

DIY CHAIN

Block chain technology based on block chain

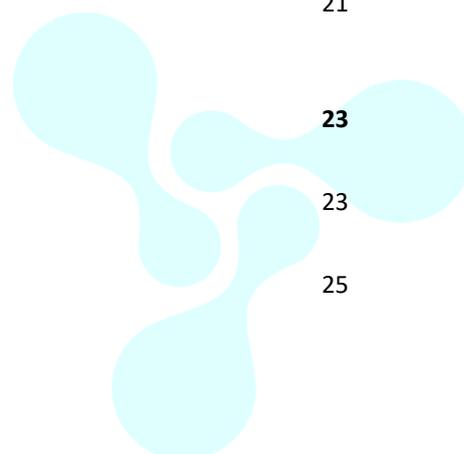
GLOBAL C2M POINT TO POINT TRANSACTION ECOLOGICAL WHITE PAPER

(internal audit version v1.3.0)

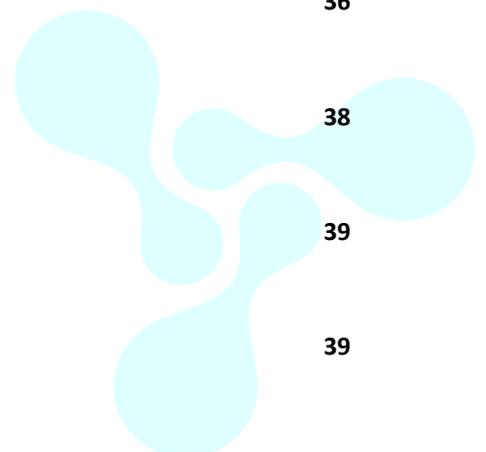
DIYchain Foundation

Table of Contents

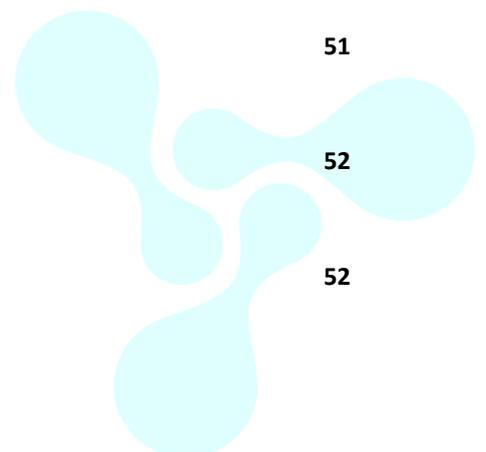
1. BLOCKCHAIN BACKGROUND	5
2. DIYCHAIN PROJECT INTRODUCTION	8
2.1 DIYchain produces background	8
2.2 DIYchain Vision	10
3. DIYCHAIN FUNCTION DESCRIPTION	12
3.1 Peer-to-Peer Trading	13
3.2 Product copyright traceability system	14
3.2.1 Product Certification	144
3.2.2 Copyright Rights Protection	16
3.3 Trading Credit System	17
3.4 Intelligent Payment System	20
3.4.1 Digital Wallet	21
3.4.2 Trading Network	21
3.5 After-sales arbitration system	23
3.5.1 Initiating Arbitration	23
3.5.2 Reverse Arbitration	25



3.6 Data Open System	25
4. DIYCHAIN APPLICATION SCENARIO	27
4.1 Custom DAPP Application Chain	27
4.2 IP Copyright Protection DAPP Application Chain	28
5. HOW DOES DIYCHAIN LAND?	30
5.1 Custom Application DAPP	30
5.1.1 Customized production plant SaaS	30
5.1.2 Applet becomes a DIYchain user distribution node	31
5.2 DIYchain Economic Ecology	32
5.2.1 Incentives	33
5.2.2 Value Ecology	34
6. DIYCHAIN TECHNICAL DESCRIPTION	35
6.1 Double-chain parallel	36
6.2 Consensus Algorithm Layer	36
6.3 Data Storage Layer	38
6.4 full chain communication layer	39
6.5 Smart Contract Layer	39



6.6 DAPP application layer	40
7. DIYCHAIN TOKEN DISTRIBUTION SCHEME	42
8. DIYCHAIN DEVELOPMENT ROUTE	44
9 DIYCHAIN FOUNDATION	46
9.1 Foundation Establishment	46
9.2 Foundation Structure	46
9.3 Division of functions of committees	47
10. DIYCHAIN TEAM INTRODUCTION	48
10.1 Team	48
10.2 Consultant	49
10.3 Partners	50
11. RISK WARNING	51
11.1 Compliance, Operational Risk	51
11.2 Market risk	52
11.3 Technical risks	52



11.4 Financial risk	53
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12. DISCLAIMER	54
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1. Blockchain background

In traditional Internet trade, almost all transactions rely on third-party trust institutions to process electronic information, and such systems are still subject to a "credit-based model", such as Taobao, Amazon and other shopping platforms, these platforms are actually A third-party trust organization that enables customers to generate trust to trade on the platform. Such transactions often need to be subject to this centralized third-party organization. According to past experience, there are at least two defects. First, if there is a problem with a third-party organization, whether it is an internal management problem or an external attack, It will bring a fatal blow to services based on third-party platforms. For example, the identity of the former ID card was stolen, such as the Sony server was hacked. Second, once a third party is bigger, such as China's BATJ, foreign Facebook, google, etc., personal information security is often not controlled by individuals. Large companies can arbitrarily call personal information for their profit, and all services of individuals and even small organizations will Controlled by large third-party organizations, individual appeals often fail to respond effectively. In this case, not only is the cost of trust increased, but once the third party is bigger, the individual will become the object of manipulation in the entire system. Therefore, the

decentralized blockchain concept was proposed.

The essence of the blockchain is a non-tamperable distributed account book, a technical solution for collectively maintaining a reliable database through decentralization and de-trusting, using three underlying technologies: consensus mechanism, cryptography Principle and distributed data storage.

The concept of blockchain was first proposed at the end of 2008 by Satoshi Nakamoto's paper "Bitcoin: A Peer-to-Peer Electronic Cash System" published on the cryptography mailing list. The blockchain technology in the thesis is the basic technology for constructing bitcoin data structure and transaction information encryption transmission. This technology realizes the mining and trading of bitcoin, which has spawned decentralized bitcoin, and then bitcoin has entered a rapid development stage. It can be said that blockchain technology is the underlying technology abstracted after Bitcoin is generated. At first, people did not realize the impact that blockchain technology may have on human business society. Until 2014, the Ethereum project proposed a blockchain based on blockchain. The smart contract system of technology and the distributed self-organizing structure (DAO) based on the intelligent contract system, numerous projects based on the Ethereum platform have attracted the attention of traditional investors, until 2017, the digital cryptocurrency

exchange currency has a major breakthrough, Many people are beginning to focus on blockchain technology and smart contract technology.



2. DIYchain project introduction

DIYchain (Do It Yourself Chain) combines blockchain technology with e-commerce transactions to create a decentralized C2M (customer-to-factory Customer To Manufactory) using blockchain decentralized, non-tamperable, and traceable features. The global e-commerce peer-to-peer trading ecosystem is determined to create a new customized e-commerce trading lifestyle.

DIYchain will use technology to build the underlying public chain of global e-commerce. In the early stage, we will start with the customized e-commerce industry, and establish the first custom e-commerce application chain on the DIYchain public chain. Later, we will promote the underlying public chain to the whole world. The developers are open, and all developers will be able to develop their own e-commerce application chain on the basis of the public chain.

2.1 DIYchain produces background

With the advent of the Internet at the end of the 20th century, the e-commerce model of Internet online transactions has become popular around the world. After more than 20 years of development, the entire global e-commerce has entered a heyday. According to relevant statistics,

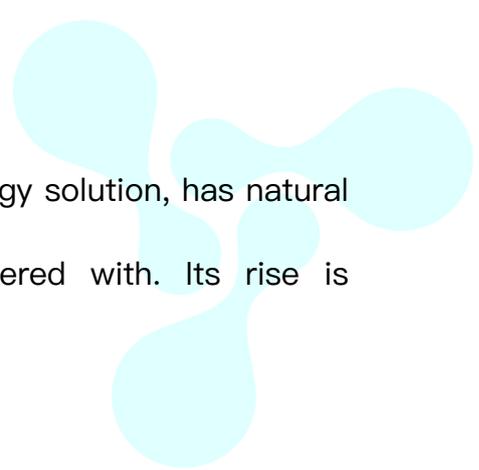
the global e-commerce market has reached 25 trillion US dollars. The main markets are concentrated in the United States, Europe, China and other regions.

According to a survey conducted by the National Bureau of Statistics of China on e-commerce trading platforms, the national e-commerce transaction volume in 2017 reached 29.16 trillion yuan, a year-on-year increase of 11.7%. Among them, the e-commerce transaction volume of goods and services was 21.83 trillion yuan, a year-on-year increase of 24.0%; the contracted e-commerce transaction volume was 7.33 trillion yuan, a year-on-year decrease of 28.7%.

Although the market share of e-commerce is still developing, there are still many problems that have not been solved:

- 1) The centralization of too concentrated is getting more and more serious
- 2) fakes can't be certified, getting more and more crazy
- 3) The problem of e-commerce payment period is getting more and more prominent
- 4) The data is mastered by the giants, and consumers and merchants cannot obtain it.
- 5) Post-sales problem handling is difficult

Blockchain, as an emerging database technology solution, has natural distributed node storage and cannot be tampered with. Its rise is



considered to be another technological wave after steam engine, electric power and Internet. It is a new technological revolution. At the same time, 2018 is considered to be the first year of application of blockchain, but there are still many problems in the existing blockchain public chain:

- 1) POW-based bitcoin consumption is too large and the transaction speed is slow
- 2) The POS-based dot currency has the disadvantage that the credit base is not strong enough.
- 3) EOS based on DPoS has shortcomings such as low enthusiasm for node voting.

With the problems of e-commerce centralization and some problems in the bottom chain public chain of the blockchain, DIYchain is thus applied. Combining the current situation and pain points of the e-commerce industry, the POS and DPOS consensus mechanisms are combined to propose the e-commerce of the blockchain. The ecosystem forms a true point-to-point transaction and creates a decentralized C2M trading model.

2.2 DIYchain vision

DIYchain aims to create a new trading lifestyle of C2M through the decentralization, non-tamperable and traceability of blockchain, combined with the actual situation of the e-commerce industry, reducing the

transaction cost of consumers and improving the production efficiency of manufacturers. Globalized peer-to-peer trading is integrated into every aspect of life, and everyone can trade and everything can be traded.

Peer-to-peer trading lifestyle:DIYchain expects to popularize C2M trading models into people's daily lives through blockchain technology, open up trust barriers between consumers and manufacturers, reduce trust costs, and achieve peer-to-peer customized e-commerce transactions.

Global e-commerce bottom-level public chain: DIYchain expects to use POS and DPOS consensus mechanism to establish a global e-commerce transaction public chain, establish a transaction credit system based on blockchain technology, product copyright traceability system, intelligent payment system, and transaction after-sales arbitration system. The open data system is open to global developers, allowing blockchain technology to serve all walks of life in e-commerce.



3. DIYchain function description

DIYchain will build a C2M peer-to-peer trading ecosystem based on blockchain technology. The main participants are: consumers, manufacturers, developers, and peer-to-peer decentralized transactions.

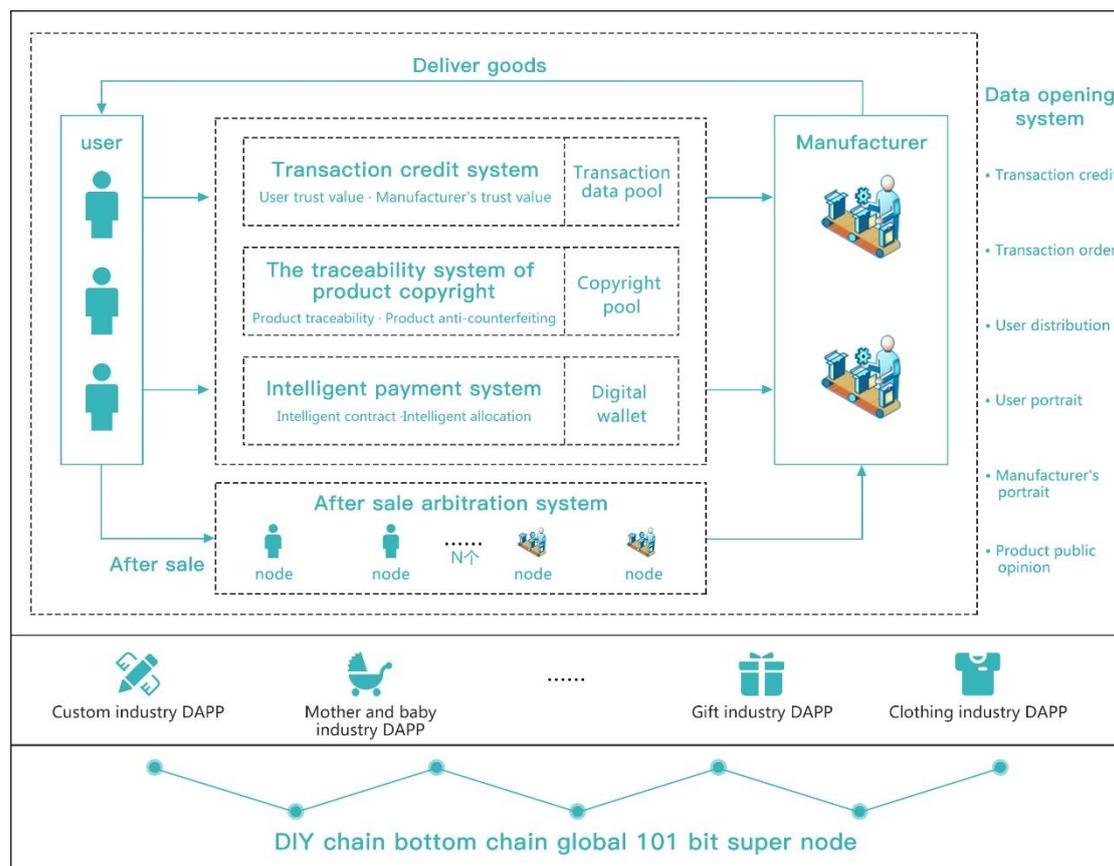


Figure 3.1 DIYchain function framework diagram

In the entire DIYchain ecosystem, the C2M point-to-point transaction ecology of individuals to factories is established on the basis of the five systems of transaction credit system, product copyright traceability system, intelligent payment system, after-sales arbitration system and data open system.

3.1 peer-to-peer trading

For the current e-commerce industry, most transactions are completed through a third-party agent, the buyer asks the agent for the purchase demand, the agent passes it to the back-end manufacturer, and the intermediate agent obtains the intermediate price difference, and the price difference is often More than 50% of the manufacturer's selling price, resulting in increased customer purchase costs, while the intermediate transfer process will lead to inefficiency.

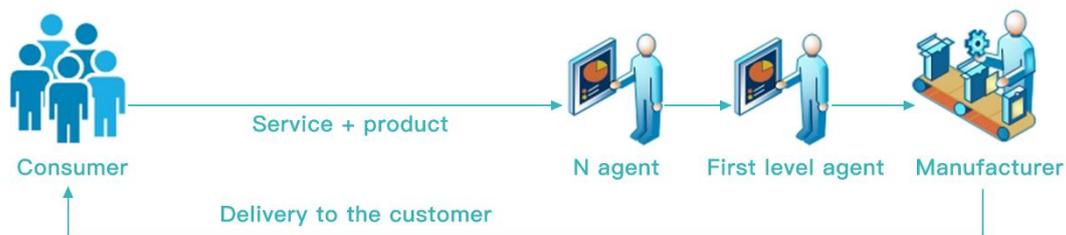


Figure 3.2 Current E-commerce Trading Model

Using the decentralization characteristics of the distributed nodes of the blockchain, a decentralized transaction ecology is established. This transaction ecology is jointly maintained by all consumers and manufacturers, and all consumers can find the terminal on this ecology. The manufacturer directly deals with peer-to-peer transactions and reduces intermediate links.



Figure 3.3 C2M peer-to-peer trading model

3.2 Product copyright traceability system

In the current e-commerce environment, whether it is Jingdong, which claims to have no fakes, or Taobao, the largest e-commerce platform in China, there are more or less fakes, and even some fakes can be faked. The copyright party also has the right to defend against fake goods. Many difficulties.

In response to this situation, DIYchain will establish a product copyright traceability system in the peer-to-peer transaction ecology, and implement copyright certification for products that are on the whole chain, and match the products that have been launched on the other nodes of the entire chain. After the certification is passed, the product will form a full chain. The only copyright mark that cannot be tampered with and broadcasts the entire chain.

3.2.1 Product Certification

In the case of copyright authentication, the digital information

authentication watermark technology will be used to encrypt the personal information, picture information, product information, picture information, etc. of the product uploader, and the data bit stream is formed by RSA and DES double encryption algorithm, and then compared. The special stream is cut verbatim, converted into decimal data, and an encrypted array with element values between 0 and 255 is obtained. Then, the watermark is embedded by modifying the element value of the host image matrix, and finally the carrier image with the embedded watermark is obtained.

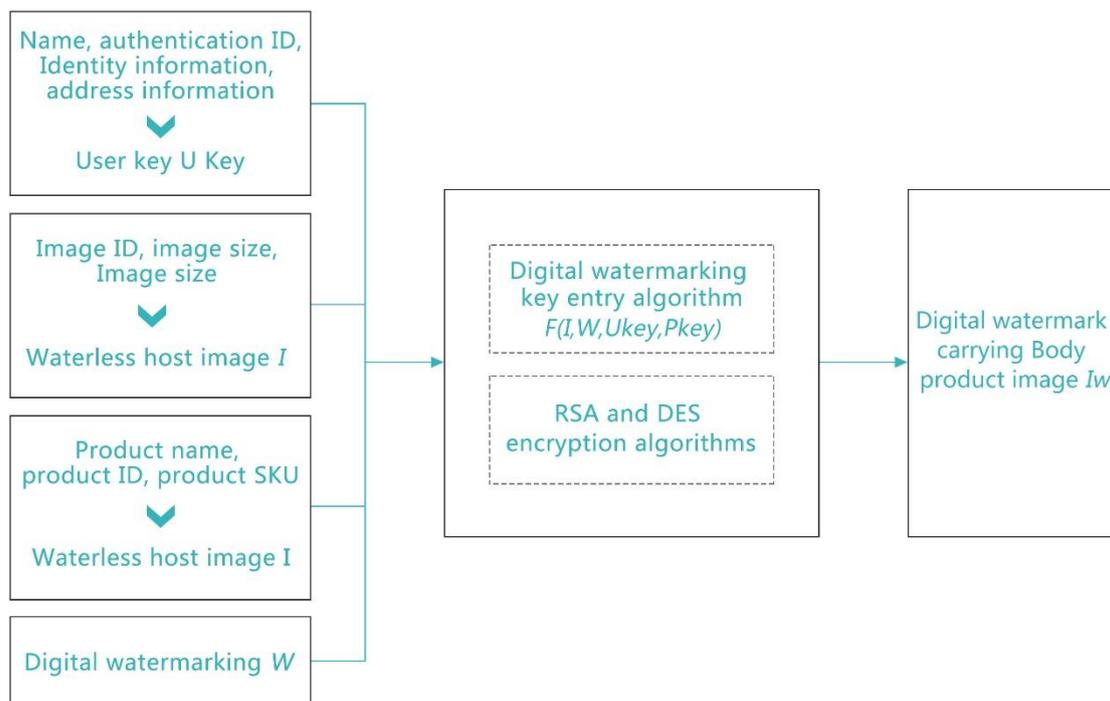


Figure 3.4 Digital authentication watermark technology flow

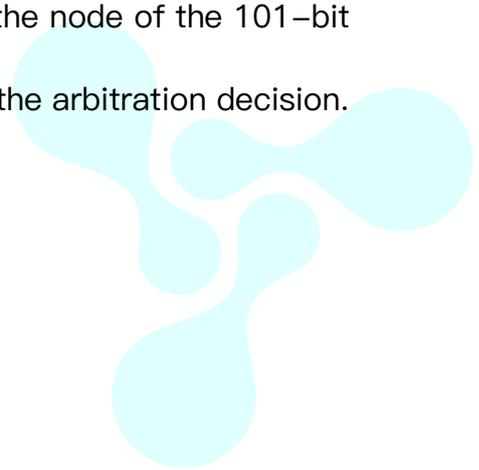
After the copyright authentication, DIYchain will store the authentication information in the whole chain block through the copyright intelligent contract, forming a block record that cannot be tampered and traceable. At the same time, for the basic information of the product, the

data base field of the product will be expanded, and the extension fields are:

Field	Field Type	Field length	Field description
product_id	Int	11	Product <i>id</i>
product_key	String	255	Product <i>key</i>
user_id	Int	11	User <i>id</i>
user_key	String	255	User <i>key</i>
product_img	String	255	Host image
watermark	String	255	digital water mark
product_img_watermark	String	255	Image of carrier product with digital watermark

3.2.2 Copyright Rights Protection

For product copyright, if product infringement occurs, DIYchain provides the basic copyright rights protection module. Users can initiate copyright rights arbitration directly on the chain. After the launch, the system will broadcast to 101 super nodes in the whole chain and broadcast to the whole chain 101. The node of the type and the node of the 101-bit manufacturer type, the three parties jointly initiate the arbitration decision.



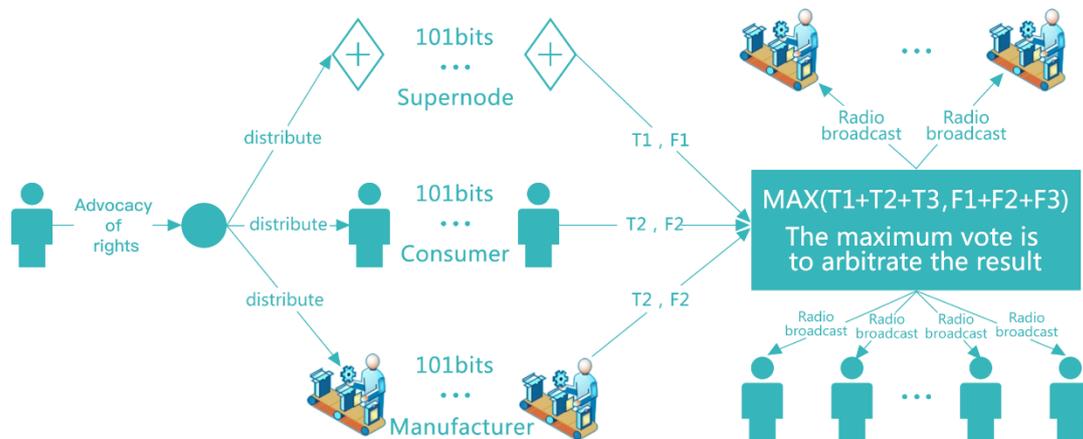


Figure 3.5 Copyright Rights Protection Process

3.3 Trading Credit System

Whether it is for consumers or back-end manufacturers, trust is built from 0 to 1, and this kind of trust often requires a centralized platform or centralized agent to endorse, and trust builds cost.

Utilizing the non-tamperable nature of the blockchain, consumers and manufacturers of the upper chain can form a non-tamperable transaction credit record, record each consumption in a true and transparent manner, and establish a global transaction chain data pool that cannot be tampered with. Smart contracts establish a credit mechanism that uses code rather than a centralized organization to dynamically assess the trading credits of consumers and manufacturers to form dynamic credit values.

DIYchain will establish credit identity through the basic information, consumption information, arbitration information and other related

information of the full chain users.

The basic information mainly includes:

- A. User name
- B. User resume
- C. User ID number
- D. User contact information

Consumer information mainly includes:

- A. Trading hours
- B. Number of transactions
- C. Transaction amount
- D. Number of transactions
- E. Transaction service products
- F. Customized transaction completion time
- G. Smart contract end time
- H. Transaction bill clearing time
- I. Whether to arbitrate

The arbitration information mainly includes:

- A. Number of arbitrations
- B. Arbitration amount
- C. Arbitration time
- D. Positive arbitration times



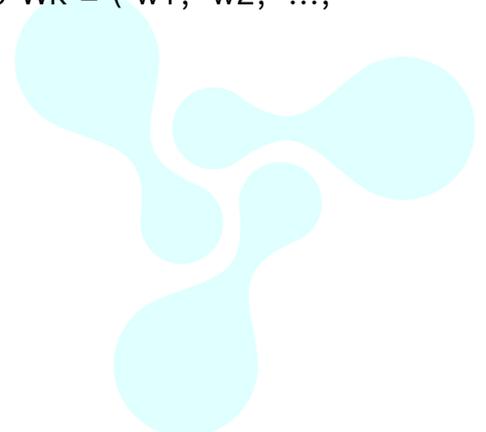
E. Reverse arbitration times

On the aspect of algorithm, based on the idea of Bayesian algorithm for voting combination model, Logistic regression, cluster analysis and neural network are selected for combination, and two hybrid models FA–RS and MEPA–RS models are used based on rough set algorithm. Optimization, Fisher’s discriminant analysis, Logistic regression, Probit regression, multiple linear regression were used to select four commonly used statistical models. The voting method was used to significantly classify the feature vectors affecting personal credit. In addition, due to the high discriminative precision of the artificial intelligence method, the step size traversal algorithm is adopted, and the average precision of the two high–precision personal credit scoring models of BP neural network and support vector machine is used as the criterion, and the significant weight is output to the individual. The credit score indicator system is significantly weighted to improve the rationality and scientificity of the indicator system

The method of equal voting is used to determine the final indicator significance order I;

Let the indicator significance weight vector be $W_k = (w_1, w_2, \dots, w_n)$

$$\sum_{i=1}^n W_i = 100$$



Traversing within the weight assignable range, and obtaining the value of all possible values of W_k ;

The eigenvalue data in the credit sample is significantly weighted to obtain a modified indicator system.

$$I_k = I^* W_k$$

With the accumulation of system data, we will continuously correct and improve the credit value establishment system through machine learning.

3.4 Intelligent Payment System

In the e-commerce trading industry, in many cases, there are bills in the transaction. For example, custom e-commerce, customers often deposit funds to dealers, dealers in the back-end processing plant to get a certain period of time, customers at various times to find various reasons not to pay. The last paragraph, the dealer can not get, naturally not to the back-end processing plant, resulting in difficult collection, and sometimes the possibility of bad debts. At the same time, in the global cross-border transaction, countries settle through their own legal currency, there are many intermediate links, which increases the payment cost to some extent.

DIYchain will issue digital assets (DIY) belonging to the e-commerce trading industry. Through the global circulation of digital assets, the intermediate exchange settlement will be eliminated and the transaction

efficiency will be accelerated. At the same time, using the blockchain intelligent contract technology, once the transaction is formed, it will form a smart contract that cannot be tampered with, and the contract will be automatically executed under certain conditions, and the appropriation will be allocated to the manufacturer in time.

3.4.1 Digital Wallet

In addition, DIYchain will establish a dedicated digital wallet for the e-commerce industry. This wallet will be stored and exchanged as a digital asset. The entire DIYchain ecosystem will not only support the virtual and physical distribution of DIY, but also other digital assets such as BTC and The direct exchange of physical objects in the whole chain ecology will open up the exchange costs brought about by the mutual exchange of digital assets and accelerate circulation.

3.4.2 Trading Network

In addition, for the high-frequency trading behavior of the e-commerce industry, DIYchain will use the lightning network as the payment basis for the entire trading network in the entire trading system. The main core includes the Revocable Sequence Maturity Contract (RSMC) and hash. Time-locked contract HTLC (Hashed Timelock Contract).

RSMC's main principle is to establish a "micro-payment channel" in

the consumer and DIYchain ecosystem and in the transaction. Both parties will pre-store a part of the funds in this channel. When the transaction is made, both parties will confirm the allocation plan of the funds together. Signed as a scrapped version. After the transaction is completed, the smart contract is allocated according to the previously agreed distribution plan, and the final transaction result is written into the blockchain network.

The entire micro-payment channel is realized by HTLC (Hashed Timelock Contract). In fact, it is a time-limited transfer. The main principle is through a smart contract. The two parties agree that the transfer party first freezes a sum of money and provides a hash value if it is within a certain period of time. Someone can propose a string so that its hashed value matches the known value (actually means that the transferor authorizes the recipient to withdraw), then the money is transferred to the recipient.

RSMC guarantees that direct transactions between consumers and manufacturers can be done under the chain. HTLC guarantees that transfers between any two people can be done through a “payment” channel. By integrating these two mechanisms, transactions between any two people (peer-to-peer) can be done under the chain.

intermediary, while the blockchain ensures that the final trading results are confirmed.

3.5 After-sales arbitration system

Due to the extreme decentralization of the entire e-commerce industry and the extreme non-standardization of certain categories, there will always be certain after-sales disputes. Buyers and manufacturers have their own rhetoric, and it is difficult to achieve consistency, which makes the backlog of customization problems difficult to handle. At present, the main processing of custom problems is generally coordinated by the platform or the dealer, so that the buyer and the manufacturer can each compromise.

Once the sale occurs, through the structure of the blockchain distributed node, the user initiates arbitration, dynamically matches a certain number of nodes to participate in the arbitration evaluation through the node trust value and the correlation degree, not a single individual, nor a single centralized structure, but full The chain dynamically matches the participation of multiple nodes to improve the fairness and reliability of arbitration.

3.5.1 Initiating arbitration

In the arbitration phase, the system will initiate an arbitration task to the N consumer nodes and N manufacturer nodes in the whole chain according to the correlation and trust values, and the node will confirm the

voting. If the confirmation is not made within 10 minutes, the system will automatically Assign the arbitration rights to other corresponding nodes. After receiving the respective K confirmation voting results (k is an odd number), the arbitration is terminated, and the result of the arbitration result is greater than $K/2$, and the result is the arbitration result, and the result will be sent to the first party involved in the arbitration process.

In the process of arbitration, the outcome of the arbitration will also affect the party responsible for the costs of the arbitration. For example, if the arbitration result is favorable to the buyer, the fee will be borne by the service or the producer, and vice versa. For the arbitration fee, the system will distribute it to all the arbitration confirmers according to the 28th principle. The winner of the arbitration result will receive 80% of the fee for the reward, and the opposite will receive 20% for the reward.

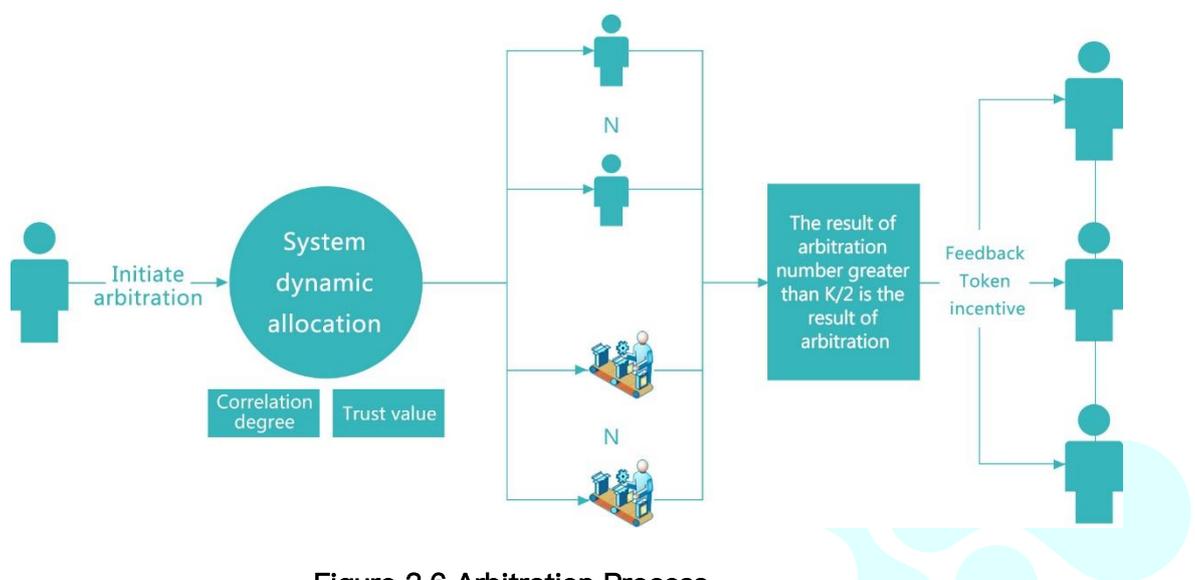


Figure 3.6 Arbitration Process

3.5.2 Reverse Arbitration

For the arbitration result, there will be a three-day publicity period for the entire chain. During the publicity period, consumers and manufacturers can propose a reverse arbitration mechanism, which will initiate a new arbitration on the arbitration result and distribute it to other nodes except the last arbitration for new arbitration, and the arbitration result will be Also broadcast to all nodes in the entire chain.

For reverse arbitration, DIYchain only provides 2 reverse arbitration opportunities, plus the first arbitration, up to 3 arbitrations. For the 3 arbitration results, 2 times the same result will be the final arbitration result and real-time Token reward and punishment.

3.6 Data Open System

In the current industry, each manufacturer and dealer has its own production data and transaction data, but these data are only their own. In the industry, they are only a few of them. They cannot obtain reliable and complete industry data and cannot cooperate together. Improve the efficiency of the industry, and in the existing centralized platforms, such as Taobao and Amazon, master the huge data in the global e-commerce field, and these data are not disclosed to all users in the whole industry, so they use this data to form their own Data barriers form a centralized

e-commerce oligarchy.

Utilize the open and transparent nature of the blockchain, open up data barriers, realize information sharing across the industry, and cooperate with each other to further enhance the efficiency of the entire industry.

In terms of data opening, it will be mainly open to transactional credit, transaction orders, user distribution, user portraits, manufacturer portraits and product sensations, and implement a layered open format.

For the consumer layer, open: transaction credit, transaction orders, manufacturers portraits

For the manufacturer level, open: transaction credit, transaction orders, user distribution, user portraits, product lyrics.

In addition, for the opening of other data types, DIYchain will vote in the form of full-chain voting for the data layer to be opened, and more than 51% of the approval will be implemented.



4. DIYchain application scenario

DIYchain provides the underlying public chain of global e-commerce, establishes a transaction credit system based on blockchain technology, intelligent payment system, transaction after-sales arbitration system, and data open system. It is open to global developers. Global developers can build various lines based on DIYchain. The exclusive application chain of each industry enables everyone to trade and everything can be traded.

4.1 Custom DAPP Application Chain

As the global economy warms, companies are paying more and more attention to their own image. The demand for group clothing customization and office product customization is increasing. Customized employee clothing has become a standard for enterprises. Customized cups, pens, books, etc. Almost the norm.

Under the current circumstances, it is difficult for enterprises to directly find the customized manufacturers on the back end. Generally, they will go through the e-commerce platform (such as Taobao) to make customized purchases. However, in this way, most of them can only find intermediate agents, so they are facing high Intermediate fee.

DIYchain will provide a full-chain underlying development interface,

provide DAPP standardized UI/UX solutions, open to global blockchain developers, developers can build custom industry application DAPP based on DIYchain, provide peer-to-peer custom transactions for global users Through the enterprise's customized demand intelligence to provide the optimal production plan, the enterprise can also choose the manufacturer by the manufacturer's location, trust value and service content, eliminating the intermediate links, saving customization and communication costs, and letting the enterprise carry out low-cost Customized, at the same time each product can be traced to trace the entire process from production to custom delivery.

4.2 copyright protection DAPP application chain

In the DIYchain ecosystem, virtual assets such as IP copyright can also be directly applied. Openers can develop IP specificity based on the DIYchain public chain, and provide IP copyright and pre-sale for IP service providers. In two major sections, the provider can upload its own IP to the full chain, the system will automatically identify the IP, and provide a copyright mark that cannot be tampered with. The IP provider can make pricing and all users can purchase it.

In this way, the IP copyright DAPP generated on the basis of DIYchain not only effectively protects IP, but also allows IP providers to obtain

revenue.

In addition, developers can also allow IP providers to directly combine IP and customized physical objects in DAPP to form IP customized products, which can be purchased by consumers all over the world. In this way, DIYchain can become a genuine IP distribution platform for global IP.

For example: Marvel released a T-shirt printed with Iron Man, limited to 100 pieces worldwide, genuine license. Consumers can purchase and at the same time scan the product's QR code to trace the IP provider's information and confirm the genuine license.



5. How does DIYchain land?

The DIYchain team will combine its own resource advantages to develop the first custom industry application DAPP based on the DIYchain public chain.

5.1 custom application DAPP

Before developing the DIYchain public chain, we will establish a custom production plant SaaS and small programs in the custom industry to accumulate certain user data, transaction data, and after-sales data for data verification and intelligent contract algorithm optimization during DIYchain public chain development.

5.1.1 Customized production plant SaaS

DIYchain has initially built the SaaS system, the largest custom manufacturing plant in China. On the platform, 2000 national registered apparel manufacturers have been registered and used. The actual number of registered terminal users has reached 100,000, and the daily average number of registered users has reached 533. The number reached 700 custom orders for group clothing, and the number of daily traded clothing reached 23,000. These will be the first real users on the DIYchain chain.

In addition, up to now, a total of 5180 models of custom-made SKUs

have been launched, covering 280 categories, mainly including three categories of clothing, gifts and office supplies.



Figure 5.1 Custom Production Plant SaaS

5.1.2 Small program becomes a DIYchain user distribution node

DIYchain has cooperated with a number of partners and distributed 74 small programs. Each small program radiates at least 1,000 partners around the company, with a total of 74,000 users. Through the small program mode, the first batch of seed users on the chain is rapidly developed.



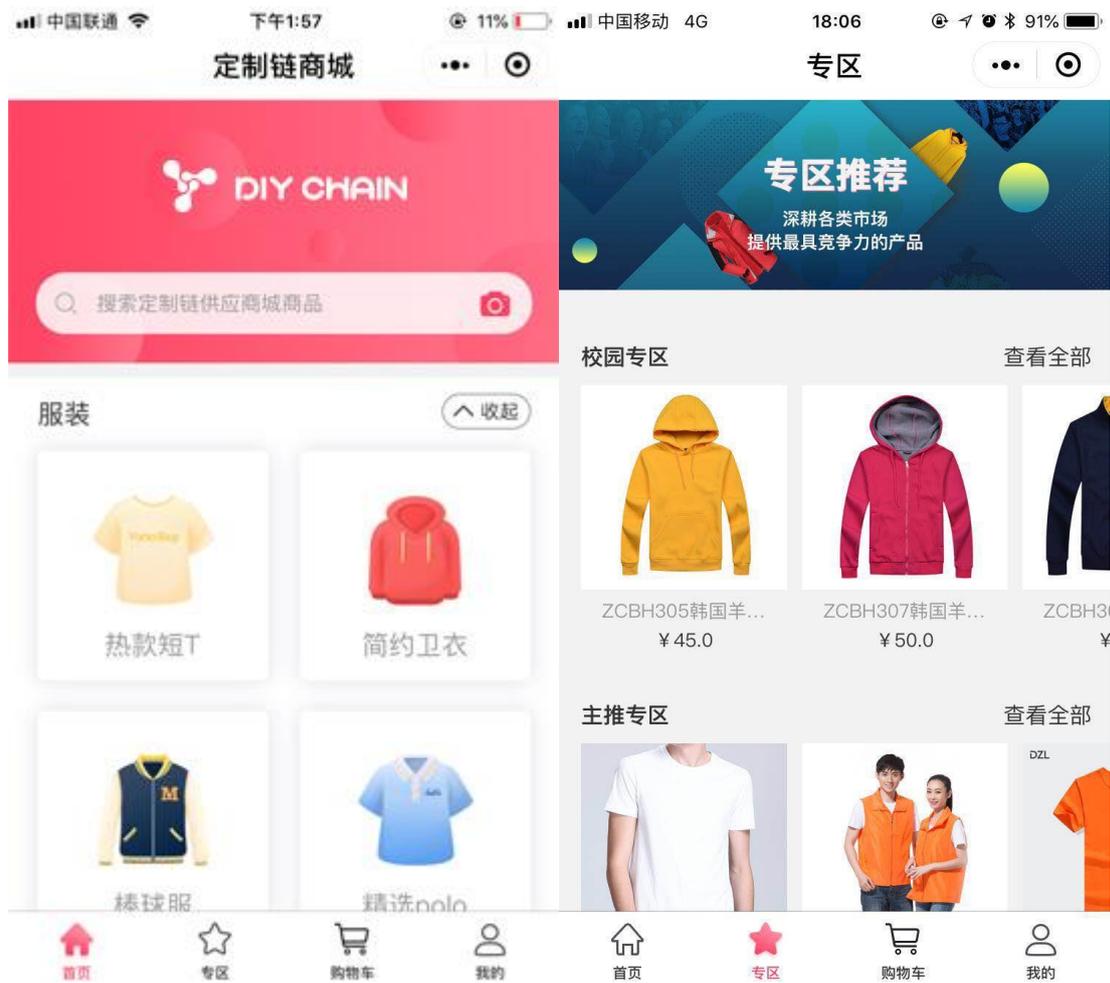


Figure 5.2 Applet

5.2 DIYchain economic ecology

As the global decentralized e-commerce peer-to-peer trading under the public chain, DIYchain will issue digital assets DIY, and in order to better allow consumers, manufacturers and developers to maintain the entire chain, in the entire ecosystem, DIYchain will come up with a big Part of the DIY is distributed to the nodes of the full chain.

5.2.1 Incentive ecology

1) Arbitration incentives

For the nodes participating in the arbitration, a certain DIY incentive will be obtained, and at the same time, if the final arbitration result and its own arbitration have been, the additional DIY will be obtained.

2) Trading incentives

Regardless of the consumer or the manufacturer, as long as there is no completion of the after-sales arbitration, the DIY will be obtained separately.

3) Winding incentive

In order to encourage consumers and manufacturers to go online, open their own trust and other data, will get an initial DIY.

4) DAPP incentives

For developers, as long as they successfully develop DAPP based on the DIYchain public chain and promote it in the whole chain, they will get DIY, which encourages more developers to develop e-commerce DAPP suitable for all walks of life.

5) DIY interest incentives

In order to allow more users to hold DIY and maintain the normal operation of the full chain network, candy incentives are issued when DIY reaches a certain market price.

5.2.2 Value Ecology

As a global digital asset in the e-commerce industry, DIY trades a variety of products, such as clothing, gifts, services, and office supplies, online and offline, anytime, anywhere.

1) Fee payment

DIY will serve as a digital asset in the entire DIYchain ecosystem. In point-to-point transactions, you can directly pay for the expenses generated by the exchange and purchase physical assets with digital assets.

2) Arbitration payment

Any arbitration will pay a certain DIY to the full-line DIY arbitration node, so that the record node participates in the arbitration to ensure the reliability and fairness of the entire arbitration.



6. DIYchain technical description

In order to facilitate testing, DIYchain will rely on Ethereum as a platform for development and testing in the early stage. However, the POW/POS hybrid consensus algorithm adopted by Ethereum has excessive consumption resources and slow transaction speed, which cannot adapt to the high frequency and fast of the e-commerce industry. The form of trading, so DIYchain will combine the DPOS and POS hybrid consensus algorithms to improve the transaction processing speed of the entire ecosystem.

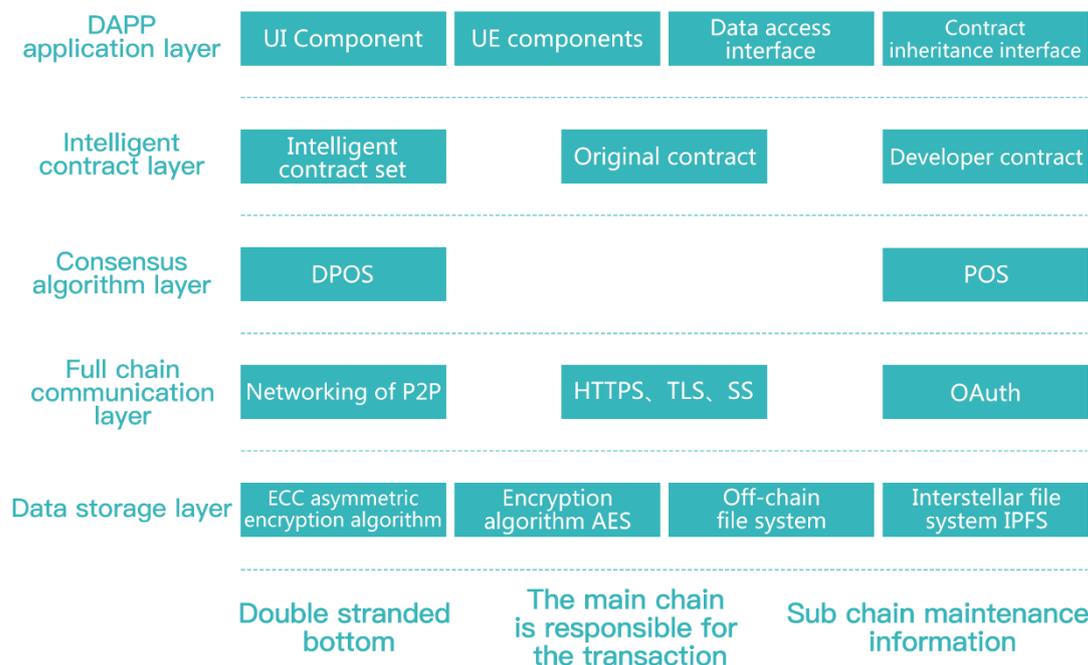


Figure 6.1 DIYchain Technology Architecture

6.1 double chain parallelism

The underlying architecture of DIYchain will adopt a two-chain parallel architecture system, which is divided into main chain and sub-chain. The main chain is responsible for executing the ecological trading system and arbitration system of the entire chain, while maintaining transaction history and trust relationship information, and there may be a globally dependent dynamic data structure in the main chain. The secondary chain is mainly responsible for maintaining the account information and trust value index of each consumer and manufacturer.

6.2 Consensus algorithm layer

At the level of the entire consensus algorithm of DIYchain, a consensus algorithm combining DPOS and POS will be adopted. DPOS is a consensus model with both fast recognition speed and high processing performance. Its principle is to let everyone who holds the token, and the equity holder can choose any number of witnesses to generate the block.

However, there are many drawbacks to this kind of voting to generate super nodes. The majority of shareholders (90%+) have never participated in the voting. This is because voting takes time, energy and skills, which is what most investors lack. At the same time, there are many difficulties in dealing with bad nodes. Community elections cannot prevent the

occurrence of some destructive nodes in a timely and effective manner, posing a security risk to the network.

In view of the above problems, in the DIYchain consensus algorithm, the traditional DPOS vote is selected as 101 representatives to be adjusted: the smart trust automatically selects the global trust value to occupy the top 101 super nodes in the whole chain. The super node is dynamically determined by the trust value in the transaction credit system, and the credit value generated by the transaction of the full chain consensus is used to determine the super node, thereby avoiding the time, energy and skill required for the full chain node voting. At the same time, among the 101 super nodes, 50 are from consumers and 51 are from manufacturers. Although the 101 super nodes are divided into two types, the rights of both parties are the same. Generated, recorded.

In addition, in order to avoid super node inaction, DIYchain, if the computing power is unstable, the computer is down, or trying to use the power in the hands to do evil, the full chain node can initiate node voting, eliminate the super node that does not act, after the rejection, the system will be Within 24 hours, the credit value of the full chain node is re-evaluated and 101 new super nodes are finally determined, and the rejected nodes will not be selected again in the next 101 days, so as to achieve the fairness and impartiality of the super node.

In addition, in the DIYchain algorithm, a system for issuing interest based on the amount of money held by the user and the time (coin age) in the POS is introduced into the DIYchain, and the first batch of users will be sent to certain token incentives. Attract more users and manufacturers to ensure the safety of the entire DIYchain ecosystem.

6.3 data storage layer

The block data of DIYchain is stored in a chain structure, and all blocks have pointer references of the previous block to ensure that the data is not tampered with. The sha256 function is used to hash the data, the ecc asymmetric encryption algorithm is used for identity authentication, the aes encryption algorithm is used to encrypt the private key, and the Merkle number is used to verify and store the transaction.

For large file contents, it will be stored in the off-chain file system. At this stage, a prototype system based on ethereum geth and IPFS has been developed, and the abstract (digital fingerprint) is saved to the chain for self-certification. IPFS is a point-to-point distributed hypermedia distribution protocol that combines the best distributed system ideas of the past few years to provide a globally uniform addressable space for everyone. IPFS replaces traditional domain-based addressing with content-based addressing. Users don't need to care about the location of

the server, regardless of the name and path of the file storage. We put a file into the IPFS node and we get a unique cryptographic hash value calculated based on its contents. The hash value directly reflects the contents of the file, and even if only 1 bit is modified, the hash value will be completely different.

6.4 full chain communication layer

The communication layer includes a distributed networking mechanism, a data propagation mechanism, and a data verification mechanism. It adopts a complete P2P networking technology and has an automatic networking function. In terms of communication security, it can flexibly support secure communication protocols such as HTTPS, TLS, and SS (SecureWebsockets). When it is necessary to establish a platform application external service interface, it can extend OAuth–certified integration.

6.5 smart contract layer

For each smart contract, as a chain of assets for full lifecycle management, complete controllable process management for the submission, deployment, use and cancellation of smart contracts, and integration of the rights management mechanism for the mechanism of intelligent contract operations Comprehensive safety management

DIYchain will build a smart contract collection to manage all the smart contracts developed by developers on DAPP based on the DIYchain public chain, and used for contract upgrades and destruction. In addition, the contracts generated by DIYchain for the credit trust system, the intelligent payment system, and the full-chain super nodes will be put into this collection, and all developers will inherit the contracts of the public chain to derive contracts suitable for their own industry transactions. Reduce developer development, quickly implement DAPP and apply it.

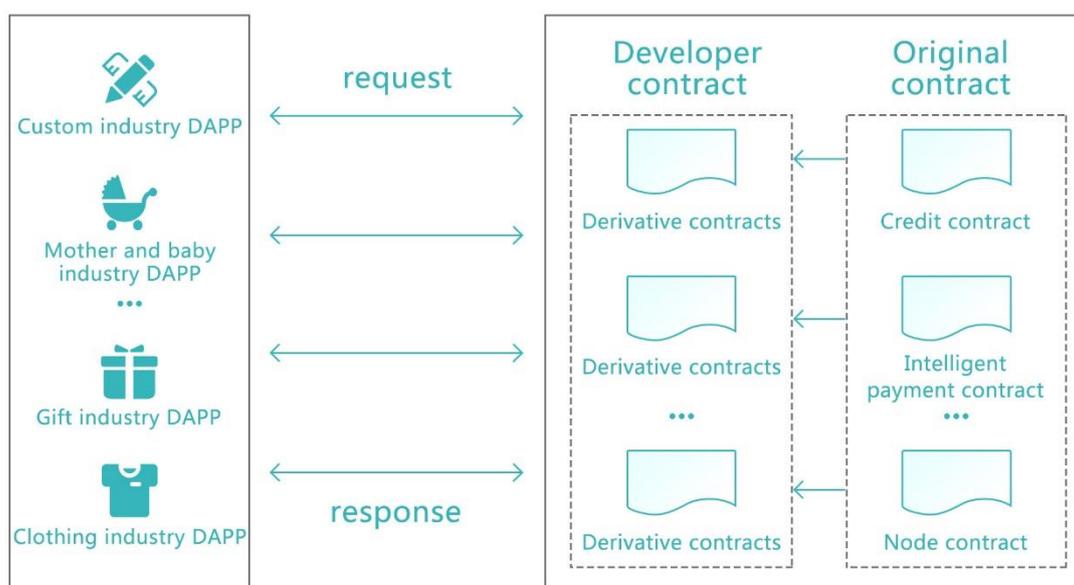


Figure 6.2 DIYchain smart contract collection

6.6 DAPP application layer

DIYchain will establish a peer-to-peer e-commerce transaction public chain based on the consensus algorithm of DPOS and POS hybrid, and open to global developers. In order to save developers' development costs,

DIYchain will not only open the underlying interface, but also provide standardized components for UI/UX, accelerate developers to develop DAPP, and reduce unnecessary costs.

In addition, regarding the development language, DIYchain will provide data access interfaces and interactive interfaces for diverse development languages, support multi-language integration and function extension, and will support many current mainstream languages such as Java, JavaScrHOT, and Python.



7. DIYchain Token Distribution Solution

The total amount of DIYchain (hereinafter referred to as the total amount) is 1 billion Tokens, and the distribution forms are as follows:

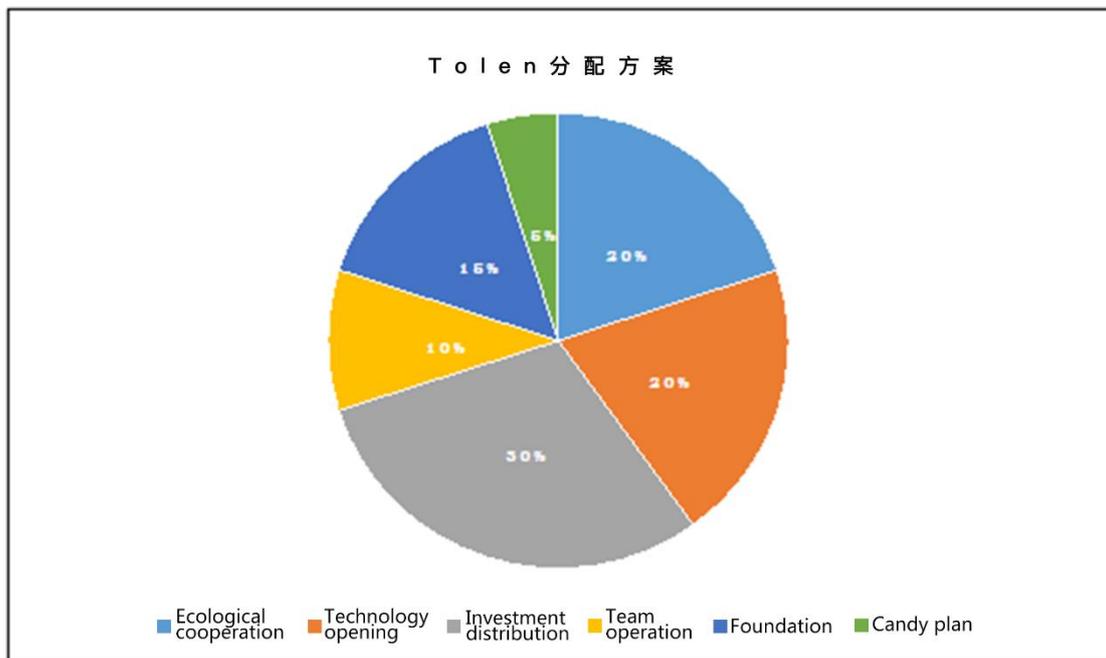


Figure 6.1 DIYchain Token Distribution Scheme



Total supply: 1 billion	code: DIY
<p>20% ecological cooperation, a total of 200 million Token. It is used by platform eco-partners in platform construction, activities, development, and human, material, talent contributors and institutions.</p>	
<p>20% technology development, a total of 200 million Token. The technical team will be allocated in the technology platform, technology development and maintenance upgrade process, including small programs, SaaS and other software, hardware development.</p>	
<p>30% investment allocation, a total of 300 million Token. Among them, 10% are strategic investors, 20% are angel investment institutions and individuals, 30% are cornerstone investors, and 40% are early investors. This phase is only open to specific groups, 6–12 months of locking and release according to the stage</p>	
<p>10% of the team operates with a total of 100 million tokens. Individuals and teams that will be assigned to the core team of the founding team to make efforts and contributions, including the human, material, and financial resources that the investor and consultant team will continue to invest in the process of project initiation, design, and resource formation.</p>	
<p>15% Foundation, a total of 150 million Tokens. The Foundation is mainly used for ecological incubation, marketing, commercial development, legal compliance, etc., to maintain rapid development of the community and the entire ecological environment and subsequent healthy and sustainable development.</p>	
<p>5% is used in the candy program for a total of 50 million tokens. Mainly used for the incentives of the entire ecological user, and continuously maintain the sustainable development of the entire ecology.</p>	

8. DIYchain development route



Figure 8.1 DIYchain development route



time	planning
2017 Q4	Project research to understand industry pain points
2018 Q1	Project establishment, member construction
2018 Q1–Q2	Custom DAPP–SaaS, small program polished and online
2018 Q3	Complete public chain architecture design and development
2018 Q4	Development transaction credit system
2019 Q1	Develop a smart payment system
2019 Q2	Development of trading after–sales arbitration system
2019 Q3	Development data open system
2019 Q4	Complete the public chain migration, the whole platform is online
2020 Q1	Custom DAPP application online
2020 Q2	Continuous development, global promotion of the underlying public chain

9 DIYchain Foundation

9.1 Foundation establishment

Considering the positioning of DIYchain internationalization, the DIYchain Foundation (hereinafter referred to as the “Foundation”) is a BVI company established overseas. The Foundation is committed to the development and construction of DIYchain and the promotion and promotion of transparent governance to promote the safe and harmonious development of the open source ecological society.

9.2 Foundation Architecture

The DIYchain Foundation Governance Architecture includes operational processes and rules for day-to-day work and special situations.

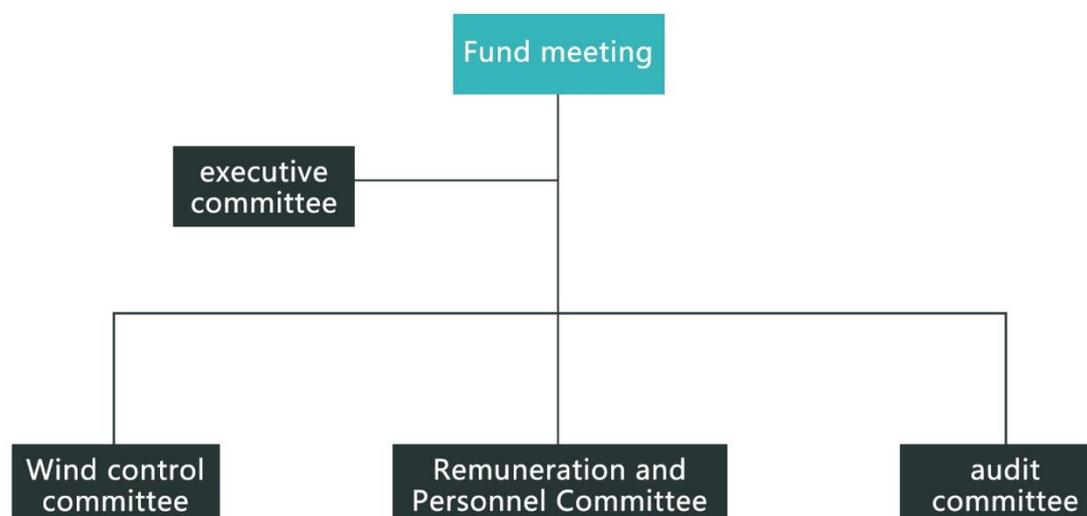


Figure 9.1 DIYchain Foundation Governance Framework

9.3 Division of functions of each committee

1) Executive Committee:

Research and develop long-term plans, designate charters and management systems, feasibility analysis and approval of new projects, and manage daily operations.

2) Risk Control Committee:

Research and develop risk control strategies, develop risk control standards, review overall operational risks, convene project risk review meetings, and organize audit results.

3) Compensation and Personnel Committee:

Formulate and revise the salary and incentive plan, review the organization setting and post setting, and hire personnel.

4) Audit Committee:

Responsible for operations audit, financial audit, code audit and TOKEN destruction.



10. DIYchain team introduction

10.1 Team



Chingiz

Founder and CEO, worked as a senior researcher at a research institute, senior block chain researcher.



Lance Winstein

Director of operations in Europe and America, worked as a director of marketing in a well-known electricity supplier company. 2 years of chain operation experience.



Varun Kapoor

Technology leader, the main research area is block chain and Internet of things, block chain technology senior research fellow, with 6 years of block chain development experience.



Janyoung

In charge of the project, the project has two patents authorized by the state, and won the special project of scientific and technological entrepreneurship of the Hubei provincial science and technology department. It has rich experience in the supply chain and landing of the custom industry.



Chason

The head of the Asia region, the founder of CCTV2, a pioneer of business in Wuhan, a pioneer in pioneering business in the city, has been engaged in 8 years of custom electric business, and has been studying the block chain for 3 years.



10.2 Consultant



Wang Ye

Six ho venture capital President & partner, Harvard University MBA, Shanghai Jiaotong University, once worked in BCG, IBM, Siemens, and so on. In the 08 year, it focused on PE investment, and focused on the investment of VC in the 10 year.



Du Ting

The founder of technology incubator demo++, Ph.D. of Xi'an Jiao Tong University, undergraduate course of North post, Ink ink chain, original block chain early investor.



Xu Gang

The Ministry of industry and credit China Software Industry Association District chain special committee expert, China block chain entrepreneurship Institute Shenzhen branch vice president, district chain entrepreneurship Institute expert think tank lecturer senior lecturer, cloud chain technology founder, founder of the cloud Wallet.



Chen Bi Kui

Six venture partners, MIT master of computer science and MBA, Tsinghua undergraduate, worked in Oracle Corp for software development.



Wu Tung

Doctor of finance of Central University of Finance and Economics, honorary consultant of Asian block chain society, special researcher of international cooperation center of national development and Reform Commission, assistant researcher of Financial Institute of development research center of State Council and researcher of international financial research center of Central University of Finance and Economics.



Zhang Xiao Jun

Capital partner, founder of Turing fund, original Angel Bay venture capital, director of investment and investment in Lanshan, co founder of coin circle daily public name of coin circle, deeply involved in famous projects such as initial chain, deep brain chain, topology chain and so on.

10.3 Partners



11. Risk warning

The project has the following risks, please pay attention to the subscriber:

11.1 Compliance, operational risk

Compliance and operational risk refer to the risk that DIYchain will violate local laws and regulations in the process of recognizing funds and conducting business, resulting in the risk that the operation cannot continue.

The safe-haven approach to compliance and operational risk operations teams is:

- 1) The operation team and the decision-making committee adopt a decentralized operation mode to eliminate single-point risks;
- 2) Hiring professional lawyers in the local business to design open platforms, digital asset issuance, digital asset trading, blockchain finance, blockchain applications, etc. under the legal framework;
- 3) In order to meet and comply with local laws and regulations, the DIYchain platform may not provide normal services in some countries and regions.



11.2 Market risk

Market risk means that DIYchain is not accepted by the market, or there are not enough users to use it, business development is stagnant, and there is not enough profit to support it.

The safe-haven approach to the market risk operations team is:

- 1) After nearly one year of actual market operation experience, confirm that the market pain points exist objectively;
- 2) Utilize the experience of the founding team in sports, internet and financial market services to quickly incubate the platform ecosystem and generate profits.

11.3 Technical risks

Technical risk refers to major problems with the underlying technology, resulting in DIYchain failing to achieve the expected functionality and tampering or loss of critical data.

The hedging approach to the technical risk operations team is:

- 1) Based on the mature, open source and secure blockchain technology, adopt the architecture that has been recognized and verified by commercial customers to develop the DIYchain system;
- 2) After recognizing sufficient resources, attract more high-end talents from relevant industries to join the development team, lay the

foundation, replenish the strength, and draw on the mature development experience.

11.4 Capital risk

Capital risk refers to the significant loss of project funds, such as: theft of funds, loss of funds, and substantial depreciation of reserves.

The hedging approach adopted by the fund risk operation team is:

- 1) The multi-signature wallet + cold storage method of the reserve fund is jointly controlled by the decision-making committee. Under the multi-signature mode of 5-7, when three directors are unable to perform their duties at the same time, the reserve funds will be at risk;
- 2) The operation team serves the financial industry all the year round and has rich experience in risk control. When the liquidity fluctuates sharply in the market (more than 50% decline), the loss will occur.



12. Disclaimer

For the DIYchain project, a fund based overseas will be established. The Foundation will act as an independent legal entity and will be responsible for organizing the team to develop, promote and operate the DIYchain project and assume all relevant responsibilities.

As a virtual product with practical use, DIYchain Coin is not a securities, nor a speculative investment tool.

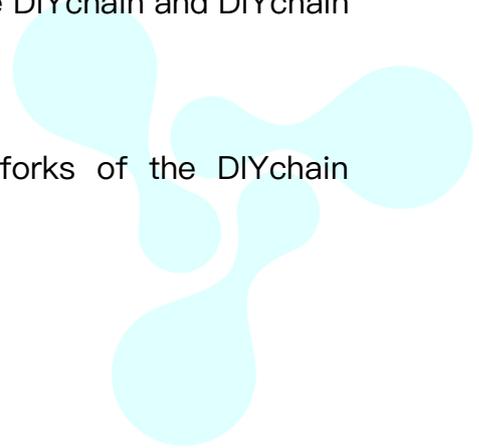
Except for the virtual number Token officially designated by the DIYchain Coin as a DIYchain platform, it does not represent any real-world assets or rights (such as foundation shares, voting rights, etc.).

Except as expressly stated in this white paper, the DIYchain Foundation does not make any representations or warranties regarding DIYchain or DIYchain Coin. This document is for informational purposes only and does not constitute an opinion regarding the sale and purchase of DIYchain Coin. The above information or analysis does not constitute an investment decision. This document does not constitute any investment advice, investment intention or instructed investment. This document does not constitute or be construed as providing any purchase or sale or any invitation to buy or sell any form of securities, nor is it a contract or commitment of any kind.

Relevant intent users clearly understand the risks of DIYchain /DIYchain Coin, and once the subscriber participates in the subscription, they understand and accept the risk of the project.

The DIYchain Foundation hereby expressly disclaims and refuses to accept the following responsibilities:

- (1) Anyone who violates any country's anti-money laundering, counter-terrorism financing or other regulatory requirements when purchasing a DIYchain Coin;
- (2) Any person who violates any of the representations, warranties, obligations, undertakings or other requirements set forth in this White Paper in the purchase of DIYchain Coin, and the resulting unusable or inability to extract digital chips DIYchain Coin;
- (3) For any reason, the DIYchain Coin sales plan is abandoned;
- (4) The development of DIYchain failed or was abandoned, and the resulting undeliverable or unusable DIYchain Coin;
- (5) Delays or delays in the development of DIYchain, and the resulting schedule of failure to achieve prior disclosure;
- (6) Errors, defects, defects or other problems in the DIYchain and DIYchain Coin source code;
- (7) Faults, crashes, defects, rollbacks or hard forks of the DIYchain platform and DIYchain Coin;



- (8) DIYchain public chain or DIYchain Coin fails to achieve any specific function or is not suitable for any particular purpose;
- (9) the use of the DIYchain Coin sales plan;
- (10) Failure to promptly and completely disclose information about DIYchain development;
- (11) Any participant leaks, loses or destroys the DIYchain Coin's wallet private key;
- (12) Anyone's trading or speculation of DIYchain Coin;
- (13) DIYchain Coin is listed, suspended or delisted on any trading platform;
- (14) DIYchain Coin is classified or considered by any government, quasi-government agency, competent authority or public agency to be a currency, securities, commercial paper, negotiable instrument, investment or other thing that is prohibited, regulated or Legal restrictions;
- (15) Any risk factors disclosed in this white paper and related to such risk factors, resulting in or accompanying damages, losses, claims, liabilities, penalties, costs or other negative effects.

