder the further development of this new decentralized storage network :

●The distribution and release rules of FIL tokens are not friendly to miners . At the beginning of the mainnet launch, miners can only buy FIL tokens from the market at a high price to continue to maintain mining expenses. Therefore, there is a large-scale "shutdown" of miners as soon as the mainnet is launched . This is obviously not conducive to the long-term incentives for infrastructure providers (i.e. miners) ; except for miners , other participants in the ecosystem have not received sufficient incentives and are not willing to participate in maintaining network development ;

●The threshold for participating in Filecoin mining is high . You need to have a large number of pre-collateralized tokens and purchase mining machines with AMD high-end processors. These have hindered the participation of more small miners and a large number of Intel mining machines .

●Filecoin network itself result in limited actual on-chain processing capacity (TPS) . When the network is congested, it is even unable to process proof of effective storage on the chain, and it is also unable to conduct normal transfers. This greatly limits the further expansion of the Filecoin network .

●officially launched by Filecoin still has a lot of room for improvement in packaging efficiency . In a sense, this is a waste of real-world storage, computing, and bandwidth resources, and cannot achieve efficient use of resources .

Therefore, Filecoin still has a long way to go before it can truly become a usable decentralized storage infrastructure . On the other hand, storage is only a part of the Internet infrastructure . In the future, the distributed Internet will need a more complete set of incentive protocols to encourage miners to contribute more resources including storage , computing, and bandwidth.

02 .Project Vision

M-Tatrix Project Vision

M-Tatrix hopes to become the infrastructure of Web3 (the future Internet) , build a distributed storage, computing and bandwidth incentive network based on the IPFS protocol , integrate Internet infrastructure resources around the world , and achieve optimal utilization of resources .

M-Tatrix will implement a more reasonable distributed storage incentive mechanism, and will gradually evolve from distributed storage to the incentive layer of the distributed Internet , achieving more refined incentives and optimizing the use of computing , bandwidth and storage resources . The advantages of M-Tatrix are mainly reflected in:

- Lower mining threshold, eliminating the SHA256 algorithm's dependence on AMD mining machines, and encouraging more miners to contribute network infrastructure resources to the entire network ;
- High cost-effectiveness, free power supply for mining machines, low mining cost and short payback period ;
- Worry-free mining, technical support from a professional operation and maintenance team , and strong stability ;
- Safe and transparent, 100% real computing power is monitored 24 hours a day in real time, and the on-chain data is publicly available ;
- Multiple benefits, permanent mining benefits , shared computing power rewards + airdrop rewards ;

High data availability , which can be used to store "hot data" and "warm data", and users can quickly read the stored data ;

- A decentralized governance mechanism with multi-party participation , adopting a community-based development and management model, where developers, miners , and other participants in the ecosystem will jointly determine the direction of network development ;
- Reasonable token distribution. The vast majority of tokens will be produced by mining. At the same time, refined long-term incentives will be provided to all participants in the ecosystem to ensure the long-term healthy development of the ecosystem.
- M-Tatrix will inherit the effective storage of the Filecoin mainnet and encourage miners to jointly maintain the M-Tatrix network.

03. Technological improvement and innovation

Technical improvements and innovations of M-Tatrix

the first step in a distributed Internet incentive network based on the IPFS protocol , M-Tatrix proposes a number of technical improvements and innovations.

New hash algorithm

M-Tatrix aims to become the incentive layer for future Internet infrastructure , which will inevitably require incentivizing more diverse hardware to join the network .

Therefore, it is necessary to ensure that the mining performance of x86 -based mining machines is at the same level while ensuring security and encourage diversity .

Currently, M-Tatrix is verifying hash algorithms including SHA512 , Poseidon , Pederson and Blake2s. M-Tatrix will evaluate the security and actual performance of these hash algorithms on different platforms and select the most suitable algorithm to support Intel mining machines or other high-performance mining machines.

Recursive zero-knowledge proof technology

Proof of Replication (PoRep) is an important part of Filecoin's storage proof. Combined with zero-knowledge proof, PoRep can quantify storage resources and generate corresponding proofs on the chain. In Filecoin's PoRep proof mechanism , every time a miner encapsulates a sector, they need to submit two proofs to the network. The corresponding messages are PreCommitSector and ProveCommitSector.

In fact, in the existing Filecoin network, most of the on-chain messages are submitting these two types of proofs. However, the on-chain message processing capacity (TPS) of the Filecoin network is very limited. When the network is congested, a large number of proof messages will occupy most of the on-chain resources, and ordinary messages will not be packaged. This also leads to the " selfish mining" behavior of large miners , and the proof messages of small miners are basically unable to be put on the chain.

M-Tatrix proposed a recursive zero-knowledge proof (Recursive ZK-SNARK) technology to solve the above-mentioned TPS bottleneck problem and the problem of message on-chain.

The basic principle of Recursive ZK-SNARK is to conduct off-chain proofs of several sectors generated by miners within a certain period of time , form a Merkle tree, and generate an aggregated proof. In the end, only one proof needs to be submitted to the network to complete the process of on-chain proofs of multiple sectors at the same time . In this way , the proof messages that each miner needs to submit will be significantly reduced, thereby improving TPS and achieving network expansion. In addition, by adjusting the degree of proof aggregation, the message processing capacity of the network can also be adjusted to meet the needs of different development stages of the future M-Tatrix network.

WindowPoST + VRF mechanism

After completing PoRep, miners need to provide proof of spacetime (PoST) to prove that the data is continuously stored. Each sector encapsulated by miners in Filecoin will be spot-checked every day, and miners need to submit WindowPoST proof correctly, otherwise their pledged FIL will be confiscated. For miners with large storage capacity , the number of proofs submitted every day is very large , and with the further development of the network, more and more WindowPoST will need to be submitted in the network , which may eventually cause network congestion and reduce the network's ability to process ordinary messages .

M-Tatrix introduces a random check mechanism into the WindowPoST check mechanism , which greatly reduces the frequency of each miner submitting WindowPoST proofs , and does not need to submit multiple proofs of computing power every day . Ordinary random check functions may be predicted, thus affecting the security of the network, because if miners can determine the time when they are checked, there is a possibility of cheating .

M-Tatrix uses a Verifiable Random Function (VRF) to further improve the security of random checks.

Efficient mining software

M-Tatrix will also optimize the existing open source mining software to comprehensively improve the mining efficiency of mining machines and maximize the use of mining machine computing resources and storage resources. The optimization is mainly focused on the task scheduling module and the zero-knowledge proof module .

●Task scheduling optimization Under the same hardware and software conditions, different task scheduling strategies will directly affect the packaging efficiency of the mining machine. Filecoin 's current mining software has many defects in task scheduling, which greatly affects the growth of the network's effective storage. M-Tatrix will release mining software with task scheduling optimization to improve the mining efficiency of the mining machine.

●Zero-knowledge proof optimization In Filecoin, both PoRep and PoST use a large number of zero-knowledge proof algorithms , but there is still a lot of room for optimization in the generation process of zero-knowledge proofs . M-Tatrix 's mining software will greatly optimize the efficiency of zero-knowledge proof generation and release it to all miners .

Combining the above two optimizations, M-Tatrix 's full-network mining efficiency will be significantly improved compared to the existing Filecoin network, which means that with the same hardware investment, M-Tatrix will gradually become the largest distributed storage network.

Decentralized governance mechanism

The M-Tatrix development team is responsible for maintaining the M-Tatrix project, but the development and management of the entire project will adopt a community model. In the M-Tatrix community, anyone can submit code, and they are required to submit complete test code. All newly submitted codes will be merged into the test network after being fully tested, and will be launched on the main network after running stably for a period of time, so as to ensure the security and stability of the main network.

The M-Tatrix project fully respects the opinions of all community participants in the ecosystem. The development and launch of each new feature must be decided by voting by community members.

Developers, miners and ordinary users in the M-Tatrix ecosystem can participate in voting and jointly decide the development direction of the network.

04. Release plan

M-Tatrix—Release plan

MTX token, whose full English name is M-Tatrix and Chinese name is Temas , is a tradable encrypted digital equity certificate . MTX is issued through the parallel chain technology of the Three-Body public chain T coin , and users can obtain it through purchase or mining.

Total Issue **21 , 000 , 000**

1 million original mother coins and 20 million coins are jointly produced through pledge mining
MTX block generation time : 10 seconds
MTX released per block : 1.5 (reduced by 5% every 90 days)
MTX released every day : 12960

Among them, 10% of the block output will be used as the maintenance fee of the mining pool and parachain technology , and 10% will be used as the mining pool incentive pool to reward the top 30 communities with the largest weekly destruction increments.

Users who use the MTX computing power platform need to consume 15 MTX activation accounts worth 15U .

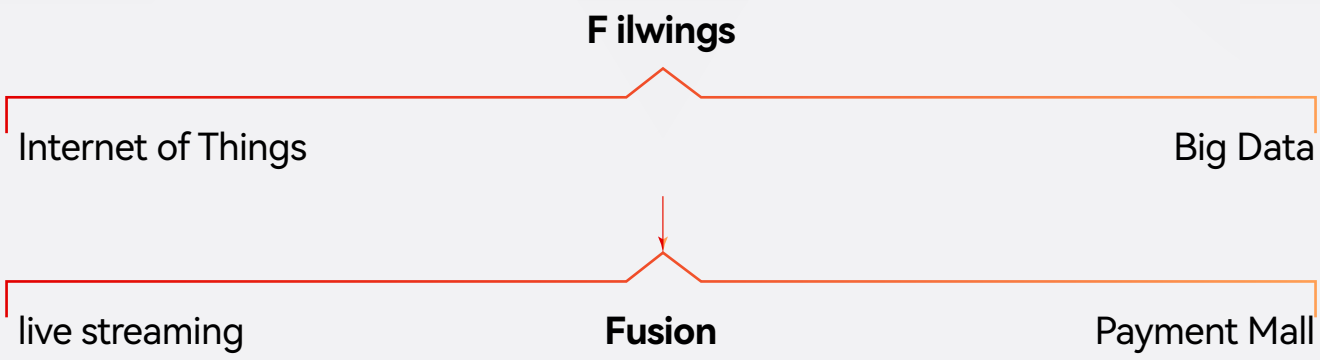
05. Ecological Application

M-Tatrix Ecological Application

M-Tatrix has set its sights on the new infrastructure that has been greatly supported by the national government in recent years. IPFS distributed storage can be perfectly integrated with the Internet of Things, big data and 5G , greatly alleviating the problems of data storage and data security, thereby creating a variety of landing ecosystems such as live broadcasting and shopping malls .

F ilwings Ecology Mall | Payment | Distributed Storage | I PFS Interstellar Lab DeFi Live

Through the combination of IPFS 's distributed storage with 5G and big data, M-Tatrix can build an efficient and fault-tolerant underlying network to derive an ecosystem of payment, live broadcast, and shopping malls, providing more possibilities for payment, live broadcast, and shopping malls. It will form an efficient, secure, and stable digital network, promote the integration of IPFS and life, bring more value to society, and provide M-Tatrix with a stable monetization channel to promote the future development of IPFS .



Self-operated mine

We have built our own mining farms in Shenzhen, Shanghai, Chengdu and other regions, with more than 100,000 mining machines. Some of the mining farms use nuclear power, which has a great advantage in electricity costs.

DeFi

M-Tatrix is an open, fair, transparent and low-threshold IPFS cloud computing platform that provides services such as mining pool construction, mining pool operation, storage resource accumulation, and storage resource leasing.

After joining the Defi ecosystem, it is also a decentralized financial aggregator in the IPFS field. As a derivative currency in the Defi sector of M-Tatrix , MTX gives full play to the decentralized financial aggregation function, links the IPFS ecosystem and investors, and helps investors maximize their capital benefits while enriching the IPFS ecosystem.

I DC Cluster Mining

- Scale effect advantage, lower cost
- Flexible configuration of storage space to maximize computing resources and speed up computing deployment
- The stable power and network resources in the computer room guarantee mining income and storage services
- Cluster management, algorithm optimization, one-click upgrade
- Professional operation and maintenance management to reduce hardware loss

Summarize

the core innovation of Filecoin , M-Tatrix has realized a better distributed storage network incentive layer :
By canceling the pre-mortgage and adopting new hash functions , the threshold for miners to participate in mining has been comprehensively lowered ; combined with recursive zero-knowledge proof , PoST+VRF and other technical innovations , the TPS and message on-chain problems have been solved, greatly improving the scalability of the M-Tatrix network . The optimization of mining software has significantly improved mining efficiency and improved the utilization efficiency of hardware resources in the network .

M-Tatrix adopts fairer token distribution rules and decentralized community governance, which greatly improves the fairness of the protocol, contributes to the long-term development of the project , and ultimately realizes a distributed storage, computing and bandwidth incentive network based on the IPFS protocol , becoming an important part of the future Web3 infrastructure.

Unlike Filecoin, which only encourages people to provide distributed storage, M-Tatrix will encourage people to provide verifiable computing and measurable bandwidth resources based on distributed storage , and ultimately form a huge difference with Filecoin . We believe that with the overall development of the blockchain industry and the ecological development of M-Tatrix , a world of distributed Internet is slowly unfolding before our eyes .

07. Legal structure and risk warning

Legal Structure

MTX will not conduct any public or private fundraising through the sale of tokens. MTX is used as a virtual commodity with practical uses, not a security, nor a speculative investment tool.

The tokens held by the MTX Foundation will be used mainly by the Foundation for technology development, community building, marketing, operations, financial auditing and other purposes.

MTX may still be questioned or supervised by competent authorities in different countries. In order to meet and comply with local laws and regulations, MTX may only provide normal services in certain areas or at certain times.

Risk Warning

Regulatory risks : Blockchain technology and related operational activities are still in the early stages, and there are no clear laws and regulations in China and internationally to provide clear compliance regulations for settings, information disclosure, and transactions. In addition, relevant national departments are still in a wait-and-see stage and have not reached a final clear conclusion. Changes in the international environment and adjustments in national policies may have an impact on the value and liquidity of MTX .

Risk of brain drain: The MTX project is ready to attract more human resources , senior technical and market talents to join. They also have confidence and commitment, and put in their efforts and labor for this. However, in the future development, it is inevitable that core management or technical personnel will choose to leave. We respect the personal choices of team members, but we also need to emphasize that this may have a negative impact on the development of the project.

Risk of hacker attacks: During the development and operation of MTX , it is possible that it will be subject to malicious attacks from hackers, competitors, etc. The means, methods and timing of their attacks are difficult to predict, which may cause losses to investors.

Uninsured loss risk: Accounts on the chain are different from bank or financial institution accounts that investors are familiar with. Accounts on M-Tatrix are not insured. In any possible risk situation, no institution or individual will insure or guarantee the investor's losses.

Unknown risks: In addition to the risks mentioned in the white paper, there are other risks that the founding team has not yet anticipated or mentioned. These risks may suddenly break out, and the risks mentioned above may break out in combination. We hope that all participants can fully understand the project situation so as to make rational investment decisions.

Disclaimer

This document is for information transfer purposes only. The content of the document is for reference only and does not constitute any advice, instigation or invitation to trade stocks or securities of companies related to the MTX project. This document does not constitute or be understood as providing any buying and selling behavior, nor is it any form of contract or commitment.

In view of unpredictable circumstances, the goals listed in this white paper may change. Although the project team will try its best to achieve the project goals, investors who purchase MTX in the secondary market must bear their own risks. Some documents in this white paper may be adjusted with the market environment and technological development. If the above situation occurs, the management team will publicize it through a new version of the white paper.

M-Tatrix explicitly states that it will not be responsible for any direct or indirect losses caused by participants, including :

Depends on the content of the document

This article contains errors, omissions or inaccuracies

Any actions resulting from this article

The project team will strive to achieve the project goals listed in the white paper, but due to the existence of force majeure, the team cannot and will not make a commitment to fully achieve them.

MTX token is an incentive tool to achieve project effectiveness, not a legal item or investment product. MTX is not a form of ownership or control. Controlling MTX does not mean control over the ecosystem, system or data. M-Tatrix does not grant any individual or team the power to control and influence decision-making over the ecosystem, community, system, etc.