



Chaos

Blockchain-based Distributed Business Application

Ecology

Sep. 2019

ChaosX.io

I. Origin of Chaos Ecology

Opening of blockchain chaos

Since Satoshi Nakamoto created the Bitcoin in 2009, the blockchain technology has deeply influenced the development course of the whole human society by virtue of its ingenious design of peer-to-peer network ledgers, secure and credible consensus protocols and innovative value transmission technology.

BlockChain is essentially a serial transaction record (called block) that concatenates and protects contents by cryptography. It combines distributed networking technology, asymmetric encryption and consensus mechanism to build a point-to-point value transmission network without the help of third parties. Structurally speaking, each block in the blockchain contains the cryptographic hash, corresponding timestamp and transaction data of the previous block, so that it is difficult to tamper with the block contents. Based on the above architecture, we can abstract several protogenetic characteristics of the blockchain:

1) Decentration: the data are accounted and stored by the distributed architecture, and there is no centralized hardware or management organization. The system functions are maintained by equal nodes relying on the consensus;

2) Trustless: all nodes in the whole system can exchange data freely and safely in a trusted environment through the consensus-based norms and protocols, reducing the trust cost;

3) Non-repudiation: once the information is confirmed and added to the blockchain, the information will be permanently stored in the distributed full node, and the modification of the database on a single node will be invalid in the confirmation;

4) Publicity: the data are public to all people except the private information of the counterparty is encrypted. Anyone can query the blockchain data through the public interface, and the whole system is transparent to all people;

5) Anonymity: The exchange between nodes follows a fixed algorithm, and there is no need for trust in data interaction, so the counterparty does not need to establish trust through public identity, and can achieve anonymity through the asymmetric encryption.

Over the next ten years, the blockchain value has been gradually explored and applied to a wide field, forming a diversified business support scenarios based on DApp with public blockchain as footstone and smart contract as link. Clearly, the blockchain technology has achieved the Internet value delivery without involvement by any third parties with its decentralization characteristic and node consensus model, and completed the change of production relations in human society by virtue

of greatly reducing cost for online labor division, cooperation and trust, which will lead to a technological, economic and ideological civilization revolution. Generally speaking, industrial cochain is imperative in this new stage of human development.

Cochain traps in traditional industries

Theoretically, the wide application of blockchain technology can fundamentally solve the shortcomings existing in the current social sectors, and establish an on-chain business order based on the concept of decentralization, promoting the transformation of human society.

However, just like the predicament faced by the Internet at the beginning of its birth, there are still many obstacles to the popularization of blockchain technology. Tens of thousands of blockchain projects are born around the world in 2018, but only a few projects form mature application systems, and there are usually some performance problems.

The main reason for this phenomenon is the technical threshold of the blockchain. The entrepreneurs and developers from other industries are usually unable to develop and operate a public blockchain completely, but it is more complex to build an actually usable blockchain application ecosystem. In this situation, more and more entrepreneurs begin to seek a more feasible industrial cochain scheme, so Chaos emerges.

II. Overview of Chaos

Chaos is an underlying application ecology based on blockchain technology. It aims to provide reusable decentralization solutions for various industries in the real world by creating high-performance and expandable public blockchain, open cross-chain application platforms, cross-industry development architecture and token economics model, that is, to build convenient accessible cochain channels for traditional industries and build cross-industry ecological platforms based on the decentralization theory.

Chaos has solid blockchain infrastructures and many application development support modules, including:

- High-performance public blockchain: ChaosChain. It can provide 10,000-level TPS second processing speed by using the efficient consensus mechanism, meeting the needs of distributed application scenarios.
- Application ecology footstone: TaiYi platform. It can realize diversified business collaboration in different application scenarios by the cross-chain mechanism and multi-protocol support system.
- Business chain incubator: HuaXu. It supports key modules with cochain and has a comprehensive distributed DApp product development support system.

In addition, Chaos also has various industrial application support

modules to achieve common blockchain functions, such as digital identity, online trust and distributed storage, etc., which can provide blockchain technology support for any third-party product developers.

Based on the above structure, Chaos can be widely used in the financial services, Internet advertising, life services, product traceability, knowledge economy and public services, etc. It aims to solve the primary problems such as centralized risk, inefficient value circulation, malignant market monopoly and product authenticity, etc. in various industry scenarios. Chaos also builds a low-cost and high-effect chain production relationship, provides a diversified, convenient and intelligent on-chain lifestyle for end users, and realizes the miracle of the blockchain application industry by relying on the technological innovation.

III. Brief Analysis of Chaos Technology Architecture

Chaos network model

ChaosChain is based on the public blockchain structure, which is divided into the data layer, network layer, consensus layer, activating layer, contract layer and application layer from bottom to top. In order to facilitate the application module design, we further abstract and classify the classical public blockchain structure to form a Chaos public blockchain technology architecture, which includes the footstone structure, the link structure and the top structure.

Footstone structure

■ Data layer

The data layer is described as the primary core of the blockchain encryption ledger, and it is also the infrastructure of the decentralization mechanism. Chaos integrates core modules such as multi-source identity authentication, data authorization and distributed authentication mark, etc. in the public blockchain data layer. This mode can directly embed the digital identity information of the user into the blockchain substructure, which effectively enhances the security and verifiability of user mechanism in Chaos ecology.

■ Network layer

The network layer in the blockchain technology architecture mainly refers to the distributed node network, which is the hardware foundation for realizing the peer-to-peer link and communication of the blockchain node equipment. Any transaction, verification and communication based on the peer-to-peer network are implemented by the network layer. The design of Chaos public blockchain provides new contents for the network layer, including multi-protocol support and cross-chain structure, which provides rich heterogeneous network access mechanism for the underlying cross-chain facilities of the ecosystem.

■ Consensus layer

Essentially, the consensus is to form a unified consensus protocol, so that different nodes can implement distributed ledger maintenance cooperation under the same rule, that is, to provide Byzantium General problem solution. The consensus layer is the technical realization of the consensus mechanism. In order to improve the efficiency of consensus, we adopt DPOS (Delegated Proof of Stake) model, namely, Token holders vote to determine the block confirmation of a limited number of supernodes, which can achieve higher TPS efficiency.

Link structure

■ Activating layer

The activating layer is the unique structure of the public blockchain, which is used to confirm the activating distribution and its allocation mechanism. The main task of the activating layer is the cooperation and management of supernodes in the DPoS consensus of Chaos. We will provide block validation and activation for supernodes and formulate the corresponding management plans. At the same time, cross-chain services, external credible resources and ecological application participation will also be included in the activation scope to achieve the effective activation for ecological niche participants.

■ Contract layer

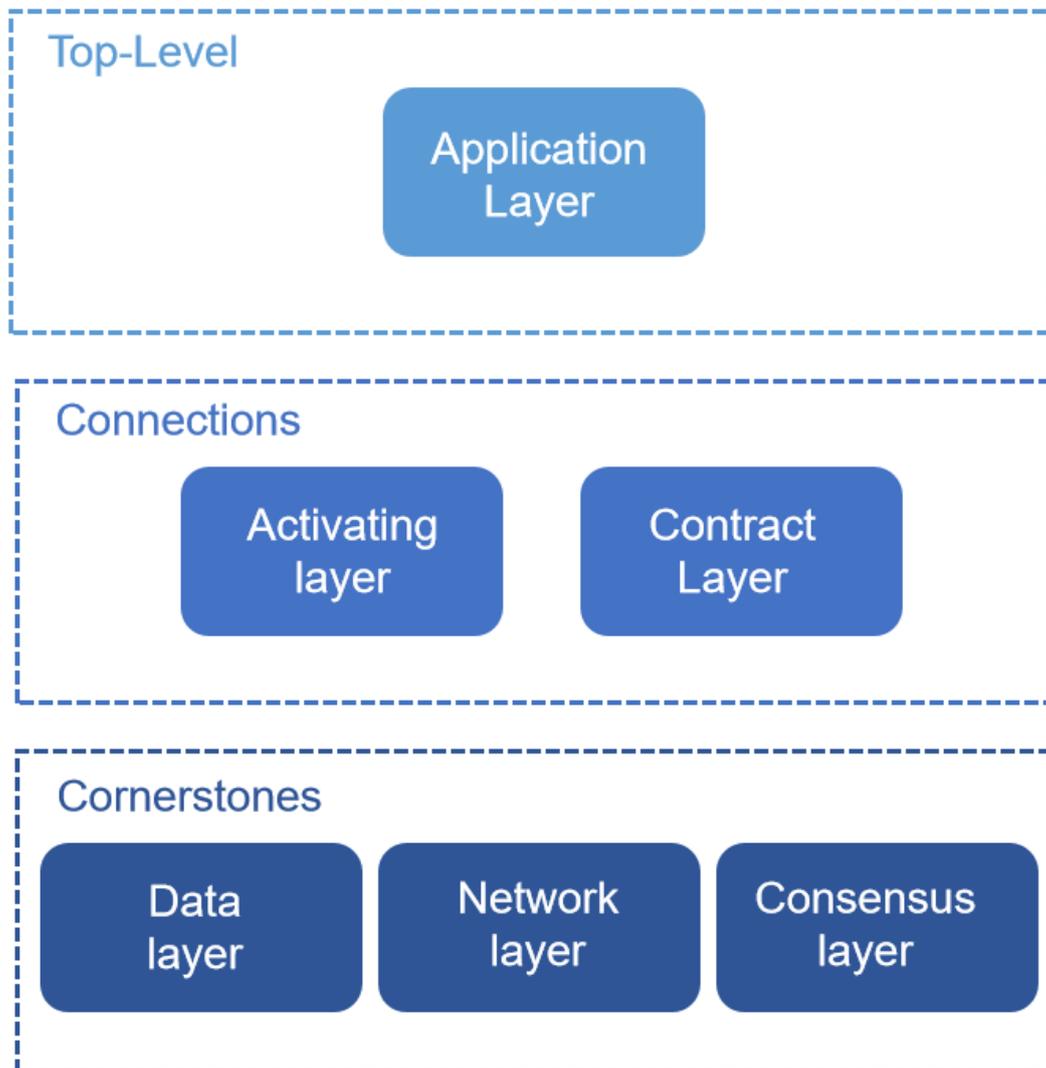
The executable code in the blockchain ledger is generally called Smart Contract, which is executed by contract engine. Since the birth of Ethereum, the Turing Complete programming language - solidity supported by EVM virtual machine has improved the writing and application of the smart contract qualitatively. The contract layer structure of Chaos contains built-in contracts of system, virtual machines and application contract templates, etc., and supports mainstream programming languages such as Java, Go and Python, etc. The customized external interfaces are used to realize the trusted interaction between heterogeneous chains and homogeneous chains to ensure the formulation and execution mechanism of perfect smart contracts.

Top structure

■ Application layer

The application layer aims to provide an interaction interface and pypttool for various distributed applications. The application layer in the top structure of ChaosChain mainly includes development modules, support protocols, APIs and development environments. It provides a concise and easy-to-use application development framework for application developers in various industries. In order to meet the different actual needs in the real

scene, the application development toolset has the characteristics of openness and high scalability. The developers with different industries and technical backgrounds can use the toolset to realize the layout of application products.



Core module of Chaos ecology

Chaos ecology consists of three core modules, including ChaosChain, TaiYi platform and HuaXu application incubator,

which together constitute a complete blockchain application industry ecology covering underlying services, data cochain, on-chain interaction, application research and development, as well as community governance to realize the cochain of multi-domain industry without threshold.

■ ChaosChain

ChaosChain is a basic open and expandable public blockchain. It is designed on the basis of distributed networking technology, asymmetric encryption and token economy, and has the application orientation and cross-industry expansibility. It is one of the infrastructures in Chaos ecology. ChaosChain not only has the function of data on-chain storage and storing and interaction, but also has distributed data index to store and invoke heavyweight files and applications, which is the direct guarantee of the whole ecological governance and stability.

ChaosChain adheres to the design principle of basic ecological chain and adopts the design scheme of supporting the linkage of underlying ecological chain and business chain, of which the underlying ecological chain provides basic functions such as account management, token mechanism, business chain management and data cross-chain, etc., while the business chain provides support for specific ecological applications. In Chaos, the data and value

interaction can be carried out between the underlying ecological chain and the business chain and between business chains, and the open consensus mechanism and token distribution can be supported.

In terms of consensus, ChaosChain adopts an efficient DPOS consensus model, namely, the Chaos ecology token holders vote to determine a limited number of block production nodes (also known as "supernodes") to maintain blockchain and confirm transactions, thus ensuring the efficiency, security and user experience of ecological applications with efficient TPS.

■ TaiYi platform

In the Chaos ecology, we build a cross-chain mechanism and multi-protocol support system - TaiYi platform to meet the diversified business collaboration of different application scenarios, achieving the business chain and application environment of specific industry standards automatically, and building a high-speed path for traditional industries and blockchain.

As the footstone of Chaos ecology, TaiYi platform is a multi-protocol and cross-chain service support matrix. The support modules include general smart contract templates, multi-protocol stacks, shared computing platforms and distributed cloud storage, etc. TaiYi platform abstracts complex problems in specific scenarios into

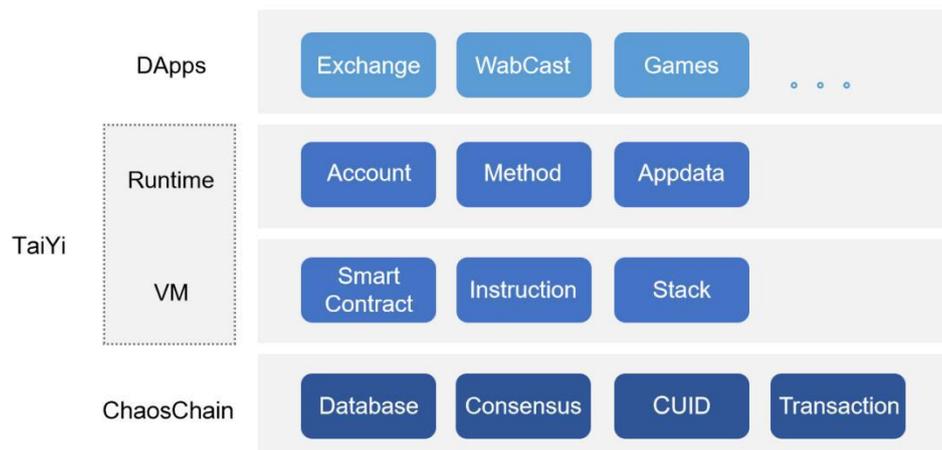
mathematical models that can be easily handled by the main chain and business chain, and provides cochain and delivery services for various business logic in various fields.

■ HuaXu application incubator

HuaXu application incubator is the key module of application cochain in the Chaos ecology. It has a comprehensive blockchain application development support system, and can be used by technicians without professional blockchain application development background. HuaXu integrates multi-language development environment, multi-business chain template, rich scenario application framework and DApp series toolkit, which can not only provide industry incubation for the implementation of blockchains of business models in many industries, but also provide technical support for any third-party enterprises and independent developers.

For product developers with the encrypted asset distribution needs, HuaXu will provide a Chaos ecology-based digital asset distribution module free of charge. Any developers can use this module to customize the exclusive third-party token to build the circulation and settlement functions in the application system. In addition, Chaos will also support the third-party token collection with public blockchain as the medium or anchor, and provide multi-type token interaction templates. While building application

clusters better, Chaos can effectively reduce the costs of building and operating industry application systems, so that Chaos becomes the blockchain application ecosystem built, co-governed and shared by participants.



Chaos ecology support modules

■ Identity cochain module

Creating digital identity for participants is one of the basic elements of the blockchain business system. We can truly realize the confirmation of behavior ownership and quantification of value only by possessing the on-chain digital identity, and ultimately apply it to the realization of diversified business scenarios. Furthermore, the on-chain digital identity of the participants also reacts on the industry itself because of the trustless and non-repudiation of the blockchain, effectively enhancing the authenticity and security of its user information and property, and significantly reducing the operating cost. It can be said that the identity cochain is a stepping

stone for the industry to enter the blockchain world.

Chaos will provide all participants with a convenient and credible identity cochain module. Participants can obtain Chaos user identity (CUID) through the public blockchain entrance or any on-chain application entrance. CUID has permanency, uniqueness and non-repudiation of the registration, and its security is guaranteed by the asymmetric encryption mechanism. It will anchor the identity information, credit records, on-chain behavior and personal assets, etc. of the participants. According to the CUID-related protocol, the holder enjoys the ownership of the behavior information. Any enterprises or organizations must obtain the authorization of the holder's digital signature to read and apply the behavior information for business. CUID avoids the potential risks of data leakage, forgery or illegal acquisition and trafficking caused by third-party intervention or network security while improving the operational efficiency of the business application system.

■ Ecological trust mechanism

Based on the current mainstream view, any business scenario is difficult to solve the trust problem at low cost. Under the combined effects of centralized storage risk, imperfect authenticity confirmation mechanism, malicious data forgery and other factors, the participants often fall into the prisoner's dilemma-like dumb

games, resulting in high costs and uncertain outcomes for both user acquisition and enterprise collaboration, and even re-entering the endless loop of the trust crisis.

The trust mechanism built by Chaos ecology provides blockchain-based multi-dimensional trust solutions for the above problems. The Chaos ecology trust mechanism is an efficient, low-cost and saturated trust building system, which includes trust identification protocol, concurrent truthful declaration, random scatter authentication and trusted data source space, etc. In the Chaos ecology trust mechanism, a single entity initiates concurrent trust declarations for multiple data sources with the digital signature encrypted with the private key. Firstly, the mutual recognition of the trust identification protocol nodes should be carried out, and then the public key confirmation of the data distribution information should be completed by the random scatters. After a reliable trust instance is completed, the initiating entity will obtain quantitative trusty weights in the trusted data source space. This mechanism is conducive to improving the identifiability of the trusted sources and laying a benign competitive environment for ecological applications.

■ Agile node ledger design

In the classical blockchain substructure, the block storage mainly includes Block Header and Block Body, of which the block

header mainly stores a series of functional parameters such as parent block hash, hashrate difficulty and timestamp, etc., and block body stores the transaction list. Compared with the full node storing complete block data, some public blockchains extend the concept of lightweight node, that is, only store block header instead of transaction list information. It can be applied to personal lightweight equipment.

Chaos adds a unique storage unit - agile node on the basis of traditional lightweight nodes, that is, expand lightweight nodes by optimizing Merkel tree and intelligent profile, to achieve more abundant storage requirements in the basic public blockchain and business chain. For a Chaos ecology participant, agile nodes have good dynamic scalability. Besides the core data of the eco-basic block header, agile nodes will also effectively expand user-related content, including their own transaction records, interest list records, highly active business chains and their application-related records. That is to say, with the increasing user participation depth in the ecology, agile nodes will continue to automatically optimize the iteration, and eventually form an exclusive customized node that fits the behavior characteristics, which not only provides convenience for the user experience, but also avoids unnecessary storage requirements.

■ Storage optimization module

The redundant storage is one of the protogenetic characteristics of the blockchain. At the technical level, this redundancy provides nearly perfect security for data storage. The security provided by redundancy has the boundary decreasing effect with the complexity of the on-chain application, that is, for some risk-free and weak copyright data, the security gains of the on-chain storage are much lower than the performance load caused by the chain itself. For example, the heavyweight file on-chain storage, such as games, videos and installation packages, etc., will cause network congestion, slow interaction response and other user experience problems under current technological conditions, but it does not have the absolute necessity of the encrypted storage.

As a basic application-oriented blockchain ecology, Chaos abandons the obsessive-compulsive global cochain shackles and adopts a practical storage mode combining on-chain storage with off-chain storage. When facing the data generated in the actual production process, the built-in storage optimization module of the platform quantifies the storage level according to the established rules: the lightweight and high-frequency data will be stored directly on the chain as part of block contents; for large-volume data, the distributed off-chain storage is carried out after a digital index is

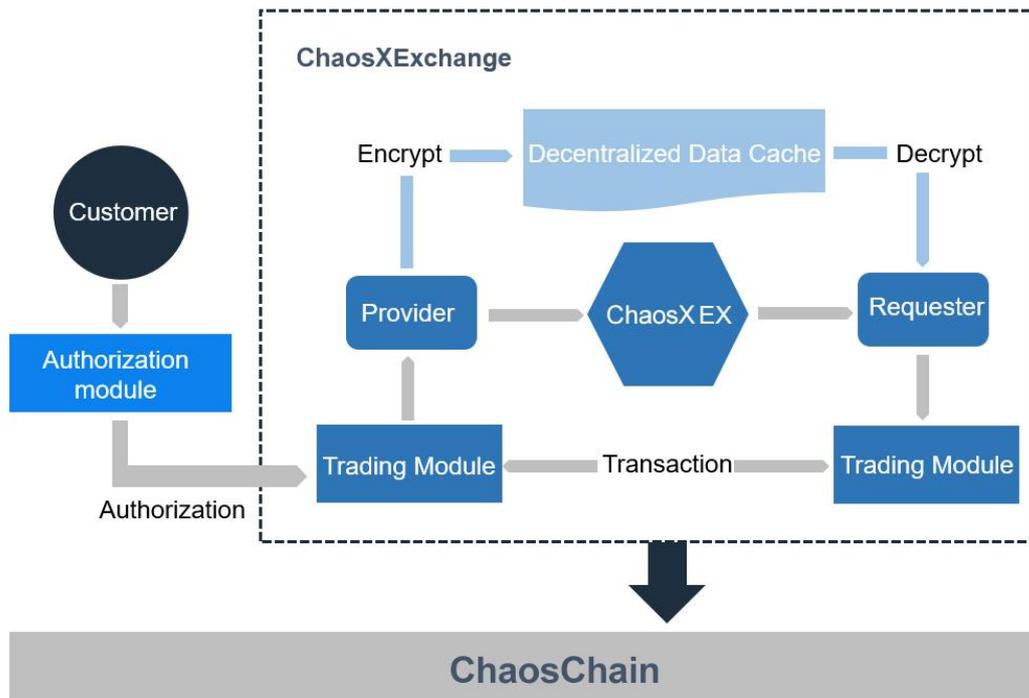
automatically generated, and the index is packaged in blocks. Users can access and manipulate such data through the index in accordance with the access rules. For some special scenarios, data owners, community management nodes and high-weight trusted sources can also participate in customizing advanced storage schemes. Generally speaking, the storage optimization module confirms the balance point between efficiency and security in Chaos ecology.

■ ChaosX transaction platform

Chaos ecology provides a comprehensive business chain distribution support service. Any third party can build the business chain product ecology and distribution standard/non-standard digital assets. The distribution of the application token will use the public blockchain token of Chaos ecology as the basic pricing assets and value circulation voucher. Meanwhile, TaiYi platform also supports the various asset circulation in the whole ecological field, and establishes the value connection between ecological applications.

To realize the above objectives, the ChaosX transaction platform has been designed to guarantee the value definition of ecological token and its derivatives. ChaosX is an open and decentralized asset transaction system which is designed based on the TaiYi platform. It carries two major technological modules: enterprise digital asset wallet and intelligent transaction matching

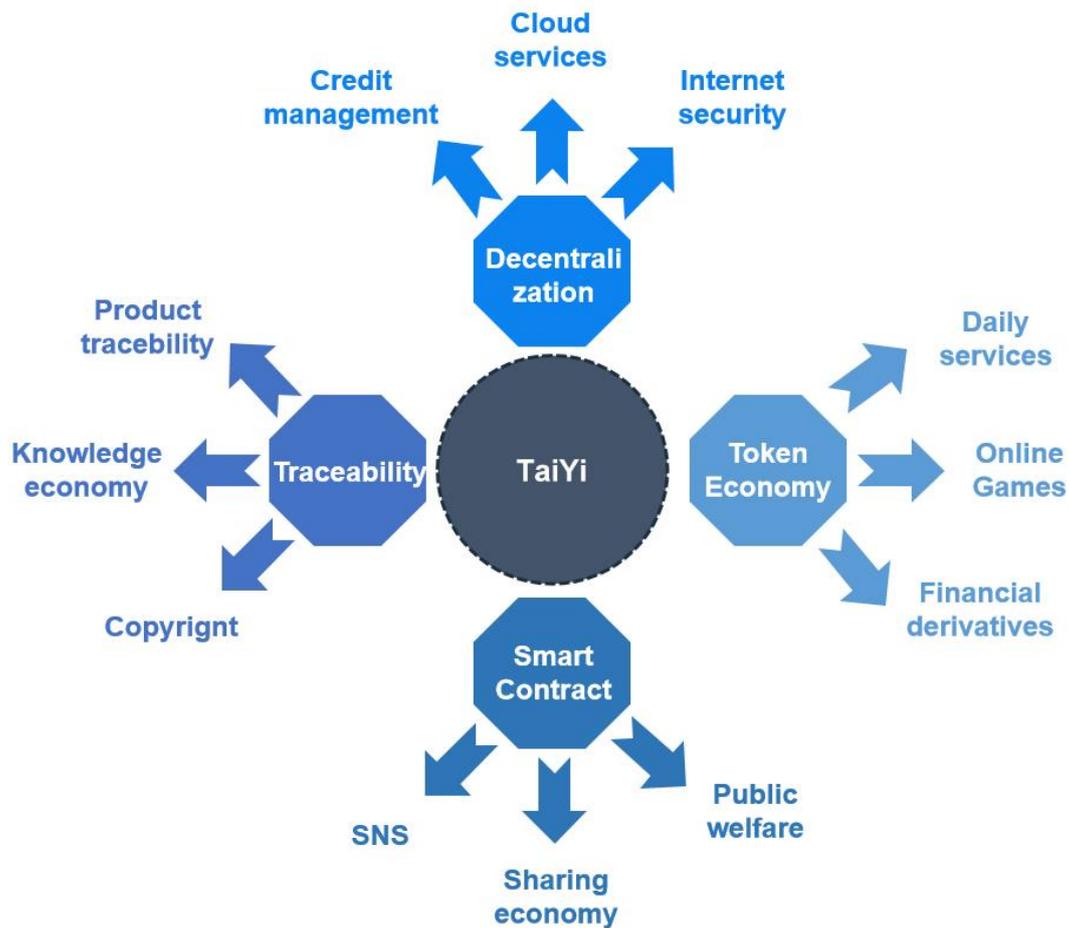
engine and supports the transaction pair system based on the public blockchain token, realizing free exchange between any application assets within the ecology and the public blockchain token. In addition, the ChaosX transaction platform also provides abundant application supported interfaces, by which developers can embed the transaction module directly into the distributive APP to realize real-time transaction.



IV. Application Case Analysis

The Chaos ecology which is designed to construct a cross-industry application system based on the blockchain can provide blockchain solutions applicable to many fields with the support of high-performance public blockchain, TaiYi platform and

HuaXu application incubator.



Finance and asset management

Finance and asset management is a field which attracts much attention of multi-blockchain projects and has been equipped with relative mature infrastructure partially. Theoretically, with technologies based on blockchain, such as trust system, distributive storage, encryption and so on, substantial breakthroughs can be realized with respect to complex procedures, high costs, low efficiency, etc. in traditional asset management. However, most blockchain finance and asset management APPs at present are not

equipped with the extensibility and practicability and cannot meet the diversified demands of users in real scenes or give full play to the technical advantages of the blockchain.

To solve the above problems, Chaos ecology is compatible with a broader asset management design framework which can be used more easily, providing decentralized solutions for insurance, equity transaction, financial derivatives and mobile payment. HuaXu incubator includes finance industry supported modules which are of extensibility, by which any a third-party developer can invoke relevant functional modules more conveniently to customize products for customers. Meanwhile, developers can also feed the financial service operation situation of their products back to Chaos and further update incubator supported module to promote R&D and operation level of the blockchain finance industry.

Internet advertisement

Advertising is an industry which has risen together with the Internet era. After over 20 years of development, Internet advertising has gradually become the main form of the advertising industry depending on information exploration, data analysis and other advantages. However, the trust system of Internet advertising has increasingly reached a bottleneck in recent years. As the volume of the industry increases and the online trust mechanism lacks, false,

illegal and traffic monopoly problems have become prominent, and the low cost of doing evil has significantly affected legal rights and interests of consumers and the market order of fair competition.

Chaos ecology aims at constructing an advertising operation framework based on the blockchain technology. We provide a reform philosophy about the productive relationship between the advertising producer and the end user, enabling advertising developers to use an extremely simple industry structure without the intermediary agent involved. HuaXu incubator includes a perfect online transmission application template which can guarantee the validity of clicking on each webpage through identity authentication on the user chain, so it is suitable for DApp product development of the advertising industry. Meanwhile, the protogenetic characteristics of token economy help solve many problems in the advertising industry fundamentally, such as heavy and a complicated account checking, low efficient settlement, etc., establishing a more efficient and precise Internet advertising order.

Life service

The present blockchain application system is still a major short slab in the life service field. Even though characteristics of blockchain match this field much, there are only a few of application cases which cannot form an industry. On one hand, there is a certain

difference between the present investment guide attribution and live services; on the other hand, there are certain technological barriers for cochain of traditional life service products. As a result, most similar tries stop at the R&D or test stage, and it's hard to form sound life services based on the blockchain.

To further expand the application scene of blockchain, Chaos ecology provides the fundamental life service field with sufficient technical supports and market supports. In the face of various life application types and multiple standards, TaiYi platform formulates a set of standardized settlement mechanism. Any a third-party life DApp can access the mechanism for free, and relevant services can be exchanged with token via the main network, finally forming a set of application clusters covering a wide scope, including catering takeout, petty commodity retail, hotel rent, car hailing and rent, film and entertainment, exercise and fitness and other daily services. Meanwhile, the life service field blockchain application will break the information island in a real sense to form a backbone industry which has a broad market prospect.

Social network

In the various Internet derivative industries, social network is a successful sample as well as the most iconic product of the modern Internet economy undoubtedly. The social network based on the

social attribute of humans a huge market. Meanwhile, after over ten years of exploration, it has formed a sound business logic. Except for its own functions, the present social network is also an ideal traffic flow of other products. However, social APPs have protogenetic disadvantages. Trusts between users and service providers cannot be established effectively, so it is hard to guarantee the validity of product information and privacy of users.

Similarly, we also take social DAPP as the focus of the whole Chaos ecology. It plays an irreplaceable role both in terms of import of product users and project community management. There are two types of social APPs in Chaos. One type is the basic social APPs which are protogenetic IM APPs launched officially or by a third party and are developed to mainly meet demands of users and manufacturers for real-time exchange of information. The other type is the special social APPs which are lightweight products designed for specific user groups and realized through the secondary development of manufacturers of a specific industry based on the protogenetic IM. Meanwhile, Chaos social products based on the public blockchain technology are integrated with the blockchain identity and trust mechanism, significantly improving users' information safety.

Knowledge economy

In recent years, as the public's awareness of protecting intellectual property rights has been gradually improved, the intellectual economy relying on the network has risen rapidly and many representative forms have been derived, such as the copyright, training, information, etc. However, due to the volume of the Internet information and the digital attribute of products, sound intellectual property industry standards are hardly to be established under the existing specifications, and the tort and imbalanced values have led to that creators of excellent contents hardly achieve ideal incomes or effective protection.

The timestamp, openness and non-repudiation of the blockchain can guarantee realization of intellectual economy. TaiYi platform is designed with a concise intellectual economy supported module. Any original creators and training service providers in Chaos ecology can achieve copyright information cochain protection through easy operation. Furthermore, to promote the business progress of intellectual economy under the blockchain framework, HuaXu incubator also provides developers with intellectual economy product transaction modules to facilitate construction of smart contract based cash realization channels on ecology APPs, such as offer for sales, auction, lease, sharing, etc. realizing prosperous intellectual economy in the blockchain era.

Online game

Online game is one of the most popular industries at present. Statistical data show that the overall revenue of the China game market in the last year was RMB 214.44 billion, accounting for 23.6% of the global game market. However, as the game market becomes saturated, the game industry has gradually been fatigued, small and medium-size game manufacturers have to reduce their R&D and operating costs under the condition of channel blockade and giant monopoly, leading to more and more inferior and plagiaristic products which are pushing the patience of users and the life of the industry to an end.

The virtual attribute of game products enables games to become one of the most ideal application forms of blockchain. By virtue of optimizing the public blockchain performance and providing rich game application framework, Chaos supports development of MMO, e-sports and education-type blockchain games, realizing core logics cochain on the basis of guaranteeing entertainment experience. HuaXu incubator also provides virtual asset right authentication and transaction templates. Virtual props will be identified as encrypted blockchain assets in the mode of non-standard token. Game operators or a third-party developers can establish props transaction exchanges where users' active participation in games can be given

comparable returns to form a huge virtual prop value circulation market and make games become an important constituent of blockchain cultures.

Product traceability

Along with the rapid rise of e-commerce, a lot of false and inferior problems have been caused. Besides, due to the difficult supervision caused by a huge product volume and the right safeguarding dilemma caused by the diversified industry chain, consumers' rights and interests are hardly to be guaranteed, and a product tracking system which covers a wide scope is needed to be established. The blockchain has protogenetic attributes, such as timestamp, openness and non-repudiation. Its decentralized certification process can prevent counterfeit and falsification of information in a single link and can realize effective targeted tracking of products.

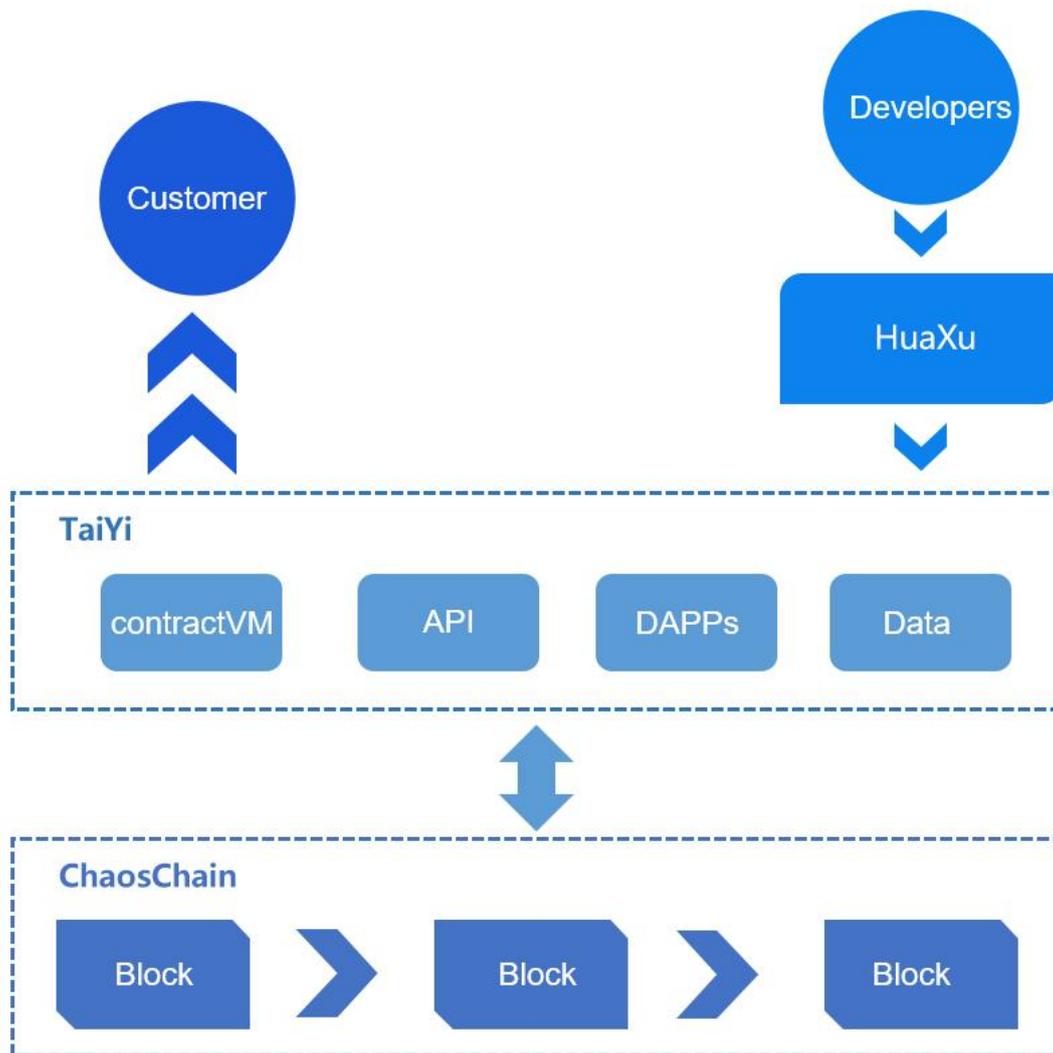
Chaos ecology can provide blockchain anti-counterfeit tracking service for physical or virtual products and form the product tracking cooperation layout in various application scenes. As regards physical commodities, the tracking technology can help realize whole-industry chain information loop from manufacturers to consumers. Any business links of a commodity will be recorded on the blockchain truthfully. Consumers can learn about all the tracking information via the sole identification code of a commodity, such as the commodity's production,

logistics, etc.

V. Chaos Ecology Token Economy Model

Chaos is a time of comprehensive exploration for the blockchain business system and the token economy model. We try to perfect the protogenetic industry production relationship, provide supports for transformation of the blockchain and reshape the value attribute of manufacturers and consumers on the basis of no deterioration of use experience. Chaos will present the following three aspects of characteristics:

- **Form standardized industry cochain procedure and establish the blockchain application system;**
- **Construct a token economy business model based on the distributive application cluster;**
- **Restructure and quantize the ownership of action values of participators of the ecology.**



Standardized cochain procedure

At present, the blockchain industry is still dominated by unitary industry application chain. In such a case, blockchain projects is of certain closure, and homogenized products are of a prominent redundancy problem. Restricted by the performance of the public block chain and the consensus scale, the present blockchain application system has not reached the business level, and its investment attributes are more than its application attribute. What's

more, as for entrepreneurs who do not have the blockchain technology and operational experience, the technology threshold of transformation from a traditional industry to the blockchain industry is high and the public blockchain design cost is rather high.

Chaos will provide the blockchain industry with a reusable standardized procedure for application cochain. We devote ourselves to the qualitative change of the blockchain industry from a unitary application chain to a basic ecological chain to construct an open basic ecological platform for effectively solving the obstruction of cochain of traditional industries. Chaos will customize comprehensive development tool set for cross-industry applications, forge a decentralized agreement platform integrated with many systems, realize the highly attractive combination of demands of data cochain, smart contract, trust model and distributive processing, forge simple, easy-to-use and efficient blockchain application development channels and construct a standardized cochain procedure for business application of multiple fields in realistic scenes.

Distributive application and token economy

Based on the support of wide third-party original application resources of TaiYi platform, Chaos DApps is not loose and disorderly pileup of APPs but a distributive application service matrix guided by fair competition and user service. On this platform, any enterprise, organization or individual can carry out DApp development, distribution

and operation based on Chaos and obtain incomes comparable to their pains and creativity in a fair competition environment; Accordingly, users will access a wider application choice space, the most valuable DApp recommendation and deeply customized exclusive products so as to further access the convenience, rights and interests brought by development of the blockchain technology.

In addition, the construction of the Chaos ecology application system has also achieved commercial implementation of token economy in traditional industries. As the token economy is introduced and popularized, application of traditional industries on the blockchain will realize a distributive business model. Any entrepreneur can realize application development and efficient settlement by virtue of Token issuing and the product operation model of the public block chain of Chaos. Meanwhile, each person, as a product user, can realize the exchange of products and services relying on the Token they hold and can participate in management of products and the community and become the final beneficiary of development of blockchain application.

Restructuring of action values of participators

In the economic model of traditional industries, it is hard to provide a uniform value evaluation standard for actions of participators (especially for the end user). As the final link and the largest group in the ecological system of any business chain, end

users' action values are hard to be measured accurately. And if manufactures and distributors cannot accurately master actions of users, target users usually cannot be positioned so accurately. As a result, unnecessary R&D, manufacturing and promotion resources will be wasted. Accordingly, as independent individuals, users' market information source is relatively unitary. In the Internet environment where there are big data traps and information security cannot be guaranteed, it is hard to protect their consumption guide and action value ownership from damage of manufacturers or a third-party malefactors.

Adhering to the philosophy of redefining participators and restructuring their action values, Chaos will create a reliable blockchain identity for each participator via the diversified identity authentication system and guarantee via the flexible and effective smart contract that any valid action is bound with its identity closely and will not be tampered by any person. In Chaos, developers and end users, as the work producer and contributor, will possess the ownership of all of their valid actions, realize action value definition based on the token economy system and finally share contents and gain incomes via the decentralized application platform. Enterprises, organizations or platforms can apply data and actions of users to business through authorization of users, position the real target

groups effectively, improve industry efficiency and form a brand-new economic model under the Internet era.

Chaos ecology principle

Infrastructure and supporting modules of Chaos provide a stable support and a rich management architecture and also enable ecology APPs to have a flexible and delicate rule design concept. At the same time, Chaos based on the blockchain technology inherits the decentralization advantage to the maximum, creates values and trusts based on technologies and provides all the participators with a benign competition environment and realizes continuous improvement of the ecological economic aggregate based on increasingly enriched APPs and diversified appreciation of token assets.

Taking an APP product based on the Chaos ecology as an example, the developer needs to create a CUID identity to access the ecology for free. Then all the development resources of HuaXu application incubator (including the development environment, operating manual, utility tool set, etc.) can be used for opening an exclusive business chain and APP product R&D procedures. During this process, the developer can access other supports (such as development resources and hashrate resources of a third party) via the ecology token and can also customize exclusive token as needed and issue the token publicly on TaiYi platform. After R&D of products, the developer can launch public testing on TaiYi

platform and then put the standardized online procedure into operation after evaluation of community users. Business chain token obtained by users through participating in application or providing contributions can exchange the token of the main network via the Chaos ecology transaction hub to gain incomes. It is worth mentioning that Chaos ecology supports diversified internal circulation of APPs, can customize business logic models for products of a third party in accordance with the characteristics of an industry, the usage habits of its user groups can be maintained and finally the third party can benefit from the overall ecological value circulation.

VI. Token Profile and Distribution Scheme of Chaos

Chaos token profile

To realize the above ideas, we have created the platform asset ChaosToken (short for AOS) as the value circulation medium in economic activities of Chaos ecology as well as an evidence of management of the platform. In Chaos ecology, AOS can serve as the carrier of value exchange and the evidence of participation of users as well as the basic pricing asset, provides support for the digital token economy of the whole ecology and will become a protogenetic pricing medium of digital assets of derivative business

chains in the Chaos ecology. This characteristic is mainly represented in the following aspects:

1) The Chaos TaiYi platform will provide all the business chains in the ecology with protogenetic supports in terms of the underlying architecture, consensus model, APP design, etc.;

2) During the standard / non-standard encrypted asset production process based on APPs on the Chaos TaiYi platform, AOS can be used for realizing basic pricing of production elements and production actions;

3) TaiYi platform supports asset circulation within the whole ecology, establishment of value linkage of APPs on the ecology platform and realization of value defining of token and derivatives.

At the early stage of the ecology, AOS was issued based on the Ethereum ERC20 standard. After the launch of the main network of Chaos, all the AOS will be exchanged into tokens of the main network at the proportion of 1:1, and the result will be mapped to the corresponding address of the main network.

AOS access and application mechanism

In the Chaos ecology, each participator can access encrypted digital asset gains via the open functions of the platform and these digital assets can be used for exchanging commodities or services on the ecology platform or derivative APPs.

Modes of accessing AOS include but are not limited to the following ways:

1) Valid actions. Users can gain AOS returns through valid participation actions on TaiYi platform, in communities and distributive APPs, such as account registration, information perfection and participation in interaction. Such actions will be integrated and optimized automatically on the platform and awards will be given to such users.

2) Contributions to the ecology. In Chaos, any participator who makes contributions to the ecology will be given AOS awards according to the participator's contribution degree, including participation in development of APPs of the ecology, provision of services, hashrate contributions, community management, product test, etc.

3) Value generation. Chaos comprehensively supports non-standard token issuing and circulation of a third party. When users create compliant non-standard assets based on the network or targeting at the real world, they can obtain AOS based value attributes, and users can carry out value conversion freely relying on products.

4) APP mining. Chaos will provide APPs of a third party with the self-defined economy system permission. Users can carry out

mining by using these DApps to obtain AOS. These awards will be determined and implemented by the APP operators on the platform.

5) Blocking reward. With packaging and verification of super node blocks of Chaos public blockchain, users can obtain AOS stimulation.

The application scenes and consumption modes of AOS include, but are not limited to the following ways:

1) Purchase or lease of products and services on the Chaos ecology platform;

2) Platform resource exchange, such as the third-party development resources, hashrate resources, etc.;

3) Independent release of community activities, promotion, voting and other tasks with payment;

4) Exchange APP token in the Chaos transaction hub;

5) Participate in early investment of APP products on the ecology platform;

AOS release and distribution scheme

The total release amount of AOS will always be 1,000,000,000 pieces. The minimum unit is ch (1AOS=10000000ch). The release amount will not be increased forever based on the smart contract. In order to ensure early ecological construction, AOS will adopt the following allocation method:

1) 15% for organization and angel investors (AOS will be distributed to organization donors and angel investors at the early time of the project by two rounds. In the first round, 50,000,000 tokens will be released, and 10% will be released monthly one year after hedging; in the second round, 100,000,000 tokens will be released, 5% will be released immediately, and all the rest will be released in four months (35%, 30%, 20% and 10% respectively) one half a year after hedging);

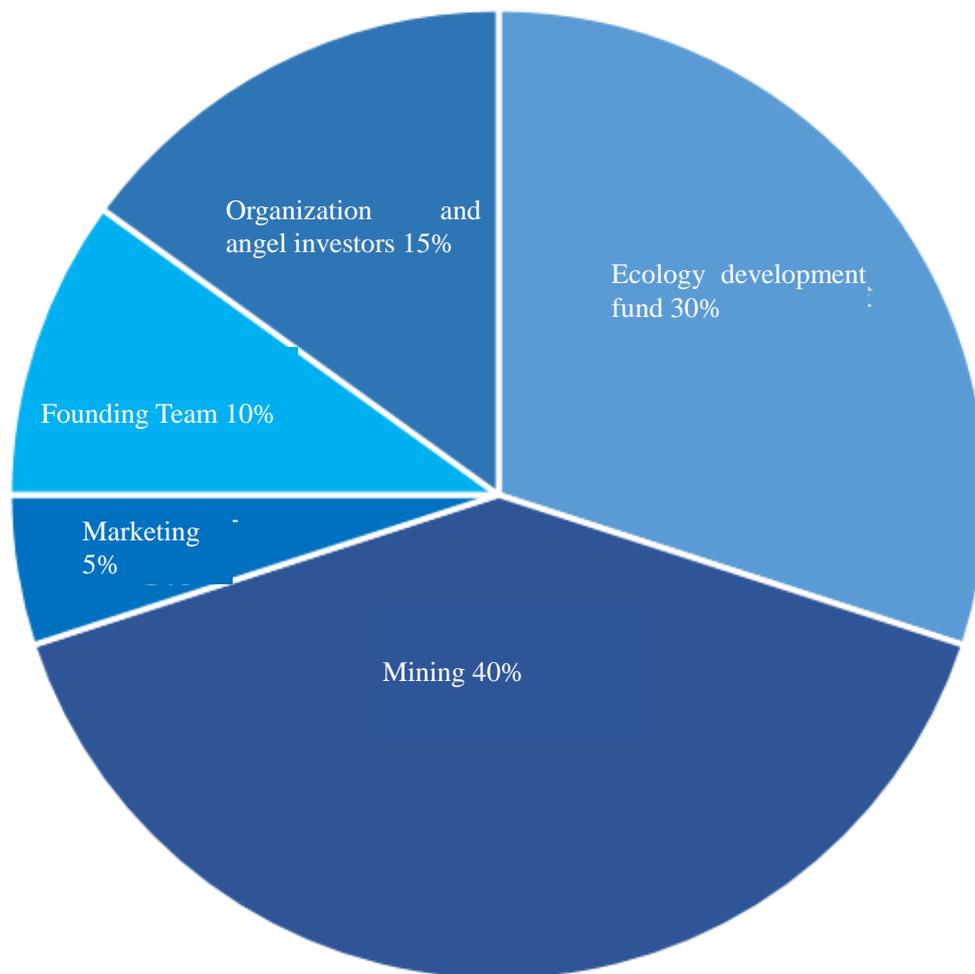
2) 10% for the foundation team (tokens will be used for construction of the foundation team and stimulation of the team. They will be unfrozen in two years (50% for each year);

3) 5% for marketing (tokens will be used for project promotion in the industry, including offline road show, user stimulation, air drop of candies, etc.);

4) 30% as the eco-development fund (tokens will be used for stimulating participators of the ecology, such as the third-party manufacturers, developers, community managers and other contributors in construction of the ecology. They will be released in three years (50% for the first year and 25% respectively for the last two years);

5) 40% for mining (tokens will be used for awarding confirmation of super node blocks and all the participators. They

will be unfrozen in four years as the ecology is constructed (50%, 25%, 15% and 10% respectively).



VII. Development Course of Chaos Ecology

Chaos aims at serving as a bridge between traditional industries and blockchain in the virtual world and constructing a global basic blockchain ecology guided by a cross-industry application system.

Our strategic planning course is as follows:

2019/Q3

Formal project approval, establishment of design, R&D and consultant teams;

Release of white book, launch of official website;

Launch of ChaosChain and TaiYi platform development schemes;

Launch of the global community layout of Chaos;

2019/Q4

Release of AOS standard token based on ERC20;

Participation in international blockchain summit, exposure in front of media for the first time;

Completion of organizational and angel financing;

2020/Q1

Formal online testing of the first AOS supported ecology application product;

Confirmation of the cooperative model of TaiYi platform, business cooperation negotiation;

Over 30,000 community users;

2020/Q2

Completion of development of ChaosChain and openness of source code;

Launch of performance testing of main network of Chaos;

Launch of AOS on the world first-tier transaction platform;

Completion of TaiYi platform application development framework, compatibility agreement and business interfaces;

2020/Q3

Formal launch of the main network of Chaos, commencement of Token mapping;

Selection of 70 super nodes from the global super nodes;

Transfer of launched ecology APPs to the main network of Chaos;

100,000 community users;

2020/Q4

Launch and operation of the first traditional industry chain;

APP development competition, launch of over ten DApps covering many industries;

Realization community autonomy, formation of the super node + community ecology management model;

Establishment and optimization of Chaos ecology circulation system;

Perfection of supporting modules, formation of large-scale industry cochain channels;

