THE NEXT GENERATION INTERNET OF THINGS EXPLORER PLATFORM BASED ON BLOCKCHAIN

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ABSTRACT

IoTE® is an Internet of Things Explorer for new decentralized, immutable, and secure technology for ledger or book account records. IoTE guarantees the authenticity of various transactions through personalized data that is used to confirm access rights in the interconnected Explorer of new technology. This is designed to enable material property payment and account settlement, point-to point the investment value, and to subvert the traditional way of value transmission in the investment and financing field.

IoTE will be based on IPFS data storage protocol, and will use the DAG data structure in order to greatly improve the transaction speed, guarantee data security and fully meet the data interaction in the interconnected Explorer of new technology. IoTE uses CryptoVantaa's initial algorithm which is CPU friendly, GPU resistant and ASIC resistant. In reality, the new ASIC devices are designed to have unreasonably higher hashing rates, so, the fairness of improving gains is significantly reduced. As the value of encrypted currency increases over time, more attention was paid to the design of special equipment for mining purposes with greater emphasis on maintaining decentralization of PoW mining power and prevent IoTE from being manipulated by a few participants. As such, IoTE designers and developers precisely designed CryptoVantaa algorithm from scratch to achieve this goal. loTE uses the mixture of POW+ iPOS' common methods to keep a miner's account, making the transactions data directly or anonymously linked, which greatly guarantees data privacy and security. It does not only ensure the right of decentralized data, but also ensures efficiency of operations.

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1. PROJECT BACKGROUND

Since the emergence of the internet's development in the 1970s, followed by the birth of the TCP/IP, the HTTP protocol and the open source there has been rapid developments in the following decades. From the creation of web browsers to the development of more advanced options like Microsoft's internet explorer and latter technologies, the emergence of decentralized internet was inevitable. Then came the birth of Bitcoin in 2008 based on blockchain technology. This revolutionary technology developed rapidly, and could launch Blockchain Explorer helping people access decentralized internet. This has subsequently been followed by the development of blockchains, large data, artificial intelligence, and IoT, which forms the foundation upon which we intend to launch the IoT Explorer.

The 2014 IPFS protocol (Interstellar Planetary File System) was created and maintained as an open-source project. It is a globally oriented, point-to-point file system designed as a complement or to even replace the current hypertext transmission protocol (HTTP), which connects all computing devices within the same file system. By using addresses based on their content instead of domain-based addresses; and instead of verifying the private and sender' s identity, we will simply now need the authentication, in order to make the web faster, safer, stronger, and more persistent. The IoTE Explorer is dedicated to the domain of the interconnections in between different sources of materials of new advanced technology. It is truly centered by super books that will not only secure data based on a futuristic IPFS data storage protocol, but will also use the DAG data structure to increase speed and raise the TPS.

The Internet of Things is a huge market. According to Gartner, a well-known research Institute, the number of global "intelligent connections" will reach 100 billion by 2020, and the market scale will reach more than 300 billion of US dollars. This is expected to rise and reach trillions of US dollars in the future. It is also expected that 99% of the objects will be connected to the Internet in the near future creating a robust IoT network. IoTE undertakes data security, privacy protection, and transfer of value in the field of the Internet of things Explorer, and records all kinds of data in this field making it immensely relevant for such a robust network. IoTE, will use a diverse range of technologies such as BlockChains, IPFS, DAG and IoT to bring incredible value and benefits to our future, when we will be living in a smart city where everything interacts. The goal is to achieve payment and devices' settlement, value investment, and do better than the traditional value of the transmission mode in the field of investment and financing.

2. DIFFICULTIES OF INTERCONNECTED EXPLORER INDUSTRY

IoTE has a special concept which is "all objects/devices are connected". Currently, almost all the objects, tools, machines, and equipment that we use in our daily life are not connected to the internet. Looking into the future these items will be transformed to become the final tools for the creation of the 'intelligent connections' in our new technology, IoTE. Given that many of these items will be connected to the Internet, it means that almost all items will have their own communication, perception and networking capabilities. Then, by collecting an extensive data, (including the transaction data which is the most direct use of data; just like a set of super books) the future society will evolve within micro and major changes in our daily lifestyle.

However, this will not be smooth sailing. The IoTE concept has been put forward, and has now been developing for over 20 years. During this time it has exposed many difficulties such as device's security, personal privacy, rigid design, the need of collaboration with multi-agents and communication compatibility.

2.1 SAFETY EQUIPMENT

Mirai's Botnets of Internet of things Explorer technology was rated as the top 10 breakthroughs in 2017 by the Massachusetts Science and Technology Review. According to the global statistics, Mirai's botnets have connected and hijacked more than 2 million items on the internet of things platforms such as cameras. They also launched a DoS attack, which paralyzed Dyn, the U.S. domain name resolution service provider crippling many popular websites, such as Twitter and PayPal, which were not accessible at that time. Subsequently, the Internet of Things and its devices were enslaved showing the vulnerability of the technology.

2.2 PERSONAL PRIVACY

The internet of things technology is also faced by the risk of personal privacy infringement. Due to the centralized nature of the technology's framework, it has become exposed to potential attacks and leakages of personal private information that is a big issue in the modern internet era. For instance, recently, according to the famous Chinese online news website: Renmin.com; we found out that 266 cameras in Chengdu, China, were broadcasted live on the Internet thus compromising their user's private information.

Stephen Hawking, a famous physicist, opines that Artificial Intelligence (AI) may not only be the biggest event and creation in human history, but also the last one. What he meant was that

AI could lead to the end of human beings. Hawking believes that AI can solve most of the world's problems, including human diseases, social problems and so on. AI has this potential. If AI is properly used, it will have an infinite potential. Although it can pose as a threat to humans if proper use is not considered. Once AI is out of control, human beings are restricted to evolution and will not be able to compete with it.

2.3 RIGID FRAMEWORK

With the continuous evolution of low-power wide-area technology (LPWA), it can be predicted that the internet of things Explorer equipment will grow in the future, and the cost of centralized services will be very expensive.

2.4 COLLABORATION OF MULTIPLE AGENTS

Nowadays, many Internet of Things Explorers or Internet of Things systems (IOTs) are self-organizing networks within operators and enterprises with collaborations of multi-agents. When it comes to collaboration across multiple operators and peers, the trust needs to be assured.

2.5 COMMUNICATION COMPATIBILITY

There is a lack of a global and unified language to the concept of the Internet of Things Explorer platforms. This can easily interfere with the communication between multiple IOT devices, and result in multiple competitive standards and platforms.

3. HOW IOTE COPES WITH INTERNET OF THINGS EXPLORER PROBLEMS

3.1 THE REAL DIFFICULTIES IN THE INTERNET OF THINGS EXPLORER INDUSTRY

The Internet of Things Explorer business structure is as shown in Figure 1. Investors provide funds for a company that manufactures products or services through production tools and provides products and services to users through sales channels to recover investment or profit.

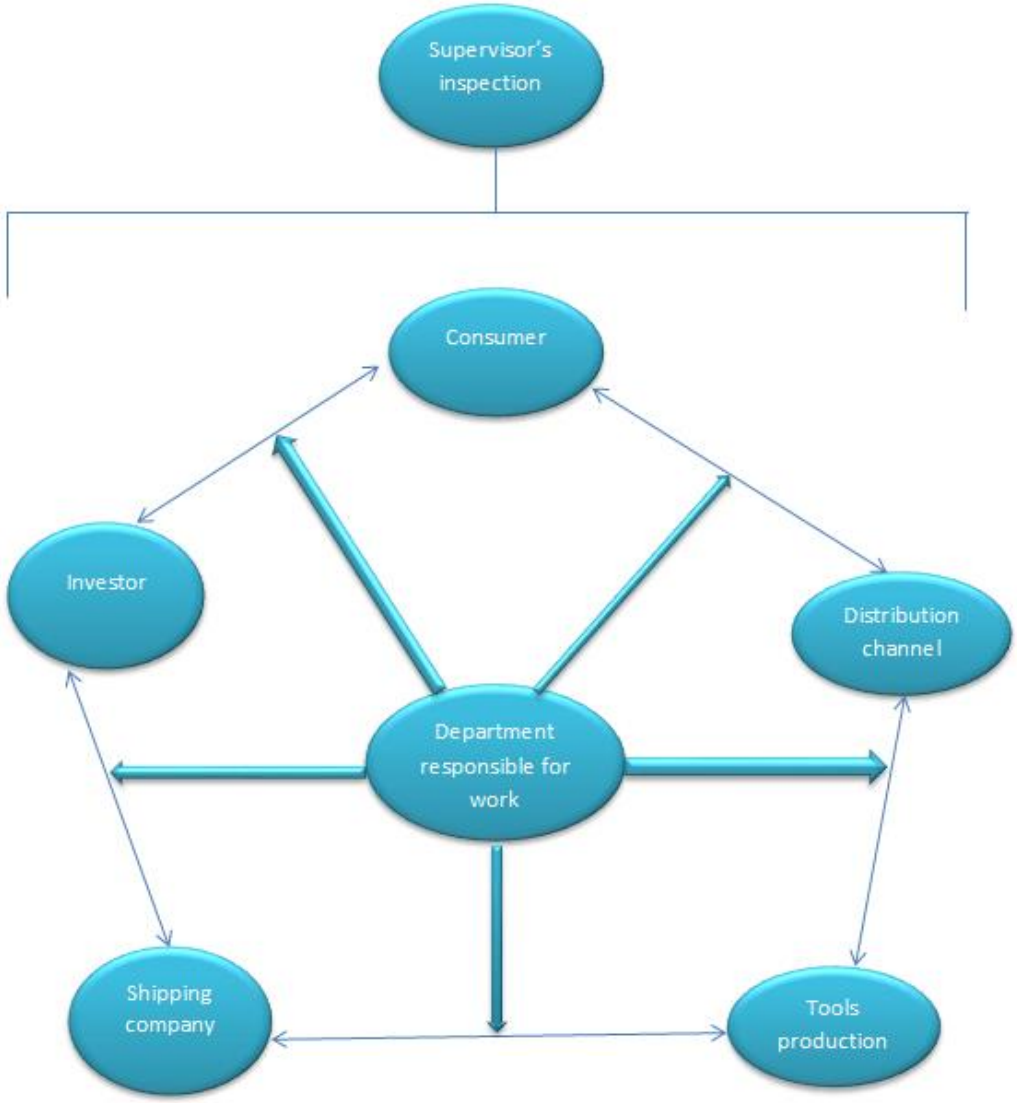

Figure 1：Business Structure

"Investor" can be an individual or institution, etc.

"Shipping Company" refers to individuals, companies, listed companies and so on; **"Tools Production"** refers to the production equipment, place of services, creator, personal services, transportations, etc.

"Distribution Channel" refers to the physical stores, online shopping malls, agents and distributors, micro-business circles of friends and so on;

"Consumer" refers to the vast number of consumers, and to a certain extent can also be consumers and investors, two in one.

Users should pay for the products or services while distribution channels make profits through sales. Tools productions make profits by manufacturing products and services, and so on. These processes seem very reasonable. The competent state authorities control all links, and supervision and inspection departments may conduct spot checks and supervision at any time. For example, the state regulates the development of enterprises and protects the interests of all parties through various policies such as: tax, stock system, IPO and listing. The financial statements of some listed companies or large companies are audited by specialized auditing institutions and supervised by independent directors and supervisors. In this regard, they are trustworthy.

However, these investors, operating companies, production tools, and sales channels have their own centralized transaction data and financial statements. This makes it easy to get falsified statements and subsequently falsified data. Every year, a lot of companies' financial fraud causes huge losses to investors. Fake and inferior products, especially food and drugs, cause great harm to human beings and social impact. At the same time, there are a lot of taxes on these kinds of incidents.

These problems occur mainly due to people's participation as there are a lot of subjective operations in this field. Generally "people may make mistakes", and as such cannot be relied upon to rectify these mistakes as it may still generate huge costs and increase a lot of manpower and material resources. This is where IoTE comes in.

3.2 BLOCKCHAIN+ INTERNET OF THINGS EXPLORER BEING A NEW BUSINESS FOR THE FUTURE

With time, the development of BlockChain technology is becoming more advanced with new solutions created across multiple platforms. Similarly, there are substantial breakthroughs in the IoT front which makes the combination of these two new technologies the foundation for bringing transparency, safety, speed, security, and credibility to modern business. The goal of super account books cannot be realized with Blockchain alone, but with the incorporation of Internet of things Explorer. IoTE collects and submits all kinds of transaction data of Internet of Things devices. The equipment data is then directly or anonymously sent to the upper chain for confirmation to investors, shipping companies, tools production, distribution channels, consumers, and competent departments as shown in Figure 2. The supervisory and auditing departments form the super node of IoTE set of super-books, and allow a large number of scattered nodes and miners to participate in this accounting. Through the common view of this mechanism and algorithm of POW+iPOS+CryptoVantaa, Super-books can then not be

tampered, nor formed, which solves the problem of centralized accounts in modern commercial structure.

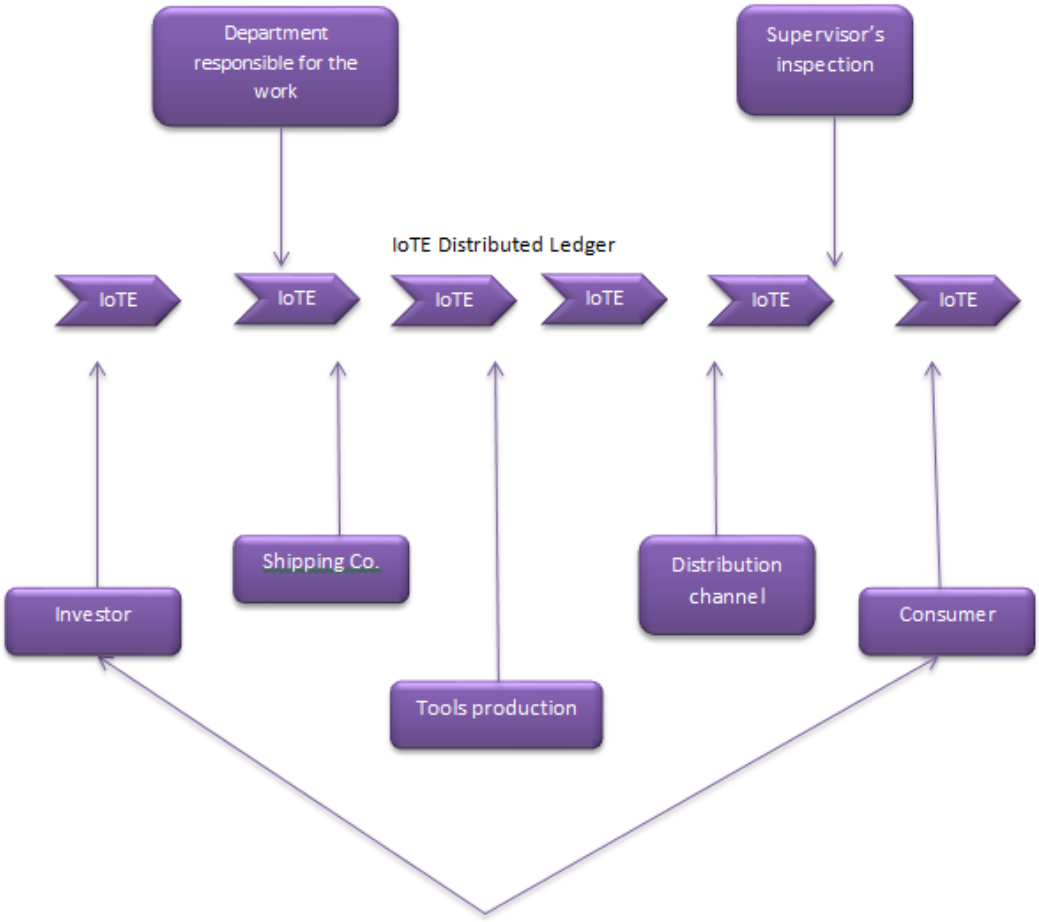

Figure 2：IoTE Distributed Ledger

IoTE will restructure this new business system structure as seen in Figure 3, in order to achieve a higher degree of integration between investors and consumers. Investors or consumers will publish their needs on the IoTE platform. The intelligent matching platform can meet the needs of production tools. For physical products, Blockchain logistics will be used to better track the origin of products. National authorities or audit departments will share books and keep intelligent inspection. IoTE can provide an open, transparent, and immutable super account book for the country and investors, hence saving a lot of credit costs for SMEs, whilst make business activities more honest, and secure. By doing this, SMEs credits, financing, transactional operations and taxes problems in almost all countries can be solved by IoTE.

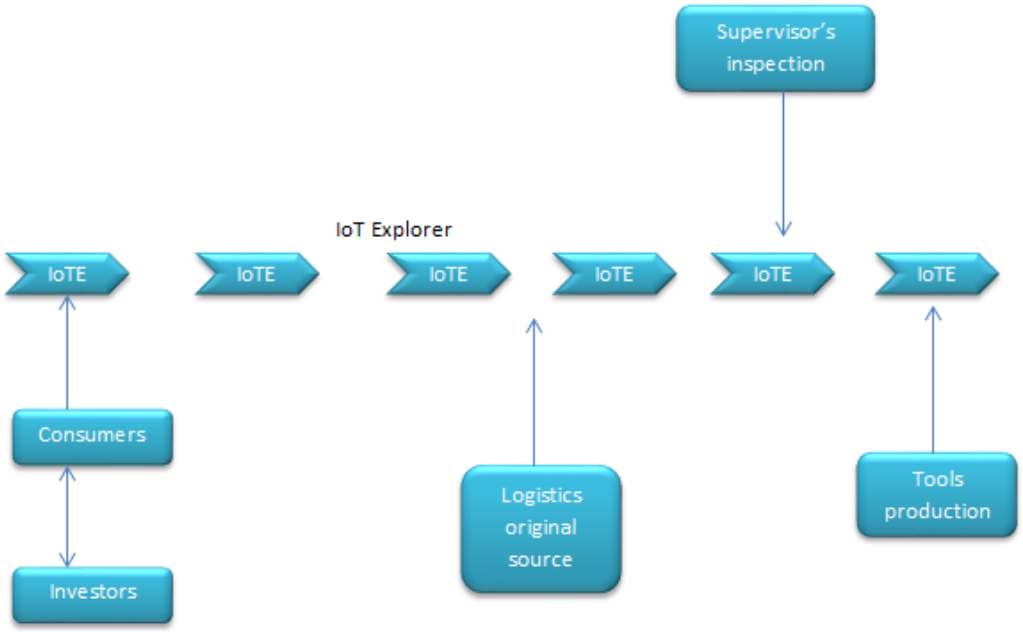

Figure 3 ： IoTE's New Business Structure

IoTE will set up a value sharing platform as seen in Figure 4, which will be initiated by investors or consumers, creating many other similar needs, and forming a strong demand source to be published on an open and transparent IoTE platform. It is intelligently distributed to a large number of tools productions on the platform to fulfil the needs of the different parties. Consumers, investors and suppliers will be highly transparent so as to achieve the on-demand production and on-demand value sharing (such as investing, creating tools production on demand, etc.).

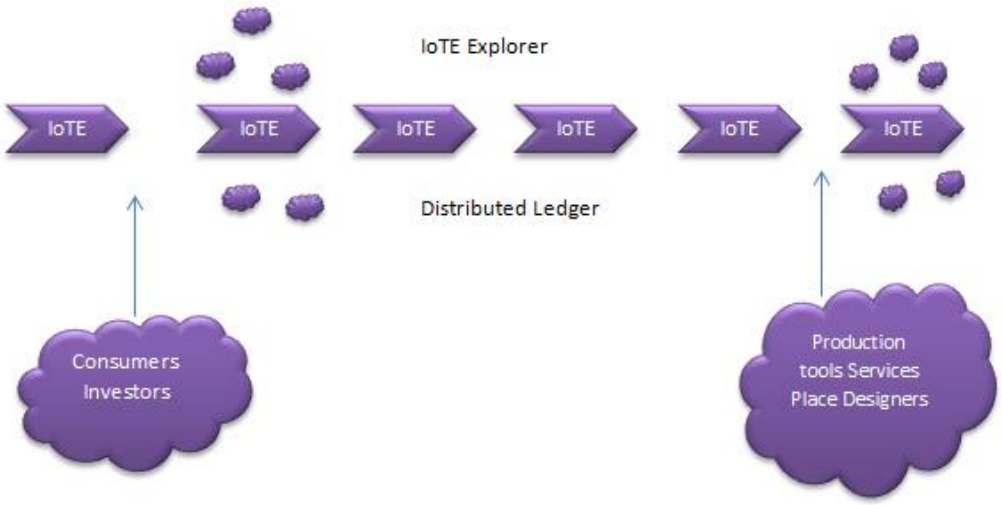

Figure 4 ： IoTE Value Sharing Platform

3.3 BLOCKCHAIN + INTERCONNECTED EXPLORERS CAN(S) AND CAN'T(S)

It is difficult to solve some problems linked to rigid design components, communication compatibility and collaboration of multi-agents, value sharing platform for IoTE. Also, since it involves many institutions and units it is difficult for a company to solve all of these matters and it may take a long time. However, there are many big companies like IBM, Google, Microsoft, Qualcomm, and Alibaba that are already working to solve these issues.

Distributed peer-to-peer structure of blockchains coupled with open and transparent algorithms can build mutual trust at low costs, break the shackles of information islands, and promote the lateral flow of information and multiparty cooperation. Blockchains do not need to solve the protocol and network of Internet of Things devices themselves. They only need to write key data into blockchains by consensus, which is difficult to compile and trace back to the origin relying on chain structure. New business structures such as peer-to-peer value investment, on-demand layout of production tools, and personalized order production services are realized.

The decentralized structure of blockchain effectively guarantees the security of Internet of Things devices. With the increasing number of nodes, decentralized control makes hacker attack costs very high. On the other hand, IPFS is used to store distributed data making data security extremely high.

4. IOTE'S DESIGN

4.1 IOTE'S DESIGNING CONCEPT DESCRIPTION

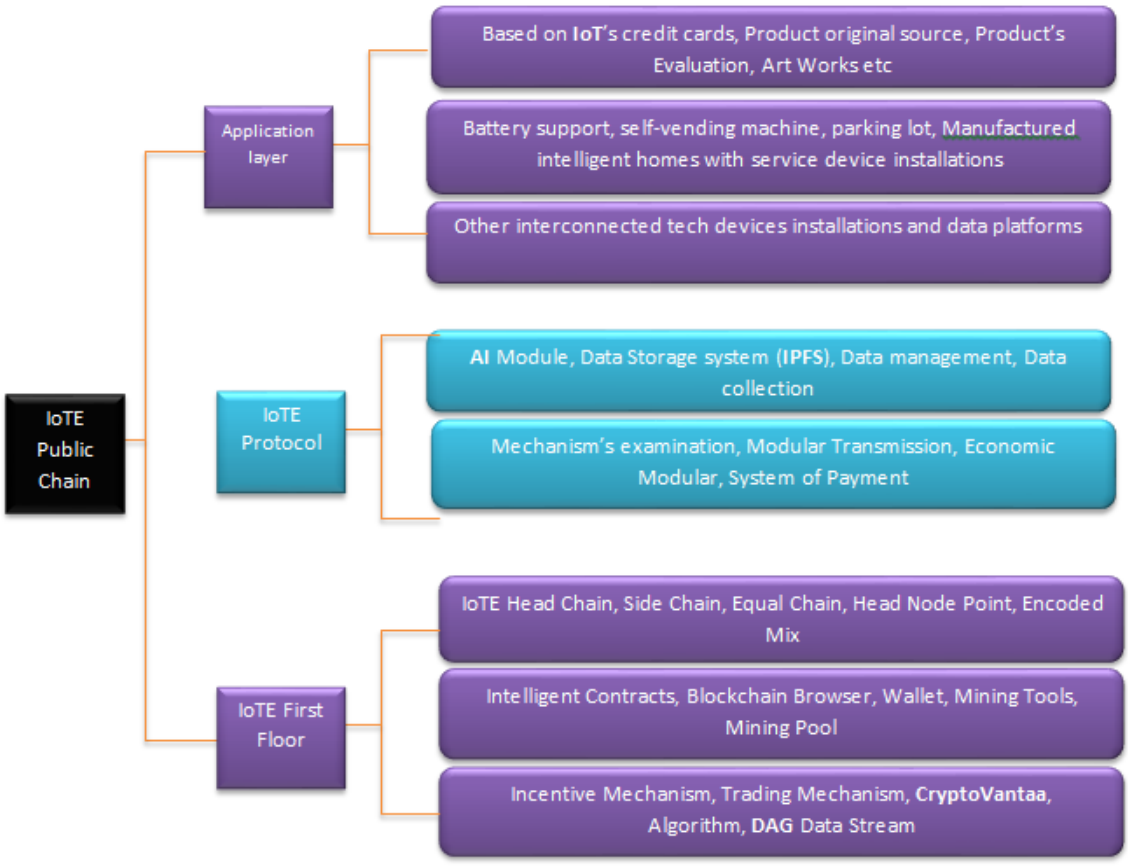

Figure 5 : IoTE Structural Framework

IoTE adopts a modelled design as seen in Figure 5. The public chain of IoTE mainly includes the bottom layer, protocol layer, and application layer. At the bottom, the main chain, side chain, and parallel chains are adopted to effectively integrate intelligent contracts, wallet, main node, incentive trading mechanism. CryptoVantaa algorithm and DAG data stream as well as the protocol layer use IPFS protocol. AI intelligent module, data acquisition and management protocol form the application layer. All of these protocols can bring technical works such as credit card with POS machine, product's traceability, evaluation, photography

and music to the platform. On Figure 6, there are examples of such devices that can be used such as some sensory games, charging piles, parking lots, unmanned vending machines, smart homes and even some transactions platforms data. The above functions will be completed in different stages.

Through the IoTE Internet of Things Explorer DAPP, the large transaction data of the Internet of Things or Internet of things Explorer can be accessed and released at an immeasurable speed. When its transmission value gets to be established, the powerful and unalterable super account book can be functional, our investors and consumers can then keep their interests (of investing, investments, transactions, etc.) without worrying.

Figure 6：DAPP Application Framework

4.2 IOTE'S USE OF A LARGE RANGE OF PROTOCOLS

IoTE will use a large number of relatively mature protocols, such as IPFS star file system; and often will use the head chain, measurement chain and parallel chain's structures in order to ensure speedy DAPP application data interaction. In the short-term, future DAG data stream structure will be used to greatly improve the speed of transactions and fully meet with the user's expectations for high TPS. At the same time, the common view of the mechanism and algorithm of POW+iPOS+CryptoVantaa are adopted to make CPU a friendly and effective system to reduce the possibility of using GPUs and ASICs in mining.

4.3 AI MODULE

IoTE mainly solves the problem of information collection and perception whereas, block chain mainly solves the problem of trustworthy information transmissions, and artificial intelligence mainly solves the problem of intelligent processing of information as seen in Figure 7. AI is a science and engineering that enables intelligent machines and computer programs to learn and solve problems in a way that usually requires human intelligence (including natural language, translation, visual perceptions, pattern recognitions, decision-making, and so on.). Efficient data sharing among nodes can be an important and needful feature of distributed database. Artificial intelligence needs large data, especially data sharing. The more data is available for analysis, the more accurate the prediction will be, including the machine's evaluation, capacity and quality. Also, the more reliable the algorithms that will also be generated!

Figure 7 : AI Artificial Intelligence Module

4.4 BASED ON IPFS

IPFS (Inter Planetary File System) is a distributed hypermedia distribution protocol as shown in Figure 8. Large files are cut into small chunks and can be downloaded from multiple servers at the same time. IPFS network is a fixed, fine-grained, distributed network, which can also meet and fulfil the requirements of the network's content distribution.

Figure 8：IPFS Storage Protocol

4.5 BASED ON DAG'S GRAPH AND TRANSACTION DATA MODEL

Directed Acyclic Graph (DAG) is a data structure just like arrays, permutations and block chains as shown in Figure 9. But unlike blockchains, DAG changed the longest chain consensus to the heaviest chain consensus. In traditional blockchains, the newly released blocks will be added to the original longest chain, and all nodes will consider the longest chain as the criterion, and then spread indefinitely. In DAG, each new unit is added not only to one block in the long chain, but to all of the previous blocks. If we assume that when you publish a new transaction, there are two valid blocks in front of you, then your block will actively link to the first two at the same time, each new unit in DAG verifies and confirms its parent unit, and from a parent unit to another parent unit, it slowly reaches the Genesis unit, and include the hash of its parent unit in its own unit. As time goes on, the block chains of all transactions are interconnected to form a graph structure. If you want to change the data, it is not only a matter of several blocks, but also the data change of the whole block diagram. Compared with DAG, this mode is more complex and difficult to change. The following figure is a restructured DAG frame:

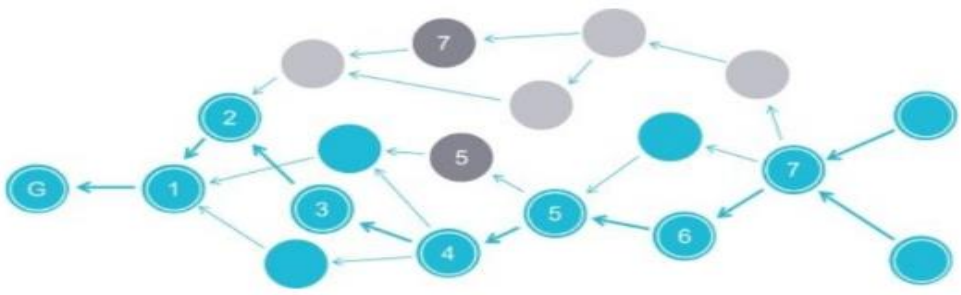

Figure 9：DAG Data flow

DAG is not a blockchain technology in theory, but if the block chain uses DAG data stream structure, TPS can be greatly improved. At present, IOTA's TPS can reach 600-900, which exceeds PayPal's trading capacity. As more people apply, the efficiency will be higher. ByteBall, XDAG, SPECTRE and shell chain are all optimized on DAG structure, and the effect is very good. **The TPS of shell chain has reached 100,000 times.**

5. IOTE'S SPECIALTY

5.1 POW+IPOS'S COMMON ALGORITHM

IoTE uses a combination of PoW (Proof of Work) and iPoS (IoT Proof of Service) as consensus algorithm. PoW uses CPU mining algorithm. Through the original CryptoVantaa algorithm, the results of each round of hash calculation are submitted to the next round of block chain calculation. The GPU operation's efficiency is lower than the CPU's, while we will be reducing the probability of ASIC used by professional miners.

5.2 IMPLEMENTATION OF POW'S COMMON VIEW IN CPU'S MINING ACHIEVEMENTS

As we all know, Bitcoin is the first encrypted digital currency to attract a large number of users. Since its establishment in 2009, Bitcoin has adopted CPU mining, then GPU mining, and then ASIC professional mining machine. At first, a server used to mine 3-5 Bitcoins a day. But the after several years of development, the computing power has increased dramatically. However, currently even if you mine with a CPU for hundreds of years, you will not be able to mine even a single Bitcoin. Even GPU and ASIC professional miners need to consume a lot of power, resulting in a lot of waste. So IoTE's POW uses CPU to mine because in reality, there are a lot of CPU resources available. Users can leverage their surplus CPU resource to mine on the IoTE network thus benefiting from the idle capacity. This is well utilized with IPFS/filecoin where a large number of IPFS miners have surplus CPU resources. CPU's POW mining consensus participation is simple and is energy saving.

5.3 IMPLEMENTATION OF IPOS IN HOST NODE NETWORK

The IoTE host-node or full node wallet is a server running on a P2P network, allowing peers to use it to receive updates about events on the network. These nodes need a lot of traffic, storage space and other computing resources, resulting in significant costs increases, which is not suitable for the healthy development of P2P network. The introduction of IoTE into the primary node network can effectively avoid the reduction of the primary node capacity effectively accelerating the speed of propagation and strong privacy encryption. Miners

running the primary node need to invest in a fixed IP, sufficient bandwidth, and storage space, while each primary node locks 150,000 IoTE communications to ensure the effective operation of the P2P network. The primary node can get 35% of the block‘s total reward of IoTE and the main node will not be lost nor reduced, preventing price fluctuation of IoTE passport.

5.4 ANONYMOUS AND ADVANCED PRIVACY SAFETY

Based on the two-thirds network, IoTE can provide innovative functions in some non-trustable and decentralized way. The function of primary node service can be used to drive anonymous payment and instant payment system.

It is well known that Bitcoin provides hidden and pseudo- transactions in public ledgers, but there is a one-to-one relationship between the sender and the receiver. This provides a permanent record of all transactions occurring on the network. Through the Blockchain Explorer, we can inquire all directions of the passport in detail. Bitcoin has special advantages and respect following this theory, but it has also a low level of privacy protection, which is not conducive to the application’s developments in the field of the Internet of Things (IoT) or Internet of things Explorer (IDB).

The privacy function of IoTE is an optional strong anonymous encryption asset. IoTE programs start random ports. All network transport layers use a secure elliptic curve cryptographic suite. Mixed transmission makes the user's privacy impossible to find and ensures a high degree of anonymity in transactions. Using a large number of primary node P2P network, it has tamper-proof instant transaction, which realizes the function of instant transfer, and can be completed within seconds. It has the functions of asset attributes, anonymous protection, and instant transaction.

IoTE really protects your data privacy by mixing up details of the sources of funding. All the assets in a wallet are made up of different "inputs", and can be imagined as discrete currencies. Anonymous payment uses an innovative transmission method that mixes inputs with other IoTE’s without leaving assets in the wallet. In this way, the user always keeps control of their assets. IoTE implements a privacy protection strategy based on hybrid anonymity, which is a transaction compression method, and improves privacy protection by discarding useless information. The principle is very simple and effective, mixing several unrelated transactions together, mixing up the input and output of the transaction, making it difficult to trace the origin of the input and output.

5.5 DESIGN AGAINST QUANTUM ATTACKS

Many other encrypted assets are usually not quantum-resistant using ECDS algorithms. Quantum computers will become more sophisticated and they are likely to dominate the computing world in the near future. Even if researchers, governments, businessmen, or the public are studying it, we will eventually see that quantum computing becomes possible. This is an incredible new technology that can greatly improve our lives. However, there are many problems that we need to focus on in order to contribute to the development of this technology. One problem is that contemporary cryptography can be easily cracked by future quantum computers. For many encrypted coins, this means that the block chain has been broken.

6. IOTE'S COMMUNICATION MECHANISM

IoTE's Token is the digital pass of IoTE Internet of Things, with a total of 2 billion of digital pass, but will never be issued. IoTE Token will be used for asset publishing, intelligent contract, direct or strongly anonymous data submission and payment on IoTE network. The token will also be used to create tamper-free super accounts in the field of the Internet of Things. IoTE adopts the mixed mining method of PoW + iPoS to design the master node system. 70% of all the digital passes are allocated to POW billing miners and iPoS nodes. Miners are rewarded for maintaining the safety of block chains and forming consensus. Primary node holders will be encouraged to receive additional incentives for users to authenticate transactions, store data, and provide multiple services.

6.1 POW MINER'S ACCOUNTS AND OPERATING MODE OF IPOS NODE

POW book keepers' block rewards are halved every six months in the first six stages, while the number of blocks remains constant in the seventh stage. Everyone can participate in POW miners bookkeeping and get block rewards. On the other hand, more professional iPoS miners are encouraged to participate in providing services and sharing rewards to better ensure the stability of the P2P network.

Compared to the single network transmission of Bitcoin, IoTE has two-thirds of the network's mechanism. The network's second level is supported by the main node, so it has asset privacy, instant sending, decentralized management proposal system. Because the second level is very important, the primary node will get a part of the block reward. Specifically, the division of block awards is as follows: 50% to miners, 35% to master or main node holders, and the remaining 15% to decentralized management proposal system.

6.2 DAPP'S ECOLOGICAL CONSTRUCTION

DAPP's ecological construction is 8%, release through 3years, according to DAPP flow linear release. It is an attempt to create the internet of things Explorer field through the ecological construction because it can't be tampered with super accounts. Although, if we input the field of applications in the ecosystem of the Internet of Things will, it will give corresponding results.

6.3 PROTOCOL LABORATORY

Protocol Laboratory: 8%, 3 years, linear release. The development team has completed the development of basic chains such as algorithm, consensus and common mechanism, mining software, wallet, of IoTE Internet Explorer Common Chain, including chains and protocols not limited to DAG data stream, measurement chain and parallel to ensure the normal operation of IoTE network.

6.4 IOTE'S FOUNDATION

IoTE Foundation is a non-profit organization with 5% of the total number of IoTE Tokens and donations from individuals or businesses, government grants and unclaimed tokens. Research and development is the basic protocol layer, and they constantly invent technologies, new things, new economy and other ecosystems. The expansion of the ready-to-use software production promotes new technologies and practical cases to ensure the success of IoTE.

6.5 COMMUNITY OF TECHNOLOGY DEVELOPMENT

Community of Technology Development: 4%, 3 years, linear release. Block chains are open. We welcome technological developers working in the field of the Internet of Things to participate in the joint development of IoTE Internet of Things Explorers. After reviewing the code and evaluating the quality of tasks developed by developers, the IoTE technology development community will give corresponding rewards to encourage global developers to develop jointly.

6.6 COMMUNITY'S PROMOTION

Community's Promotion: 4%, 3 years, linear release. Any good product cannot be separated from good promotion and publicity. In the early stage of IoTE, an open autonomous promotion community was established. All enthusiasts interested in IoTE's ecology were welcomed to participate. The community members voted to award appropriately passes to community contributors. After preliminary completion of the IoTE ecological construction, community members can also promote the application of DAPP in IoTE‘s ecology to obtain returns.

6.7 ASSISTANCE OF FUNDS FOR EDUCATION

Educational Assistance Fund: 1%. IoTE is committed to creating an untouchable super account book in the field of Internet of Things with internet of things, but we can't forget our social responsibility. From the beginning, IoTE has put out 1% of the permits for educational assistance for poor children and left-behind children on a worldwide base. It uses Block Chain Explorer to track the flow of funds. In the future, it will cooperate with world-renowned educational assistance charities, and at the same time, it will also be on IoTE. DAPP construction is an important part of it. Over the past 100 years, education was fundamental, and still is. In the spirit of "teaching people to understand how to fish is better than teaching people to take a fish", we devote ourselves to the education of poor and orphaned children in the world. At the same time, we also welcome charitable donors from all over the world. You can donate anonymously.

The donations address is ERUovSfEmAQJLAAdJaKp2GyGhKvCGQP9LQ

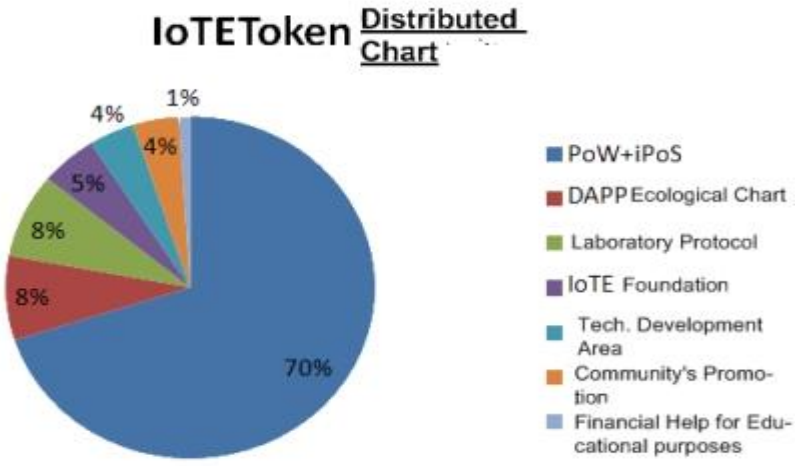

Figure 10: IoTE Token distribution chart

7. HOW TO GET LOTE'S TOKEN

7.1 PROVIDING CPU ARITHMETIC MINING

The simplest and most common mining equipment is the universal CPU on every computer. Mining refers to providing solutions when encrypting problems arise and thus maintaining block security on block chains. Miners create new money in the process of mining and are

rewarded by blocks. So miners need to solve the algorithm problems to get block rewards. Mining requires a series of hardware equipment. IoTE uses CryptoVantaa algorithm, which is CPU-friendly and can effectively reduce the possibility of adding GPU and ASIC.

The profitability of mining activities depends on the power of mining equipment used by miners, the more the difficulty of the current algorithm of the network, the more the expenditure of the hardware equipment and electricity charges.

7.2 PARTICIPATION IN IPOS'S FABRICATION PROJECT

The primary node system provides the key services for the network. Miners would be the first level of the network, providing users the sending and receiving services of funds and preventing the occurrence of double-flower payment. The main node is the second level of the network, it provides support services. The main node does not participate in the mining activities, so the mining equipment cannot act as the main node. We use a specific need to provide fixed IP, computing, and storage server resources to participate in the construction of the main node of the iPoS can get IE incentives. To run the iPoS node, one must lock 150,000 IEs to provide services for customers on the network, and receive regular payments as a reward from the block. The locked IE is always under the owner's full control and can be freely controlled by the owner. Once the locked IE is transferred or paid, the corresponding primary node will be offline and will stop receiving block chain rewards. Like miners, the iPoS master node comes from 35% of the block reward. The total number of incentives is 24.5% of the total number of IoTE licenses' issued, total of 490 million.

The Income estimating formula, in which: N is the number of primary nodes of iPoS, T is the total number of primary nodes, R is the current block reward, and B is the average number of days. A is the average block reward, usually fixed at 35%.

7.3 PROVIDING SCENARIOS OF APPLICATIONS FOR THE IOTE

IE incentives can be obtained by providing application scenarios in the field of Internet of Things to participate in DAPP ecological construction. The total amount of incentives is 10% of the total amount of IoTE issuance, with a total of 200 million.

7.4 PARTICIPATING IN IOTE'S TECHNOLOGY DEVELOPMENT

The incentives can be obtained by participating in the development of IoTE‘s technology development. The total amount of incentives is 4% of the total number of IoTE licenses' issued, with a total of 80 million.

8. IOTE'S ECONOMIC MODEL

IoTE adopts a classical notarization economic model, that is, Vitalik Buterin, the founder of Ethereum, who carries on the analysis and demonstrates the IE model, according to Fisher equation optimized by block chain economics.

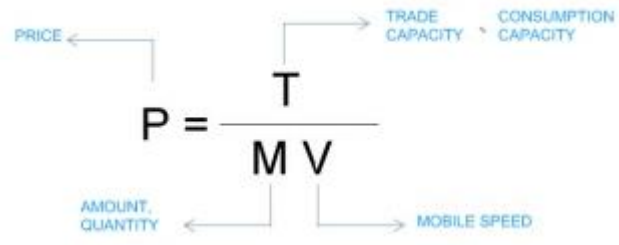

Figure 11: IE model

T: Total trading volume, total consumption. The higher the T value is, the higher the price P is. IoT's ecological construction is to expand the use of IE scenarios and stimulate the use of demand. Massive landing applications are the ultimate driving force to promote IE consumption and circulation.

M: Number of passes. If the number of circulation permits decreases, the price then increases.

V: Pass flow rate. The lower the flow rate, the higher the price.

9. ROADMAP

(1) IoTE project planning started. Research and Analysis of POW Algorithm

(2) IoTE program framework design. CryptoVantaa algorithm development

(3) Desktop Wallet (Win32/64/Linux). WhitePaper V1.0

(3) IoTE's Design Framework for user's accessibility in cryptocurrency. Listing on exchanges

(4) Super Masternode plan. WhitePaper V2.0

(5) Desktop Wallet (Mac). P2P Network Integration

(6) Proposal Tracking Platform. First Voting Cycle Begins

(7) Mobile Wallet. Store data based on IPFS

(8) Merchant Cash Integration. DAG data structure layer fusion

REFERENCES

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Disclaimer

As it is a new industry, block chain has very high investment risk and technology risk, and belongs to high-risk industry. Following the product's description of this new technology, the white paper expounds the layout and Prospect of this technology and industry. The technological level and regulatory environment are constantly changing. It is not recommended for people with economical risks to invest.

Version statement

When there are contradictions between different versions, the latest version shall prevail.

Right of interpretation

The IoTE Core developers reserve the right of final interpretation to this document.