

FinndyChain White Paper

Super Smart Contract Based Data Ecosystem

Keywords: Data mining, super smart contract, DPoW, safe delivery,
AI modeling, side chain storage, authorization confirmation,
technology desensitization, slicing fusion

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Contents

Preface	1
1、 Project Background	3
1.1 Existing problems	3
1.2 Values of the block chain	4
1.3 Social visions	5
2、 The Ecosystem Scheme of FinndyChain	7
2.1 FinndyChain architecture	7
2.2 Super smart contract	8
2.3 Side chain storage	10
2.4 The data mining model	11
2.5 Data ecosystem architecture	12
3、 Application Market of FinndyChain	16
3.1 DApp1. Data trading platform	16
3.2 DApp2. Distributed collection terminal	16
3.3 DApp3. Precise marketing platform	17
4、 Economic Model	19
4.1 Application scene	19
4.2 Capital use planning	21
4.3 Investment advantages analysis	22
5、 Team Composition	23
5.1 Core team	23
5.2 Global Consultant and Investor	24
6、 Development and Planning	26
6.1 Development course	26
6.2 Time planning	26
7、 Project declaration	28
8、 References	29

Preface

In recent years, along with the fast development of the internet economy and popularization of the information system and the database technology, more and more information on human being's social activities is recorded with digital technology and data produced in each industry and institution are increasing exponentially. Meanwhile, fast development of big data, cloud computing and AI technology has also improved people's data processing efficiency and reduced the data processing cost significantly. Data has become the petroleum of the new times and are overwhelming development of all industries. The society is developing into the DT times from the IT times.

In the future, people can collect kinds of data at a low cost, from multiple terminals and dimensions. The data source stored in a system to achieve the business goal can be fused by integration to break down the data isolated island and support other external information systems or decisions. And its value can be realized again after circulation to create more application values and improve the data utilization of the whole society. Hence, along with the fast expansion of the big data industry market scale, it has become a key mission of the big data times to establish efficient data ecosystem, explore the value behind the data source and realize standard circulation and application of data.

Now emergence and development of the block chain provides the times with the best opportunity exactly. In a narrow sense, block chain is a kind of chain data structure composed of data blocks concatenated in time sequence, and an untampered and unforgeable distributed and decentralized database assured by cryptology. In a broad sense, it is a brand-new distributed computer technology application mode which uses the chain data structure to verify and store data, uses the consensus algorithm among distributed nodes to generate and update data, uses cryptography to ensure safety of data transmission and accessibility and uses the smart contract composed of automatic script codes to program and operate data.

Therefore, in nature, the block chain, as a kind of database technology, can match the data perfectly. The coupling degree is much higher than that of combination of the block chain and other fields. Furthermore, characteristics of block chain, such as decentration,

anonymity, non-tampering and the consensus mechanism can exactly solve several key problems of perfect implementation of the big data industry.

This White Paper is a solution of the decentralized data ecosystem based on block chain developed by FinndyChain based on its years of mature practice, exploration and innovation in the big data collection, circulation and application field. We target at forging a compliant and ordered data ecosystem taking big data as the production material, AI as the productivity and block chain as the productive relations.

1、 Project Background

1.1 Existing problems

As the production materials, data have become the basic infrastructure of the whole industrial chain of big data. Along with that data become increasingly important, the collection, processing, circulation and application links of data are necessary conditions of fast realization of the big data industry and maximization of the data asset value. At present, the big data field has several key problems as shown below:

1.1.1 The copyright and privacy cannot be secured

As we all know, data are reproducible and can be copied via computer and transmitted fast and circulation is not transparent. Whether it is the data on the public network or internal undisclosed data of enterprises, it is hard to totally control the copyright and privacy of data. The copyright problem of the data on the public network has not been solved properly. And internal data of enterprises are often publicized on the internet, as a result, the data assets are disclosed and there is no any copyright claim. In terms of privacy and safety, in recent years, there have been several criminal cases arising from disclosure of personal private data. Functional departments of all countries are establishing effective and legal policies and schemes to promote legal circulation of data resources of the whole society. At the same time, relevant platforms need to establish a complete set of data confirmation authorization circulation application system and complete technology desensitization scheme so as to ensure the clear ownership relation of data and perfect solving of the privacy and safety problem.

1.1.2 High collection and processing cost

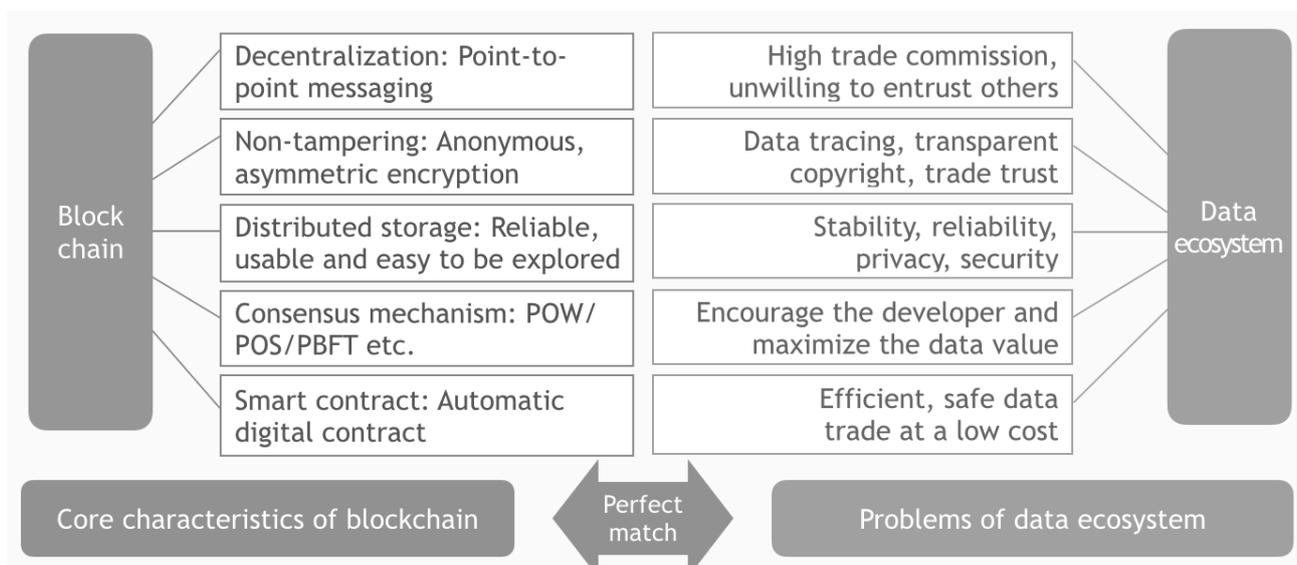
The industrial study indicates that more than 60% flow on the whole internet comes from crawler of internet data or directional collection. When the data from the data source are collected, the server will bear a very high load. To meet demands of their own business, the data demander will invest a large cost in collecting kinds of data from the network and other costs will be invested in later processing. In the current big data times, the

dimension, quantity and timeliness of data are key factor of evaluating data values. Integration and fusion processing degree of data will decide their value for the society. The core features of the internet are opening and sharing. In the future, data after authorization, desensitization and processing can be circulated and applied at a low cost and efficiently. And, while benefiting the data source party, the demander will not pay more costs. The internet will gradually change from the content realization in the traditional IT times to the data realization in the DT times.

1.1.3 Low reuse rate and severe data isolated island

Along with the fast development of cloud computing and data collection technology, the existing social data scale will be bigger and bigger. However, there is not an effective platform for sufficient exploration and reuse of these existing data. Enterprises and government institutions have mass valuable data sources, however, due to the unclear copyright ownership specifications and the trust mechanism problem in the data circulation process, the data source channels are not willing to exchange data or cooperate in terms of data fusion or connection. Therefore, the data utilization rate is low and the data isolated island phenomenon between data resource channels is severe. To solve the data reuse and isolated island problems fundamentally, a good data circulation system should be founded on the basis of benefiting the data owner for a long term.

1.2 Values of the block chain



It has stepped into the block chain application times from the "internet plus" and the "block chain plus" under the promotion of technological innovation. From the perspective of value investment, the project which has a high matching degree and can solve the key problems of the industry with the essence of block chain can be sustainable and can create values as expected by people! The core features of block chain and comparison of existing problems of data ecosystem are as shown on the following Figure.

The nature of block chain is the distributed decentralized database. The subject of data ecosystem is data. The HASH on-chain and data can match each other totally and tampering will not happen. These features make data on-chain have unique advantages that other products do not have. Besides, introduction of block chain updates the traditional centralization to the decentralization mode. It has an overwhelming meaning in the circulation and application process of data. Key problems solved with block chain are as shown in the following Table:

Classification	Key problems of the data industry solved with the blockchain
Authorization/ Determination of rights	After HASH on-chain, it can match and bind the ownership totally and the ownership can be clear and controlled
Tracing	Data based on the chain can be stored permanently, traced and circulated transparently
Decentralized storage	Reduce the burden of the server significantly, facilitate fusion and reuse of data, protect data from being scrubbed
Point-to-point delivery	High delivery efficiency, no data cache / preservation, more trustworthy
The incentive system	Can greatly stimulate the developer and supplier, the ecosystem will be more complete
System efficiency	With the fully-automatic smart contract, the data circulation process can be completed safely and efficiently

1.3 Social visions

FinndyChain targets at forging a largest world blockchain data ecosystem and exploring

the value behind the data source with blockchain. FinndyChain connects the global data sources based on the decentralized network nodes of blockchain, uses the side chain technology to store distributed slicing of data to realize permanent storage and reuse of data so as to realize "decentralization storage and point-to-point delivery" of data." With the complete Token economic model, FinndyChain can stimulate platforms to a maximum to participate in ecosystem construction actively. Data circulation is realized based on the three elements circulation principles "authorization + desensitization + authorization confirmation" initially created by FinndyChain. At the same time, the system can provide mature and complete distributed data collection engine to realize legal, safe and efficient data access and circulation and help data suppliers and demanders to access to the platform with the best experience at the lowest cost and maximize the data value fast.

With years of advanced experience of big data trading platform practice and mature technological deposits, FinndyChain team is one of the earliest batch of teams who explore the blockchain technology in practice. We have connected nodes of million-level data sources based on the distributed data storage technology to realize fast circulation and running of data, developed the globally advanced distributed data collection engine and have deep understanding for the key problems in data collection, circulation and application processes.

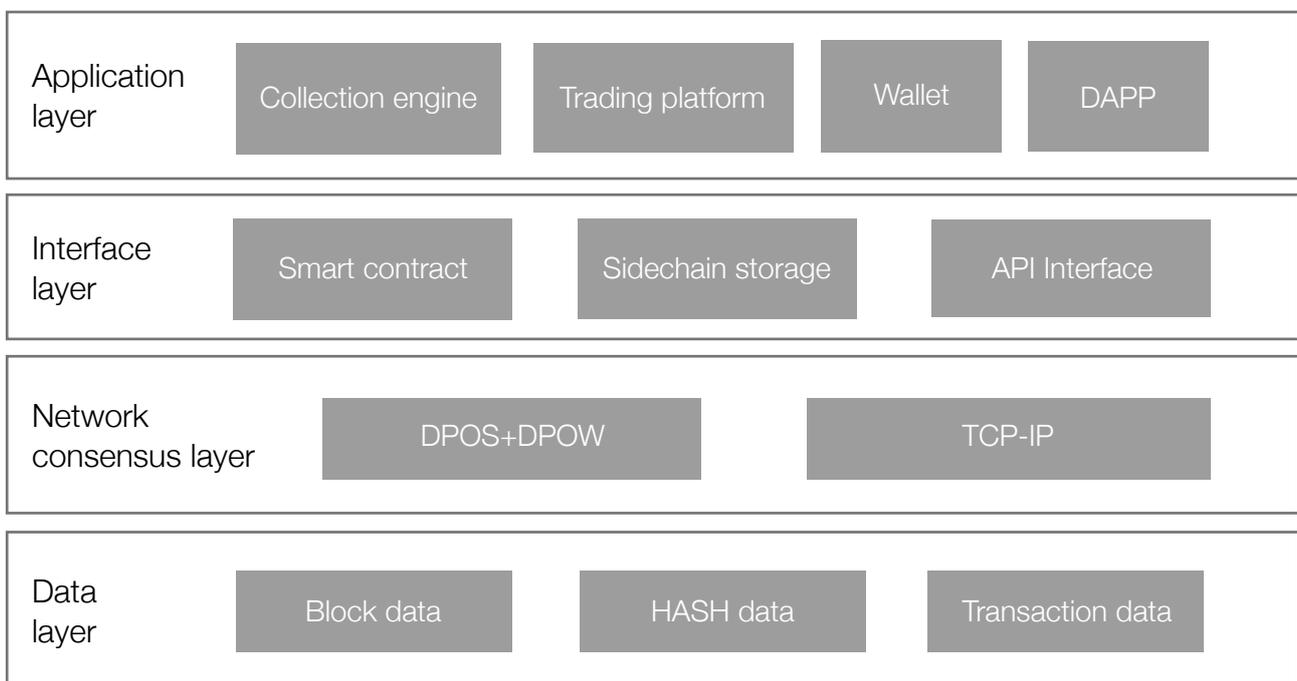
FinndyChain carries out the most innovative practice of applying the blockchain technology into the data field. The data ecosystem built based on the overwhelming blockchain technology will become the one-stop entrance platform of the data industry, including access, storage and application of data. Finally, based on the blockchain, we will realize: The vision that linking all the data developers and the data nodes in the world to implement "data mining" and produce circulation, maximize the data value of the data source party and make the data demanders use the data at a low cost and efficiently!

2、 The Ecosystem Scheme of FinndyChain

The data ecosystem of FinndyChain mainly includes the main chain and side chain of blockchain, super smart contract, data storage system and the DApp application market which can not only meet the basic functions of public chain such as Ethereum and EOS but can also link the global data sources to realize collection and application of mass data assets and finally form the global big data ecosystem management system.

2.1 FinndyChain architecture

FinndyChain is the basic public chain specially developed for the data industry based on the DPoS+DPoW consensus algorithm. Depending on development of Graphene technology architecture, FinndyChain can realize block creation within 3s and have 100,000 TPS. Its performance is far superior to the basic blockchain of Bitcoin or Ethereum. Layered architecture of the basic module of FinndyChain is as shown in the following Figure:



DPoS (Delegated Proof of Stake) mechanism is also based on Graphene. Its principle is that each coin holder votes to produce 21 representative nodes which will be defined as the super nodes. They have the totally same rights and can be expanded without

limitation. DPoS mechanism is similar to the parliamentarism or the people's congress system. Representatives who cannot perform their production block duties will be dismissed. The network will choose new super nodes from the standby nodes to replace them. DPoW (Data Proof of Work) consensus mechanism is a basic blockchain ecosystem consensus model designed by FinndyChain for the data field. It is improved based on the Pow of Bitcoin. It is an innovative consensus model which uses the mental algorithm of developer users instead of the traditional Pow algorithm of computer to realize "data mining". FinndyChain is a new generation of basic blockchain architecture in the data field. It is specially designed for the data ecosystem. Main features and characteristics:

- **Innovative consensus.** Initiative DPoS+DPoW consensus with a stronger community self-governance;
- **Super contract.** Super smart contract. Namely the AI interface specially designed for data ecosystem;
- **Data mining.** The complete "data mining" algorithm design, more sound stimulation and ecosystem;
- **Side chain storage.** Data resources deposited in the system are processed with decentralized storage via the side chain;
- **Independent architecture.** The deposited data resources and business data separation can ensure the performance of the architecture;
- **Application market.** Use solutions on the DApps chain to perfectly solve the copyright privacy problem brought by unencrypted data delivery.

2.2 Super smart contract

The super smart contract of FinndyChain in nature is a set of promise agreement defined digitally and can be implemented automatically and programmable interface rules for data on the operational chain. It can provide the GUI mode and developer mode to meet different types of scenes of clients for fast completion of application development. The smart contract of FinndyChain can realize corresponding design in accordance with the features of the data industry. The specific features of the contract are shown as below:

- **The extremely simple development.** DApp development with 8min. Visible GUI contract editor and template development environment, not requiring a programming basis;
- **High safety.** The high fault tolerance and high atomicity design can improve the safety

and reduce the BUG occurrence significantly;

- **AI self-modeling.** There are thousands of built-in big data application models, matching the DApp seamlessly and realizing safe delivery of data on chain;
- **Improvement of performance.** With good performance and implementation efficiency, it can be optimized as per features of the data industry and implemented with machine code.

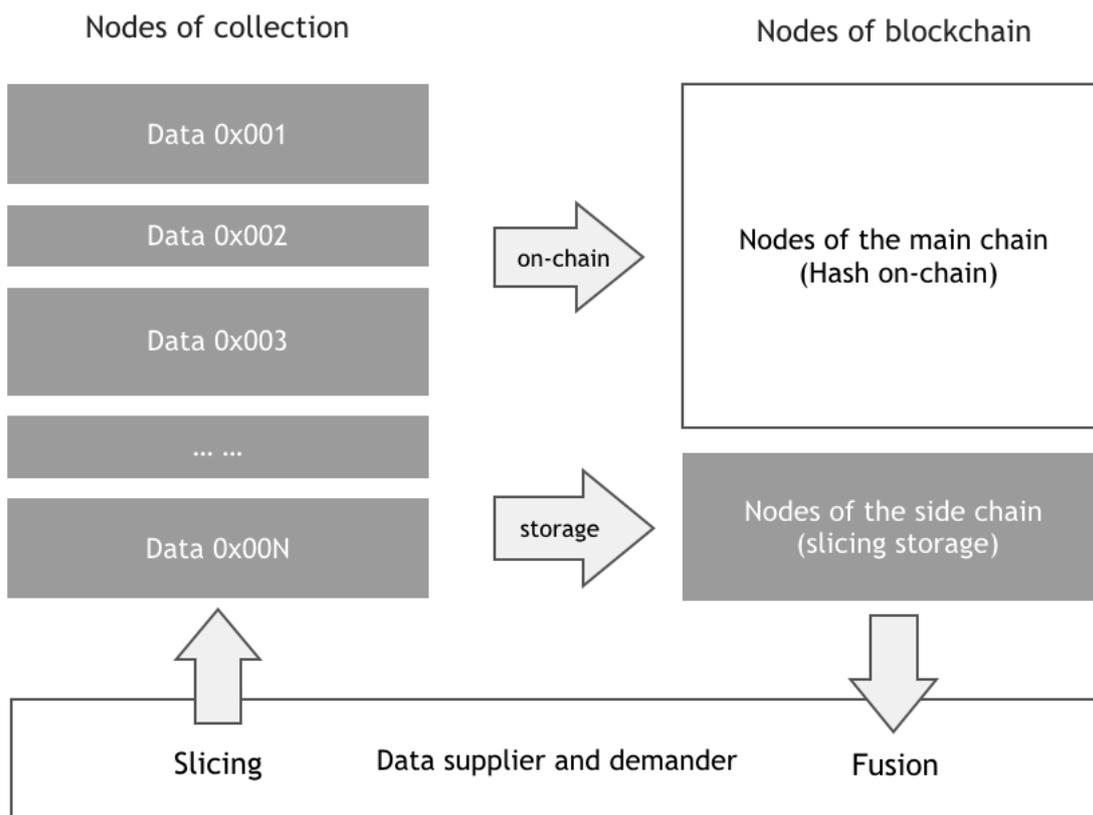
The super smart contract of FinndyChain is specially designed for the data ecosystem of FinndyChain. The application scene cases are shown as follows:

- **Data ID Code.** Data developers can generate the data identification in accordance with the attribution of the data file to be released, including kinds of special attributions of data such as the data type and data dimensions.
- **HASH on-chain.** Data developers release the template of the contract according to the data and write the data identification into the contract after Hash encryption and then send the request of creation of the smart contract to the blockchain.
- **Feature verification.** The platform can complete verification of special attributes in the contract to avoid basic quality problems or safety problems. After passing the verification, sign the contract, program the data and release the contract.
- **Query and retrieval.** Data demanders can retrieve, view the intention data via the blockchain and realize reuse of data. The data demander can also submit the request of query and retrieval to the blockchain as per the contract template.
- **Safety traceability.** Data circulation need reply and approval of data developers. Operation in the circulation process can be implemented automatically as per the strategies stipulated in the contract and consensuses and records in the chain can be implemented. Data owners can read the operation records of the contract approved from the blockchain to realize monitoring, check and audit.
- **Signing of the contract.** All participants stipulated in the contract will receive the smart contract request in the local blockchain and finish signing of the contract. Before signing, the platform needs to confirm the qualification of all participants.
- **Fusion and correlation.** The data developer will submit the result to the blockchain contract. As for the slicing missions completed by several data developers, fusion and integration of results will be completed as per the AI modeling of the contract and then the data demander can acquire the computing result from the blockchain.
- **Data delivery.** The data demander will implement data computing as per the

authorization signature of the contract, confirmation of the right to use and other requirements. It can be determined whether the data should be used in the SandBox as per the grade of right authorization to complete delivery finally.

2.3 Side chain storage

The data ecosystem stores mass data. It will affect the overall performance and the blockchain will be quite enormous if all the data are stored in the main chain. The side chain concept is put forward based on the main chain. Is it mainly used for solving the business demands which cannot be done properly by the main chain. It is similar to two independent databases. The side chain storage of FinndyChain is based on IPFS development to realize slicing storage and fusion delivery of data. The specific data access and circulation flow chart is shown as below:



2.4 The data mining model

The DPoW consensus mechanism of FinndyChain is designed based on the "data mining" model initially created by FinndyChain. DPoW "data mining" targets at solving the problem of extremely low utilization of the data mine and the severe data isolated island problem in the big data times. The previous ten years are the time when the data are deposited on the internet. Internet, enterprises and governmental institutions have mastered mass valuable data most of which have not been explored or utilized sufficiently. The data mining tool engine designed for the developer (ToD) and the general public (ToC) will maximize exploration of data values and circulation and reuse of data.

Compared with the PoW adopted by digital currency blockchains such as Bitcoin, the DPoW consensus mechanism of FinndyChain can realize stimulation of the blockchain through mental algorithm of the developer instead of the computer computing mode. Comparison of segmentation of DPoW and the traditional PoW mode is as shown in the following Table:

Comparative point	PoW	DPoW
The mine owner	Open	Data source owner
Mine	Computer algorithm	Data source
Miner	Automation	The developer / person
Mineral reserves	BTC/ETH/...	Data
Mining tools	Mining machine / computer	Distributed collection engine, etc.
Stimulation source	Digital currency	Demander
Total mineral reserves	Constant or no upper limit	No upper limit

The stimulation of DPoW comes from the purchase expense paid by the data demander. If the mine explored by the developer has a copyright owner, the purchase expense will be used for paying the commission of the data mine owner. Additional part will be used for stimulation of ecosystem contributors such as the super nodes and the standby nodes.

The super nodes and standby nodes are voted by the users on the voting system of the platform.

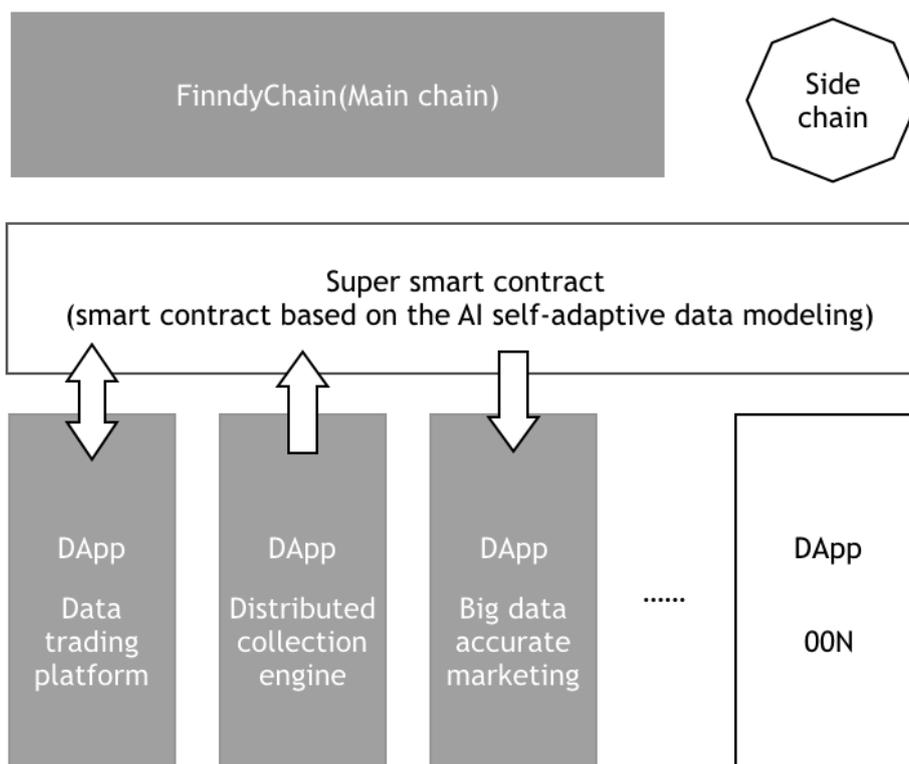
The data mining of FinndyChain can be made based on the distributed collection engine provided by the system. The user of the collection engine is also the developer of the ecosystem data. Integrating the developer mode and the newbie mode, the collection engine can realize mining involving all men. The main programming languages such as Python, PHP, JAVA, Go, JS, Ruby are supported as the development languages.

The big data mine is like the petroleum which will have no value for the society without exploiting. Public network, enterprises and governmental institutions have mass data, but exploit of these data needs complete schemes and good stimulation ecology. The DPoW data mining of FinndyChain and its stimulation model can realize participation of all the people in data collection, storage, circulation and application to the maximum and finally significantly improve the utilization of social data and promote fast implementation of the global data petroleum strategy.

2.5 Data ecosystem architecture

The ecosystem of FinndyChain mainly includes the main chain, side chain, super smart contract and the decentralized application market based on the contract. The main chain is used by FinndyChain for storage of the business data and supporting development of the whole ecosystem. The side chain is mainly used for distributed and decentralized storage of circulating data in the ecosystem. The super smart contract is the AI smart contract developed by FinndyChain for data ecosystem. It is also the bridge of communication of the blockchain part and the DApps in the ecosystem. The application market is the application set developed based on FinndyChain.

The application market is the core of the public chain ecosystem of FinndyChain. DApps will make contributions to the ecosystem with transmission of data to link the supplier and the demander. It is also the basis of safe circulation of the whole ecology. The infrastructure of the FinndyChain ecosystem is shown as in the following Figure:



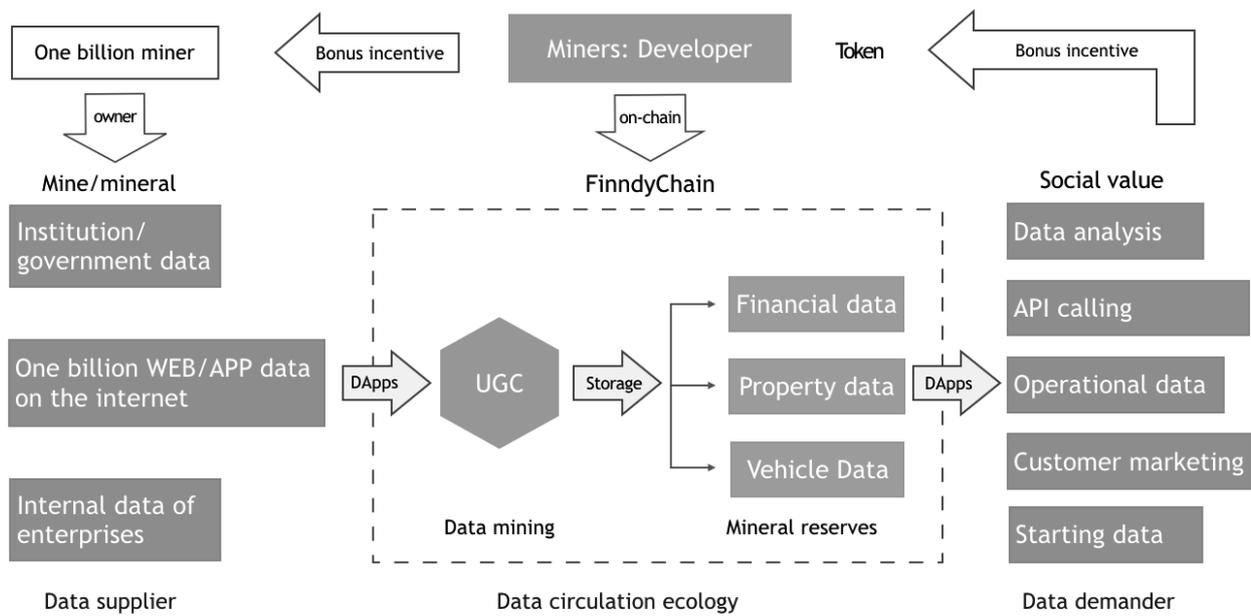
Key points mainly solved by the FinndyChain data ecosystem include:

- **Data authorization.** All the data should be put on the chain based on the authorization contract provided by the system to build up the sole binding relation between data HASH identification features and data block. The coupling degree between data and data HASH identification is 100%. If any characters of the original data change, the HASH will change accordingly. This matching advantage cannot be equipped with by any other products on the chain. It can also synchronously match the SMA Similarity Matching Algorithm, Homomorphic Encryption Algorithm, safe delivery model and the credit mechanism of the ecosystem to perfectly ensure data safety and no copyright disputes and build up a good ecological basis.
- **Technology desensitization.** On the basis of ensuring the application value of data to the maximum, rewrite or replace the sensitive information in data to realize reliable protection of sensitive and private data. The system is equipped with rich built-in technology desensitization rules for fast invocation during DApps development. After technology desensitization, the private and safe problems of data can be solved fundamentally. Private data such as the personal name, mobile phone number, ID number and family address will be disclosed if they are used directly and even more

severe problems will be caused. After technology desensitization and AI modeling of the system, these data can be delivered and used safely.

- **Data confirmation authorization.** The bi-directional authorization confirmation during data circulation, namely the confirmation of data ownership and the confirmation of the right to use. The confirmation of the right to use can ensure directional and legal circulation of data and more excellent of the data delivery link; The confirmation of data ownership can make the developer's data on the chain be valid permanently and data developer will get benefit as long as the data are reused. Stimulation of data will be sustainable for a long term, which will promote active participation of the participants.
- **Decentralized storage.** The core of data ecosystem is data. There will be mass data during the data circulation process and the HASH mapping will complete data storage. The main chain only stores the basic information of data ecology to ensure the high performance and high expandability of FinndyChain. At the same time, the system storage cost will reduce significantly. The decentralized storage can fit the basic principles of the blockchain better.
- **Point-to-point delivery.** During the process from collection, storage of data to the final delivery, circulation is transparent and there is no preservation or any unencrypted data cache of any intermediate parties, by which, the trust issues of traditional centralization platform model can be solved. Users will not worry about copy of data or the copyright problem arising from stealing. The point-to-point delivery, together with the data Homomorphic Encryption Algorithm and Sandbox of system integration, can realize safe circulation of data.
- **Credit mechanism.** Based on blockchain, the complete authorization and confirmation environment can be established and a powerful credible consensus mechanism can be realized. The credit evaluation mechanism can establish the credit model for all the users of the platform and can realize permanent storage on the chain. Once credit problem occurs, the system can implement relevant contract automatically, find out the user via the tracing mechanism and implement relevant punishment. With the fair and just voting system and machine learning algorithm of the system, the credit model can keep perfecting itself and learning.

The final data circulation architecture diagram of the ecosystem is shown as below:



The FinndyChain ecosystem has deposited 200,000 distributed data source nodes. With the PB-level data source support and AI modeling, it has the natural mass sample data advantage. The super smart contract is equipped with over 2000 kinds of mature data application models. Depending on the AI and Sandbox technology, it can guarantee safe placement and delivery of data on the chain to realize safety circulation of data exactly and avoid the copyright privacy problem arising from circulation of unencrypted data.

FinndyChain targets at forging the safe circulation ecology of global data. At present, mature DApps based on FinndyChain ecosystem has been developed. All the DApps will be developed quickly based on the mass data source nodes, mature tool set, extremely simple development suite of the ecosystem to explore the value behind the data source to the maximum.

3、 Application Market of FinndyChain

FinndyChain is a public chain specially designed for data ecosystem. Based on the profound deposits of the team, it has been applied to many application scenes. The application market is similar to the AppStore. The application market has several built-in DApps to meet basic data circulation demands of ecosystem users. In the future, the developer will develop mass DApps based on FinndyChain. And these DApps will deposit mass data source assets and data application models for the ecosystem of FinndyChain. Other developers can implement further data exploration based on these deposits. As the petroleum of the new times, data will realize the maximum value by virtue of the FinndyChain ecosystem. Some application of the application market is shown as below:

3.1 DApp1. Data trading platform

The data trading platform DApp is the decentralized application developed based on FinndyChain. It can realize circulation of data of the FinndyChain ecosystem. It supports distributed collection, storage and fusion circulation of mass data so as to driven development of data trade with technology. The public data on the internet and internal data of enterprises or the governmental institutions can access to and deposit on the trade market via crowdsourcing acquisition of the "data mining" mechanism, after processing of authorization, confirmation and desensitization with the data or algorithm rules to meet demands of enterprises for data analysis, data operation and precise marketing.

The data supplier and demander can realize trade on the platform and the platform will not charge any commission of the trading parties or preserve any data. The delivery process is realized based on the fusion algorithm of the platform with verification on the main chain and invoking on the side chain. Data demander can purchase available data or release data demand or directly use the data engine to collect data; Data supplier and developer can release data source products and data algorithm rules on the platform or accept the customized order released by the demander.

3.2 DApp2. Distributed collection terminal

Distributed collection engine terminal DApp, a set of open-sourcing and distributed collection robot node engine developed based on FinndyChain, is mainly used for "data mining" and upstream circulation of ecosystem data and dedicates itself to making users explore the value behind the big data mine fast. The collection engine terminal, an internet WEB/APP structural data and data block data collection engine integrating data collection, cleaning, decentralization and processing, can support deployment of private nodes or service ecosystem, can break down the data isolated island, build up the self-owned big data cloud collection / crawler system or obtain benefits from contributing data to the ecosystem.

Ecosystem users can collect text, pictures and other information resources at a low cost and efficiently, filter and process these data to explore precise data required and output data in the form of structural file package, collection rule algorithm or API interface. At the same time, users can release data on the trading platform for trade or exported and save data in the mode of Excel CSV SQL or other formats in local.

3.3 DApp3. Precise marketing platform

The precise marketing platform DApp is a big data precise marketing platform product developed based on FinndyChain. It is mainly applied to downstream application of mass data based on FinndyChain ecosystem.

Precise marketing is a fashionable marketing term in the big data times. Roughly, it means taking advantage of kinds of new media and sending the marketing information to the accurate target audiences so as to save marketing costs as well as realize the maximum marketing effect. The new media here generally refer to the media other than newspaper, magazine, broadcasting, TV.

The precise marketing platform DApp is the decentralized application based on fusion of mass data source of FinndyChain ecosystem. By virtue of application of portrait model of users, personal data can be desensitized and labeled and finally serve clients in the mode of a "result" to meet demands of clients. The behavior portrait is the typical user model abstracted from the behaviors of the user. Through collecting and analyzing the social attributes, living habits, consumption behaviors or the characteristics of the target users

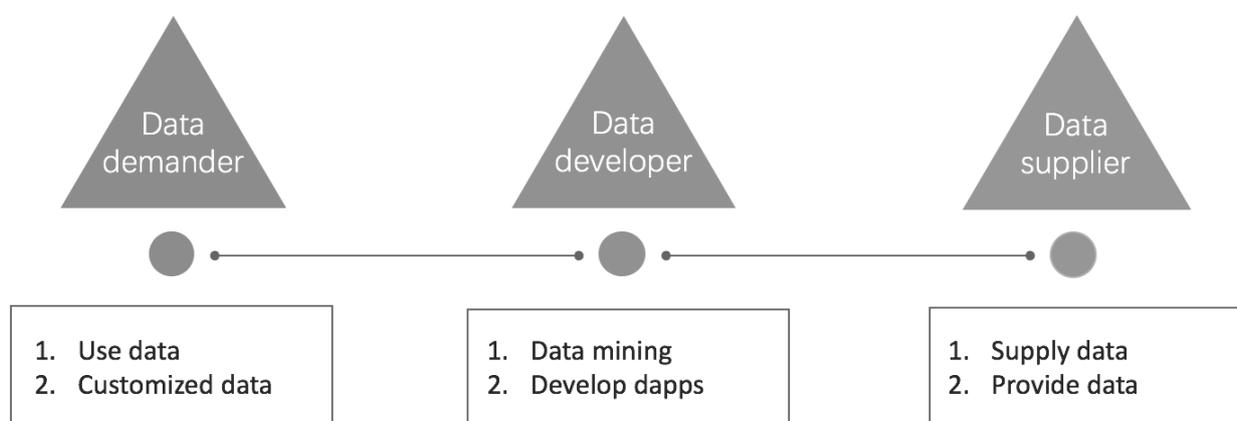
served, enterprises can provide an information basis for all the decision processes related to users to guide service development and marketing of the enterprise's products. The core of user behavior portrait is "labeling" the user. Each label usually is the characteristic identification prescribed by people and used for describing a category of people with highly precise characteristics such as age, sex and interests, etc. Different labels after integration of structural data system can be combined into different user behavior portraits. This core demand is applicable to the precise marketing scenes of all industries.

Compared with the traditional precise marketing platform, the precise marketing platform DApp based on the FinndyChain ecosystem can perfectly realize safe circulation of data and application and solve the data copyright and privacy problems fundamentally. It is the downstream application of the FinndyChain and has an epoch-making and overwhelming meaning.

4、Economic Model

4.1 Application scene

Main users of FinndyChain ecosystem include: Data demander, supplier and developer. The data demander is the user who has a demand for data application. The data supplier refers to the users with the data source rights and provide the data source on the ecosystem. The data developer is the user who provides mining services and developing DApp. It is as shown in the following Figure:



The Token application scenes of FinndyChain ecosystem mainly include:

- **Ecological circulation.** Currencies circulated on DApp such as the ecosystem and the trading platform;
- **Node stimulation.** Stimulation of super nodes and standby nodes;
- **Upstream realization.** Stimulation of realization of data provided by the data supplier;
- **Downstream payment.** The expense paid by the data demander who invokes the data;
- **Mining stimulation.** Stimulation of data mining of data developer;
- **Other stimulation.** Stimulation of management, voting, operation and other aspects of FinndyChain ecosystem.

Based on the above Token application scenes, data supplier, demander and developer of the FinndyChain ecosystem will participate in the ecosystem and exert their own

functions by virtue of the DApp carriers on the application market. The complete application scene case:

Ecosystem application scene I:

A scientific institution is studying an AI machine and needs random sample data of 10,000 kinds of local languages such as the record of a paragraph including 300 words. This institution can release a demand task based on Token stimulation on the system data trade DApp. Millions of users on the platform after noticing the demand can complete and submit the task fast via the data collection engine of the system. Data will be put on the chain via HASH and be saved permanently. Data will be stored on the side chain and others will not have the right of viewing the data. Demanders can complete diversified customization of the task within a few of minutes and the random language distribution demand can be met. The deposited data set can be reused and the developer will obtain Token stimulation for each time of reuse.

Ecosystem application scene II:

An enterprise wants to make a report for analysis on the trademark intellectual property industry and needs to collect data of 26 million items of trademarks publicized by the government on the brand website. Usually, it will cost RMB 180,000 to write the technical code and complete collection evaluation and the delivery period will be three months if the task is completed by the self-owned technical team or a third outsourcing team. This enterprise can use the distributed collection engine DApp provided by the system to complete data collection fast or use the DApp on the trading platform to release the demand task based on Token stimulation. After the demand task is released, millions of developers will accept the order as per the trademark id slicing and each person needs to complete collection of 260 items of data. This can accelerate completion of the task significant and it is no need to take the technical difficulties. Whether it is individual collection or data set based on demand crowdsourcing, after deposit, they can be reused for a long term and Token stimulation will be provided.

Ecosystem application scene III:

A precise marketing advertising company constructs the basic advertisement injecting system and needs mass user portrait label data to optimize the model. It can develop the DApp individually and use the mass user portrait data or directly invoke the user portrait

data API via the precise marketing DApp of the system or release the demand task on the data trading platform in accordance with the standardized encrypted equipment ID as the index to collect data provided by data source developers fast. The enterprise can filter data and confirm the authorization via the super contract and finally can complete most main user portrait data on the market, by which the reviewing rate, covering rate and precision of the model are improved significantly. Many data sources of this demand will be processed with authorization and desensitization when are putting on the platform. The data supplier can provide long-term benefits and the demander can complete business demands at a low cost and efficiently.

4.2 Capital use planning

Money will be mainly used for technical research and marketing. Some capitals will be used for technical research upgrade to keep improving the technical level of the platform ecosystem; Some capitals will be used for marketing and operation maintenance, mainly for improving the recognition of the project to attract more developer users' participation in the construction of the ecosystem of FinndyChain; The rest part will be used as the expense of public relations and flexible capitals to explore more exchanges as possible to support trade of the FinndyChain Data Token, etc. This is shown in figure below:

Proportion	Use of funds
30%	Research expense: promote fast development of the platform
30%	Platform operation: incubation and construction of the community ecosystem
10%	Legal compliance and public relation expenses
20%	Marketing and business promotion
10%	Flexible expenses, standby expenditure

4.3 Investment advantages analysis

Teamwork advantages:

Forged by the core team which has years of data trade experience and is advanced in the blockchain field. Supported by ten thousands of industrial data models and rich real user demand cases, the team has a deep understanding for the key problems of the industry.

Technical deposits:

Has years of experience in the distributed blockchain industry, as well as experience of distributed collection and storage architecture of several thousands of servers. It can shorten the development period significantly and implement the planning fast.

Data deposits:

200,000 distributed data source nodes and PB-level data deposits. Based on the product upgrade and the millions of users of the centralized platform, it can realize fast application and circulation of Token and improve the activity of the community ecosystem. Keep users away from the air chain and air coin.

Advantages under opportunities:

In the big data times, data mining via FinndyChain can promote fast implementation of the "data petroleum" strategy. At the same time, the platform can provide ToC and ToD mining modes to realize mining of the public. The market space and social value are enormous.

5、 Team Composition

5.1 Core team

We have an experienced core team composed of members who have years of experience in the blockchain and data trade industry. Members of the core team have a bachelor or master degree or above. Introduction to main members:

Midy Ma	Founder of FinndyChain, An expert on Data Trading research.10 years of experience in technology development and enterprise management. Successfully founded several enterprises. The early core developer of the blockchain. The best enterprise CIO of the fourth cloud tripod award. Graduated from Shanghai University, master of AI & Automation. Once worked for Tencent and led the development of Tencent's first game bigdata AI engine.
Tony Zhang	Co-founder, 8 years of experience in bigdata industry and operation management. A senior data modeling expert. Continuous entrepreneurs. Proficient in bigdata model development and has rich experience in data platform operation. VP of Yuejin Group and led the construction of data analysis model and market operation of big data products. Angel investor in many early projects.
Andy An	Technical partner, a distributed database development expert, a blockchain consensus algorithm contributor. Graduated from Shanghai Normal University computer science. Proficient in big data, blockchain technology. Once worked for Anjuke, responsible for the development of Internet and big data products. Once served as Qian Yu technology CTO, led block chain real estate platform development. One of the earliest senior developer in consensus algorithm field.

Raajiv Sami	Strategy consultant, an entrepreneur with a background in wealth management and a comprehensive understanding of finance and technology. Raajiv has accumulated rich experience through strategic consultation of several enterprises in the direction of fund management and blockchain development. Some of the global brands Raajiv has represented include: St. James's Place, MLC (part of the NAB group), AXA, AMP, Bankwest (part of the CBA Group), and ACAP (part of the Navitas group).
Mark Lee	Business partner and a public relation expert with rich experience in the finance industry. Has years of financial channel development experience and is proficient in public relation policy study.
Jason Wu	Singapore Super Partner, Continuous Entrepreneur, Partner of a well-known consulting firm and Financial Investment Project Manager. Futures trading community co-founder. There are more than 15000 hours of spot gold (XAU) experience in US stock futures trading. Bitcoin early players, contract players. Singapore digital money player community early participants. Participate in multiple blockchain project investment. Super partners in several digital currency exchange in Singapore.
Evin Yang	Marketing partner and a block chain community marketing expert with a block chain community of millions of users. A senior player of Bitcoin. Start to be engaged in Bitcoin in 2013 and once created a 200 times of leverage income.

5.2 Global Consultant and Investor

Chandler Guo	Known as Baoerye, Founder of BitAngel fund and the Whampoa Military Academy
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In addition, some Token Fund investment institutions are as follows:

Lianzhong Capital, Yongchuang Joint Venture, Tathagata Capital, Juniper Capital, Garcia Capital and other global emerging blockchain token funds.

6、 Development and Planning

6.1 Development course

In 2015: The team was founded, the big data trading platform project was started up; Obtained RMB millions of investments from InnoSpace Angel Fund; Released the distributed data collection engine 1.0 and started research of blockchain technology;

In 2016: The centralized big data trading platform was launched online and realized more than 100,000 developer users; Completed internal network test of the first domestic blockchain distributed storage system; Realized more than 500 data models involving all the industries;

In 2017: Obtained RMB tens of millions of investment from Some Capitals. Was put into research of the blockchain formally. Had more than 300,000 developer users and the monthly turnover broke through RMB three million;

In 2018: The excellent global data source nodes broke through 200,000 and each node indexes TB-level or several 100 millions of data. At the same time, we released the blockchain White Paper, comprehensively introduced the blockchain data source nodes to focus on forging a data ecosystem.

6.2 Time planning

Stage I:

2018 Q1 Solve problems of the industry by virtue of the blockchain technology and start operation of the project community;

2018 Q2 Reach strategic cooperation with the FinndyChain Foundation. Pass the product model verification and release the project White Paper 1.0;

2018 Q3 Start release of Token. Start research of the main chain;

2018 Q4 Complete development of the infrastructure and put it on the main chain.

Stage II:

2019 Q1 Start development of FinndyChain DApp. Formally open the application market and promote it to the global developers;

2019 Q2 Complete development of relevant tools, including blockchain wallet and browser;

2019 Q3 Keep upgrading the AI model base and the super smart contract, data interface matching and ecosystem user marketing and promotion;

2019 Q4 Complete 100 DApps on chain and successfully incubate ten big data AI apps;

2020 Q1-Q2 Realize overall market operation of the product, large-scale advertising and marketing promotion;

2020 Q3-Q4 Implement community operation construction and platform operation maintenance to keep generations of upgrade and perfection of the platform.

Stage III:

2021 Q1-Q4 Implement product advertising and promotion and ascend to the first tier of Chinese data market;

2022 Q1-Q4 Explore the overseas market and open the door of global data markets such as Europe, America, South Korea, Japan and Singapore.

7、 Project declaration

This White Paper is only for information transmission and its contents are for reference only but not for suggestions, instigation or invitation for individual or any relevant institutions' purchase or sales of the FinndyChain. At the same time, no individual or enterprise may, in any way, copy, reprint, extract, or use other means to use the content or information of the white paper in any way without authorization.

Before development of FinndyChain, we have founded a non-profit foundation in Singapore. The foundation is mainly founded for implementing project financing, operating the Token ecosystem fairly, justly and transparently and managing the development team of Token. In the meanwhile, the foundation has employed professional legal lawyers to provide relevant laws and regulations support for implementation of business.

According to the above reasons, participants should sufficiently understand the background of the team, the overall frame of the project and the ecosystem mode and reasonably adjust individual visions before participating the project.

8、References

- [1] Jorge Izquierdo. The new operating system for protocols and DApps, <https://blog.aragon.one/introducing-aragonos-3-0-alpha-the-new-operating-system-for-protocols-and-dapps-348f7ac92cff>, 2018.
- [2] Cryptonomex. <https://github.com/cryptonomex/graphene>.
- [3] Gong Ming. Blockchain Society: Decoding of Global Application of Blockchain and Investment Cases 2016.
- [4] Joseph Poon, Thaddeus Dryja. The Bitcoin Lightning Network: Scalable Off-Chain Instant Payments, 2016.
- [5] GeGao. <http://36kr.com/p/5075070.html>.
- [6] Vitalik Buterin. Explanation of DAICOs, <https://ethresear.ch/t/explanation-of-daicos/465>, 2018.
- [7] Vitalik Buterin. On Medium-of-Exchange Token Valuations, <https://vitalik.ca/general/2017/10/17/moe.html>, 2017.
- [8] Conner Fromknecht. Connecting Blockchains: Instant Cross-Chain Transactions On Lightning, <https://blog.lightning.engineering/announcement/2017/11/16/ln-swap.html>, 2017.
- [9] CAICT. <http://www.caict.ac.cn/kxyj/qwfb/bps/>, 2018.
- [10] Matus Lestan, Joe Urgo, Alexander Khoriaty. district0x Network: A cooperative of decentralized marketplaces and communities, 2017.
- [11] Huang Shiliang. Refuse the Attack from Payment Arbitrage - An Attack Technique of Over-the-counter Trade of Bitcoin and Precautions, https://mp.weixin.qq.com/s?__biz=MzIxNTA0NDQzMA==&mid=2651798518&idx=1&sn=4e91bac98cea5bc600e8429f1af3a728, 2017.
- [12] RSK Labs. Sidechains, Drivechains, and RSK 2-Way peg Design, <https://www.rsk.co/blog/sidechains-drivechains-and-rsk-2-way-peg-design>, 2017.