The Free Trail Whitepaper

1. Project Summary

At present, a new round of scientific and technological revolution and industrial transformation swept the world. As a subversive technology, blockchain is leading a new round of global technological revolution, and is expected to become the "source of global technological innovation and model innovation", and promote the transformation of information interconnection to value network. The trend of blockchain technology is irreversible. The introduction of JPMorgan Chase Bank, the special study of blockchain technology by the Political Bureau of the Central Committee, the pilot project of digital currency launched by the central bank in dozens of cities, together with the loose Technical Supervision, have enhanced the confidence of global blockchain practitioners and entrepreneurs.

The decentralized trust feature of blockchain is applicable to almost all application scenarios. Since 2018, with the increasing popularity of blockchain, the industry is more urgent to reform the blockchain. In order to reduce redundant construction, improve efficiency and enhance scalability, the

concept of industry public chain was born.

The public chain integrates the advantages of virtual asset issuance, circulation, supporting account system, "world state" state machine, intelligent contract advanced programming, etc., hoping to provide the underlying support for industry applications to issue currency with one key and fast chain reform.

Since the release of the white paper on bitcoin in 2008, Nakamoto defined bitcoin as a peer-to-peer e-cash system initiated by one party and received by the other party, without relying on any financial institutions in the middle. There has been a boom in the application of peer-to-peer e-cash in the world.

In 2013, Ethereum, founded by vitalik buterin, added Turing complete contract on the basis of bitcoin point-to-point e-cash system, making the point-to-point digital currency programmable and defining state process, and proposed the concept of DAPP.

From 2013 to 2014, digital currency exchanges and stable currencies anchored with French currency began to appear, and the value storage and trading properties of digital currency were recognized. Since 2017, the third generation public chains

around the world have improved the consensus mechanism TPS for 3000 times, and initiated on chain governance, which makes the problems such as hard bifurcation, hacker attack and node evil that are disturbing the encryption world not only through technology At the same time, the way of operation also depends on the way of sociology and economics.

But so far, digital currency has not replaced the centralized e-cash system, and even the largest peer-to-peer e-cash system application in the digital currency industry: transaction and lending, are adopting centralized system, and only a few businesses in the world support bitcoin payment.

The reasons are as follows:

First, the TPS of the whole digital currency industry is too low. Although the peak value of TPS of the third generation public chains exceeds 3000 and the Turing complete contract is loaded, the development of consensus on currency attribute is difficult. 80% of the consensus on digital currency is attributed to bitcoin, Ethereum, letcoin and other low performance or old-fashioned digital currencies without Turing. Therefore, even in the field of retail payment, peer-to-peer electronic payment has really fallen There are also huge obstacles.

Second, the consensus foundation of peer-to-peer e-cash system is still weak, which leads to the slow development of application. Although the global digital currency users are growing nonlinearly, it is reported that more than 50 million users have been developed in the past decade, but compared with the users of centralized e-cash system, it is facing a long waiting period for maturity. At the same time, the blockchain industry attaches great importance to computational power incentives, but not to community consensus expansion incentives and application development incentives, which also affects the popularity and promotion of the whole point-to-point e-cash payment system.

TFT free trail is a new generation of free application chain in the world. It is the first to create a free application chain technology architecture that enables all business scenarios. It integrates and connects the assets between various public chains and alliance chains, and enables all on chain ecology in an all-round way. It has become the world's largest block chain business landing ecology, and the bidirectional unity of behavior contribution consensus verification and asset value consensus verification is created "100 scenes - million traffic - 10 billion value".

The free trail is a point-to-point financial circulation and asset appreciation system beyond BTC, It is committed to becoming a financial payment gateway beyond BTC ecology. Through TFT, BTC can be subject to the difficulties of landing application payment and multi scene payment circulation under the constraints of centralized exchange and some regional supervision. In terms of community governance, the maximized community benefits of TFT are shared with TFT nodes and TFT miners. BTC has been led by bitcoincore technology team, Gradually lost the spirit of freedom, innovation and sharing, and TFT is to lead the vast community to regain freedom, embark on the road of freedom, and realize the real freedom of assets and wealth. TFT will connect bitcoin, Ethereum and other cryptocurrencies with strong consensus at the present stage, stable currencies anchored by the value of real-world fiat currencies, and high-performance infrastructure of emerging public chain cross chain system.

BTC and eth are a generation of public chain systems with broad consensus in the field of digital currency, and they are also important technology integration assets of TFT. TFT will play the role of the first "free way financial payment system" in BTC and eth ecology through technical agreements and scenario

payment capacity. In the first phase, it is planned to access 1000 entity payment scenarios in Asia Pacific region and North America region through TFT, including le Tiantian, Gucci, LV and other shopping malls and high-end luxury industry scenarios are the first to truly implement the TFT application payment and circulation scenarios, and share the profits with TFT nodes and miners.

TFT freedom road is committed to the realization of a cash system that can replace the centralized technology mechanism across the whole encryption world. As the first point-to-point application financial system innovated in BTC and eth ecology, it can share the interoperability infrastructure of the whole encryption world without permission public chain.

2.Background

2.1 Design Overview

Based on the blockchain technology and the design principle of decentralized anonymity, a "private Internet" is constructed on the distributed nodes for all the public to use. On this basis, through precise and rigorous product design, TFT will run the initial function in the application of cryptocurrency wallet, achieve a friendly user experience, form a perfect decentralized financial and commercial ecology, and finally

build a non centralized consensus social ecological future currency network.

TFT originated from point-to-point cash system, and will gradually extend a variety of functions, including nuclear magnetic resonance trading, trust network, competition system, information network broadcast, encrypted secret chat, anonymous transaction, smart contract, distributed OTC transaction, super master node, super miner, lucky draw and unique smart contract design chain payment contract. All these functions echo, circulate and balance each other, forming a strong internal structure of TFT in the early stage. Its internal financial balance, community promotion, business docking, value precipitation and network expansion will subvert the concept behind the centralized business model.

Eventually, it will be a private Internet for use around the world. It supports the development of a separate web browser where each TFT address can be used as an anonymous IP address. In this open privacy network, all applications of the centralized Internet can be transplanted. Through the joint efforts of the community, to create a new, decentralized Internet free ecology.

In terms of operation strategy, TFT takes decentralized community win-win as the guiding principle, and motivates TFT users as the main force to start the project. Following the principle of decentralization, it maximizes the influence of the community team. This creates more space for the long-term development of TFT, and it is also a tribute to the historical

development of digital currency industry.

TFT Freedom Road advocates that the majority of participants in digital currency industry and blockchain industry re embrace the spirit of decentralization and embark on the road of freedom again. What TFT brings is not only a new cryptocurrency, but also a new blockchain product; what it brings is a completely decentralized financial network, a truly subversive business practice, and the reshaping of the Internet. It leads mankind to the door of freedom, is an immortal idea and indestructible thought.

With unparalleled financial logic, this is the difference from any cryptocurrency we've ever seen. It will become a truly decentralized global currency and bring real wealth freedom to the world. TFT points to the road, which is a road of ideological freedom and wealth freedom.

TFT hopes to make people realize the long-term significance of decentralized consensus, realize the precious of privacy and self-protection, promote the progress of human civilization by connecting the power of life, and face our unknown future and ourselves with sincerity and love.

2.2 Background Overview

Blockchain technology has achieved global application deployment, and all countries are paying close attention to the development of blockchain and planning the application of blockchain. Through almost barrier free value exchange,

blockchain technology will change the way we record and access certain types of data. Combined with IOT Internet of things and AI's ability to analyze massive data at high speed, it will produce a new and highly intelligent ecosystem. Thousands of AI start-ups around the world are getting ready to go. Compared with technology giants, the competitiveness of start-ups lies in the in-depth research, exploration and corresponding product development of artificial intelligence based on its own characteristics.

Thousands of AI start-ups around the world are getting ready to go. Compared with technology giants, the competitiveness of start-up enterprises lies in the subdivision of artificial intelligence, in-depth research, exploration and corresponding product development in combination with their own characteristics; as an innovative and subversive technology, blockchain can effectively empower entrepreneurial enterprises, and combining with human intelligence will produce a high-intensity collaborative effect, and has a huge prospect.

2.2.1 in the field of science and technology

From the century go war between alphago and Ke Jie, to the

official launch of driverless vehicles, the application of artificial intelligence gradually involves all aspects of daily life. Artificial intelligence "is a new technical science to research and develop theories, methods, technologies and application systems for simulating, extending and expanding human intelligence". As the core of artificial intelligence, intelligent chip has become the key field of layout of major technology giants. Intel, NVIDIA and other traditional chip giants join hands with Google, Microsoft, Qualcomm and other companies to occupy half of the smart chips.

From Siri of Apple mobile phone to "Little Ice" of Microsoft, speech recognition technology is widely used in medical, education, Internet, electronic information, office and other industries. It is worth mentioning that although there are high technical barriers to speech recognition, iFLYTEK has the world's leading Chinese speech recognition technology in view of the different languages used in different countries. With the development of image recognition technology and cloud computing, security system will also transform from passive defense to early warning intelligent defense. Intelligent public security management system, intelligent traffic management system and intelligent building management system

are developing in a more efficient, accurate and extensive direction.

According to the technology maturity curve released by Gartner in 2017, artificial intelligence will become the most disruptive technology in the next 10 years, and ubiquitous "Ai +" will become the mainstream. Thousands of AI start-ups around the world are getting ready to go. Compared with the technology giants, the competitiveness of start-up technology companies lies in the in-depth research, exploration and corresponding product development of artificial intelligence based on its own characteristics.

2.2.2 at the level of Industrial Development

An industrial revolution is taking off in various countries. The national strategic deployment represented by German industry 4.0, American advanced manufacturing, British industry 2050, etc., all point to industry 4.0.

Nowadays, the world has been in the state of post industrialization, and the problems of overcapacity, innovation and cost pressure are gradually increasing. In this form, we began to look forward to new industrial production models to solve the problems that have emerged, and industry

4.0 was born. In the era of "centralized production and flexible control", the centralized production mode and flexible production mode can be realized from the centralized production mode and the flexible production mode in the era of Internet. The connotation of industry 4.0 is to realize the intelligent analysis and decision-making of the production system through the wide application of Internet technology, real-time perception and monitoring of massive data generated in the production process. The production process has become more automatic, networked and intelligent, making intelligent production, network collaborative manufacturing and large-scale personalized customization become new production formats. To solve the original problems, avoid risks and improve safety, a new working mode and definition will make it more suitable for the development requirements. This is the industrial revolution and the revolution of production mode. In the future, human society will be more intelligent, and various industries will certainly apply advanced technologies such as artificial intelligence and blockchain. A large number of enterprises will face the transformation from automation to intelligence, which will bring huge economic growth momentum and innovation opportunities. In the future, a large number of

automation activities will be replaced by intelligent activities. The cost advantage is not only reflected in the human cost after the upgrading of production lines The reduction is more reflected in the reduction of production materials and operating costs caused by the integration of upstream and downstream digital deployment system and lean and customized production.

2.2.3 at the level of social public services

Blockchain technology is penetrating into the fields of social security, intellectual property rights and public administration, mainly focusing on four aspects: identity verification, legal authentication, information sharing and transparent governance. For the first time, the British government has released the 2016 distributed ledger Technology: beyond blockchain report, which explores the key applications of distributed ledger in government affairs. Subsequently, the United States established the "Congress blockchain core group". Russia, Singapore, Dubai and Japan all accelerated the social application of blockchain technology.

Under the influence of the basic concept of distributed consensus, the transparency and open source of blockchain

technology and social cooperation, public service has realized the overall transformation from data management process optimization to management idea, which helps to improve public participation, reduce social operation costs, improve the quality and efficiency of social management, and plays an important role in improving social management level and governance level. The changes brought about by the combination of artificial intelligence and blockchain technology will cover all application fields, including the traditional Internet, and will usher in significant changes.

2.3 Application of Pain Points

2.3.1 the cost of data acquisition is high, and it is easy to form data island chain

For Industry 4.0 in the future, it is not only necessary to intelligentize the data within the industry, but also to coordinate and cooperate with different industries in different regions of the industrial chain. Data is the basis of industrial cooperation. However, the current situation of the industry is that some powerful factories in the industrial chain have already realized the data, but most of the small and medium-sized factories have not. For small and medium-sized producers, to join industry 4.0, they must realize production

data and make them according to the enterprises they depend on. This is a high-risk and single function investment for small and medium-sized producers. It is useless to provide their own production data to the large enterprises they depend on. If the large enterprises cancel the cooperation with them, these data may be invalid. For small and medium-sized enterprises, transaction data collection cost is too high. Looking at most manufacturing enterprises, it systems and business departments are still operating independently. The IT systems of R & D, design, production, sales, marketing and other departments are not fully integrated, and the operation process is not integrated, which greatly increases the communication cost of enterprises and reduces the production efficiency. From the extension of the industrial chain, suppliers, enterprises, customers and consumers are still cutting each other In the split state, the supply and demand can not match well, and the terminal products are passively accepted, which brings great trouble to enterprises.

2.3.2 the credit investigation of relevant participants is becoming increasingly prominent

There is no unified platform for notarization in production capacity, personnel flow, technical capacity, business data,

goods circulation and product sales response in related industries, so it is difficult for enterprises to identify the credit rating of partners. It will undoubtedly take more time, money and energy to verify the credit of the partner. For small and medium-sized enterprises, while the hidden cost increases, it will also lose some opportunities to cooperate with large enterprises.

2.3.3 centralization of centralized platform

Centralized data platform brings great value to all walks of life, but it also has obvious disadvantages. There are obvious disadvantages in the centralized digital system

1) Data information of centralized data platform cannot be unified. Due to the difference of industry standards, enterprises in different regions and industries determine the corresponding data reference according to their own database, and the data information obtained from their own data platforms is also different. The lack of industry standards for platform data is one of the main obstacles to the rapid development of intelligent industry;

2) It is difficult to guarantee the privacy and security of transaction information. The biggest risk of centralized data platform is that once the platform is attacked by technology,

the information is tampered with or stolen, which can not guarantee the safety of users. Many kinds of data are important assets of enterprises. Once the information is leaked and improperly used, the consequences are unimaginable;

3) Centralized data platform is difficult to ensure the reliability and openness of data information sharing. Information flow can create and produce value, and the users may suffer economic losses after being tampered or stolen. The data source of centralized platform cannot guarantee its authenticity. In addition, the data openness and sharing of the centralized platform is not high, the timeliness of information is not strong, the data can not be circulated in time, once the timeliness is over, the value can not be created and the needs of participants can not be met.

2.4 financial development

2.4.1 financial technology 1.0 era:

It is the era of financial "finance" and "technology". The it and office technology are realized in the stage of it and office software. This is a wave of bottom-up driven data closure. Technological leadership cannot be reflected in business performance, which belongs to the stage of infrastructure construction. The 1.0 era is the stage of government led and capital support, and the main stage in China is from 1993 to

2013. In the industry, 1.0 is mainly concentrated in software service providers, hardware service providers, SMS, outbound calls, and traditional data industries.

2.4.2 fintech 2.0 era:

The age of fintech 2.0 is socialized financial technology. The emergence of fintech 2.0 mainly comes from the progress and reform of "cloud computing", "mobile Internet" and "big data". With the outbreak of mobile Internet, traditional financial institutions began to carry out the Internet. The combination of science and technology and finance has gone further, and the focus has gradually shifted from products to customers.

Taking banks as an example, banks output their payment ability and account capacity in the form of integrated API, which can be applied to various scenarios. Fintech 2.0 can be regarded as a wave dominated by licensed financial institutions.

At the same time, due to the emergence of cloud computing, the cost of financial entrepreneurship is also greatly reduced. Investment channels and fund-raising channels have been opened, and private finance is in an explosive posture. Various P2P, online lending, financial management, crowdfunding, tripartite payment, consumer finance and other financial products emerge in endlessly.

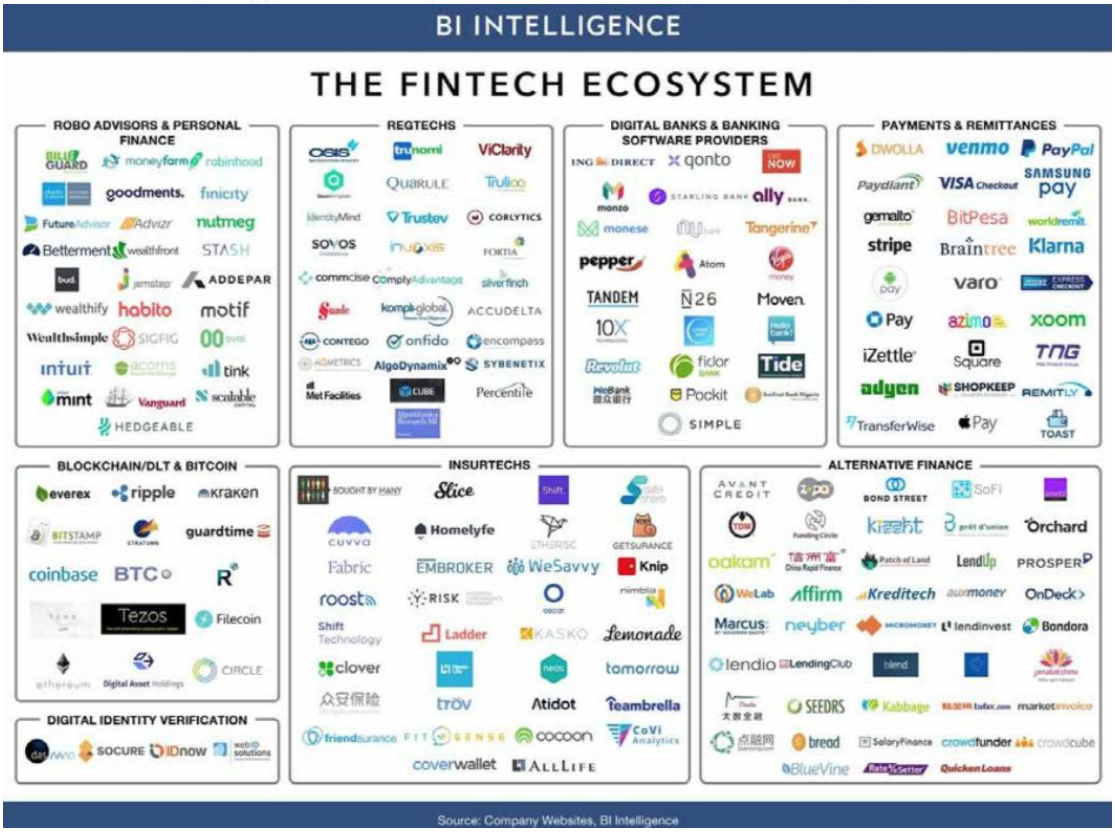
In terms of time, fintech 2.0 started in 2013 and peaked in 2016. In that year, the UK financial regulatory authority and EU regulators promoted the liberalization of banking regulatory policies.

In the industry, it can be roughly divided into risk control

modeling, three-party payment, big data risk control (blacklist, device anti fraud, live identification, location information), online arbitration, electronic signature, aggregated customer service system, cloud computing, network security, etc.

2.4.3 fintech 3.0 era:

Fintech 3.0 is called intelligent fintech. With the continuous expansion of financial technology and economic development, the state's supervision of the financial system is becoming stricter and more perfect, and the reform of the financial system is more urgent.



Starting from 2018, the boundary between fintech and financial services has been significantly blurred. In fact, under the

incentive of financial technology competition, every existing financial institution is looking inward and participating in innovation activities. As a result, existing companies are now actively investing in acquisitions and working with other fintech competitors.

In terms of science and technology, the improvement and development of Internet of things, artificial intelligence, 5g, fog computing, VR / AR and blockchain will reconstruct the entire financial system. As a kind of decentralized existence, blockchain will reduce the "trust crisis" and build a new type of social organization, including the intermediary of financial institutions.

At present, fintech 3.0 has achieved the fastest application landing in blockchain. JPMorgan has released its own blockchain technology and token jpmcoin, which represents that the opening of the b-end market has been opened, and the clearing system between banks will usher in changes.

2.5 financial pain points

2.5.1 market mechanism failure, monopoly and various risks caused by information asymmetry

Information asymmetry means that in the market economic activities, all kinds of personnel have different understanding of the relevant information; the personnel who have sufficient information are often in a more favorable position, while those with poor information are in a relatively unfavorable position.

The information asymmetry caused by the limitation of market information processing ability and the difference of information processing efficiency will lead to the failure of securities market mechanism.

It is shown in the following three aspects:

1. The failure of the formation mechanism of securities price means that there are non market factors involved in the formation of securities price, and there are also differences in investors' reactions to these factors.

2. The production process of price signal is not perfect and the information reflected by price is incomplete and inconsistent.

3. The inefficiency of financial market in reflecting market information leads to the decline of market efficiency and the failure of capital allocation function of financial market.

Information asymmetry will lead to the vulnerability of financial institutions, and then lead to adverse selection and moral risk. Stiglitz and Weiss's research shows that compared with the lender, the borrower has more information about the risk of the project he invests in, while the ultimate creditor and depositor do not know the purpose of the credit, As a result, adverse selection and moral hazard in the financial market arise.

2.5.2 low efficiency of resource allocation

The effective allocation of resources is the basic content of economic development. At the same time, capital is an important source and power to expand reproduction, and an indispensable

factor to promote economic growth. The contribution of capital to economic growth not only lies in the expansion of quantity, but also in the improvement of capital allocation efficiency which has a far-reaching impact on economic growth.

However, in contemporary society, due to the monopoly of financial market, information opacity, information asymmetry and other factors, the efficiency of asset allocation is low, resulting in Matthew effect, resources will be gathered to the head, while the long tail market is ignored, lack of resources filling, difficult to develop. Thus forming the head project, the project will attract a lot of capital, but the start-up project is difficult to get the attention of capital.

On the other hand, large amounts of funds are more likely to be trusted and absorbed by the head resources, while the vast majority of depositors' funds are difficult to be utilized due to the small volume of individual funds, resulting in idle assets and unable to obtain the growth of assets. According to the long tail theory, the capital base of small and medium-sized enterprises is very large. After these resources are collected, the volume is much larger than the capital of the head. Therefore, the effective allocation of such capital will produce unlimited economic growth.

2.5.3 inflation

Inflation refers to the devaluation of currency due to the fact that the money supply is greater than the actual demand, that is, the real purchasing power is greater than the output supply under the condition of currency circulation. When the amount

of money issued in the market exceeds the amount of money needed in circulation, paper money will depreciate, prices will rise, and purchasing power will decline.

Inflation is an important means for the bourgeoisie or the ruling class to strengthen the exploitation and plunder of the working people at the grass-roots level. Inflation is the first to bring serious disaster to workers and farmers. As a result, the real wages of workers have dropped sharply and their living standards have become increasingly poor.

To solve such problems, we can use blockchain technology to issue digital currency that will never be issued, and build a credible and decentralized financial system, so as to control the supply of market money and prevent asset devaluation.

The road of TFT freedom aims to solve the above-mentioned technological and financial problems through the advanced blockchain main chain technology and token financial circulation application model, promote the practical implementation of blockchain technology, promote the spirit of digital currency freedom, surpass BTC, and rebuild the eternal spirit.

3. Technical design

3.1 technical features

3.1.1 proof mechanism of npoc node contribution

The proof of npoc node contribution is a heterogeneous consensus algorithm jointly implemented by the node POS miner pow. The POS node completes the network initialization and the

initial block chain creation and the later POW mining voting. The pow mining machine creates subsequent blocks to maintain the blockchain network.

In order to realize community autonomy, the weight of contribution degree is allocated according to the amount of currency and workload. In addition, it can be improved with the existing developers. Through community voting to decide whether to implement or not, that is to gather group wisdom to make decision and implement.

To achieve: participatory, collaborative, cooperative, distributed, decentralized, autonomous and efficient community. Heterogeneous mechanism is used to realize the efficient operation of the generalized Dao (decentralized autonomous organization). The heterogeneous mechanism enables the holders of digital currency to directly participate in major project decisions.

After the adoption of the heterogeneous price mechanism, we use the hard currency as the guarantee of the price. Miners can hardly sell digital currency below the cost price, and with the improvement of computing power, the rising mining cost will also make the currency price stable and upward, which restricts the excessive concentration of digital currency in the single

POS mechanism.

On the other hand, POS allows investors to focus on the medium and long-term development of the project, and is more inclined to put the currency in the wallet for POS rather than to put it on the exchange ready for trading at any time. To make TFT ecology more healthy, people will pay more attention to TFT technology and landing applications, rather than just focus on short-term price fluctuations.

In terms of security, a single POS system is unstable, and equity holders can easily generate the corresponding timestamp history (so it is easy to forge blocks). The heterogeneous mechanism avoids the problem of POS forgery. At the same time, because POW must be verified by POS, POW miners can not decide and change the network rules, and can effectively resist 51% attack of single POW mode 。

3.1.1.1 npoc voting

In bitcoin mining, when the block height is h, as long as miner 1 first calculates the correct hash value, he immediately broadcasts it to all miners, and other miners verify whether his hash value is correct. If most miners think he is right, he can get the reward and accounting right of this block, and the labor of Miner 2 is meaningless. Other miners start to

calculate H + 1.

In TFT, with the same block height and within a certain period of time, different miners can generate blocks, block1 and block2. The system randomly selects five votes from the voting pool for voting selection. Even if there is a mining bully, the block calculated first may not be used. Moreover, if POW miners violate everyone's interests, their block rewards will also be deprived.

3.1.1.2 voting pool

In order to make the voting rights relatively fair, TFT uses the voting pool mechanism. Through the fare adjustment of 360 blocks (about 12 hours), the total number of votes in the voting pool is controlled to 40960. The system selects randomly, and after the candidate successfully participates in the voting, he will return the cost of purchasing the vote.

3.1.1.3 purchase of votes

The votes in the voting pool are purchased by TFT holders and can be purchased from their wallets. The total purchase cost is ticket price plus ticket fee, which is paid to POW miners to put new ballots into newly excavated blocks.

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A. Notary mechanism

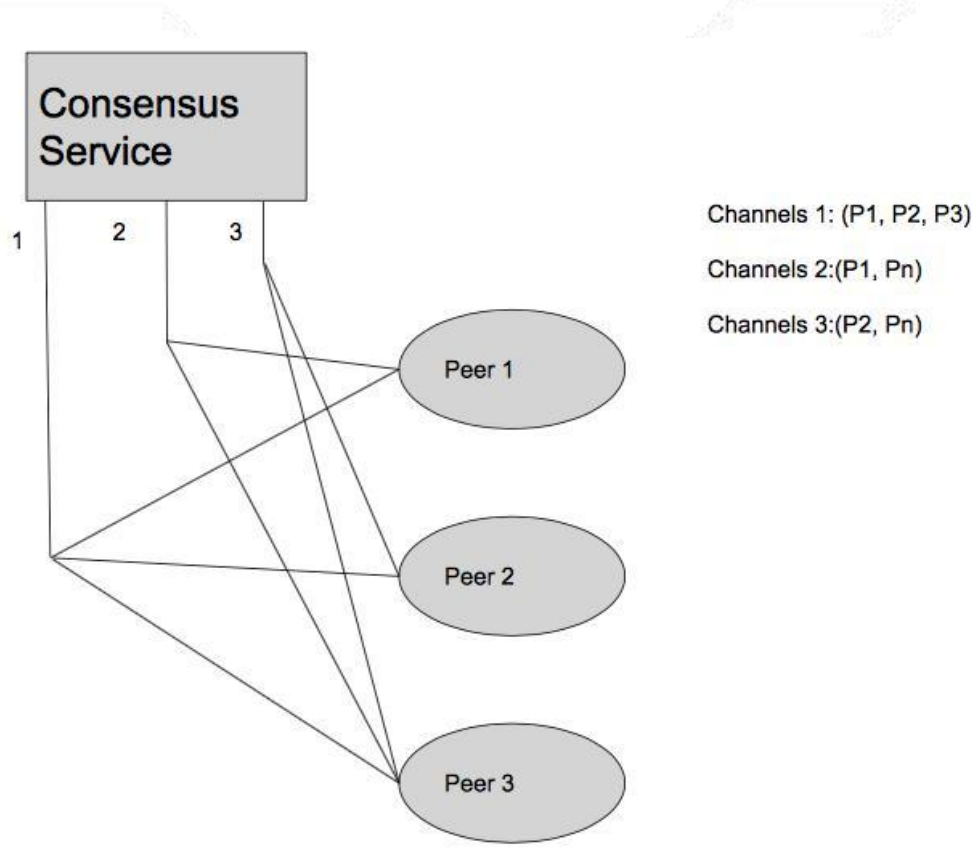
The main representative is the ripple interleaver agreement, which is applicable to all accounting systems and aims to achieve a global uniform payment standard.

B.Corda

Corda is a "blockchain like" technology architecture. Both sides of the transaction jointly select a notary with high feasibility to test the validity and uniqueness of the data. If the notary proves that the transaction is feasible, the transaction will be concluded, and the transaction notary's

books will be synchronized. The advantage of this is that the transaction can be processed more efficiently under the condition of security.

The new definition of fabric includes chain, peer, channel and consensus service. Peer can participate in multiple ledgers, which makes fabric extensible. Peer has the characteristics of transaction isolation and ledger isolation.



C. Cosmos

Cosmos is a cross chain open source project of interchain foundation, which focuses on solving cross chain asset transfer. The blockchain network is mainly composed of zone and hub

1) Cosmoszone is a separate blockchain space;

2) Cosmos hub is a multi asset proof of interest cryptocurrency network.

Hub is a relay chain, which is billed by a decentralized group of verifiers. A hub communicates with multiple zones, and each hub has billing information of multiple zones associated with it to generate a multi asset center ledger. Hub ensures that the total amount of assets in different zones remains the same.

The cosmos process is as follows:

Firstly, the cross link communication between hub and zone is achieved by IBC protocol. Suppose Zone1 wants to make cross chain transactions with zone2.

1) Zone1 generates transaction information and publishes it on hub;

2) Hub generates the proof of the existence of the cross chain packet of Zone1 and publishes it on zone2;

3) Zone2 receives the message package and publishes the received certification information on the hub;

4) Hub gives proof that zone2 has received the proof, and sends the message to zone2.

Cosmos benefits include:

1) Token transfers in each zone will pass through the hub they

are connected to, so in each zone

All assets will be recorded;

2) If one zone fails, other effective zones will not be affected;

3) The newly added zone can be easily added to the hub center.

D. Cross chain transaction

Cross chain technology is a means to realize the outward expansion of blockchain, which largely determines the development limit of blockchain projects. As for cross chain technology, the current mainstream cross chain technologies include: Notary schemes, side chains / relays, hash locking and distributed private key control.

TFT uses relay technology and future protocols such as Polkadot and cosmos to support cross chain transactions between different encryption currencies. The cross chain technology adopted by TFT is mainly based on security, efficiency and difficulty of implementation. The core technology of TFT cross link protocol is relay chain, which makes TFT not only have the scalability and scalability of Polkadot, but also have the feature of cosmos compatible with future blocks.

Cross chain protocol supports cross chain transactions between different currencies, allowing users to implement transactions

between TFT and BTC, etc, zcash and other tokens. Breaking the transaction barriers between different currencies, making a "information island" complete barrier free transfer, transaction and exchange in TFT. TFT relay chain plays a huge role in promoting the transaction and exchange between different currencies of the blockchain, provides very novel technical and ideological guidance for emerging blockchain related companies, and has great innovative significance for the vigorous development of the blockchain industry.

3.1.3 cross chain protocol design principles:

1) Security: This is the cornerstone of cross chain design, which has absolute security while realizing cross chain. The historical data generated in the cross chain process is extremely difficult to modify;

2) Performance: cross chain efficiency is also an important consideration. Under the condition of ensuring security, throughput and cross chain validation speed should be improved as much as possible. In other words, the number of transactions processed across the chain per second reaches a certain number, so that users can enjoy a better trading experience.

The relay chain is designed by using the cross link protocol similar to Polkadot relay chain and cosmos. It mainly records

the transaction address and transaction amount and verifies whether the transaction is legal. There are multiple transaction units in a transaction chain, and each cross chain transaction must be recorded and verified by at least one transaction unit. In each foreign currency connected with the relay chain, the contract generated must be reviewed by the transfer unit of the relay chain. Moreover, the transaction address of a node in each foreign currency must have a mapping address in the relay chain, and the amount of each transaction will be stored in the relay unit in the relay chain.

Relay chain provides technology and platform support for cross chain transaction between TFT and foreign currency, and also provides space and opportunity for cross chain transaction between different foreign currencies. The main functions of the transfer unit are as follows:

1) Verify the legality of all non verified transactions;

2) Collect votes for the previous transfer unit;

3) If the previous transfer unit does something wrong, a penalty will be issued.

Its structure is as follows:

```
Transfer
{
```

```
version:0000...0001,
previous:DC32...1CD1,
height:999,
verify:...,
punishment:...,
direction:output/input,
sourcelink:TFT,
targetlink:ETH,
amount:99ETH,
public_key:12ea...df94,
signature:84ec...edf6,
hash:57da...96c2,
}
```

Version: indicates the version number.

Previous: points to the previous transfer unit.

Height: indicates the height of the current transfer unit.

Verify: verified transactions and votes.

Direction: indicates the direction, divided into output and input.

Sourcelink: indicates the source chain. It can be eth, BTC, etc. in the case of input and TFT in the case of output.

Targetlink: indicates the target chain. In the case of output,

it can be eth, BTC, etc., while in the case of input, it can only be TFT.

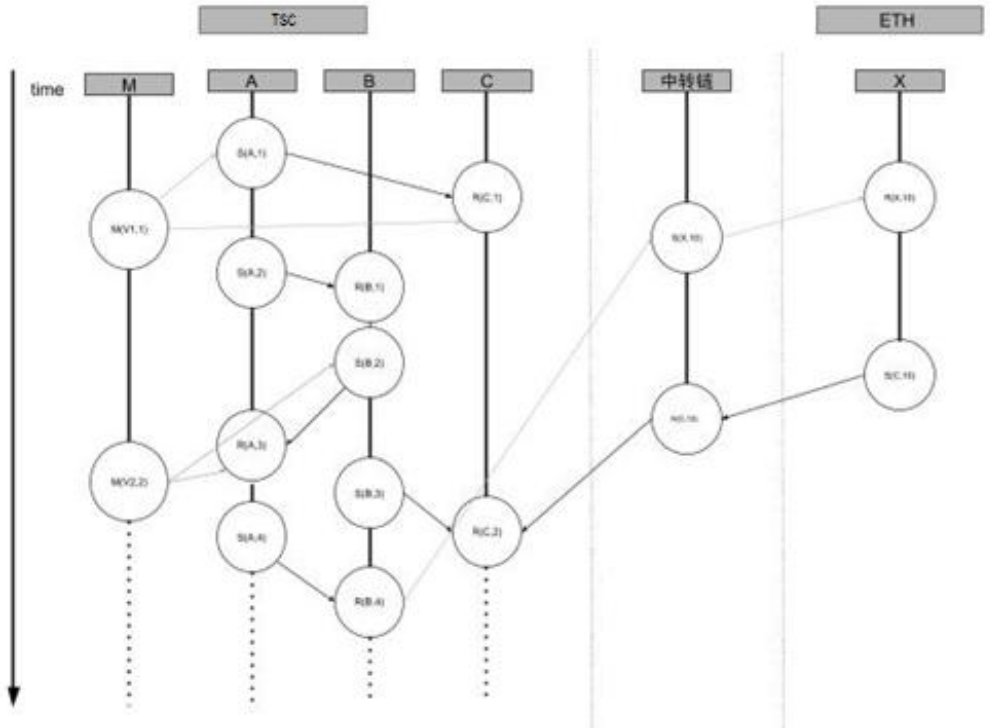
Amount: indicates the amount and needs to bring its own unit.

Punishment: to give evidence and punish those who fail to pass the vote.

public_ Key, signature: sign the unit to ensure that the unit is sent by the verifier.

Hash: hash the whole unit to ensure that the transaction unit will not be modified in the process of network transmission.

Take the cross chain transaction between TFT and eth as an example:



Input transaction:

1) Suppose that account x on Ethereum needs to pay 10eth to TFT account C. X needs to apply for a transfer contract on Ethereum. The transfer contract should contain the address of TFT account C and the sending amount, and be signed by the account C;

2) The relay chain actively monitors that eth has contracts related to TFT accounts;

3) In the relay chain, a transfer unit records and audits the contract, and the verifier conducts digital verification;

4) If the digital verification is passed, a record about the transaction will be added to the terminal C node of the account, and 10eth will be locked in the ETH to make it temporarily unable to circulate in the ETH; if not, the contract will be void and the transaction will fail;

5) Finally, a verification unit in the TFT verification chain verifies the end node of account C to reach a consensus of the whole TFT network.

Export transactions:

1) Suppose that TFT account B needs to pay 10eth to account x on Ethereum. Account B needs to send a transaction request to the TFT relay chain. The transaction request should contain the address and amount of eth account X and be signed by account

B;

2) Relay link receives the request from TFT account B and records it;

3) In the relay chain, a transfer unit records and checks the transaction request, and the verifier performs digital verification and signature;

4) If the verification is passed, the end node of account B adds a transaction record of deducting 10eth, and the relay chain converts the mapping of account X's address in eth, and releases any 10eth locked in eth;

5) Finally, the contract sends the 10eth to account X in eth.

The cross chain transaction technology of TFT is not limited to a single currency. The relay chain of TFT can be connected with BTC, zcash, EOS and other derived spaces. In other words, most of the current currency derived block spaces in the market can be connected to the relay chain of TFT. Moreover, any newly born currency can be easily and quickly connected to the TFT trunk chain as long as it has signed a contract with TFT and reached a consensus. In this way, TFT can achieve a large scale of unlimited expansion, which greatly meets the needs of global transactions.

Moreover, most currencies in the market can even be traded

directly through the TFT relay chain, such as BTC and eth. In this way, there is no need to directly establish channels or platforms in BTC and eth, which greatly saves technical and human costs. TFT relay chain can be used as a huge cross chain platform in the market to realize transactions between different currencies.

In order to ensure the instantaneity and security of cross chain transactions on the TFT relay chain, the implementation of TFT atomic exchange will be adopted. TFT atomic swap is a new technology, which allows TFT currency and other types of digital assets to realize point-to-point transactions without trust.

This kind of transaction can be completed in an instant, and neither party has the opportunity to violate the agreement. In addition, when one party withdraws from the transaction, the digital assets will be returned to both parties after a specified time. This technology is of great significance to the future of cryptocurrency, because this seamless cross block chain cryptocurrency swap capability opens a new application. TFT atomic swap can break through the transaction barriers between various crypto digital currencies and ensure the correctness of transactions. If users want to trade between TFT

currencies and other types of cryptocurrencies, this technology can give users complete control of their own funds.

TFT Working principle of atomic exchange:

The working principle of TFT atom exchange is as follows

For example, m and N are both sides of digital asset transaction. M has its own account in TFT, and N has its own account in Ethereum and TFT. Now m and n have settled a deal through telephone, Internet and other channels, and also know their respective TFT accounts. According to the transaction concluded, m intends to transfer his 100tft on TFT to N. under TFT's account, n will pay m 200 etc through TFT.

In order to complete the transaction between TFT and etc, the two parties carry out the following steps in turn:

In order to complete the transaction atomically, first n defines an instruction x, and calculates that V: = hash (x). Now only n knows X;

N issues a transfer transaction on TFT and conditionally transfers 200etc to M. However, different from ordinary transfer transactions, this transaction has a hash locking condition: m only shows an instruction that satisfies hash (x') = = V to TFT within 4000 seconds, then x' can put 100etc into its own account (there is no essential difference between

account model and utxo model). If M fails to claim etc, n can send a refund transaction on TFT to return 100etc to its own account Household. The V and timeout in the hash locking condition are public, which can be seen by m of course;

M now sees that n has initiated such a transaction on TFT, but he does not know what the unlocking instruction x is, so he must pay 100 TFT to N through TFT to buy this instruction X. Therefore, m sends a transfer instruction with the same hash lock to N on TFT, which is valid for 2000 seconds. If n does not receive the instruction, the transfer amount will be refunded automatically. This hash locked instruction transfer is easy to implement in principle. Its logic is: when n clicks the instruction transfer, a dialog box will pop up asking n to input an instruction x satisfying hash (x ') = = V'. If the input is correct, the TFT in the instruction transfer will be transferred to the account of N on TFT. At the same time, TFT will send a reply to m informing m that the transfer has been received, and N will be displayed on the reply The input instruction X. If n inputs the wrong instruction X ', then n cannot collect the transfer amount;

Now that n has received the instruction to transfer, it timely clicks the instruction to transfer, and has entered the

instruction x known by N itself. Because V = = hash (x), n successfully got 100tft. According to the program logic, TFT sends a reply to m to inform m that the transfer has been received and that the instruction input by N is x, so m knows the instruction X;

Since m now knows instruction x, he can use instruction x on TFT to extract the 200 pending etc. M operated in time and got 200etc on TFT;

So far, M has got 200etc, while n has got 200tft. In the transaction process, Ethereum and TFT do not need to communicate with each other at all, but it still ensures the atomic exchange between TFT and etc.

The above is the normal process, and the atomicity of exchange is still valid under the abnormal flow. For example, in step 3 above, m did not send transfer through TFT. Since n could not see the transfer, it would not input the instruction x to M. if M could not get the instruction x, it would not be able to extract etc on TFT, and the atomicity of the transaction was guaranteed.

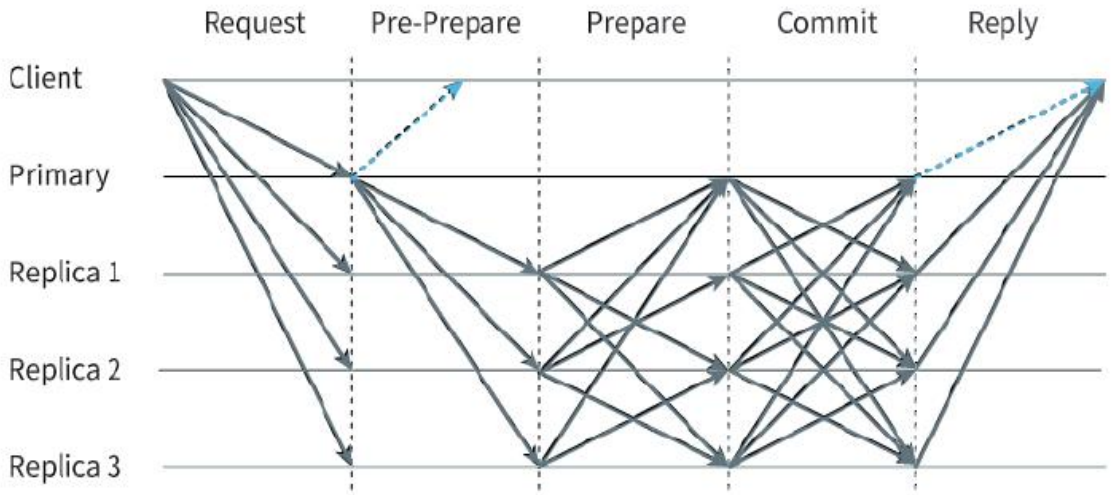
Hash locking mechanism is easy to implement on Ethereum and other blockchains, and TFT will not have too many difficulties to implement the above hash locking transfer.

In addition, since the two kinds of transfer are the transfer of designated opposite party, the program can be designed to provide instructions from a third party to help unlock, but the assets still follow the original designated transfer mode. This design enables users to safely entrust others to operate when their own wallet is invalid or temporarily unable to access TFT. Therefore, the disclosure of unlock instructions in TFT will not only bring security problems, but also have additional benefits.

3.2 technical points

3.2.1 multi domain protocol group payment

According to the consensus technology, the TFT domain LD is divided into ldpos, ldpow, ldbft, ldpoa, ldpoc and so on. In the future, with the development of blockchain, protocol clusters will be increased. To interact with the TFT main chain, the payment chain needs to register the TFT native chain first.



The payment chain will register with link domain and then intervene in the path ecology of TFT freedom. Linkdomain and linkdomain interact through TFT value circulation agreement. Each linkdomain contains the blockproof protocol under the linkdomain. At the same time, when the payment chain is registered in the linkdomain, the registration and other information of the payment chain will be retained on the TFT for free payment function application.

When a payment chain wants to link with TFT and enter the TFT ecological payment scenario, it will follow the following process:

1. Firstly, tftsdk initiates the registration request of a linkdomain in the chain in the form of transaction. The request

information includes the block format of the chain, light node protocol, merkleproof, etc.

2. After receiving the request, TFT registers in linkdomain, and the payment chain inherits all the agreements and value circulation agreements under the domain;

3. The payment chain can transmit the data in the free application chain of TFT, BTC and eth to the chain regularly through the application payment protocol of TFT.

In TFT, there will be many different blockchain platforms, including various application-oriented public chains, DAPP free application chains, and projects based on the erc2.0 platform of TFT. When implementing the full scene payment technology agreement of TFT, a group of cross protocol interaction will be needed between different two transactions, so the complexity of this method will increase at the combination level. For example, if there are n cross links, there will be n (n-1) interfaces at most. Although some of the n (n-1) interfaces can be integrated, it is obvious that this design is very complicated.

Therefore, in TFT, we introduce a kind of TFT bridge relay chain. All TFT chains are anchored to the bridge bridge relay chain with the payment chain value anchoring protocol, and the relay

chain is used to assist the verification and transfer of payment transactions in TFT ecology.

3.2.2 hotstuff protocol

Hotstuff is a Byzantine fault-tolerant consensus algorithm based on threshold signatures proposed by the VMware team in March 2018. Facebook's blockchain project Libra also uses hotstuff as its basic consensus. Hotstuff has two advantages: Traditional BFT consensus generally adopts full connection network communication mode. In order to reach a consensus, multiple rounds of communication between nodes are often needed, which causes great pressure on network bandwidth.

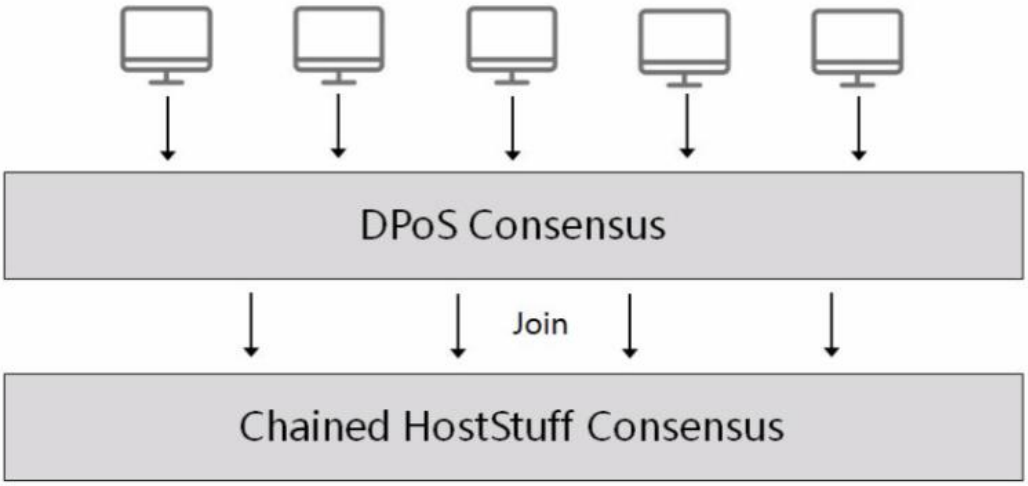
Therefore, BFT consensus is often applied to alliance chain scenarios with fewer nodes. For example, the classical pbft (Practical Byzantine fault tolerance) whose communication complexity is O (N2) has been successfully applied to many well-known alliance chain projects. Hotstuff uses threshold signature algorithm to reduce the communication complexity to o (n), so it is more suitable for large-scale node public chain scenarios.

In addition, the traditional BFT consensus, such as pbft consensus, when a verification node finds that the master node has an exception (including timeout, Byzantine behavior and

other errors), it usually can't directly conduct the primary node election (also known as view change). It needs to wait for enough verification nodes to find the error, and then wait for the new master node to send a new view message, and the verification node has verified ne Only after the validity of the w-view message can the viewchange be completed.

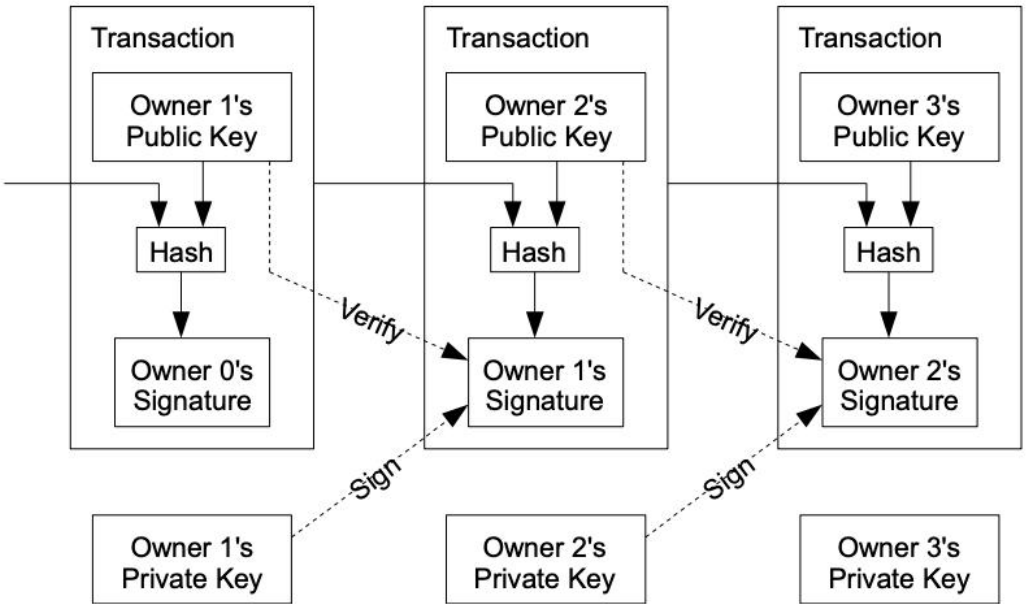
In the process of view switching, the system can not normally provide services to the outside world, which is difficult to accept for those systems that require high availability. In hotstuff, the verification node can directly switch to the new view and notify the new master node. At the same time, it is compatible with the consensus technology mechanisms such as npoc and dpos. Hotstuff integrates the view switching process into the normal process, reducing the communication complexity of view switching to linear view change for the first time, and the system can continue to provide external services in the process of view switching, which greatly improves the

availability of the system.



3.2.3 distributed privacy and encryption

TFT has full access to BTC's privacy and encryption system. Different from the central server used in the centralized chat application, TFT secret chat function has no central service sector, but uses numerous master nodes in the TFT chain as a distributed information transmission server. These master nodes only provide network services such as data operation and information transmission, and do not store user related information. IP hiding of all primary nodes, that is, no one can track or lock these hidden servers.



The distributed anonymous server composed of numerous master nodes in the TFT chain constructs the TFT distributed anonymous network. No matter what information is transmitted anonymously through the distributed network, TFT can guarantee its security. All information is stored only on our local device. No one can access the information except the correspondent. Each information is transmitted through different master nodes; a single master node cannot capture all the information. In TFT distributed anonymous network, each message sent can be encrypted by different encryption algorithms. Even if someone controls all the master nodes, the encrypted information is not easy to decrypt.

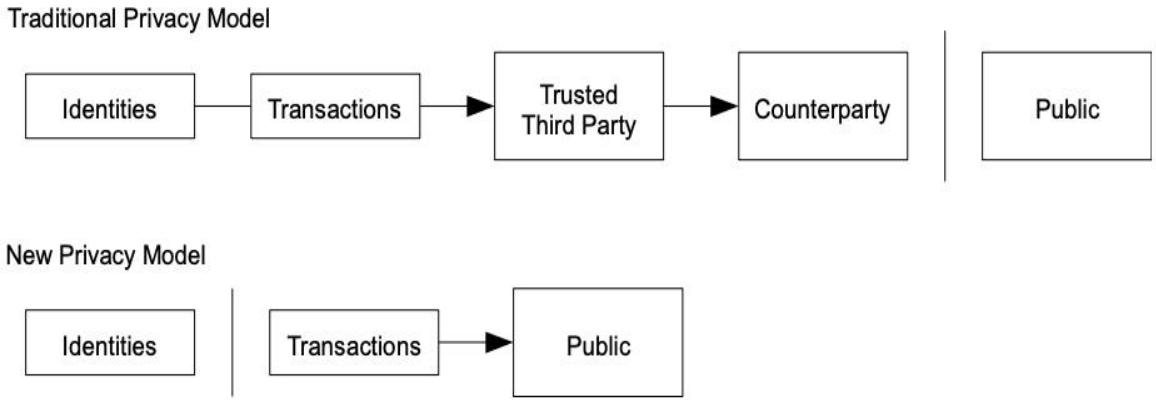
3.2.4 secure random number model

In the process of running contracts on the chain, the randomness of random numbers is related to the fairness of many services and games. However, there is no good way to provide secure random numbers in blockchain. Some blockchains rely on block hash to generate randomness.

In npoc system, since it takes little time or energy to generate a block, miners (verifiers) can easily generate thousands of blocks in succession until they get a hash value they like, and then submit the hash value. In Marco Polo network, when the validator agrees to block out, it will first broadcast a hash of a random number by multiple validators, and then spell these random numbers into a complete random number to ensure the security of the random number.

3.2.5 TFT wallet TFT financing agreement

TFT wallet is designed with double wallets to realize the decentralized storage compatible with TFT and bitcoin in one software. TFT and BTC use the same elliptic curve encryption to calculate their respective public keys. After base58check encoding, two different addresses are obtained. The same private key can be used for a variety of assets to manage them safely and quickly.



TFT wallet can monitor and manage offline wallet through online wallet to meet the needs of users for multiple asset storage.

3.2.6 multi currency support

TFT supports multi currency, and each account can store a variety of digital assets, which is convenient for the implementation of TFT pay disk financing payment network and the use of multi currency of electronic cash payment system. At the same time, TFT account can meet the needs of more scenarios of point-to-point cash payment system.

4. Technical agreement

In essence, the blockchain network of TFT freedom road is an application-oriented specific blockchain. We hope to design a pluggable application ecology supporting all applications, including finance, payment, traceability, games, insurance, real estate, social networking, content, community, etc. However, various applications are very different, even if the same kind of application also has a variety of heterogeneous architectures. Considering that the blockchain world is multi chain parallel, TFT first lays out high traffic application scenarios.

The application layer protocol of TFT consists of four core modules.

• Services Definition (SD) defines the entrance of different application scenarios. At present, it supports three

applications: financial payment, traceability and content services, and will support more services in the future.

• State protocols (SP): defines the algorithms and conditions needed to verify a state or state change.

• Rainbow contracts (RC) allow us to fund and reward anticipated changes in ecological status.

• Traceability protocols (TP) allow us to bind the ecological state to the supply chain in a credible way.

4.1 SD (Services Definition)

Service definition SD enables our system to support blockchains in specific fields. The specific functions are as follows:

Implement core functions in specific areas in a verifiable way.

A kind of Ensure high throughput and scalable trusted computing

Restrict the smart contract to the specific language (DSL) framework to ensure the security of the smart contract and avoid overflow and other vulnerabilities.

Upgrade and change in a safe way to avoid forking.

Use modular design core, such as credit score, identity authentication, public-private key equivalence, to improve the interoperability of the system.

From the perspective of parameterization, service definition SD is a two-dimensional parameter, as follows: financial

payment: SD_ Fin traceability area: SD_ St content domain: SD_ AR Internet of things IOT:SD_ IOT

Parameters of the first dimension of each application domain, according to SD_ FIN_ XXX、SD_ ST_ XXX、SD_ AR_ The parameter format of XXX is passed in. XXX can be configured and selected through parameters on the interface or configured through the command line.

4.2 state protocols

Sp (state protocols) is a specific algorithm and standard used to verify a state change. It supports three kinds of algorithm results.

Simpleb simple Boolean (true / false) simplen simple number resultstructm complex structured structure (later Implementation) each of the above calculated results indicates a state change, which is also suitable for TFT state machine logic and direct programming.

The following are examples of applications:

• Simplen takes the number from 0 to 100 to represent a user's trusted rating

Value, or reputation value.

• Boolean value of simpleb (true / false), indicating whether the merchant is blacklisted.

• Structm represents the consumption behavior data trend of a user under data mining.

The basic function of SP (state protocols) is to simply evaluate the state and state changes of a specific application. SP supports identity authentication and application entrance. Each application scenario can be passed into SP and use SP's structured data.

SP is bound to the identity authentication portal. For example, in the financial payment application, the final result is connected with the identity of the merchant and the user, and connects with decentralized identity authentication, biometric authentication, Google auth, etc.

The state protocol SP is specified in a domain specific language and can refer to calculations running on and off the chain. The decentralized organization of each application is responsible for managing the state protocol SP, which we can call SP organization. SP management organizations use semantic version control identifiers to publish different versions of the same protocol. This is very similar to open source software version control, which provides us with a unique tag to identify a given version of an SP and set the version boundary. The system allows protocols to refer to each other as dependencies and has

different degrees of strictness or flexibility in version control. It also allows organizations to gradually upgrade their agreements based on new research.

4.3 TFT contracts RC (TFT contracts)

TFT contracts RC (TFT contracts) allow credible funding, incentives, usually token rewards, for specific ecological outcomes. Examples of use cases are as follows:

• In the blockchain e-commerce platform, users purchase goods, participate in mall activities, participate in community activities, and users get the business trust score, etc. related applications will call the contract RC layer.

• In the content and media incentive applications, users browse advertisements, report false advertisements, users share high-quality content and spend time and attention, the content application will call the corresponding contract RC parameters.

• In food traceability applications, users input data, share links, query data, use data, complete transactions and so on. From a technical point of view, RC platform is mainly to provide a smart contract framework which is conducive to the sustainable development of the ecosystem. We emphasize its security. Referring to the industry advantage project, we

define the language definition and domain of smart contract. For example, it defines the necessary conditions for each action. Contracts that are not within the necessary conditions will not be executed. For example, a payment item may include a process of user review and balance query. Usually, the application layer and transaction phase of financial payment applications will make logical decisions, However, when entering the stage of smart contract, it is also required to determine in RC platform, that is, the reward of pre specified ecological state change benchmark.

To improve flexibility, we provide scalability features, such as contract layer configurable capabilities. In addition to currency exchange relying on ecological state, TFT contract RC also provides many other wise contract terms, including ownership, governance and special rights and interests, which can depend on a given verifiable state change.

TFT contract RC usually refers to one or more SPS and may set thresholds for sp. the results of TFT contract RC can also be used to measure the reward amount. Obviously, the TFT contract RC supports both the token in the system and the token in the ecosystem. At the same time, after cosmos ecological maturity, it can also access eth, BTC and cosmos atom.

4.4 traceability protocols

Almost all blockchain applications will have specific traceable application scenario requirements, including tracking the life cycle of a transaction, querying the authenticity of published content and other scenarios. Therefore, we will use high reuse and large function independence to form a traceability protocol TP.

Traceability is the core part of the blockchain, and its reusability is very high. Therefore, we specially define the traceability protocol TP, which is bound to specific applications through service definition SD. If rewards are involved, contract RC will be called. For example, in the food traceability scenario, the user enters the data to obtain the reward. In terms of technical implementation, the TP protocol is called first, and then the contract RC is triggered when the verification is passed.

The use cases are as follows:

After a bottle of high-end liquor is produced and packaged in the workshop, a unique traceability code marked by RFID electronic tag will be bound to the entity. Records are recorded on the chain, including all relevant information: origin, workshop, production and packaging personnel, inspector,

delivery time, factory batch number, etc.

High quality liquor with blockchain attributes is transferred to pipeline operators, terminal merchants and exclusive stores through logistics companies. In the middle of each link, including the transporter, the departure warehouse, the arrival warehouse, when to start, when to arrive, the handler and other information are uploaded to the chain by RFID tags in real time.

The above use cases can be directly implemented using the traceability protocol TP. Other scenarios, such as financial payment, are also implemented through TP protocol. The TFT browsing area will also use the traceability protocol TP to query the real flow of data on the chain.

5. Business map

5.1 IOT intelligent economy

5.1.1 TFT IOT vision

TFT believes that based on the free blockchain payment network, everyone in the world has the right to create, own, manage and use their own TFT, and let TFT serve themselves. In order to achieve this goal, TFT has designed a blockchain protocol, which enables people to have traceable ownership of their own

TFT, decentralized management and realization rights, and continuous artificial intelligence learning ability of TFT. Such a TFT centered protocol enables everyone's data to be connected with his own TFT, ensures security and uniqueness through the blockchain network, and enables people to obtain benefits by contributing data, which is the foundation of the new digital economy.

In this economic system, everyone's TFT is a certified three-dimensional artificial intelligence image, which is similar to the host in appearance and voice. It can also learn continuously, understand the master, answer questions, and do things on behalf of the host without the limitation of time and space.

Different from the traditional blockchain protocol, TFT blockchain protocol has an artificial intelligence network module of artificial intelligence learning. Distributed artificial intelligence algorithm is interwoven on the blockchain architecture, which is the core module of TFT blockchain. Blockchain allows more people to share data and resources that would not have been shared before. In this way, large-scale data and resources are larger than the Internet.

Therefore, machine learning and artificial intelligence are needed for data analysis and resource call management.

TFT blockchain protocol is designed for artificial intelligence customization and provides a blockchain platform for the deployment of artificial intelligence. More data and resources, including computing power, can be shared without worrying about privacy, security, and being taken away by competitors. Usage and records are distributed across large, decentralized computer networks.

Artificial intelligence technology provides learning ability for users and developers. Users can constantly improve their artificial intelligence. Developers can provide better services for users with the algorithm and computing power of artificial intelligence. The participation of all people makes the progress of artificial intelligence system faster and more powerful.

5.1.2 artificial intelligence economic system

The combination of our digital assets and intelligent virtual identity technology can create a new digital economy - artificial intelligence economic system. On this platform, the intelligent identity of each person and TA is a point on the network. Through the point-to-point network to interact and

flow, the higher the contribution to the network, the greater the profit. Data can be created and made alive by means of new and concrete assets.

We can not only show an intelligent identity similar to us, but also present a variety of freer, more idealized and more interesting virtual selves. As contributors to data, we have more imagination and more freedom to use when we imagine how to use intelligent identity to work and do things on our behalf. We have the right to decide how to release our personal digital products, how to motivate program developers, and how to charge from users of information. The future economic system can be people-centered, and value is managed and maintained by people and used by people.

5.2 IOT instant payment communication

5.2.1 vision of Internet of things payment communication based on blockchain

Based on the layout of TFT IOT global ecosystem, users from all over the world can play games and socialize through token in the ecosystem, and ensure the security and privacy of user information, thus establishing a complete ecological closed loop.

5.2.2 provide secure communication encryption network

TFT not only stores and manages TFT assets, but also provides wallet management services for other digital currencies on the basis of ensuring secure communication, including sending and receiving digital assets, digital assets red packets and other functions. The storage of chat records is no longer a passive default, and the information can be freely selected or destroyed in the chain. At the same time, TFT communication economic network is also open to expand development capabilities, and with the support of TFT token reward, it provides more abundant application capabilities for TFT communication economic network.

TFT also supports other digital currencies to complete the function improvement of TFT. TFT also provides expression pack service for TFT users. Facial expression provides users with an interesting visual communication way to interact with their friends and family, and can also increase the user's participation. The expression pack provides users with efficient and concise expression, and also increases the interest of communication. It solves the problem of cold and no temperature in the face of screen communication. The expression market of TFT gives every participant the

opportunity to create their own expression products and deliver their value in the TFT network. Because of the contribution of resources, the copyright dispute will no longer be a problem to be solved.

5.2.3 TFT free encryption communication treasure

In order to facilitate users to view their own communication with others, we will develop communication treasure. Users can obtain the required information by free and paid ways according to their own needs. TFT free encryption communication treasure provides users with the number of their own communication information, token consumption, etc. You can also pay a certain token to query other people's relevant information after obtaining the consent of others. We will set up communication rankings and consumption rankings on the home page. For users on the list, the official will give a token reward.

5.3 free Internet of things service ecology

5.3.1 free VPN service of master node

Each region or country has basically set up a firewall for its own network security, which may lead to the normal communication between users in different regions. TFT will open several specific nodes as VPN service channels, establish private network on the public network, carry out encrypted

communication, and solve such cross regional and cross-border communication problems. As a TFT, token will become the payment medium of the service.

5.3.25g communication facilities support cross regional free network services

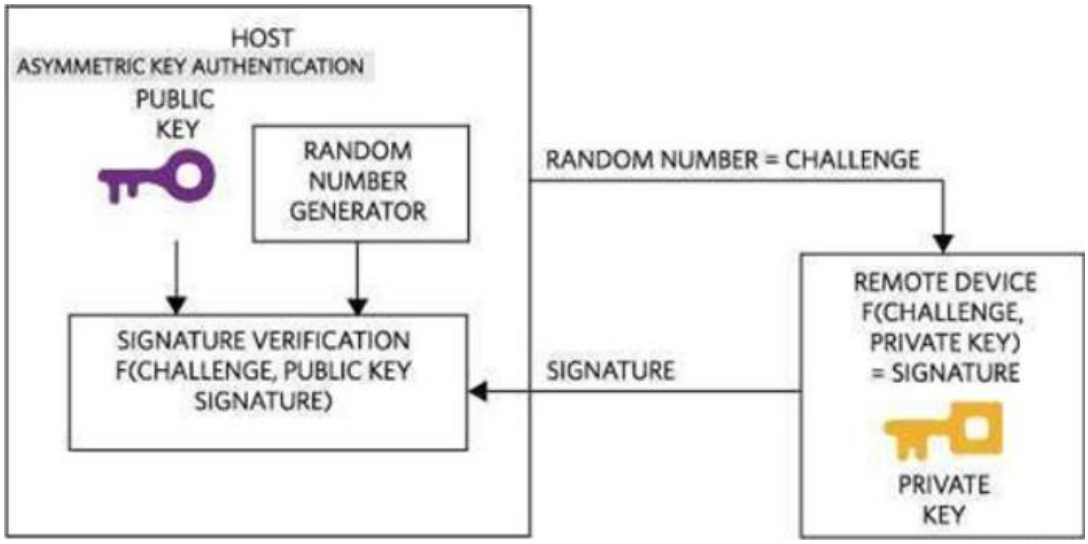
5g communication facilities support cross regional free network service, which is an infrastructure support service for Internet of things communication based on peer-to-peer network. Users can use token payment in TFT ecology to enjoy the Internet of things communication convenience brought by 5g communication. The first indicator is "high speed". 5g can download 8GB HD movies in six seconds, while 4G takes seven minutes.

Another typical indicator of 5g is "zero delay", which is mainly reflected in the fields of medical treatment and automatic driving. In the autopilot operating system, 5g technology can collect all data points in real time and send them to the data center, which will then be processed on the server and then sent to the car's computer - everything should happen in an instant, so that neither the machine nor the people will notice the significant delay.

5.3.3 trusted device chip based on asymmetric encryption

Security authentication is the basic function of electronic equipment to participate in safe interaction and use. Especially in the field of Internet of things (IOT), security authentication is very important: untrusted terminals may put the entire infrastructure at risk. TFT develops a security chip based on asymmetric encryption, which relies on two keys: private key and public key.

Only the authenticated device knows the private key, and the public key can be disclosed to any party who wants to authenticate the device safely. As discussed above, the host sends a challenge to the device. The device calculates the digital signature according to the challenge and private key, and sends it to the host (as shown in the figure below). But at this time, the host uses the public key to verify the digital signature. It is important that the functions used to calculate digital signatures have specific mathematical properties. RSA and ECDSA are the asymmetric methods used in TFT trusted device chip.



6. Application scenarios

TFT is the technical infrastructure of the point-to-point e-cash system, which completely replaces the centralized technology mechanism. It is also the basic network protocol to promote the rapid popularization of TFT and BTC ecology in global scenario payment.

TFT is a kind of point-to-point application payment protocol beyond BTC ecology. Token is TFT, which is committed to become the financial application payment gateway in the field of digital currency ecology. Through TFT, the free application payment of digital currency and the free payment circulation of multi scene can be realized.

TFT will connect bitcoin Ethereum and other cryptocurrencies with strong consensus foundation, stable currencies anchored by real-world fiat currency value, and high-performance infrastructure of emerging public chain cross chain system. BTC is a high-quality public chain with extensive consensus basis in this field, and is also the most important asset exchange object of TFT. TFT will pay for energy through technical protocols and scenarios The first payment system of digital currency in BTC ecology.

6.1 point to point cash payment application

In the application and development of point-to-point e-cash system, TFT will take the lead in the field of point-to-point retail payment where BTC and other digital currencies have not yet been popularized and actually implemented, so as to turn the point-to-point payment of digital currency into reality. Tftpay will cover nearly 10000 merchants in Southeast Asia, Europe, South Korea, Japan, the Middle East and other regions. It will take the lead in 1000 physical merchants in Asia Pacific region and North America to access and circulate assets in TFT free scene payment. Furthermore, through the spirit of global currency of TFT, BTC's original vision of point-to-point payment and free transaction can be re implemented, and the

whole encryption can be opened All digital currencies in the monetary world, and the realization of second level payment confirmation, which is a positive application for TFT's global currency attribute.

TFT is committed to realizing a point-to-point application payment system that can replace centralized technology mechanism across the whole encryption world. As the first point-to-point application payment system beyond BTC ecology, TFT realizes unlimited expansion of TPS in the encryption world by sharing the interoperability infrastructure of unlicensed public chain in the whole encryption world, and allows each transaction to choose a gas fee approaching zero.

6.2 application of DEX decentralized exchange

Exchange is one of the largest application types in digital currency industry. However, there are some problems in centralized trading technology, such as asset security, opaque trading process, etc. In addition, bitcoin, Ethereum, letcoin and other old digital currencies occupy the vast majority of the trading volume in the exchange market. However, if the point-to-point trading is adopted, it will be impossible to realize the order trading, contract trading or the TPS is too low to meet the actual trading requirements. In more cases, the

two problems will exist at the same time.

Decentralisation is the trend of the future. Both coin security and fire currency have been deployed in this field. DEX, a decentralized exchange, uses cosmos based public chain. In the future, the public chain with project side resources will realize decentralized trading function.

With the development of technology, the TPS performance of the third generation public chain has reached 3000, but for the whole non-linear and rapid development of digital currency trading industry, a single head exchange may soon reach this performance ceiling.

TFT will provide second level or even millisecond level transaction speed for Dex in BTC main chain ecology, and make bitcoin and other digital currency intelligent contracts that cannot define state process. All of these will be realized through FTF network without trust, transaction fee approaching zero and TPS unlimited expansion. In order to encourage the development of TFT eco DEX industry application and the transaction demand brought by other point-to-point retail payment applications, of course, excellent DEX applications also enjoy TFT application ecological incentive subsidies.

6.3 decentralized e-commerce and retail industry

In the traditional retail era, "centralized e-commerce" is the main way of business networking. An e-commerce platform centralizes all businesses and eyeballs / traffic, and becomes the first entrance for consumers to shop. However, in the new era of retail focusing on user traffic, retailers gradually realize the importance of their own traffic, and having an independent e-commerce platform and "decentralized e-commerce" have become the new demands of businesses.

The erc2.0 ecology of TFT freedom road public chain can meet this demand. In the TFT ecosystem, users browse e-commerce DAPP, select a product and place an order. The e-commerce DAPP requests the user's identity information through the TFT payment agreement. After the verification, the e-commerce DAPP sends a payment request to the payment chain. After the payment is successful, the order information is synchronized to the logistics chain. After the logistics chain obtains the order information, it goes to the merchant's warehouse to pick up the item and then delivers the item to the user The information under the chain cutting is synchronized to the logistics chain in real time through the Internet of things.

In the process of information flow, information fraud and user's information flow are controlled by the information

providers and the electronic payment center.

● decentralized Finance

Defi is short for decentralized finance, also known as openfinance. It actually refers to the decentralization protocol used to build an open financial system, which aims to enable anyone in the world to conduct financial activities anytime, anywhere.

In the existing financial system, financial services are mainly controlled and regulated by the central system, whether it is the most basic deposit and transfer, loans or derivatives transactions. Defi hopes to establish a transparent, accessible and inclusive point-to-point financial system through distributed open-source protocol to minimize trust risk and make it easier for participants to obtain financing. Compared with the traditional centralized financial system, these difi platforms have three advantages:

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

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

c. All the agreements are open source, so anyone can cooperate to build new financial products and accelerate financial

innovation under the network effect. Defi is a relatively broad concept, including: currency issuance, currency trading, lending, asset trading, investment and financing, etc.

We see the birth of BTC and other cryptocurrencies as the first phase of defi. However, the decentralization of currency issuance and storage only provides the solution of point-to-point settlement, which is not enough to support the rich financial business.

The rapid development of decentralized lending agreements in the past two years will have the opportunity to further open up the financial system of the blockchain world and bring defi into the second stage, which is the era of TFT.

7. General syndrome model

7.1 operating objectives of token

TFT uses innovative blockchain technology and eco token to achieve:

1. Higher TPS, better liquidity and lower handling charges, which can solve the problems of slow, expensive and inconvenient transfer of digital assets;

2. Separate the right of governance and ownership, achieve data sharing and privacy protection, and truly achieve fairness, fairness and openness;

3. With 2000 nodes + 2000 mining machines, 53% of TFT can be dug out, and 27% of TFT will be used for ecological incentive to realize community autonomy;

4. Truly promote the development of global blockchain technology and the ecological landing of blockchain industry, and truly use the blockchain technology to break through food, drink, play, clothing, food, housing and transportation, and realize Web3.0 e-commerce +;

5. Realize the construction of supply chain finance and decentralized ecological exchange with ecological resources, and truly solve the scam problem of defi;

7.2 operation model of Token:

Pass Name: the freedom trail

Certificate abbreviation: TFT

Total number of certificates: 21 million

Seed and angel investors hold 1% TFT, which will be circulated in the market at an early stage;

The remaining 99% of TFT passes are issued on the principle of fair and open, and the specific distribution is as follows:

1. Bonus pool of Genesis node: 6%, which is distributed by 2000 Genesis nodes according to their ecological contribution.

2. Free ore pool: 47%. Combined with the mining model and rules

of TFT, it is obtained by 2000 TFT mining machines through consensus mechanism.

3. Ecological incentive: 27%, which is used to motivate core communities and ecological promoters with outstanding value, increase the landing scene and number of users of TFT, and release it according to the ecological incentive policy.

4. Holding by foundation: 20% is held by TFT foundation for long-term development of projects and cross industry cooperation; dynamic release is carried out according to TFT project development index.

7.3 ecological participation mode

7.3.1 Genesis node

Participation threshold: 5000U / node; limited to 2000 bits

Participation progress: after the purchase of 2000 Genesis nodes is completed, the road of freedom can be opened to produce coins

Among them, 6% of the daily total network currency production will be distributed to 2000 Genesis nodes as dividend income

Node other benefits:

The first batch of mining machinery agency rights, 100 overseas conference places, the first private customized poster publicity, attending the blockchain leaders summit, global

community office subsidies, global luxury brand discounts, etc

7.3.2 super miner

Threshold for participation: the first batch of models include T200 and minit200; the price of T200 solid miner is 2350u; the price of minit200 cloud miner is 500U, and the computing power is 1 / 5 of T200

After the start of coin production in the whole network of freedom road, 47% of the daily amount of money will be obtained by the mining machines working in the whole network;

To be a miner, two conditions must be met at the same time

Purchase T200 solid miner or minit200 cloud miner;

Destroy the 2000 u TFT into the black hole address

explain:

1. Minit200 mining machine is issued by the official entity mining machine, which reduces the threshold of miners' participation;

2. The number of physical mining machines is limited, so miners need to queue up for purchase in advance;

3. Fujian Longyan mine (with 80000 bitcoin mining sites) will provide power and hosting site support for super mining machines

8. Development route

1. In January 2020, the project of TFT free application chain was set up to discuss, conceive and design the core technology, strategic planning, development route and ecological layout;

2. In April 2020, the core technology route of TFT free application chain was formally proposed and entered the research and development stage. The world's top scientific research laboratory team carried out joint research and development, committed to comprehensively improving the underlying chain technology structure and full commercial application deployment agreement of the blockchain industry;

3. In July 2020, the commercial ecological landing route of TFT freedom road was established and the scheme was launched, and the integration and docking of traditional business resources of TFT Foundation began, including the early docking and scheme design of blockchain in luxury e-commerce, B & B travel, living consumption, offline business payment, etc;

4. In August 2020, TFT will launch the genesis node plan, and in the next half a year, TFT will launch global famous trading platforms (Huibi, gate, MXC, betterex, okex, bitcomb, etc.) to provide circulation for TFT communities;

5. In September 2020, the ecological exchange of TFT Freedom Road Based on the main chain of TFT freedom road will be launched,

and the commercial application of defi and Web3.0 will be fully deployed. At the same time, the test network and main network of TFT main chain will enter the online stage and complete the switching;

6. In October 2020, the whole network coin production of freedom road was opened, and the genesis node and super mining machine began to enter into ecological governance and mining to obtain profits; at the same time, the commercial application of "blockchain + new retail e-commerce" began to go online, and the provincial and municipal agent plan was launched to promote the parallel transaction and commercial development of assets on and off the chain; several commercial scenarios based on TFT free application chain were gradually launched at the same time To promote the value growth of TFT token through commercial transactions and commercial landing, and after realizing the comprehensive profit of TFT business ecology, it will vote according to the TFT community committee to buy back TFT with commercial profits to realize eternal deflation;

7. In November 2020, after the completion of three rounds of tests of the test network, the TFT free application chain will officially launch the main network, and the super miner plan of the TFT free application chain will be launched. The node

verification of the real-time Pope consensus mechanism will be completed by means of software and hardware technology deployment and parallel pledge, and share the verification rights and ecological development dividends of TFT main network;

8. In March 2021, TFT free application chain launched NFT business points. TFT super miner can exchange the excavated TFT into NFT, participate in dozens of business networks based on TFT bottom chain technology incubated by TFT through ecological technology, and get through the comprehensive business scenarios of TFT free application chain and NFT;

9. In June 2021, the baas open platform of TFT free application chain will be fully open to ecological partners, realizing the full coverage of TFT free application chain technology application in the blockchain field. Ecological partners will be able to independently access TFT baas, use TFT advanced underlying technology and commercial payment protocol to realize the block chain landing application and payment of their own scenarios, and one-stop deployment technology The plan of operation chain reform;

10. In September 2021, TFT ecological navigation plan will be launched in an all-round way. TFT will promote the full

penetration of "blockchain" into the "blockchain +" field. "TFT industry win-win fund" will participate in the chain application enabling and comprehensive chaining of more than 100 traditional enterprises;

11. In December 2021, the "tft-dex decentralized exchange" based on the free application chain of TFT was officially launched and fully operational. The circulation and trading of full ecological assets of TFT free application chain and NFT integral chain will be fully launched. TFT will become the only platform currency of the exchange. At that time, it will lead the latest wave of digital currency exchange with millions of ecological flows and promote DEX decentralization Chemical exchanges will replace centralized exchanges in an all-round way to promote the innovation of blockchain industry.

9. Partners:

MLB

Founded in 1997, MLB is a fashion brand of F & F with more than 280 stores in Korea. Has been committed to the development of MLB into a fashion brand. F & F owns the major league basketball franchise.

MLB is a fashion brand of F & F in South Korea. It has a classic tradition of 150 years and is a leader of street culture and international lifestyle.

MLB has a full range of clothing, including men's, women's, children's and accessories, providing wear equipment covering

all genders, ages and from headtotoe. Its products combine Korean fashion shape and texture, showing that sportswear can also have the style of fashion trend. In terms of product design, MLB not only integrates the major league baseball teams, but also combines various elements of baseball.

For example, bigball chunky series reinterpreted the term "bigball" in baseball, specially retaining the logo of many famous baseball teams, such as nyyankee, ladodgers, Boston REDSOX and so on, in the form of "megalogo". In other parts of the shoes, such as "home plate", "baseball field", "hitter" and other exclusive baseball patterns.

GIORGIO ARMANI

Armani is a world-famous luxury brand. It was founded in Milan, Italy in 1975 by Giorgio Armani, a fashion designer. He is famous for using new fabrics and excellent production.

The Armani brand logo is a metamorphosis of an eagle looking to the right. The eagle symbolizes the highest quality, excellence and skill of the brand, and has since taken it as

a permanent symbol. Apart from managing garments, Armani also designs ties, glasses, scarves, leather products, perfume and even home furnishing products, etc. the products are sold to more than 100 countries and regions around the world.

Gucci Gucci, an Italian fashion brand, was founded by Guccio Gucci in Florence in 1921. Gucci's products include fashion, leather goods, leather shoes, watches, ties, scarves, perfume, home furnishing products and pet products. Chinese translations are GUCCI and Gucci.

Gucci brand fashion has always been famous for its high-end, luxury and sexy. As a symbol of status and wealth, gucci has become a consumer favorite of the rich and upper class. It has always been favored by business people and elegant in fashion. Gucci is now Italy's largest fashion group.

Since 1854, Louis Vuitton, handed down from generation to present, has become the symbol of fashion travel art with excellent quality, outstanding creativity and exquisite craftsmanship. Our products include handbags, travel goods, small leather goods, accessories, shoes and shoes, ready-made clothes, watches, high-grade jewelry and personalized customized services.

In December 2018, Louis Vuitton ranked 34th in the "world top 500 brands 2018" compiled by the world brand laboratory. In October 2019, Interbrand ranked 17th in the global top 100 brand list.

In July 2020, Forbes 2020 global brand value top 100 was released, Louis Vuitton ranked ninth.

Polkadot.

Polkadot focuses on cross chain. Gavinwood, the founder of Polkadot, was the co-founder and CTO of Ethereum eth project, whose market value is the second. The project token dot has increased by more than 10 times and can connect different blockchain networks. Polkadot can link different blockchain networks to achieve "ten thousand chain interconnection", such as connecting Ethereum, bitcoin and other blockchain networks So that the value of these blockchain networks can flow with each other without the help of centralized exchanges, so as to realize the real "value Internet".

Ethereum (English Ethereum) is an open source public blockchain platform with smart contract function. It provides a decentralized Ethereum virtual machine to handle point-to-point contracts through its dedicated cryptocurrency ether (ETH).

The concept of Ethereum was first proposed by vitalik buterin, a programmer, inspired by bitcoin from 2013 to 2014, with the general idea of "next generation cryptocurrency and decentralized application platform". It was developed through crowdfunding in 2014. Ethereum is the second highest cryptocurrency in market value, second only to bitcoin.

The concept of bitcoin was first proposed by Nakamoto on November 1, 2008, and was officially born on January 3, 2009. According to Nakamoto's idea, the open source software is designed and released and the P2P network on it is constructed. Bitcoin is a kind of P2P virtual cryptocurrency. Point to point transmission means a decentralized payment system.

Different from all currencies, bitcoin does not rely on specific currency institutions to issue. It is generated through a large number of calculations based on specific algorithms. Bitcoin economy uses distributed database composed of many nodes in the whole P2P network to confirm and record all transaction behaviors, and uses the design of cryptography to ensure the security of all aspects of currency circulation.

The decentralization of P2P and the algorithm itself can ensure that the currency value cannot be manipulated by manufacturing a large number of bitcoin. Based on cryptography design, bitcoin can only be transferred or paid by the real owner. This also ensures the anonymity of currency ownership and circulation transactions. The biggest difference between bitcoin and other virtual currencies is that its total quantity is very limited and it has a strong scarcity.

10. TFT foundation governance organization

10.1 foundation establishment

As the TFT Freedom Road blockchain network is committed to building the world's largest blockchain commercial landing network, the TFT foundation, with its main body located in the United States, is committed to the development, construction and operation of TFT ecological network, promoting the development of community, transparency, health and efficiency of projects, promoting the safe and harmonious development of open-source ecological society, and contributing to the development of blockchain Give strength.

The first decision-making committee of the foundation is composed of 17 members, including 3 team representatives and 3 early investors. After the expiration of the term, they are re elected by the community vote. After the term of office of the decision-making committee expired, 11 representatives were selected by voting in the community, and 8 core members of the decision-making committee were selected by the early committee members according to the contribution of community members. New members must pass the vote of all members of the community strategic decision-making committee before they can pass the appointment selection.

For the use of funds, the foundation selects the world's top international audit institutions for formal financial audit, and will publish the audit results regularly, so that investors, ecological participants and users can understand the progress of various work and the use of funds.

10.2 distribution of committee functions

-Executive Committee

Research and formulate long-term and short-term plans, formulate regulations and management systems, formulate project planning and strategic direction, assist in expanding

media relations, manage daily operations, and be responsible for promoting the smooth and effective work of the foundation.

-Operation management committee

According to the development goals of the foundation, be responsible for the clear positioning of the project, formulate the development strategy, grasp the needs of users, and formulate the operation mode and direction.

-Remuneration and Personnel Committee

Draw up and revise salary incentive plan, allocate organization and post setting, and employ personnel.

-Audit and compliance committee

Responsible for the monitoring and evaluation of the project, including operation audit, financial audit, code audit and token application audit, to ensure the compliance and expenditure specification of the project, and improve the efficiency of fund utilization.

11. Disclaimer and risk tips

TFT passes do not constitute securities in any jurisdiction. This white paper does not constitute a prospectus or offer document of any kind, nor does it constitute a contract for securities of any jurisdiction or solicitation of investment securities. This white paper does not form or form part of any

opinion on the proposed sale or any offer to purchase any TFT token by its partners / suppliers, nor should it form the basis or reliance on any contract or investment decision, in whole or in part, and the facts presented therein.

No one may enter into any contract or have a legal commitment binding on the US foundation for the sale and purchase of TFT passes, and will not accept cryptocurrency or other payment methods on the basis of this white paper. Any agreement between any partner and you as a purchaser and any agreement relating to the purchase or sale of any TFT pass (referred to in this white paper) is subject only to a separate document which sets out the terms and conditions (the "terms and conditions"). In case of any inconsistency between the terms and conditions and this white paper, the former shall prevail.

None of the information listed in this white paper has been reviewed or approved by regulators. No such action has been or will be taken under the laws, regulatory requirements or rules of any jurisdiction. The publication, distribution or dissemination of this white paper does not imply compliance with applicable laws, regulatory requirements or rules.

-Disclaimer

To the maximum extent permitted by applicable laws, regulations

and rules, TFT and / or partner shall not be liable for any indirect, special, incidental, indirect or other damages (including but not limited to loss of income or profit, and loss of use or data) in any form, tort, contract or otherwise, arising out of or in connection with your approval of or reliance on this white paper or any part there.

-Risk and uncertainty

Potential purchasers of TFT passes (as described in this white paper) should carefully consider and assess all risks and uncertainties associated with TFT, its partners and their respective businesses and operations, TFT token and initial issuance, and all information sets are set out in this white paper and the terms and conditions prior to purchasing TFT token. If any of these risks and uncertainties develop into actual events, the business, financial condition, operating results and prospects of TFT and / or its partners may be materially and adversely affected. In this case, you may lose all or part of the value of the TFT token.

-Cautionary statement on forward-looking statements

All statements contained in this white paper, statements made in press releases or anywhere publicly available, and oral statements that may be made by TFT and / or partners or their

respective principals, the executive team and employees representing TFT and / or partners (as the case may be) are not statements of historical facts.

All statements relating to the financial condition, business strategy, plans and prospects of TFT and / or partners and the future prospects of TFT and / or partner's industry are forward-looking statements. These forward-looking statements, including, but not limited to, statements on TFT and / or partner's revenue and profitability, prospects, future plans, other expected industry trends, and statements in this white paper on other matters discussed by TFT and / or partners are not historical facts, but merely forecasts.

These forward-looking statements involve known and unknown risks, uncertainties and other factors that may lead to the actual expected results, performance or performance of TFT and / or the partners, the expected performance or performance, or the implications of these forward-looking statements. These factors include:

(1) Changes in political, social, economic and stock or cryptocurrency market conditions, and regulatory environments in the countries in which TFT and / or partners conduct their respective businesses and operations;

(2) The risk that TFT and / or partners may not be able to implement their respective business strategies and future plans;

(3) Changes in the expected growth strategy and the expected internal growth of TFT and / or partners;

(4) Changes in the feasibility and fees to be paid to TFT and / or partners in connection with their respective businesses and operations;

(5) Changes in the availability and remuneration of employees required by TFT and / or partners to operate their respective businesses and operations;

(6) Changes in customer preferences of TFT and / or partners;

(7) Changes in the competitive conditions for the operation of TFT and / or partners and the ability of TFT and / or partners to compete under such conditions;

(8) Changes in future funding needs of TFT and / or partners and the availability of financing and funding to meet these needs;

(9) Acts of war or terrorism;

(10) Catastrophic events and natural disasters that affect the business and / or operations of TFT and / or partners;

(11) Other factors beyond the control of TFT and / or partners;

(12) Any risks and uncertainties associated with TFT and / or partners and their business and operations, TFT token and TFT initial token sales.

All forward-looking statements made or attributed by or on behalf of TFT and / or partner are expressly limited by such factors. In view of the risks and uncertainties that may result in the actual expected results of TFT and / or partners, performance or performance significantly different from the expectations expressed or implied in the forward-looking statements in this white paper, we should not rely on these statements excessively. These forward-looking statements apply only as of the date of this white paper. TFT, the partner or any other person does not represent, warrant and / or promise that the actual expected results, performance or performance of TFT and / or the partner will be discussed in the forward-looking statement.

The actual results, achievements or achievements of TFT and / or partners may be significantly different from the expected results in these forward-looking statements.

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