DATT White Paper

DATT Found

DATT White Paper Version1.0

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This document will be updated continuously according to the progress of the project

Abstract

DATT (Digital Assets Trust Token) project provides a unified infrastructure of value bearing, value interconnection, value flow and value realization for traditional Internet through blockchain technology, and realize the interconnection with other blockchain projects in a cross-chain way, so as to truly realize the mutual integration and intercommunication of information internet and value Internet. In the DATT project, token carries the value created by the Internet. It is no longer just a financial symbol, but has connotative value. This is the essential difference between DATT and other blockchain projects, the most important highlight of DATT, and the key foundation for realizing "sustainable value growth" of DATT.

contents

1 Problems faced by the Internet

The Internet has been the infrastructure for the normal running and development of our world. A lot of wealth created by society is stored on the Internet in digital form. Due to the defects of the Internet itself, we are facing the following serious problems.

（1） The Internet has no effective protection of digital assets

Internet virtual space is different from the physical world. In the Internet, all assets exist in the form of information data. However, the Internet can realize the instant replication of information data without cost. The assets existing in digital form can not be effectively protected, and we can not even trace and confirm the original ownership. This is more obvious in content creation and innovation, for example, in Tik Tok, a creative short video will be imitated by countless people in the moment, and some original knowledge works are also reprinted everywhere. The rights of the original can not be effectively protected, which greatly damages the enthusiasm and rights of the original creators, and has great damage to the benign development of the Internet.

（2） The Internet lacks effective value realization

The development of Internet applications can not be separated from the active participation of the majority of users. General applications have their own independent user points system to encourage users to participate. But there are two very big defects. First, the points do not have the value growth, especially for the early users, users can not get the bonus of application value growth. Second, the user points are generally limited in the application system, cannot circulate between the different applications. Therefore, the user points of most application systems has become a chicken rib, and the user's points in many application systems has become invalid. The design of user points of application system is not based on value, nor is it the carrier of value. Therefore, to a large extent, user points system has become a rogue, which can not truly measure the value of users' participation and contribution,

nor can it be circulated and realized. It is a Lose-Lose situation for users and applications.

（3） The financial base is seriously insufficient

In the Internet era, a large number of social wealth exists on the Internet in the form of digital. However, the current Internet can not effectively use the wealth, nor can it provide effective financial tools to give full play to the collaborative function of the Internet in finance. At present, the Internet can not achieve the unity of value creation and value use, which seriously weakens the basic role of the Internet as social running and development, and hinders the vigorous development of the Internet.

2 Why develop DATT

Provide effective protection for users' digital assets，DATT provides a secure and trusted protection mechanism for Internet users' digital assets through blockchain decentralization, openness, transparency, unforgeability, traceability and other technologies.

Provide infrastructure for the continuous value growth of user digital assets，Using the token issued by DATT to replace or associate the user points system, token is no longer just a value symbol. It is used to carry the value created by users on the Internet, so as to realize the continuous growth of value.

Realize the interconnection and integration of value network and information network，DATT uses Cross-Chain technology to realize the interconnection with other blockchain projects. Through DATT, the interconnection between Internet information network and blockchain value network is realized. The blockchain value network provides financial support for the development of Internet information network, and the Internet information network provides application scenarios for the block chain value network, thus forming a big cycle and promoting the benign development of the blockchain and the Internet。

Building a more active community，DATT connects the traditional Internet and the blockchain value Internet. On the DATT platform, it introduces a large number of traditional Internet users, forming a benign circulation and interaction between assets, credit, application scenarios and other elements, which will form a more creative and active community.

In view of the problems existing in the Internet, the goal of DATT is to unify the information internet and the value Internet, so that value becomes the intrinsic attribute of the Internet.

3 What is DATT

DATT is a decentralized digital asset trusted service network with "sustainable value growth" as the core strategy and provides Internet application innovation and IP protection core functions. DATT is committed to building a unified value interconnection, value circulation and value growth infrastructure between Internet applications. DATT will empower the traditional Internet and strive to create a safe, efficient and easy-to-use "value ecology" blockchain public operating platform.

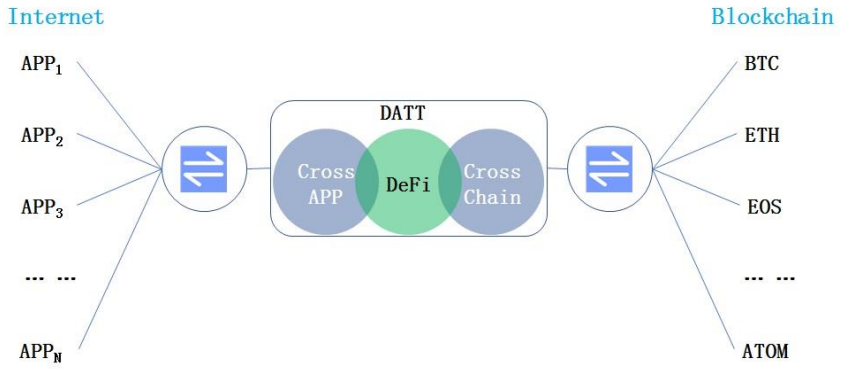


Fig 1 Position of DATT

As shown in Figure 1, DATT breaks the value island of blockchain through Cross-Chain technology, and establishes an interactive network of blockchain assets. DATT realizes interconnection and value bearing with traditional Internet applications by providing open interface (OpenAPI) or plug-in technology, so as to establish a unified standard for digital assets between the Internet and the blockchain, provide

unified underlying support for DeFi applications, and make digital assets more accessible. it make the digital assets holders and Internet value creators to enjoy the real security, freedom and transparency of DeFi application services, and enjoy the continuous growth of digital assets.

4 Design of DATT Technology

DATT is built using NULS ChainBox which is the development framework of blockchain. ChainBox is a toolbox for quickly building blockchain, which encapsulates the underlying modules such as ledger, account, transaction, block, consensus and network, and shields complex blockchain technologies such as distributed data storage, point-to-point data transmission, consensus mechanism and encryption algorithm. Developers can use ChainBox to quickly build a basic chain.

In order to meet the needs of the project of DATT, we makes further optimization and expansion in Cross-Chain and consensus module on the basis of ChainBox. In addition, DEX module is added to support the decentralized matchmaking.

The application scenario of the DATT project is first oriented to the traditional Internet. The following will describes the unique design of DATT in this respect.

4.1 Main chain and application chain

On top of DATT, there will be a variety of rich Internet applications. If all transactions handled according to a unique blockchain, it will not only cause the rapid expansion of the blockchain, but also make the blockchain inefficient. At the same time, due to the different development of Internet applications, if all applications use DATT, the value of DATT will be greatly affected if the application is not well developed or closed. Therefore, for the DATT Internet application scenario, the DATT blockchain adopts the double-layer structure of the main chain and the application chain. Through the unified sharding technology, different applications can

flexibly configure nodes according to their needs, and construct application blockchain network. The main chain provides unified account, asset issuance, application management, SPV confirmation, Cross-Chain operation and other functions, and the application chain realizes specific application functions. The double-layer blockchain architecture achieve reasonable management of functions, avoid the rapid expansion of the main chain, and improve the overall processing efficiency of the blockchain. At the same time, DATT also reduces the direct impact of poor asset management of associated applications.

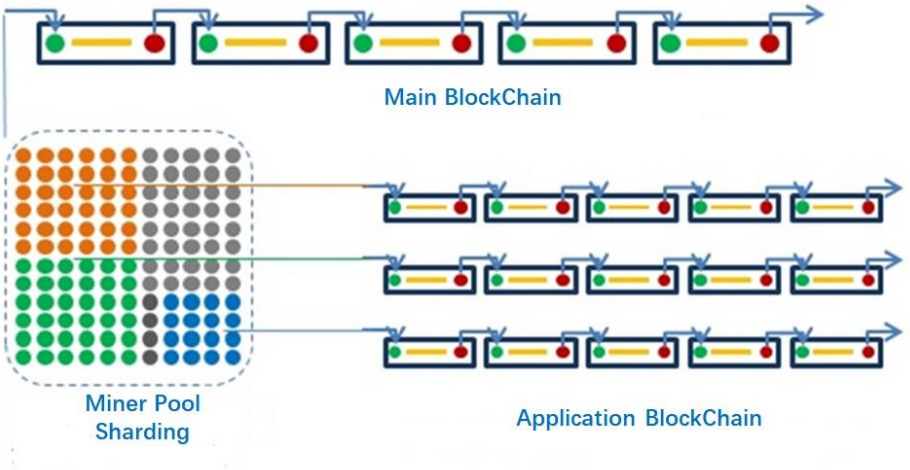


Fig 2 Two layer architecture of DATT blockchain

The relationship between the application chain and the main chain is not only independent but also connected, sharing the mining pool and protocol stack based on the blockchain, and achieving reasonable functional autonomy to build a harmonious, balanced and shared value ecology.

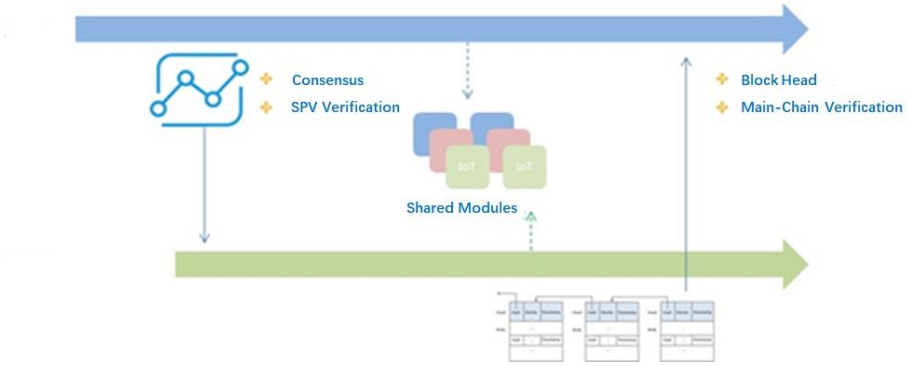


Fig 3 Relationship between application chain and main chain

DATT application chain：

1） **Create smart contract for application chain:** An application chain smart contract is created on the main chain of DATT. According to the actual application scenarios and objectives of the application chain, the consensus mechanism used in the application chain is selected. DATT will provide a variety of consensus mechanisms such as POW, POS, DPOS, PBFT and so on. You can select whether the application chain needs the main chain verification. The security and user experience of the application chain can be increased by selecting the main chain.

2） **Main chain verification:** The application chain submits the data block head to the main chain, which is used for network wide verification and storage. The application chain can realize SPV verification in the main network. DATT implements the two-tier architecture and two-level verification of the blockchain, keeping the flexibility and efficiency of the application chain, and inheriting the security of the main chain.

DATT realizes the horizontal expansion of blockchain through the two-tier structure, and ensures the security through double-layer data verification. This reasonable architecture design and service governance is the basis for DATT to achieve high TPS. The ultimate goal of DATT is to achieve the processing capacity of 1 million + network wide TPS, and truly achieve the technical infrastructure goal of Internet application ecology.

4.2 Big data private chain

In the Internet application, users will produce a large number of valuable data assets, which must be effectively protected. For this Internet application demand, DATT provides private chain support for users. When users need big data storage, they can create a smart contract and select customized configuration parameters to customize a private chain of their own. Through the key, the user completely controls the access rights of the data, so that the user has the complete property rights of the data.

The participants of DATT are not only independent individuals, but also

enterprises and organizations. For enterprise users of large enterprises, they may have huge data storage and subsequent data analysis and processing requirements. In this scenario, it is not appropriate for data to be stored through a distributed blockchain. Or, users require that the data must be stored on their own cloud platform and be able to share the data value guaranteed by the blockchain. With the development of blockchain, DATT abstracts and defines big data operations, encapsulates the general interfaces and functions of big data operations, and provides flexible choices for users' big data requirements.

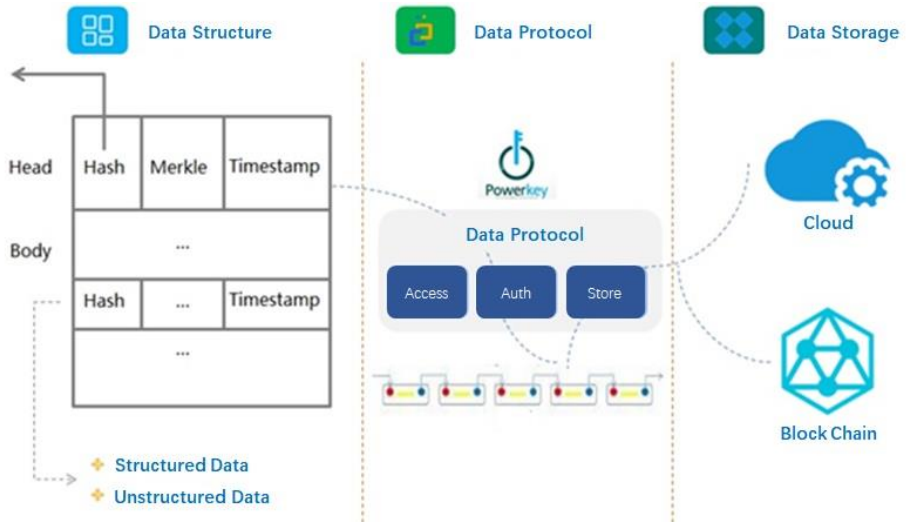


Fig 4 DATT big data protocol stack

In DATT, big data processing is designed into three stages：

1） **Data structure**：With the secondary data storage structure, the data types and data sizes of big data vary greatly, including structured data, and unstructured data such as images and videos. Firstly, block is used to abstract all the data and define the data uniformly. Any data is defined as a resource reference entry, packaged into data blocks and hashed. The specific original data is retrieved by reference, and the original data can be encrypted or not encrypted as required.

2） **Data protocol**：DATT defines data access control, authorization, storage and other standard operations and interfaces, constitutes the big data operation protocol stack, and realizes the blockchain's standard operation on big data.

3） **Data storage**：According to the actual needs scenarios, the data is stored on

the cloud platform or blockchain, and the data stored on the DATT blockchain needs to pay for the storage miners.

4.3 Application protocol stack

Blockchain is a value network built on the Internet information network. With the development of artificial intelligence and IOT technology, it is not only people or people-oriented enterprises and other organizations that generate or create value. In other words, more and more intelligent hardware will participate in the value network of blockchain in the future. In addition, artificial intelligence (AI) and big data mentioned in the previous section are increasingly becoming essential basic functions in social value creation and value network. Only when these basic functions are integrated with the blockchain, can we truly provide a "trust machine" for the society and realize the landing outside of the blockchain financial field.

A prominent feature of DATT is that provides a complete definition and implementation specification of blockchain application protocol, which lays a solid foundation for value ecology generation of blockchain.

Fig 5 Application protocol stack

In DATT, the difference between the application protocol stack and the function module in common software architecture is that each application protocol is composed of definition, implementation and interface, which constitutes an entity and is represented by a smart contract. The application protocol stack in DATT adopts an open strategy, and gives full play to the strength of community developers to

create a prosperous DATT application protocol cluster. It can also develop specific application protocols for other users to use, and can obtain certain benefits.

Taking an algorithm module of artificial intelligence as an example：

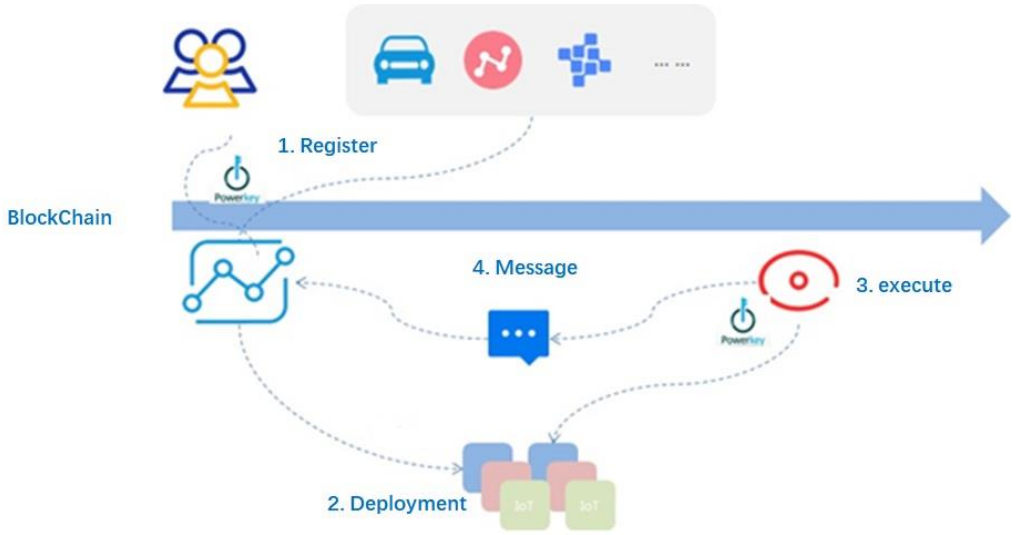


Fig 6 Implementation of Application Protocol

By creating a smart contract on DATT, registering an algorithm module of artificial intelligence, and defining the use rules. The module is deployed in DATT, and other users call it through smart contract. As a result, the smart contract to which the module belongs is triggered by message, such as fee payment.

5 DATT Economic Models

5.1 Token issue

DATT is a native asset built into the network. The largest total issue of DATT is 2.1 billion. The initial issue is 1.1 billion. The remaining 1 billion will be produced through node consensus.

5.2 Initial issue token allocation

The initial issue of DATT is 1.1 billion pieces, and the allocation plan is as follows：

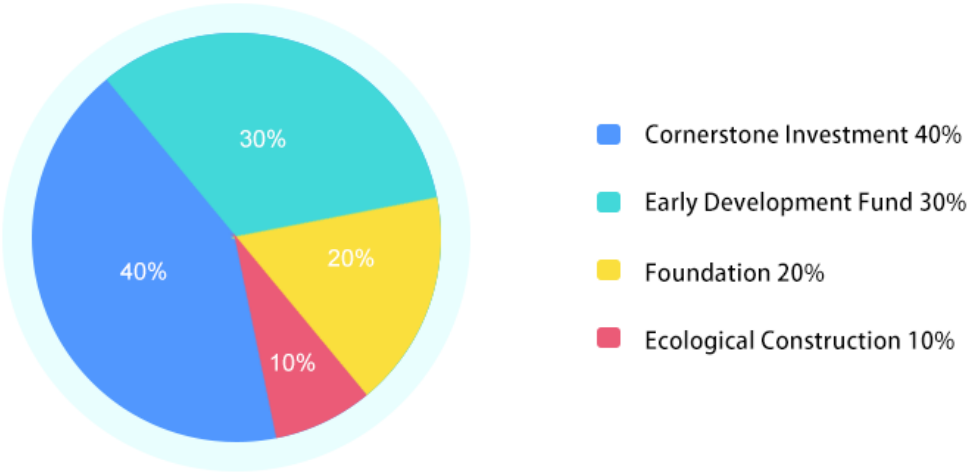


Fig 7 Token allocation

（1） Cornerstone Investment： 10%

It is used for institutions and partners to participate, accumulate more resources and promote project development.

（2） Early Development Fund： 20%

It is used for the implementation and operation of the DATT blockchain project, as well as the technical operation and maintenance. The tokens should be locked and adopt the strategy of gradual release to ensure the sound development of the DATT project.

Table 1： token release strategy

Release ratio	Release time	Release conditions
20%	running for 1 year	0.1 U / Token
50%	running for 2 years	0.5 U / Token
30%	running for 3 years	2 U / Token

Token is released step by step according to two conditions of time and price. The two conditions are the relationship of or, that is, when more than one of the two conditions is met, the token can be releaseds.

（3） Foundation： 30%

The fund support for the long-term development of DATT project mainly

focuses on the development of DATT technology and community construction to ensure the sustainable development of DATT project. Among them, 10% of the token is permanently pledged to ensure the stable operation of the main network.

（4） **Ecological Construction：40%**

Ecological construction is an important foundation of the DATT project, and also the key to the success of the DATT project. 40% token is used to gradually develop and access more Internet applications to promote ecological prosperity. Similarly, 10% of the token will be pledged to ensure the sustainable operation of ecological development funds.

5.3 Consensus node output

DATT will adopt the strategy of appropriate inflation, with a ceiling of 1% per year and 100 years to reward miners for mining, so as to maintain the normal operation of the DATT project, and avoid deflation after the token is lost due to various reasons, so as to ensure the demand and circulation of token on the DATT platform.

5.4 DATT Values

It is oriented to Internet applications, build a token economic system integrating Internet and blockchain, and realizes the sustainable growth of ecology and value for DATT through blockchain technology.

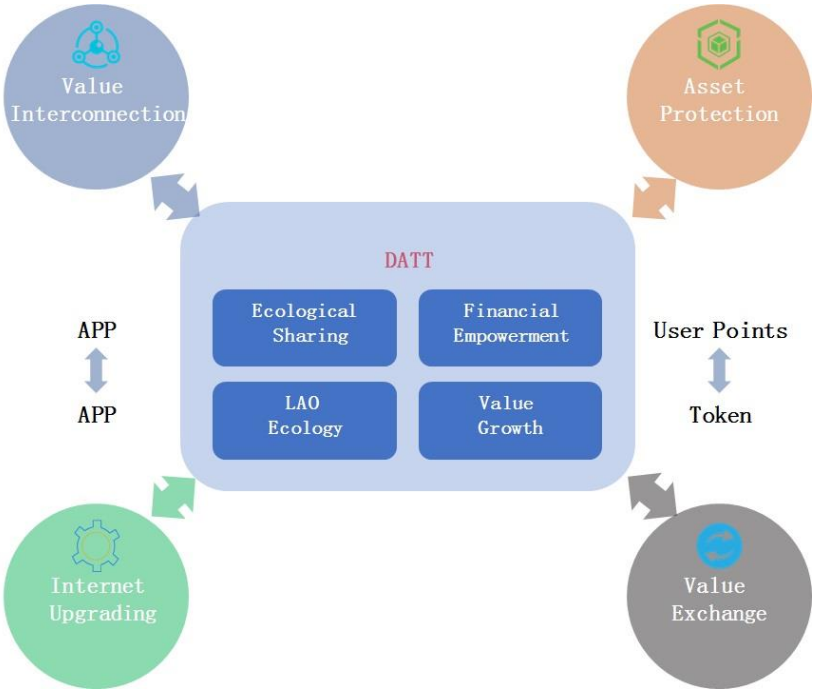


Fig 8 DATT values

（1）Value Interconnection

DATT provides a unified value foundation for Internet application, breaks the value island of application systems, and realizes value interconnection and circulation.

（2）Internet Upgrading

DATT can update the business model, establish an new economic model, reshape the relationship between enterprises and users, and ultimately achieve the purpose of optimizing the business effect through upgrading the traditional Internet with blockchain.

（3）Ecological Sharing

DATT will realize the community activity and flow, and finally realize the community resource sharing based on the application ecology and value ecology, through the value exchange and incentive between the community and the platform ecology.

（4）Financial Empowerment

As the infrastructure of application ecology and value ecology, giving full play to its financial function, it will provide abundant financial tools for DeFi to connect

applications, users and developers with finance, promote entrepreneurship and innovation, and provide growth income opportunities of application ecology and value ecology.

（5）Value Growth

The value of DATT will grow continuously with the construction and development of application ecology and value ecology as the value scale and value bearing of the whole application ecology.

（6）Asset Protection

DATT can provide reliable protection infrastructure for digital assets, and protect all intellectual property rights, creative innovation and other assets in the form of data on the Internet.

（7）LAO Ecology

With the help of the ecological development of Lao, DATT will continue to inject new strength into DATT, so that DATT will enter a positive cycle of development.

（8）Value Exchange

DATT connects the value Island, accesses more mainstream data assets, and realizes asset exchange through heterogeneous cross chain technology.

5.5 Value cycle and value growth

Through the implementation of the DATT project, the integration of the Internet and the blockchain network is realized. In the way of DATT, the unified value bearing, value transmission, value cycle and value growth of the two networks are realized. The overall value model is shown in the figure.

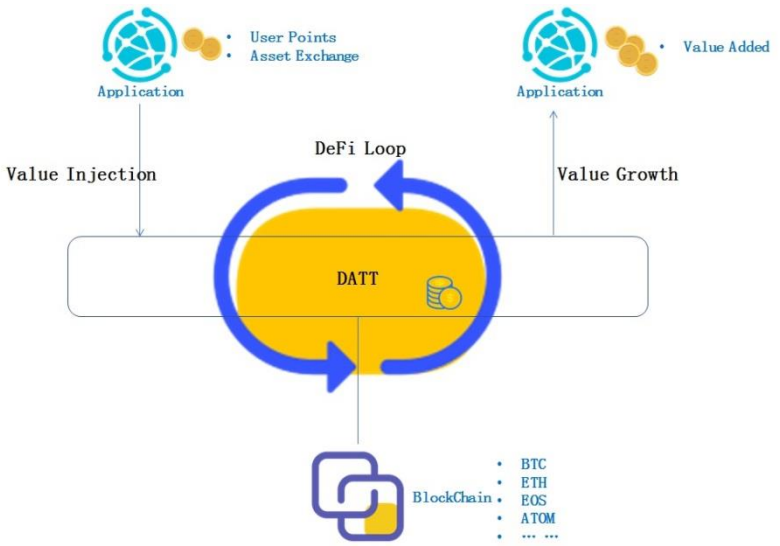


Fig 9 Token cycle and value growth

（1） Value injection

When DATT is connected to Internet applications, the value created by Internet application users, such as user points, application assets, such as advertising space, directly or indirectly anchor the DATT and inject the value into the DATT, so that the DATT naturally has intrinsic value. When an endless stream of Internet applications are connected to DATT, the increment of single token becomes inevitable because the total amount of DATT remains unchanged.

（2） Asset cycle

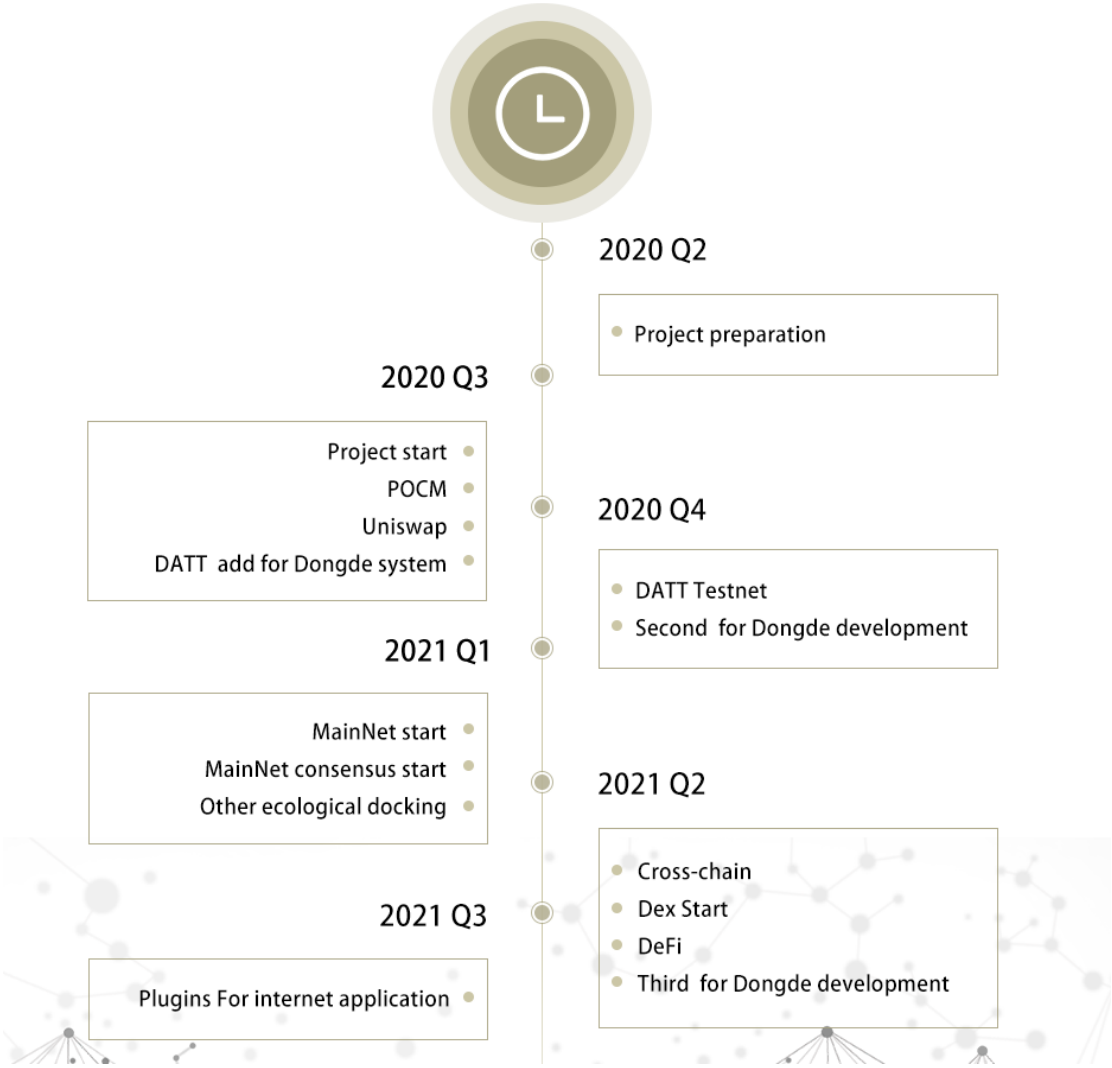
DATT connects the blockchain and the Internet, and provides the DeFi ecological underlying technical support. DATT is used in various financial transaction scenarios, forming a supply-demand relationship for the quantity of DATT. With the development of ecological construction and the expansion of the demand for token quantity, the price of token will inevitably increase. At the same time, collecting financial transaction fees with DATT will inevitably increase the intrinsic value of token.

（3） Value Growth

(1) And (2) is a process of incremental repetition over time, that is to say, with the passage of time, more and more Internet applications are connected to DATT, and more and more internet values are injected into DATT, and the demand for token

by Dei asset trading cycle is also increasing. Driven by these two functions, users hold DATT in advance will make users very surprised by the value-added, truly realize the continuous growth of value, and let all users who hold token share the benefits of project growth.

6 DATT Development Plan



7 DATT Open source community

DATT is initiated by the DATT foundation, and the first members are composed of future star mine pool, NULS community and the life knowledge application of

‘Dongde’(https://www.idongde.com/). The DATT foundation is a non-profit organization. The foundation will build a value network between Internet applications, and strive to build a public operation platform for Internet application innovation and IP protection blockchain with the sustainable construction and development of DATT ecology through Lao ecology.