



— Social Ecommerce Chain

Block chain agreement in the
next generation of e-commerce
based on social trust

Blockchain agreement in the next generation of e-commerce based on social trust

NOTICE

NOTHING IN THIS WHITEPAPER CONSTITUTES LEGAL, FINANCIAL, BUSINESS OR TAX ADVICE AND YOU SHOULD CONSULT YOUR OWN LEGAL, FINANCIAL, TAX OR OTHER PROFESSIONAL ADVISOR(S) BEFORE ENGAGING IN ANY ACTIVITY IN CONNECTION HEREWITH. NEITHER SOCIAL ECOMMERCE CHAIN TECHNOLOGY PTE. LTD. (THE FOUNDATION), ANY OF THE PROJECT TEAM MEMBERS WHO HAVE WORKED ON THE SEC NETWORK (AS DEFINED HEREIN) OR PROJECT TO DEVELOP THE SEC NETWORK IN ANY WAY WHATSOEVER (THE SEC TEAM), ANY DISTRIBUTOR/VENDOR OF SEC TOKEN (THE DISTRIBUTOR), NOR ANY SERVICE PROVIDER SHALL BE LIABLE FOR ANY KIND OF DIRECT OR INDIRECT DAMAGE OR LOSS WHATSOEVER WHICH YOU MAY SUFFER IN CONNECTION WITH ACCESSING THIS WHITEPAPER, THE WEBSITE AT [HTTPS://SECBLOCK.IO/](https://secblock.io/) (THE WEBSITE) OR ANY OTHER WEBSITES OR MATERIALS PUBLISHED BY THE FOUNDATION.

This Whitepaper is intended for general informational purposes only and does not constitute a prospectus, an offer document, an offer of securities, a solicitation for investment, or any offer to sell any product, item or asset (whether digital or otherwise). The information herein below may not be exhaustive and does not imply any elements of a contractual relationship. There is no assurance as to the accuracy or completeness of such information and no representation, warranty or undertaking is or purported to be provided as to the accuracy or completeness of such information. Where this Whitepaper includes information that has been obtained from third party sources, the Foundation and/or the SEC team have not independently verified the accuracy or completion of such information. Further, you acknowledge that circumstances may change and that this Whitepaper may become outdated as a result; and the Foundation is under no obligation to update or correct this document in connection therewith.

This Whitepaper does not constitute any offer by the Foundation, the Distributor or the SEC team to sell any SEC token (as defined herein) nor shall it or any part of it nor the fact of its presentation form the basis of, or be relied upon in connection with, any contract or investment decision. Nothing contained in this Whitepaper is or may be relied upon as a promise, representation or undertaking as to the future performance of the SEC Network. The agreement between the Distributor and you, in relation to any sale and purchase of SEC token is to be governed by only the separate terms and conditions of such agreement.

By accessing this Whitepaper or any part thereof, you represent and warrant to the Foundation, its affiliates, and the SEC team as follows:

- (a) in any decision to purchase any SEC token, you have not relied on any statement set out in this Whitepaper;
- (b) you will and shall at your own expense ensure compliance with all laws, regulatory requirements and restrictions applicable to you (as the case may be);
- (c) you acknowledge, understand and agree that SEC token may have no value, there is no guarantee or representation of value or liquidity for SEC token, and SEC token is not for speculative investment;
- (d) none of the Foundation, its affiliates, and/or the SEC team members shall be responsible for or liable for the value of SEC token, the transferability and/or liquidity of SEC token and/or the availability of any market for SEC token through third parties or otherwise; and
- (e) you acknowledge, understand and agree that you are not eligible to purchase any SEC token if you are a citizen, national, resident (tax

or otherwise), domiciliary and/or green card holder of a geographic area or country (i) where it is likely that the sale of SEC token would be construed as the sale of a security (howsoever named) or investment product and/or (ii) in which access to or participation in the SEC token sale or the SEC Network is prohibited by applicable law, decree, regulation, treaty, or administrative act, and/or (including without limitation the United States of America, Canada, New Zealand, People's Republic of China and the Republic of Korea).

The Foundation, the Distributor and the SEC team do not and do not purport to make, and hereby disclaims, all representations, warranties or undertaking to any entity or person (including without limitation warranties as to the accuracy, completeness, timeliness or reliability of the contents of this Whitepaper or any other materials published by the Foundation). To the maximum extent permitted by law, the Foundation, the Distributor, their related entities and service providers shall not be liable for any indirect, special, incidental, consequential or other losses of any kind, in tort, contract or otherwise (including, without limitation, any liability arising from default or negligence on the part of any of them, or any loss of revenue, income or profits, and loss of use or data) arising from the use of this Whitepaper or any other materials published, or its contents (including without limitation any errors or omissions) or otherwise arising in connection with the same. Prospective purchasers of SEC token should carefully consider and evaluate all risks and uncertainties (including financial and legal risks and uncertainties) associated with the SEC token sale, the Foundation, the Distributor and the SEC team.

The information set out in this Whitepaper is for community discussion

only and is not legally binding. No person is bound to enter into any contract or binding legal commitment in relation to the acquisition of SEC token, and no virtual currency or other form of payment is to be accepted on the basis of this Whitepaper. The agreement for sale and purchase of SEC token and/or continued holding of SEC token shall be governed by a separate set of Terms and Conditions or Token Purchase Agreement (as the case may be) setting out the terms of such purchase and/or continued holding of SEC token (the Terms and Conditions), which shall be separately provided to you or made available on the Website. In the event of any inconsistencies between the Terms and Conditions and this Whitepaper, the Terms and Conditions shall prevail.

All contributions will be applied towards the Foundation's objects, including without limitation advancing, promoting the research, design and development of, and advocacy for the application of distributed accounting technologies to create a transparent and open decentralised social ecosystem comprising a trustworthy networks of e-commerce providers and consumers linked by transactional relationships and trust endorsement, which would promote and reshape global e-commerce through a sharing economy.

This is only a conceptual whitepaper describing the future development goals for the SEC Network to be developed. This Whitepaper may be amended or replaced from time to time. There are no obligations to update this Whitepaper or to provide recipients with access to any information beyond what is provided in this Whitepaper.

All statements contained in this Whitepaper, statements made in press releases or in any place accessible by the public and oral statements that

may be made by the Foundation, the Distributor and/or the SEC team may constitute forward-looking statements (including statements regarding intent, belief or current expectations with respect to market conditions, business strategy and plans, financial condition, specific provisions and risk management practices). You are cautioned not to place undue reliance on these forward-looking statements given that these statements involve known and unknown risks, uncertainties and other factors that may cause the actual future results to be materially different from that described by such forward-looking statements, and no independent third party has reviewed the reasonableness of any such statements or assumptions. These forward-looking statements are applicable only as of the date of this Whitepaper and the Foundation and the SEC team expressly disclaims any responsibility (whether express or implied) to release any revisions to these forward-looking statements to reflect events after such date.

The use of any company and/or platform names or trademarks herein (save for those which relate to the Foundation or its affiliates) does not imply any affiliation with, or endorsement by, any third party. References in this Whitepaper to specific companies and platforms are for illustrative purposes only.

This Whitepaper may be translated into a language other than English and in the event of conflict or ambiguity between the English language version and translated versions of this Whitepaper, the English language version shall prevail. You acknowledge that you have read and understood the English language version of this Whitepaper.

No part of this Whitepaper is to be copied, reproduced, distributed or disseminated in any way without the prior written consent of the

Foundation.

Abstract

This paper will analyse the main technologies applied in the Social Ecommerce Chain (SEC Network) — a blockchain that is intended to be used for e-commerce, P2P e-commerce, online celebrity e-commerce, content e-commerce and other e-commerce industries. In essence, the SEC Network is envisioned to establish a trustworthy network of e-commerce providers and consumers through building transactional relationships and trust endorsement based on distributed accounting technologies; to introduce a new consensus algorithm to actualise the feature of multi-project extension.

I. Project Overview

(1) E-commerce Background

The “past” has not gone but the “future” has already arrived at the doorstep of modern society. The development of e-commerce has reached a new turning point— e-commerce is growing fast in mobility and decentralisation; it is rapidly forming its own distinct society. eBay, Amazon and Alibaba are prominent service providers in the field of e-commerce. The e-commerce industry in mainland China has achieved explosive development over 17 years of being in the throes of the Internet wave. Although the absolute sales volume in the field of e-commerce is still growing, the e-commerce system of Ali-Baba, the leading enterprise in this field, has constantly encountered various competing e-commerce models such as social e-commerce, online celebrity e-commerce and content e-commerce models. The market competition atmosphere has intensified extremely. Through the users of social applications WeChat and Weixin, these e-commerce models have developed rapidly. Online celebrity

e-commerce based on sale of clothing has abruptly emerged and from this a single brand with annual sales exceeding 1 billion RMB has sprung up. In the three years that the WeChat system has been involved in the business e-commerce field, its market share has already accounted for 14% of the total market share of the e-commerce market, demonstrating the potential and advantages of the new generation of e-commerce.

It can be seen from the user volume of WeChat in the Chinese market that model innovation and the market capacity of the Chinese mainland market are world-leading. From a business perspective, social e-commerce, online celebrity e-commerce and Wechat Moments content e-commerce are different approaches to e-commerce that have equally satisfactory results. All of them build trust relationships that are based on personal brands and acquaintance circles; they then attract users to purchase through the display of content. This is the most advanced model of product retail so far. Take online celebrity e-commerce as an example— web celebrities first acquire quantity forecasts of fan purchases through visual display of their products, before proceeding to initiate production of the projected quantities of said products in factories and selling them. From the sample display to the completion of the main sales cycle of individual products, from fan bulk purchases to the actual retail of such products, the efficiency of capital flow in such an e-commerce model is different in magnitude from the traditional production and retail model.

The traditional e-commerce model is based on the PC equipment era. With the development of PCs into smart terminals and their evolution towards mobile terminals with APPs as the function carriers, this traditional e-commerce model is also gradually moving in transition to the said smart mobile era. This deepening development of information technology is further empowering individuals. However, the new generation

of e-commerce is still in its infancy stage and a larger market has not be stimulated yet. For example, the agricultural products of many farmers in China lack effective product information transmission and a trust mechanism to assure the veracity of this information, such that these products cannot be sold to consumers at the right price. Consequently, solving these two core problems of establishing more effective means of product information communication and building consumer trust is an opportunity for the development of the new generation of e-commerce. To sum up, the development of a trust mechanism for the new generation of e-commerce can be regarded as an effective support for the development of the latter.

(2) The History of P2P Technology Used in E-commerce

Many developers were previously focused on the application of P2P technology in e-commerce. For example, Lightshare carries out its e-commerce business by using P2P technology. In the P2P e-commerce model, users have a more flexible communication mode for completing transactions; each user node in the network can visit another user node and trade directly with it. It is developed as a new type of e-commerce. However, the risk stemming from issues of inter-party trust is the main obstacle to the development of P2P e-commerce.

(3) Refactoring the Relationship Management between E-commerce Platforms and Consumers

With the dispersion of user time across various platforms, most brands have attempted to or have already been utilising social platforms such as Facebook, Twitter, Weibo and other similar channels for their brand promotion and maintenance of user relationships. Many small and medium-sized e-commerce companies in China have chosen WeChat as a tool to manage their customer relationships. As a result, consumers are being

drained from other e-commerce platforms as they predominantly transact through their WeChat personal accounts.

E-commerce, with the support of blockchain technology, will redefine the P2P e-commerce model, hence redefining “consumer relationship management” on e-commerce platforms. The entire process of this “consumer relationship management” encompasses the management of relationships between sellers and buyers, as well as the relationships between different buyers. Finally, managing the relationships between e-commerce platforms and their users is the key to building a trust mechanism for the new generation of e-commerce.

(4) The Rapid Rising of Cross-border E-commerce

Throughout 2017, consumption through global cross-border e-commerce has further increased. The global purchase model was further consolidated and it still has potential for rapid growth in the future. However, in the process of undergoing warehousing logistics and cross-border circulation, cross-border commodities still face a certain level of cumbersomeness in customs clearance and verification procedures. The technology of blockchain can establish trust; complete verification and other stages of the process in cross-border product flow. The actualisation of functions such as authenticity verification and the tracing of cross-border commodities will be of great significance to global cross-border e-commerce.

(5) Privacy Protection

The existing centralised network can collect private user information at will. Previous personal information leakages resulted in a series of problems such as the trading of this personal information, and even fraud. The assistance of blockchain technology is helpful in achieving the technical protection of customer information, including but not limited

to commodity trading information and many other aspects.

Therefore, the SEC Network is potentially the first trust-based blockchain project in the world to promote the formation of a distinct social ecosystem based on e-commerce. It is therefore necessary for the SEC Network to have the supporting infrastructure to be able to support massive volumes of transactions happening concurrently. To achieve this, the SEC Network adopts consensus mechanisms and node algorithms that are different from Bitcoin and Ethereum.

II. Summary of the SEC Network Architecture

(1) Blockchain System Based on Trustworthiness of Transactions Stemming from Basic Protocol

The SEC Network system contains the complete implementation of its protocol, master tool and API interface. As an open source project, its agreement will be drafted based on similar licenses for knowledge sharing.

The interactive business logic that is based on e-commerce is relatively simple but there are various forms of transactional relationships involved in e-commerce. Therefore, the SEC Network provides more room for flexibility and expansibility in its basic protocol. However, in terms of tools and API interfaces, the state of strong coupling needs to be sustained for consistency and security. Based on the rich experience of the SEC team in the early stage of P2P e-commerce and the extremely strong market demand for the latter, it is believed that these two aspects of consideration will provide some help to the rapid large-scale commercial application of the SEC Network.

(2) Summary of the SEC Network Structure

The overall structure of the SEC Network blockchain project is divided into three levels: (1) the SEC Network underlying structure; (2) As the middle layer, the SEC Network service layer provides the function of a transaction gateway, which is used for transactions such as that based on intra-chain and off-chain WEB protocols; (3) The upper layer is the SEC Network application service layer, which provides the API interface, web application development and DAPP development frameworks; the underlying application capability.

The overall frame structure is as follows:

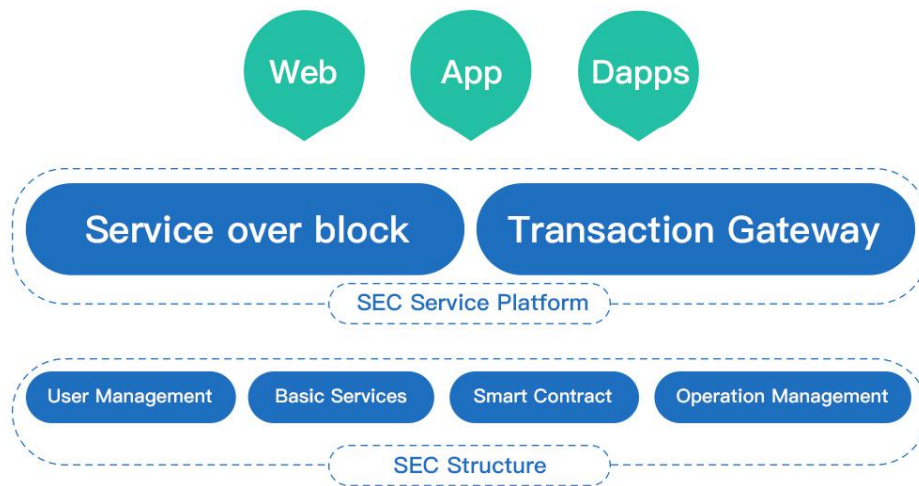


Figure 1 SEC Network infrastructure

1. SEC Network underlying architecture

(1) Account management: in charge of the identity information management of network participants, including maintenance of public and private key generation, key storage management; user identity and blockchain address correspondence maintenance and so on.

(2) Basic services: The basic services are allocated in all the nodes of the blockchain to verify the validity of a business request and to record it in the account book after completion of the consensus on the

valid request. For a new business request, the basic services first parse and authenticate it on the interface, then use a consensus algorithm to sign or encrypt the transaction or contract; to store it in a shared account book completely and consistently. A consensus mechanism can be adaptive and hence has strong fault tolerance under certain circumstances such as ARK network anomaly or node spoofing.

(3) Smart contracts: in charge of the generation of blockchain contracts for transactions; the triggering and execution of these contracts. Users can satisfy P2P e-commerce contract logic through simple operation. After publishing a contract on the blockchain, the user can trigger its execution by other events, such as collection or signature; satisfy the transaction agreement and other contract logic in accordance with the logic of the contract terms.

(4) Operations and maintenance management: in charge of deployment, configuration modification, contract settings and visual output of real-time conditions such as— alarm, trading volume, network situation, node health status and so on, in the implementation of the product when it is released on the blockchain.

2. SEC Network service layer

The SEC Network service layer provides mediation between the intra-chain and off-chain transaction gateways and the information service layer.

The transaction webmaster assists users in performing off-chain e-commerce purchase operations via an interactive interface on the chain and provides authentication services: this allows the sellers and buyers to release their transaction information and other information on the blockchain through a simple API interface, with all the accounting nodes testifying for themselves. In essence, it is the decoupling of differences between the trustworthiness of transactions and the expectations of

buyers with regards to their personal experiences in purchasing. The function of the SEC Network chain system is to actualise a trust relationship mechanism inside the chain, so that the information of a commodity object outside the chain is separated from its authenticated transaction information on the chain. In the convergent period of a transaction relationship, if two parties do not complete the transaction any further, the trust relationship between them is considered to be dissolved. The convergent period of the transaction relationship is related to the transaction speed and the width of its naturally forming autonomous domain chain.

The information service layer abstracts a variety of information from the foundational blockchain and provides the underlying information and message dialogue mechanism demanded by the application development framework of the upper layer.

3. SEC Network application layer

The SEC Network DAPP application service layer provides a framework for simple application development. Application types include basic application models such as digital assets, shared books, authentication, product tracing and ownership transactions. Users can develop their own businesses based on these application development frameworks. The underlying structure of the open blockchain (SEC Network underlying structure) and the ability of the SEC Network application layer assist communities in developing new SEC Network e-commerce application services, matching them to the corresponding application scenarios and jointly maintaining the blockchain ecosystem.

4. Elements of performance considerations

The SEC Network is not a basic blockchain application of e-commerce but an underlying protocol which potentially serves as the foundation of

e-commerce trust. The SEC Network is intended to fulfil the complex transaction relationship management of e-commerce; its underlying layer is designed to be extensible and scalable to cover a wide range of e-commerce scenarios and energise innovative entrepreneurial e-commerce companies.

Key performance issues considered for the SEC Network in the light of existing blockchain technologies include:

(1) Scalability: based on the scale of P2P e-commerce transactions and taking into consideration the computing power, bandwidth changes and storage conditions of current mobile terminals, when dealing with the resources of a single transaction, the blockchain needs an underlying mechanism design that takes into account “low time consumption” and “low energy consumption” in its processing capacity;

(2) Developability: considering the future trends of individualisation and miniaturisation of e-commerce participants, initially there will be the implementation of convenience tools that non-programmers can use with ease; these tools are projected to exceed the convenience of current e-commerce tools. Additionally, the Foundation will set out to develop a community on the SEC Network so that the value generated by the e-commerce industry can be shared fairly between all ecosystem participants;

(3) Governance: basic protocols need to be simple enough to retain its flexibility so that they can be evolved and adapted according to the needs of the times; decision making can thus be highly tolerant, reasonable and transparent in order to provide effective leadership for the decentralised system.

(4) Applicability: based on the foundations of the protocol common chain and the service layer, ordinary users are envisioned to be able to conveniently apply the decentralised e-commerce system to their

transactions.

III. Foundational Blockchain of the SEC Network Platform

The underlying architecture of the SEC Network is a multi-domain autonomous two-chain parallel system. The main chain (trade chain) is responsible for the execution of transactions, the maintenance of transaction history and trust relationships, as well as other information. The dynamic data structure that is relied upon by the entire system can be stored on the main chain, while the secondary chain (account and relationship chain) is responsible for maintaining account information and the trust index. The main chain is used to store the user information of transaction relationships that have been verified as being trustworthy through adopting an asynchronous updating mechanism.

As the business logic of P2P e-commerce is relatively simple, the SEC Network has included most of its complex architecture on the blockchain and API.

(1) SEC Network Autonomous Domain

The SEC Network is one that covers many independent blockchains and this network of autonomous domains can collectively be called the SEC Network autonomous domain. In other words, the entire SEC Network is divided into many smaller network units; the nodes of numerous transactions and trust relationships are automatically generated and converge in the same autonomous domain. Through utilising a simple type of routing management mechanism, the SEC Network autonomous domain enables the encryption of a type of proof of social relationships into the blockchain-based network; it is designed to be able to modify and update the network. The SEC Network

autonomous domain can also be extended across chains by connecting it to other chains.

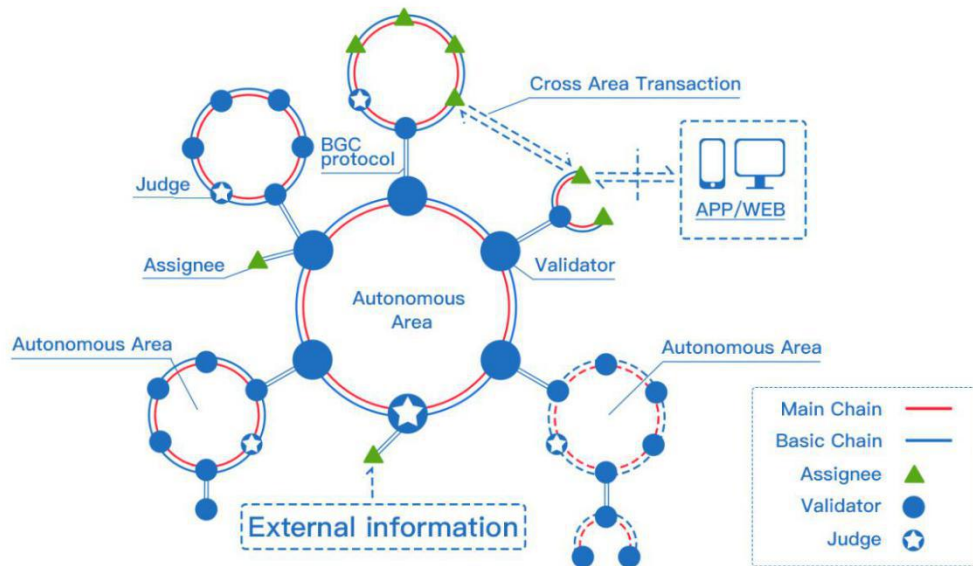


Figure 2 SEC Network schematic diagram

Transactions are carried out through the BGC protocol. The BGC protocol is communicated through the UDP and TCP of concurrent users on different domains. Tokens can potentially be transferred between domains safely and quickly without the necessity for the two items to reflect transaction liquidity. All transfers of tokens within the same autonomous domain pass through the SEC Network key node—this key node records the total amount of tokens held by each autonomous domain. This autonomous domain will isolate each verification from other faulty autonomous domains.

The SEC Network is designed as a collection of autonomous domains that can be extended outwards to encompass a very large number of autonomous domains. Each autonomous domain is managed concurrently through the same

network model, so the system is elastic. As this is operated through the support of the SEC Network dispatch core, it can be perceived as a security consensus engine like the asynchronous Byzantine fault-tolerant mechanism, which has the characteristic of consistency. Besides, under its strict responsibility delegation system, it can potentially prevent the malicious operation of ill-meaning participants. Through the adoption of the SEC Network model, blockchain processing can be combined or separated, hence achieving load balancing.

The SEC Network runs many blockchain autonomous domains through the DPOS mechanism. It takes charge of the management of the numerous autonomous blockchains (termed as "autonomous domains" and taking into consideration the routing protocol). These autonomous domains constantly submit the latest blocks, which allows them to keep up with the changes in each node status. Subsequently, information packets are sent from one autonomous domain to another and Merkle-proof is issued to indicate if the said information has been transmitted or received. This mechanism is called "communication between autonomous domains" or "Border Gateway Communication" (BGC) for short.

Any block can become the verifier by itself, thus forming an acyclic graph. Being an independent blockchain, the SEC Network autonomous domain can exchange BGC information with other autonomous domains. From the perspective of one viewing the entire SEC Network, the autonomous domain is a kind of double-chain formation, which can send and receive tokens and account information through the information exchange via BGC.

The trust verifier is set up at the centre of the autonomous domain. Although the amount of SEC Tokens will decrease in the event of attack

behaviours caused by repetitive verifiers, if over 2/3 of the votes in the autonomous domain demonstrate Byzantine issues, the verifier may be placed in an invalid broadcasting status. The verifiers in other autonomous domains will not verify or execute the transactions submitted to them. The SEC Network management system can solve the malfunction in the autonomous domain by improving the protocol. For example, when an attack is detected, the token transfers initiated by some autonomous domains can be urgently interrupted.

(2) SEC Network Autonomous Domain Communication (BGC)

One of the most critical components of the SEC Network is cross-domain communication. As there are some kinds of information transactions between autonomous domains, so it is an elastic blockchain system.

In order to ensure minimum complications during implementation, risks and autonomous domain architectural constraints, these cross-domain transactions will possess an initiator field to distinguish the identities of the autonomous domains. Cross-chain transactions are analysed to be passed through a simple queue mechanism that uses the Meckel tree (Merkle tree), in order to ensure the authenticity of the data. The task of the verifier is to transfer the transaction from the exit queue of the initiating autonomous domain to the incoming queue of the receiving autonomous domain.

Take an example that there are now two autonomous domains in the SEC Network-- "Autonomous Domain 1" and "Autonomous Domain 2" respectively. One node A in Autonomous Domain 1 and Node D in Autonomous Domain 2 generate a transaction. In order to enable the transfer of tokens and information from the blockchain node A to the other blockchain node D, a certificate needs to be issued on the receiver blockchain node C to confirm that the

sender A has initiated the transaction to a designated location.

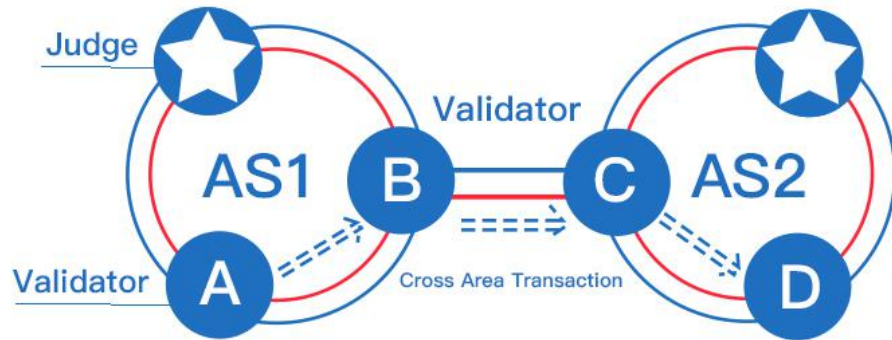


Figure 3 Cross-autonomous domain transaction diagram

On the premise of consistency, the autonomous domain of the SEC Network can divide itself to speed up a transaction through the preferential transaction mechanism of the relationship chain. Due to frequent transactions in the autonomous domain, alteration of account information and transaction relationships on the double-chain is limited, hence the rapid completion of transactions is achieved— with respect to two-way order trading, BGC (cross autonomous region communication) tokens and transactions with other autonomous domains.

(3) SEC Network Structure Participants

The SEC Network has three basic roles to maintain: Verifier, Trustee and Judge. In a transaction trust relationship, the three have the same function and level of authority, while the division of labour among the three roles mentioned above are different with respect to their packaged interests and verification rights.

1. Verifier

The verifier has the highest authority and its responsibility is to package a new block in the SEC Network autonomous domain. The verifier is required to pledge a sufficient amount of SEC tokens and operate the client end of a node on a processor with high computing power and bandwidth. In each block, the node must be ready to receive a newly submitted block. This process involves accepting, validating and republishing candidate blocks. The appointment of the verifier is deterministic, but the result of the operation logic is very difficult to predict and hence this improves security.

If the verifiers in different autonomous domains confirm the approval of the new blocks of their own autonomous domains, they must start updating the statuses of the transaction queues. In other words, they must input the blocks from the exit queue of one autonomous domain into the incoming queue of another autonomous domain. Subsequently, they must process the approved transaction set, approve the final block and rationalise the final status of the autonomous domain.

According to the rules of the consensus algorithm, a verifier who fails to perform his/ her duties will be punished. The first mistake will cause his/ her incentive to be withheld but repeated errors will cause the deduction of his/ her staked SEC and even cause him/ her to lose his/ her staked SEC (a small part will be burned and the rest of the withheld incentive will go towards remunerating the judge and honest verifiers).

Verifiers are the sole authorisers for creating valid autonomous domain blocks.

2. Trustee

The trustee has two roles. The first role for the trustees as a collective group is to help the verifier create effective autonomous blocks within a domain. They are assigned to run the entire node of a specific autonomous domain and have the necessary information about the entire node in the autonomous domain. Moreover, they can package new blocks and execute transactions; in order to obtain service charges in the form of SEC tokens, the trustee group competitively collects transaction information to promote the generation of trust transactions. Similarly, the decentralised nominee group is also intended to allow multiple vouched-for participants to coordinate and share the responsibilities of the verifier. This feature ensures the openness of participation and incentives to form a more decentralised system.

The second role of a trustee is to deliver trust. An automatic trust index is generated in the information field of the trustee and the initial value is 1. When the trustee completes a transaction, this value will increase correspondingly, up to a maximum value of 100. Similarly, if the transaction is not completed, or if a seller sells fake or shoddy commodities or if a buyer makes malicious complaints, his/ her trust index will be reduced. When his/ her trust index is reduced to 0, his/ her account is banned. On the contrary, the larger the index value, the more Sec tokens the transaction generates depending on the volume of the transaction.

3. Judge

Judges are not directly involved in the process of packaging blocks. They are independent "bounty hunters" who are motivated by one-off but high-value SEC token incentives. Judges are intended to be remunerated when they report and establish proof in a timely manner in the event of at least

one vouched-for participant committing an illegal act. Judges need relatively less resources to prevent excessive incentivisation for the disclosure of private keys to the judges; they are not required to commit to being online regularly and having large bandwidths. A judge is required to submit only a small SEC pledge which is used to prevent witch-hunt style attacks that will waste the computing time and resources of the verifier. The staked SEC amount is projected to be immediately recoverable, conversely if a judge monitors a verifiable entity for misconduct, he/ she can potentially obtain a lot of SEC incentives.

IV. Consensus mechanism

The SEC team chooses to use a consensus algorithm based on DPoS.

In consensus, under the framework of any arbitrary network defects, as long as most verifiers are honest, it can provide an efficient fault-tolerant algorithm, which can ensure the authenticity and accuracy of data at the level of large probability.

The SEC Network chain is created at the beginning stage and is continuously distributed in the application scenario. According to the requirements in different alliance chains, the detail functions of parallel chain and the specific information of service and parallel chain Tokens provided by parallel chains are customised and a part of synchronous shared account book is built among different alliance chains. The customised information forms data structures of a parallel chain and is recorded in blocks of the current period by the billing node in a manner similar to that of SEC Network transaction records. At this moment, the autonomous domain will act as a separate block chain and records the transactions in the autonomous domains

(1) Double chain consensus algorithm

The generated Ω algorithm developed by SEC team members was developed as a strictly block-chain-based cipher and consensus foundation. Differences to existing algorithms: the algorithm can meet the requirements of e-commerce in the extreme speed consensus, security, and ultra-low computational power. Using the property of bilinear mapping function, the validity of "function" is verified without leaking dependent variables to avoid the influence of the natural advantage of the generator of a block when predicting the probability of the later generator but realises the effectiveness of the algorithm by delaying the network in fact (that is to sacrifice the speed). At the same time, the consensus mechanism of DPOS is developed. Non-regularity of wrapper function can decide a block generator through method of cryptology. And the consensus mechanism is realised without sacrificing the speed of the next block.

Key points of the algorithm: (1) To ensure complete randomness, X block (sequence number of the block) is introduced into the block and only when the subversions of the current block are revealed in the entire network can the final confirmation be achieved. Prevent the possibility of intrusion blocking from the aspect of the mathematical logic. (2) At the same time, the concurrency mechanism is developed, and the blocks in which many potential subversions are located are completely independent. Through the public network, the blocks are collected in a unified way. It is given the priority to broadcast the block data and then the link is revealed to ensure that the tampering is meaningless. (3) The algorithm supports the node replacement mechanism so that any node can be taken over by other nodes at any time. Consequently, the algorithm is projected to improve over time in order to promote greater economic efficiency.

In conclusion, the Ω algorithm covers the following advantages: controllable bifurcation risk, little computation, tolerance expansion of node off-line, high security level of one-way irreversible key, voting mechanism of composite verification.

(2) Proof of stake

Through an updated structure of staking certificate (DPOS), the verifier relies severely on their staked interests. The interests of current verifiers are intended to begin from their demission. Such a long period of freezing of SEC tokens is intended to penalise misconduct in the future until the periodic check points in the block chain arrive. Misconduct may be punished, for example, by reducing incentives; if the integrity of the network is deliberately compromised, the verifier may lose some or entire of his interest and transfer it to other verifiers, information providers or holders of all rights (by burning down). For example, if a verifier attempts to approve two branches on different forks at the same time (Sometimes referred to as a short attack), he will be identified and punished by the later method.

(3) Packing of blocks

Each autonomous domain uses a different block packaging method and integrates consensus through BGC protocol. Under the consensus integrity mechanism, the primary nodes account, and the heartbeat mechanism is used to maintain the integrity of the consensus.

(4) Light client

One of the benefits of the Ω consensus algorithm is that it can develop a secure and easy light client, which helps to become an ideal tool for social e-commerce applications on the mobile terminal. The light client

must synchronise the chain formed by block headers and find the one with the most proven workload. SEC Network light client only needs to keep consistent with alterations of validation group and then verify most of the transaction to confirm the latest situation.

(5) Network design and consideration

Based on the continuation of Ethereum devp2p protocol series including libp2p and IPFS standards, the SEC Network is envisioned to effectively improve privacy, robustness, latency and modularity.

In the SEC Network, the focus is on solving the trust issues of e-commerce transactions, without consideration for selling products of text, pictures or video information storage. Therefore, it is enough for the SEC Network application to be based on devp2p protocol. Of course, in the current network architecture and e-commerce business, the usage of servers or cloud servers have become monopolistic in nature. Even if the application of simple cloud servers, may become a barrier for ordinary individual e-commerce participants. The Foundation, will focus on P2P network services. The decentralised computing projects and other projects are beneficial in reducing the load on personal web applications. Of course, seller information stored in the central computer room does not affect the application of SEC Networks.

(6) Usage of SEC token

The native digital cryptographically-secured utility token of the SEC Network (**SEC token**) is a major component of the ecosystem on the SEC Network, and is designed to be used solely on the network. SEC token will initially be issued as ERC-20 standard compatible digital tokens on the Ethereum

blockchain, and these will be migrated to tokens on the blockchain on the SEC Network when the same is eventually launched.

SEC token is a non-refundable functional utility token which will be used as the unit of exchange between participants on the SEC Network. The goal of introducing SEC token is to provide a convenient and secure mode of payment and settlement between participants who interact within the ecosystem on the SEC Network. SEC token does not in any way represent any shareholding, participation, right, title, or interest in the Foundation, its affiliates, or any other company, enterprise or undertaking, nor will SEC token entitle token holders to any promise of fees, dividends, revenue, profits or investment returns, and are not intended to constitute securities in Singapore or any relevant jurisdiction. SEC token may only be utilised on the SEC Network, and ownership of SEC token carries no rights, express or implied, other than the right to use SEC token as a means to enable usage of and interaction with the SEC Network.

As discussed above, SEC token is required as virtual crypto “fuel” for using certain designed functions on the SEC Network (such as executing transactions and running the distributed applications on the SEC Network), providing the economic incentives which will be consumed to encourage participants to contribute and maintain the ecosystem on the SEC Network. Computational resources are required for running various applications and executing transactions on the SEC Network, accepting, validating and republishing blocks (verifiers), aggregate transaction information to promote the generation of trust transactions (trustees), as well as policing and reporting illegal acts caused by network participants (judges), thus providers of these services / resources would require payment for the consumption of these resources (i.e. “mining” on the SEC Network) to maintain integrity of the blockchain. SEC token will be used

as the unit of exchange to quantify and pay the appropriate costs of the consumed computational resources and to encourage contributors to participate in community development, hence ensuring the effective operation of the network.

Users of the SEC Network and/or holders of SEC token which did not actively participate will not receive any SEC token incentives.

SEC token is an integral and indispensable part of the SEC Network, because without SEC token, there would be no incentive for users to expend resources to participate in activities or provide services for the benefit of the entire ecosystem on the SEC Network.

V. Account Management and Business Logic

(1) Account management

1. SEC Network provides accounts and functionality

(1) User management. User management mainly solves the mapping relationship among user identity, block chain address and the confidentiality of user privacy.

(2) Account management. Account management is responsible for user account management, including account registration, login, cancellation, and irrelevant processing between account and key. When the account is registered, the identity information of the original user are mapped to the block chain address such as user name and password.

(3) Key management. In the overall mandatory mode, the key management system is responsible for the connection between the user key and the account, the key security management and the loss and retrieval. The user

key is generated on the client side. The user can choose to preserve the key in the safe box or delegate the key to the associated account to retrieve the key after the loss of the key. In order to ensure the reliability of the relationship between user account and key, the key management system stores the signature of the association by adopting multi-node chain.

(4) Authority management. The authority management module is responsible for the control and management of jurisdictions such as user account, key system, node join and exit, data access and so on including account delegation permissions, node consensus permissions and user data access rights and so on. The audit authority is to provide the audit function for regulation bodies and strictly control the access authority and data scope and connections to users unrelated to transaction on the shared account book. Account delegation permissions are used to control access to user account delegation relationships. Consensus permissions are adopted to manage the consensus rights of the participating or newly joined nodes, and the access rights are launched to manage the permissions of the client to query the data on the block chain.

(5) Control management of user trust related risk. The risk control module is responsible for the risk control of the transaction behaviour of users in the block chain.

(2) User creation and living examples of users

The user creations of the SEC Network are derived from the community users and enter the network by the way of transaction. Therefore, there is a trust relationship between the two parties whose initial trust value remain 1.

User A set up an automatic contract address on the SEC Network user interface that automatically conclude some transaction seven days after receiving the commodity. The social network / web e-commerce website releases product information. Assume 158 RMB as the price and leaves the SEC Network automatic contract address.

After found by unfamiliar user B, the mobile phone scans the SEC Network automatic contract address and finishes the payment. Since the two parties did not generate a trading relationship, they must be located in different autonomous domains of the SEC Network autonomous domain. Therefore, user B notifies verifier C in his autonomous domain. The verifier C finds the verifier D in the autonomous domain where user A is located through the hash table, sends out transaction information and updates the record. Verifier D provides payment transaction information to the automatic contract address of user A

User A found a change in the status of the contract address and updates the automatic contract delivery status. After receiving the commodity, user B can update the status information according to the original path. User A carries out the contract automatically. Seven days later, A executes contract automatically without the operation of user B. Carrying out the transaction through automated contracts and verifiers.

After completion of the transaction, user A and user B form a relationship chain and converge and attempt to establish an autonomous domain. If the path in the network meets the convergence conditions, both the parties enter the new autonomous domain and broadcast the transaction information.

If user B identify the product as a fake product, he will provide distrust confirmation to the automatic contract address and user A will

deduct the specified portion of the purchase price and reduce the trust index. If the trust index is reduced to 0, it is permanently prohibited by the network.

To sum up, this scheme enables realisation of trust transfer and social sharing in cross-border, cross-platform and cross-category P2P e-commerce markets. It will be a new underlying framework platform based on the e-commerce application scenario: decentralised, open, safe and efficient. In the ecosystem, participants can receive appropriate SEC token incentives through sharing behaviour and effectiveness sharing and businesses can also enjoy technical services while reducing the cost of platform entry and variable cost of information processing, thus achieving many advantages in one stroke. Blockchain and e-commerce are two areas with rapidly growing value. As a transparent and open system, the SEC Network is envisioned to promote global e-commerce development and reshape social e-commerce through a sharing economy. As a result, it intends to form an effective decentralisation market.

In the first phase of the solution, the technology application will be implemented in many vertical commodity fields, agriculture, cross-border e-commerce ecosystem in China, Germany, Canada and Thailand, and build a complete initial P2P e-commerce trust case.

VI. Governance Structure

Social Ecommerce Chain Technology Pte. Ltd. (“The Foundation”)

The Foundation is a non-profit organisation dedicated to supporting e-commerce application projects based on the SEC Network platform.

(1) Governance of the Foundation

The Board of Directors of the Foundation adopts a rotating chairmanship system to carry out its function(s). The Chairman of the Board is elected every two years through voting by members of the Foundation and his/ her term of office is one term, which is renewable once. Several management centres have been established by the Board of Directors of the Foundation, including: the blockchain technology development centre, the blockchain business application centre, the financial management centre, the risk control management centre and the integrated affairs management centre.

For the avoidance of doubt, while community views would be acknowledged where possible, ultimately community members are not connected with the Foundation (or its affiliates) in any manner, and the assets and funds of the Foundation (or its affiliates) remain under the control of the relevant Board of Directors who shall exercise independent judgement and apply them to achieve the Foundation's objects. The right to vote does not entitle SEC token holders to vote on the operation and management of the Foundation (or its affiliates) and does not constitute any equity interest in the Foundation (or its affiliates).

(2) Source and Management of Funds

1. The funds to maintain the operation of the project to develop the SEC Network originate mainly from sale of SEC tokens in different batches, initial supporters, private sales, membership fees and donations from other projects and so on. Some SEC tokens will be exchanged with other forms of digital assets for the operation of the project if necessary.

2. Encrypted digital and underlying assets collected by the Foundation at private sales will be kept in cold wallets or converted into other assets; they will be managed by specialists. If need be, the employment of service providers for cryptographic asset management to provide the Foundation

with financial management services can be considered; at the same time, private keys will be managed through a multiple signature system.

3. Financial management principles of the Foundation — overall management, applying comprehensive evaluation to performance, frugality; maximisation of value for the use of finances.

The asset management of the Foundation is integrated into its overall budget management; the financial remuneration and expenditure budget is compiled in accordance with the actual operating conditions.

The annual financial remuneration and expenditure budget, as well as the monthly financial budget shall be submitted to the Board of Directors for approval. The Financial Management Centre shall be responsible for the preparation and implementation of the budget; it shall disclose the budget every quarter.

The official website for the disclosure of these financial reports:
<https://SECblock.io/>.

The Foundation will engage a third-party professional auditor to oversee the financial operations of the project, conduct a capital audit and draft the audit report, which will be reflected in the annual disclosure bulletin. The quarterly report will be disclosed within two months after the end of each quarter. The annual report will be drawn up and disclosed within the three months before the end of each fiscal year (December 31st every year). The contents of the report will include but shall not be limited to: milestones and progress of the SEC Network project and application development, digital asset management, team performance, financial situation and so on.

(2) Progress and Information Disclosure

The Board of Directors of the Foundation is committed to managing and using project funds on the principles of diligence and good faith, in accordance with the objects of the Foundation. At the same time, in order to protect the interests of contributors, it aims to strengthen the management and high efficiency applications of the SEC Network, promote the healthy development of the SEC Network project and set up an information disclosure system.

The Foundation intends to employ well-known law firms as legal advisers for the SEC Network project, who shall provide comprehensive legal services for the project such as trading structure design of digital assets, operational compliance, legal risk control system design and overseas legal advice.

The Foundation will sporadically disclose critical real-time information about the SEC Network project, including but not limited to major cooperation issues, alteration of core team members and litigation involving the SEC Network. The Foundation hopes to standardise the management of digital assets received from its private sales, increase the self-regulation capability of the blockchain industry, enhance the transparency of encrypted digital asset management on blockchain and maintain the long-term development of the blockchain industry.

The Foundation will disclose information reports on the website: <https://SECblock.io/>.

VII. SEC Team Introduction

Collin Chu: former project principal in the third largest FinTech company. He has over 20 years of experience in the design and development of bank application systems and financial software systems in China and North America. He obtained his PhD. D. in computer science at Nanyang Technology University, Singapore.

Chen Siyu: graduated from UCLA (UCLA) Computer Department as a computer major. In charge of machine learning in Amazon, Baidu and unicorn company Procore Technologies; big data mining and related projects in computer vision automatic recognition. In favour of blockchain project development.

Oliver Gu: Chairman of the North American E-Commerce Forum, Co-founder of the Centre for International Productivity Cooperation, Co-founder of the China-Canadian Electronic Commerce High-Tech Alliance and Co-chair of the China-Canada E-Commerce High-Tech Summit. Obtained his Master of Computer Science from Bridgewater State University, Massachusetts, USA.

Rain Liu: Winner of the Ontario Distinguished Women Award, President of the China-Canada E-commerce Science and Technology Association and Senior Engineer of Canadian multinational corporations. Awarded certificates by Sun and IBM; former host and programme planner of Canadian National Television, Canadian Chinese Radio and Fujian Zhangzhou TV.

VIII. Contributors and Advisers

Li Mengran: Technical Director in China region of the SEC Network, CEO of maizuo net (social e-commerce), developer of real-time linux for China in its early stage and Internet serial entrepreneur. He has been a member

of the project team of INT Internet of Things blockchain under China Telecom Group.

Chen Yingkui: Founder of Maizuo net, an early employee in Tencent and an angel investor.

Wang Xing: Co-founder of maizuo net, one of the top 100 employees in Tencent and an angel investor.

Tan Lei: mining expert in blockchain and big data, NASA initiator of the North American Block-Chain Association with 13 years of work experience in Microsoft headquarters. Master of Duke University whose work and translation includes *Block Chain 2.0* and *Social E-commerce*.

Wang Yong: the specialist in the national Thousand Talent Programme. He obtained his Doctorate from Dalhousie University; is the holder of the CFA and FRM Certificate, former Managing Director in Risk Division of the Royal Bank of Canada, author of financial risk management monographs and risk management and derivatives, blockchain and other translations. He is also an academic consultant at the Rottmann School of Management at the University of Toronto and a visiting professor at York University.

Xiao Min: the partner of Matrix Partners. Successively holding the positions of General Manager of Pinyin gaga, Product Manager of Baidu TV and General Manager of IT Division in Tianji Media. Currently specialising in investment in the Internet, e-commerce, wireless, software and other areas.

Shan Feng: SEC Network China E-commerce Director, senior investor in blockchain, e-commerce operations expert; previously worked in Alibaba B2B business division before becoming the principal of Ali service provider

training department, operation department and product department. He has been engaged in the field of e-commerce for nine years and has provided services and liaising to more than 5000 e-commerce enterprises.

Zhao Yafu: Director of Risk Control at Guangdong Zhuotai Investment Management Co. Ltd.

Ge Lei: Partner of Guangdong Guangxin Junda Law Firm.

IX. SEC Token Allocation Plan

SEC Tokens Private Placement Scheme

Presale of Tokens

The booming development of blockchain technology has also attracted more attention to the realisation of value for cryptographic digital assets. With the introduction of various virtual technologies, developers can build smart ecosystems in a more flexible way. The existence of tokens, which converts the underlying blockchain technology into visual output, has further improved the management efficiency of blockchain-based platforms. From this, problems of trust with regards to decentralised systems can be resolved through the method of token encryption for basic e-commerce applications and content such as internal information exchanges, verifications and time records that are based on blockchain technology.

The application of the SEC Network in the field of e-commerce is envisioned to play a key role in encouraging contributors to participate in community development, hence ensuring the effective operation of the

network and the generation of platform fees (paid in SEC tokens) which further leads to distribution of SEC token incentives to contributors.

SEC Token Initial Private Placement Plan

The demands of the continuous operation of the SEC Network project implies that funds need to be distributed evenly in the long run; the fund distribution needs to be carried out in a sustainable and scalable manner. At present, the project is favoured by some high-quality strategic partners, some of which have become early supporters and contributors. In the private placement phase, the SEC team and strategic contributors will release a small amount of SEC Tokens; in the middle and later stages of project development, more emphasis will be placed on a contributor diversification development strategy, which includes but is not limited to e-commerce professionals, venture contributors, virtual digital industry R & D institutions and R & D personnel; individual contributors and so on.

Distribution Principle

The holders of SEC Tokens are the earliest participants of the SEC Network project. In order to protect the interests of early supporters and the healthy development of the project, only a small amount of SEC tokens will be released in this period and the rest of the SEC tokens will be frozen. The frozen SEC tokens will be released gradually over the next three years for use on the Sec Network. SEC token are designed to be consumed, and that is the goal of the SEC token sale. In fact, the project to develop the SEC Network would fail if all SEC token holders simply held onto their SEC token and did nothing with it.

The Distributor of SEC token shall be an affiliate of the Foundation. The Distributor shall issue a total number of approximately 1.5 billion SEC tokens; at the same time, there may potentially be additional mechanisms for additional issuances for merchants to pay for their purchases. In view of the rapid growth of e-commerce networks, the Distributor would be able to issue additional SEC Tokens in accordance with the real-time market prices depending on project requirements. The presale amount of SEC tokens is expected to be between 300 and 600 million units. Early supporters of the SEC Network by virtue of the most efficient market operations will have the opportunity to participate in the initial phase of the project and contributors will be involved in completing the placement of SEC Tokens; the digital currency collected would be applied by the Foundation to support the development of the SEC Network.

Standards and Methods of SEC Token Private Placement and Exchange

This distribution accepts only ETH contributions. The final exchange criterion is subject to its average price on Bitfinex at 1:00pm of the first day after the end of SEC Token Presale. The **SEC Token Private Placement and Exchange** starts on January 22 2018, and the period of one month is taken as the time of collection; If the sale is completed in advance, it will be closed in advance, correspondingly and the information as announced on the official website shall prevail.

You understand and accept that SEC token:

- (a) is non-refundable and cannot be exchanged for cash (or its equivalent value in any other virtual currency) or any payment obligation by the Foundation or any affiliate;

- (b) does not represent or confer on the token holder any right of any form with respect to the Foundation (or any of its affiliates) or its revenues or assets, including without limitation any right to receive future dividends, revenue, shares, ownership right or stake, share or security, any voting, distribution, redemption, liquidation, proprietary (including all forms of intellectual property), or other financial or legal rights or equivalent rights, or intellectual property rights or any other form of participation in or relating to the SEC Network, the Foundation, the Distributor and/or their service providers;
- (c) is not intended to represent any rights under a contract for differences or under any other contract the purpose or pretended purpose of which is to secure a profit or avoid a loss;
- (d) is not intended to be a representation of money (including electronic money), security, commodity, bond, debt instrument or any other kind of financial instrument or investment;
- (e) is not a loan to the Foundation or any of its affiliates, is not intended to represent a debt owed by the Foundation or any of its affiliates, and there is no expectation of profit; and
- (f) does not provide the token holder with any ownership or other interest in the Foundation or any of its affiliates.

SEC Token Allocation

The underlying SEC Token allocation schemes for the SEC tokens are as follows:

Table 1 SEC Token allocation planning

Type	Tokens quantity	Share of total	Total proportion	Description
Initial supporters	105,000,000	7%	0.40	50% will be distributed initially with the remaining 50% distributed over the next 3 months, with a "whitelisting" system to be adopted
Private placement	495,000,000	33%		
The Foundation (Technical iteration)	150,000,000	10%	0.10	Financial disclosure
Business / strategy	300,000,000	20%	0.20	Other private placements and institutional sales
SEC team	150,000,000	10%	0.10	Distributed over the next 3 years
Strategic partners and communities	300,000,000	20%	0.20	
	1,500,000,000	100%		Total amount

Note: 1ETH = 11000 SEC

Table 2 SEC Tokens soft and hard cap

Type	Soft cap	Hard cap
Private placement	19,800 (ETH)	39,600 (ETH)

X. Usage of sale proceeds

Table 3 SEC Tokens and description of fund application

Proportion	Distribution scheme	Description
20–40%	Initial supporters	Sold at discount to specially invited initial supporters and private placement purchasers, but subject to requirement for lockup period.
	Private sale, early contributors, institutions, and early people who provided resources and technical support for the development of the SEC Network	
10%	The Foundation	Used in project development, incentive programmes and so on. Initially 20% will be distributed, with a further 33.3% of the remainder distributed upon the expiry of each consecutive period of 365 days thereafter, over a total period of 3 years.

10%	SEC team	Initially 25% will be distributed, with a further 25% distributed upon the expiry of each consecutive period of 365 days thereafter.
20-30%	Contributing institutions, partners and communities	Initially non-transferrable; this portion will be distributed for community promotion, community operation and to incentivise users.
20-30%	Other private placements, business development / strategic cooperation	The Foundation will consider launching private placements in various parts of the world. Brand building, strategic cooperation, listing fees, etc.— funds will be released in accordance with the project process and would generally be announced in advance.

The contributions in the token sale will be held by the Distributor (or its affiliate) after the token sale, and contributors will have no economic or legal right over or beneficial interest in these contributions or the assets of that entity after the token sale.

To the extent a secondary market or exchange for trading SEC token does develop, it would be run and operated wholly independently of the Foundation, the Distributor, the sale of SEC token and the SEC Network. Neither the Foundation nor the Distributor will create such secondary markets nor will either entity act as an exchange for SEC token.

IV. Technological Implementation and Application Launch

Summary of the project plan: the project will complete the token sale in early 2018 and it is projected to release specific application scenarios and new project partners successively the same year. This Foundation will undertake the heavy task of developing and innovating the e-commerce industry and may receive remuneration from the growth of the e-commerce industry (which will be applied towards the Foundation's objects).

There is urgent market demand with regards to the project. With rich experience and resources in Internet and e-commerce operations, the SEC Network is expected to become one of the largest blockchain applications with the largest number of users in June 2019. The current project time plan is according to the following table. However, due to the blockchain technology development having a certain time risk, therefore there may be adjustments to the given technology release times and the corresponding commercial application launches. The announcement of the official website will prevail.

Table 4 Timeline in the initial stage of the project

时间 Time	计划 Plan
2017 年 7 月 July 2017	卖座网社交电商业务模式测试 The Test of the Business Mode of Social e-commerce on Maizuo net
December 2017	SEC Network based on DPOS consensus algorithm and Network Scheme
February 2018	Technical cooperation between SEC Network and Maizuo net, the social e-commerce project (current users of Maizuo net is 41 million and annual sale reached in 1.67billion RMB in 2016.)
March 2018	Development and application of out-of-chain application of Social e-commerce
April 2018	Open source of display code of WEB commodity, H5 version and Wechat small program version
May 2018	Open source of display code of Apple and Android AP
June 2018	Promotion of Toronto project: business collaboration and community user popularisation with local partners
August 2018	DAPP development framework
September 2018	Intelligent contract function based on ERC233 Standard
September 2018	Launch
September 2018	SEC Network Wallet and Launch of browser
October 2018	Launch of SEC Network Trade Gateway
October 2018	Launch of SEC Network AS and BGC

October 2018	The current 80,000 agents guiding into the main chain and application to complete the creation of the user developments
October, 2018	Cooperation with Shanghai Fishery Association and Shanghai Conghe Agriculture Co., Ltd. on the business of high quality agricultural products of origin
November, 2018	Project promotion in Silicon Valley, business cooperation and user promotion with local partners
December, 2018	Packaging of Service over Block
December, 2018	SEC Network main-chain Launch of Wiener version of SEC Network main chain (SEC stake, trust endorsement and judge judge)
February, 2019	project promotion in Munich, Germany, business cooperation and user promotion with local partners
March, 2019	Launch of Turing version of SEC Network main chain, breakthrough made in TPS main chain
April, 2019	Import of existing core users, start user operation and scale partner promotion
June, 2019	The expansion of SEC Network

V. SEC Network Media and Community

Table 5 SEC Network media and community list

Name	Address
Official website	https://SECblock.io
Telegram English group	https://t.me/joinchat/HszzcVKwZXyl5LbH8Ywx8Q
Telegram Chinese group	https://t.me/joinchat/HszzcUiWaWtR5pPm0hDPwg
Twitter	https://twitter.com/SECblock
Facebook	https://www.facebook.com/SecChain
Github	https://github.com/SECblock
WeChat Official account	SECblock
Sina Weibo	https://weibo.com/SECblock
Slack	https://secblock.slack.com/
Reddit	https://www.reddit.com/user/SECblock

VI. Project supplement

Risks

You acknowledge and agree that there are numerous risks associated with purchasing SEC token, holding SEC token, and using SEC token for participation in the SEC Network. In the worst scenario, this could lead to the loss of all or part of the SEC token which had been purchased.

1. Risk of loss of SEC tokens caused by loss of certificates

The SEC tokens of the buyer will be associated with the SEC Network account of the buyer after it is allocated to the buyer. The only way to enter the SEC Network account is the relevant login credentials selected by the purchaser. Losing these credentials will lead to the loss of SEC Tokens. The best way to safely store login credentials is to separate the credentials into one or more places and preferably not to preserve them in a public place or places with a stream of strangers.

2. The risks associated with the Ethereum core agreement

SEC Tokens are developed based on Ethereum protocols, so any failure of Ethereum core protocols, unexpected functional problems or attacks could cause SEC Tokens or SEC Network applications to stop working or lose function in unexpected ways. Additional information about the Ethereum agreement, please refers to <http://www.ethereum.org>

3. Related Risk associated with the SEC tokens of the buyer

Any third party obtains the login certificate or private key of the buyer, which makes it possible to directly control the SEC Tokens of the

buyer. To minimise the risk, buyers must protect their electronic devices from unauthenticated access requests and its access to device content.

4. Risks of uncertain Regulations and Enforcement Actions

The regulatory status of SEC token and distributed ledger technology is unclear or unsettled in many jurisdictions. The regulation of virtual currencies has become a primary target of regulation in all major countries in the world. It is impossible to predict how, when or whether regulatory agencies may apply existing regulations or create new regulations with respect to such technology and its applications, including SEC token and/or the SEC Network. Regulatory actions could negatively impact SEC token and/or the SEC Network in various ways. The Foundation (or its affiliates) may cease operations in a jurisdiction in the event that regulatory actions, or changes to law or regulation, make it illegal to operate in such jurisdiction, or commercially undesirable to obtain the necessary regulatory approval(s) to operate in such jurisdiction. After consulting with a wide range of legal advisors and continuous analysis of the development and legal structure of virtual currencies, the Foundation will apply a cautious approach towards the sale of SEC token. Therefore, for the token sale, the Foundation may constantly adjust the sale strategy in order to avoid relevant legal risks as much as possible. For the token sale the Foundation is working with Tzedek Law LLC, a boutique corporate law firm in Singapore with a good reputation in the blockchain space.

5. Risk of lack of attention in SEC Network applications

SEC Network applications have the possibility that not used by a large number of individuals or organisations, which indicate that there is not enough public interest in exploring and developing these related

distributed applications. Such a phenomenon could impose a negative impact on SEC Tokens and its applications.

6. The risk that SEC Network related applications or its products fail to meet the expectations of the Foundation itself or its buyers

SEC Network applications are currently in the development stage and may be subject to major changes prior to the release of the official version. Any expectation or envision of SEC Network itself and its buyers on functions or forms of SEC Network application or its coins may not be achieved (including the behaviour of the participants). Any erroneous analysis or changes in the underlying design may result in the generation of this situation.

7. Risk of hacking or theft

Hackers or other organisations or countries have the possibility of attempting in any way to interrupt the SEC Network application or the functionality of SEC Tokens, including service attacks, Sybil attacks, smurfing, malware attacks or conformance attacks, etc.

8. Vulnerability risk or the risk of rapid development of cryptography

The rapid development of cryptography or other related technologies such as quantum computers may bring the risk of cracking to cryptographic Tokens and SEC Network platforms, which may result in the loss of SEC tokens.

9. Risk of Lack of maintenance or application

The purchase of SEC tokens should be considered as a support and contribution in the development of next-generation e-commerce applications, not as a speculative act.

10. Risk of uninsured loss

Unlike bank accounts or the accounts of other financial institutions, there is usually no insurance stored on SEC Network accounts or Ethereum networks. In any event, no public organisation or individual will cover your losses.

11. Fault risk of application

The SEC Network platform may fail to provide normal service due to malfunctions caused by a variety of reasons.

12. Inadequate disclosure of information

As at the date hereof, the SEC Network is still under development and its design concepts, consensus mechanisms, algorithms, codes, and other technical details and parameters may be constantly and frequently updated and changed. Although this white paper contains the most current information relating to the SEC Network, it is not absolutely complete and may still be adjusted and updated by the SEC team from time to time. The SEC team has no ability and obligation to keep holders of SEC token informed of every detail (including development progress and expected milestones) regarding the project to develop the SEC Network, hence insufficient information disclosure is inevitable and reasonable.

13. Failure to develop

There is the risk that the development of the SEC Network will not be executed or implemented as planned, for a variety of reasons, including without limitation the event of a decline in the prices of any digital asset, virtual currency or SEC token, unforeseen technical difficulties, and shortage of development funds for activities.

14. Other unforeseen risks

In addition to the aforementioned risks, the potential risks briefly mentioned above are not exhaustive and there are other risks (as more particularly set out in the Terms and Conditions) associated with your purchase, holding and use of SEC token, including those that the Foundation cannot anticipate. Such risks may further materialise as unanticipated variations or combinations of the aforementioned risks. You should conduct full due diligence on the Foundation, its affiliates and the SEC team, as well as understand the overall framework, mission and vision for the SEC Network prior to purchasing SEC token.