eChain and cross-border e-commerce blockchain

eChain is a decentralized blockchain underlying contract to solve problems such as the lack of trust, complicated and opaque process, the mighty of centralized platform and multi-currency exchange of cross-border e-commerce industry. eChain can store commodity, transaction and logistics information and nodes of participants such as buyers, sellers, manufacturers, consumers, logistics, warehousing, customs clearance. eChain can provide better service by creating insurance, traceability, anti-fake, payment, transaction and allocation dApps, realizing open and transparent logistics, information and fund flows.

E-chain will be the major global cross-border e-commerce system by realizing transparent supply chain, merchandise traceability, traceable of logistics process, auto risk protection, auto payment, payment real-time settlement without transition, real credit of buyer and seller.

Global Market

Problems

Cross-border E-commerce, as a rapid development industry, has nearly 300,000 merchants in the whole in 2017 with 5000 billion dollar transaction size and 1.5 billion consumers. There are 100,000 merchants
in China with 1600 billion dollar transaction which is 1/3 of the global market. That huge amount of base still cannot stop the speed rate of cross-border e-commerce’s increasing. According to the data of Accenture, in 2020 the total consumption of the global market will reach 10000 billion dollar with 2 billion consumers which is 1/4 of the global population. This number will still be increased by 30% per year. There will be hundred thousands of new merchants join the market which make the market be more energetic and competitive.

Though the need and development of cross-border market is rapidly increasing, buyers and sellers may not build trust of each other because of the different language and culture which needs influential centralized platform to do credit assurance. Cross-border transportation and double check of customs and CIQ cause long process and complicated links of the whole transaction. The process of different currency change and settlement of exchange reduce the effective of the whole transaction, expensive supply chain and middleman cost which occupy most of commodity’s cost. The lack of cross-border after-sales makes consumer feel even worse.

Problems of cross-border e-commerce merchants faced:

- Opaque source of commodity
- Long process of cross-border transportation
- Complicated process of logistics
Unstable customs clearance rules
Foreign exchange settlement of different currency
Lack of cross-border after-sales service
Expensive third party cost

Problems of cross-border e-commerce consumer faced:
Credit of merchant, no origin assurance
Doubt if the product is real, if the quality is good enough
The loss, damage, delay by cross-border logistics
Extra economic loss or returning caused by customs clearance or inspection
Customers’ rejection, changing or returning, after-sales warranty extension

If those problems can be solved, the trading volume will be increased vastly, the global supply chain system will be optimized, the merchants can offer better service letting global consumers get cheaper and better commodity.

Goal

Global cross-border e-commerce service can be built based on blockchain which makes logistics, information and fund flows be transparency that forms the cross-border e-commerce service system.

(picture)

Based on blockchain system covering global cross-border e-commerce
merchants, industry chain and consumers, we build decentralized application for providing the service to the whole cross-border e-commerce industry such as insurance, traceability, payment, logistics, warehousing, finance, after-sales service and so on. Through building centralized cross-border e-commerce service blockchain, the whole industry’s development will be promoted and operating efficiency will be optimized. That will be the important part of global cross-border e-commerce infrastructure in the future.

Plan

Decentration: Traditional e-commerce model is highly centralized whatever to merchants or consumer. Centralization let the platform own absolutely voice while based on decentralized mechanism, middle stages cost can be reduced by letting merchants and consumers trade directly.

Tamper-resistant: Through distributed ledger model, each transaction is tamper-resistant. Each player in the supply chain can trust each other by blockchain meanwhile credit system can be accumulated by each player’s transaction behaviour which can reduce credit risk of cross-border transaction.

Open and Transparency: Due to the publicly operation of service and transaction on the block chain, all links, process can be checked clearly and supply chain’s problems can also be found that achieve effective optimization and reducing of middle cost. Consumers can get higher cost
performance of service and product.

Traceability: The whole process of commodity transition can be traced, anti-fake of commodity can be realized, origin assurance, period of validity assurance. If there are any problems happens, source can be found quickly

Smart Contract: Through smart contract, auto insurance of commodity can be realized by preestablishing the rules. If there are any problems occur, claims can be finished automatically which can dispe consumer’s misgivings, increase shopping experience and reduce merchants’ after-sales cost.

Token economy system: Problems of different currency payment, settlement and service charge can be solved perfectly by issuing token which is the most perfect solution plan of cross-border payment. Now there are many cross-border e-commerce merchants support the payment of bit-coin which will be the trend of the whole cross-border payment and settlement.

Economic mechanism

eChain’s goal is to build a open and flexible global cross-border e-commerce blockchain system to accelerate the application of blockchain in cross-border e-commerce industry. Economic mechanism will be set around this target.
Roles

Participant in eChain

- Service Provider: provide application function or service.
- User: consumers and merchants use the application/service
- Miner: provide service for mining

eCoin Token

eCoin token is eChain’s digital token and asset. eCoin is the university currency for inside. Consumer can get eChain blockchain business application by using eCoin.

Ways to get token

- Initial release: Release to eligible investor
- Mining: Get award by providing hashrate
- Award by foundation: Award for contributors of open source community
- Developer/Facilitator: Award for the developer/facilitator of dApp or service.
- Transaction: Facilitator/Developer of business application can provide service such as insurance, transfer, traceability and so on to the cross-border e-commerce merchants, supply chain and users on the
eChain to charge commission as income.

**Consensus Mechanism**

**PoW and PoS Consensus Mechanism**

There are two major mechanisms in the industry:

- **PoW**: Tokens and account right will be allocated by workload in PoW mechanisms. The victor of the competition will get account right and bit-coin of this area. More bit-coin can be earned by higher hashrate and longer mining time.

- **PoS**: Bookkeeping right is confirmed by time and amount of the coin you hold in PoS mechanism. Normally it is calculated by coin age (one coin hold for on day is counted as a coin age, like 100 coins hold for 30 days is counted as 3000 coin age). Under PoS mechanism, his coin age will be cleared to 0 if the bookkeeper find a PoS block. Whenever 365 coin age is cleared, the bookkeeper can get 0.05 coin as profit.(can be regarded as 5% interest)

**Advantages and disadvantages of PoW**

Bit-coin, Ethereum and some other blockchain products represent the PoW mechanism. Credit problems of coins can be solved by workload. Algorithm is easy. Nodes consensus can be realized without extra information. Cost of breaking the system is too large(51% of computing
There are still some disadvantages:

1. Computing power is concentrated on a few pools because of the ASIC. For example, the Ghash pool owned over 50% of computing power.
2. Miners own decisions while coin holder cannot participate in it.
3. Transaction can be processed in tens per second because of the long time consensus.

Advantages and disadvantages of PoS

Peercoin, Novacoin and some other blockchain products represent the PoS mechanism. Under this mechanism, whoever holds the coins can get the block data without any pools which will not cause the concentration. Meanwhile only people who have the coins can participate in mining and maintaining the security of the Internet without the problems of interests dislocation. Transaction can be completed over hundreds of times per second without huge energy cost. There are still some problems of PoS mechanism:

1. Profits are too concentrated. People own more coins get more profits while people own less coins will be loss money even operating clients. Rich users will be own more coins while retail investors will not participate in it which will cause the centralized of the digital coins.
2. PoS mechanism encourages accumulating coins which is good for speculator and bad for the coins. People will accumulate the coins
because of the speculation and fluctuation which will cause the
deflationary spiral and the death of the coins.

eChain’s PoS + PoW Consensus Mechanism

eChain adopt innovative PoS + PoW consensus mechanism and combine
the advantages of both and remove the disadvantages.

1. Combination mining by PoW and PoS. 50% of blocks will be
   produced by PoW and another 50% will be produced by PoS. The
   blocks produced by PoW have to be verified by PoS.

2. People who hold the eCoin can participate in the voting and eChain
   communities’ important decisions. Coin holders and miners can both
   influence the preprogramming of update. If the update is accepted
   extensively, the chain will split ends automatically to update without
   developer.

Advantages of PoS+PoW mechanism

1. Advantages of using PoW in eChain:
   1. eCoin price is ensured by the workload on the eChain

2. Mostly miners will not sell digital currency below the cost. With the
   increasingly computing power, increasingly mining cost will increase
   the coin price and restrict the centralized problems of digital currency
   in PoS mechanism.

Advantages of using PoS in eChain:
1. Coin holders and miners can vote to the schedule/proposal on the eChain. Digital currency holders can participate in important decisions without buying expensive mill.

2. Provide a counterbalance mechanism for unqualified miners. If the miner mismatches consensus rules, it can be stopped if most of coin holders say no.

3. Let retail investors look at long term development of the project. Retail investors are more willing to put the coins in the wallet for PoS instead of putting coins in the exchange. That makes eChain be healthier and people will put more attentions on technology and application instead of just focusing on short-term price fluctuation.

Advantages of the combination of two mechanism:

- Broadly DAO --- Decentralize autonomous organizations can be run high efficiently by allocating the voting percentage by coin hold numbers and workload. PoW miners and PoS miners can both participate into the consensus system and play important roles in it.

- PoW can be taken effect by the verification of PoS. PoW miners cannot change the internet rules by themselves which can defend the attack of 51%.

- PoS and PoW combination mining: the rest of the computing power of PoW can be applied into the calculation of reality problems such as big data and AI which can use the energy high effectively.
PoW mining algorithm

Introduction of major mining algorithm

SHA256 algorithm is applied to the bit-coin. The algorithm is designed by NSA and has passed the security test since the birth of bit-coin. Computing power is concentrated in a few pools because of the ASIC which goes against the decentralized design concept “one CPU one ticket” of Satoshi Nakamoto. Scrypt algorithm is applied to the lite-coin. It used to be a property graphics card mining algorithm because of the good resistance to ASIC by consuming a lot of memory. The transparency and DOF of graphics card decides the fair of the Scrypt coin released and a more property value of the Scrypt coin which is the original intention of the developer. Lite-coin once had a large drop because of the Gridseed mill. Meanwhile there is too much criticizing of the mining algorithm because of the energy wasting. A new algorithm needs to be found to protect blockchain security and create value of other parts. The core ideology of prime-coin algorithm invented by Sunny King is to find big prime number while calculating Hash. Prime number on the number axis is not only rare but also distributed irregular. Prime number can be found on the number axis by blind searching. These are also the characteristics of PoW. The difficulty of finding prime number is not liner increment and the time is unpredictable which cannot meet the needs of blockchain.
PoW algorithm of Ethereum is Dagger-Hashimoto, the newest version is Ethash. Two targets are cleared: resistance of mill and fast-verified client. It has positive correlation with the size and the bandwidth of memory instead of the correlation with CPU while mining.

**Equihash Algorithm**

The mining mechanism of eChain is Equihash algorithm. The algorithm can prevent the ASIC. The computing power depends on the memory size and graphics performance which confirms to the solution of big data and AI calculation by the computing power of the pools. Equihash algorithm is invented by Alex Biryukov and Dmirty Khovratovich. The theory founds on a famous computer science and cryptology problem ---Generalized birthday paradox. In simple terms, if there are 23 or over people in a room, the probability that at least two people’s birthday are the same should be over 50% which is not the first thoughts of most people.

In bit-coin mining algorithm, block head’s parameter can be calculated twice by SHA256 and a 256 bit character string will be obtained. The character string will be compared to an expected target and if it is smaller than the target, mining is success.

\[ SHA256(SHA256(block\ head)) < target \]

Or the whole block head (modify random number or Merkle tree) will repeat the calculation again.
In Equihash mining algorithm of eChain, after a block head is established, eChain is not judging a inequality but inputting by block head and changing the mining problems into generalized birthday paradox. What described in computer language is:

(picture)

There is an Equihash Generator in Equihash algorithm of eChain. Equihash Generator is to map an input and an index to a n bit output. $i \in \{1...N\}$, block head and integer n, k are inputs and the value of n, k are decided by the official, through

$$Xi = EquihashGen_{n,k}(\text{block head}, i)$$

N “n bit character string” can be generated and combined as a list L. What needs to be calculated is to find $2^k$ identical elements in the list L which means to find $2^k$ collision elements.

For solving “generalized birthday paradox”, many famous algorithm is proposed in Math and the algorithm of cryptographers Wagner is one of these. By the optimizing of Alex Biryukov and Dmiry Khovratovich, an algorithm called “OptimisedSolve” appears to solve the problems above. What eChain use is this solution. Better algorithm may appear in the future, eChain’s team will update mill programme in time to ensure a larger mining probability than others.

**Advantages of eChain Equihash algorithm**

Equihash algorithm has been applied in some famous projects such as
Zcash and Bitcoin Nano. The advantages are:

1. Computing power depends on the memory size which can defend ASIC and is good to graphics mining.
2. The algorithm is fair. It is hard for people or organization to optimize it secretly because the generalized birthday paradox is widely studied.
3. Equihash algorithm is easy to be verified which is important to realize the light client on the eChain.

To eChain, half of the block will be mined by PoS because of the PoS+PoW consensus mechanism and the rest computing will be used to solve the sub chain of big data and AI on the eChain platform. The nodes conform to Equihash algorithm also conform to big data memory problem and AI neural network operation. Under the big data, a mining node is a worker of Spark distributed operation while it is a convolution and calculation neuron in AI neural network.

Miners have options. Except the existed mining software, nodes can be calculated by loading eChain. When tasks are calculated by big data or AI, each node can participate in it. If a node wins the bid, computing power will be transferred from mining to the tasks of eChain computing platform, datares and deep learning model can be generated through node computing. As rewards, miners will get eCoin. Once the tasks are completed, eChain AI computing node will be existed and miners will keep mining.
PoS Algorithm

Casper algorithm of Ethereum is used by eChain as PoS algorithm. Casper requires the identifier to bet to the consensus results with most of the deposits. The identifier must guess which block will others bet and also bet to this block. If it is right, they can take back the deposits and transaction fee maybe with a few new released tokens. If the bet does not reach a consensus, they can take back part of the deposits. After several rounds, the distribution of identifiers’ bet will be convergence. Besides if the identifier change the bet obviously like bet one block with high win rate, then changed to another block also with high win rate, the identifier will be punished. This rule ensure the identifier only bet when he is pretty sure the others also think one block may have high win-rate.

The wager of computing power in PoW will be increased linearly by the confirmation number. While in the Casper identifier can increase the bet percentage by coordination to make consensus reach safest quickly. Identifiers will bet independently on each candidate of each height and release a win-rate for each block. Through repeating bet, there will be a unique winning block to each identifier of each block. This process also decides the order of trade execution. If an identifier releases the sum of distributed probability is larger than 100% or less than 0% or to a invalid block with more than 0% in one height, Casper will confiscate all his deposits.
Open Source Community

eChain’s team has many years experience in cross-border e-commerce industry. We have team members in America, Australia, Europe, Asia and hundreds of partner in global cross-border e-commerce industry including e-commerce, logistics, express, transfer, warehousing, customs clearance, ERP, technical development department and so on and nearly a thousand more partner increasing per year. Those partner will be access to eChain as a node which will build a strong eChain open source community. Members in the community can provide or accept service through releasing toke award to developer or facilitator. They will have enough impetus to develop dApp for providing a more attractive service to consumers so that a decentralized community ecosystem can be built based on the blockchain.

Technical Points

Big data on Chain

The core of insurance is actuarial pricing. The difficulty of cross-border e-commerce’s actuarial is too many risk points and opaque information. While data on eChain is all open and transparent, insurer can control the probability of risk accurately and real-time. Through off chain computing, accumulated transaction data in open ledger can be transplanted to the
high-effective big data to compute, operate, analyse and predict which can make the best price and reduce the insurer’s probability of loss. While those all information is real-time and transparent to users which can raise acceptable and conversion rate of insurance service drastically.

1. Security, reliability and transparency of data can be ensured by the storage of eChain decentralized blockchain. Once data is stored into blockchain, data cannot be changed by third party, without central fault point and protected by encryption techniques which can prevent hacker, attack and fraudulent activity. Based on Ethereum, eChain will realize a set of blockchain data storage technology such as algorithm of creating unique ID, digital ownership, data query, API gateway and so on which can increase the flexibility of data management and value of circulation.

2. Off Chain computing ensure performance and real-time. eChain big data platform will transplant accumulated transaction data in open ledger into big data computing framework to operate, analyse and predict which can make the best price and reduce the insurer’s probability of loss. The whole big data framework bases on stream computing using Kafka real-time message queue and self-developed adaptor to synchronize online and offline data and stream computing engine like Samza, Spark streaming to ensure big data computing to ensure second level response speed and in-time feedback of price
fluctuation to consumers. Off Chain’s computation will also be stored on the chain. Just like the first point, the security, reliability and transparency of information can be ensured which can raise acceptable and conversion rate of insurance service drastically.

3. Data transaction can be solved through smart contract. Enterprises of cross-border e-commerce may need the data of each other to proceed more profound analyzation. Signing the smart contract guarantees authority management, timeliness, tradability of open data which let if the data owners have the authority of sharing the data and breaks the dissymmetry of traditional centralized information letting the value of data flow on the blockchain. eChain platform can provide smart contract template library aimed to different situation such as ownership management, ownership transfer, authorization statement, multiple authorization, status data embedding, data association and so on. Furthermore is studying subchain technology to solve authorization limit of share and trade of enterprise-class data.

(picture)

AI on Chain

In insurance loss assessment, the difficulty is to check a mass of claim case one by one, determine damaged condition of commodities and ensure the loss of users such as can damaged, leaking, packing damaged
of milk powder. Plenty of people are needed to deal with these things, but the price and insurance premium are low for each commodity which is unworthy for too much labor cost. Through cross-chain technology, blockchain AI under vertical can be used and provided to proceed machine learning by data of loss assessment experience and damaged commodities picture on the whole chain and raise recognition rate and accuracy of AI loss assessment by training which will realize auto loss assessment of claims and paying the loss to consumer by app. The training algorithm of AI loss assessment engine can also be the mining algorithm of AI on Chain but compared to traditional bit-coin mining algorithm, AI on Chain can be distributed computed on the blockchain by adopting AI underlying algorithm which solve the valuable computing problems by using real world electric energy effectively.

(picture)

AI ecosystem’s establishment bases on three points: annotated data set, machine learning model and computing power. eChain provide a new way to connect the supply by using the speciality of blockchain.

1. The AI model trained by more massive and comprehensive data set will be more accurate. Decentralized data control will promote data sharing which will be more effective in data verification and reduce the bad data in the training data and the probability of being tampered. Data set itself can also be traded as IP asset. Blockchain as a kind of
database has three prominent feature: decentralized, data invariance, inherent asset and trade attributes which meet the demand very much. In cross-border e-commerce, data set may be collected from customs, wharf, insurance audit department, personal user and so on. Through IPFS file system and IPDB meta data, eChain create strong expansibility blockchain storage which meets write in, read and check requirements of plenty of users. Through token award mechanism, data sharing can be driven. Meanwhile through smart contract, the transaction of data set asset can be launched.

2. Machine learning model and parameter adjustment are the cores and also the links which cost most workload for algorithm engineer. Famous companies like Google and Netflix are trying to find better model and talents by paying big bonuses for model competition. Like the data set, machine learning model is also a kind of data assets which can be stored by eChain blockchain ensuring the security of the data and model transacted by the smart contract. To cross-border e-commerce, each link of the transaction including company and personal has specific business that can be developed as machine learning model to manage data assets through eChain blockchain.

3. AI’s hashrate problems can be solved by using plenty of decentralized node computing. For example, the training algorithm of AI loss assessment engine can also be mining algorithm for AI on Chain.
Compared to traditional bit-coin mining algorithm, AI on Chain can be distributed computed on the blockchain by adopting AI underlying algorithm which solve the valuable computing problems by using real world electric energy effectively. The mining software of eChain can also load eChain AI computing node besides the existing mining function. If a node wins the bid, hashrate will be transferred from mining to the tasks of eChain computing platform, datares and deep learning model can be generated through node computing. As rewards, miners will get eCoin. Once the technique is proven, nodes of blockchain will be trained as neuronal nodes in AI multilayer neural network to complete larger deep learning.

Application

dAppMatrix Application

eChain Business Application:

- eSure - Cross-border E-commerce Insurance
- eP2P - Customer Mutual Fund
- eTrace - Traceable Cross-border E-commerce
- eLogistics - Cross-border E-commerce Logistics
ePay - Cross-border E-commerce Payment

New business application and service can be developed by eChain blockchain provided by cross-border e-commerce facilitator and developer. Customers and merchants can use the services they need in dAppMatrix developed by eChain foundation or community with some rewards.

These applications can be released on both eChain and other blockchains. Applications of visit and integration can be built by the dApp on eChain because of the cross-chain characteristic.

As a dApp store for cross-border e-commerce, dAppMatrix will be built as an open ecosystem by data exchange interface and cross-chain technology such as asset businesses and IOT blockchains.

For example: eSure and eTrack applied in cross-border e-commerce

eTrack can check the logistic and eSure can settle claims automatically when things happened.

AI on Chain founds on AI technology and provides AI-as-a-Service by the distributed characteristic of blockchains.

How the dApps be more efficient?

When eSure needs AI to support automatic image recognition and loss assessment, computing tasks will be transferred to other blockchains by cross-chain synergy.
eSure in cross-border insurance

eSure is a dApp founded on eChain for providing blockchain insurance service to cross-border e-commerce.

According to the Accenture report, the insurance premium of cross-border e-commerce will reach 200 billion dollars.

Problems

- Existing system cannot support high-volume, petty-amount, short-term and high-frequency transaction.
- Inexecutable loss assessment because of complicated process
- Multi-currency of premiums and claims
- Uncontrollable fraud and moral hazard

eSure will provide cross-border insurance service on the eChain and accept premiums and claims by eCoin. eSure can simplify the process by automatic insuring and claiming.

1. Reduce the premium cost by decentralization

- Information synchronization and sharing of global merchants can be ensured. Merchants’ premiums and commission can be reduced by insuring and claiming on the eChain independently instead of the third party.

2. Reduce the insurance fraud and the claim infiltration by DLT - Distributed Ledger Technology

   Risk of information falsification can be avoided by DLT. DLT ensures
the information’s reliability of commodity, logistics, customs clearance and payment on the eChain so that fraud during the transaction can be completely eradicated. Insurance fraud and claim infiltration caused by opaque information flow can be avoided.

3. Automatic claim by smart contract

Insurance products can be written in eChain by eSure founded on the commitment of smart contract’s digital definition. eChain will charge some tokens as deposit. When claims are applied on the chain, the claims will be paid automatically from the deposit after the result from AI loss assessment technology.

(picture)


Settlement of multi-token and multi-currency is necessary because eChain is a cross-border e-commerce platform. Multi-chain technology can support the payment of different tokens from different countries. Claim can be paid by different tokens to merchants in different countries.

5. Credit insurance will be applied into cross-border e-commerce area by blockchain’s tamper-resistant and timestamp.

In cross-border e-commerce area, the big problem of the industry is whether commodities are real. Fraudulent delivery, falsified commodities and logistics information and fakes are the ways
speculators use. All commodities can be labeled by eChain’s characteristic. Conversion rate of cross-border e-commerce policies can be increased by applying credit insurance as smart contract.

6. More insurance services can be built by collaborating with other dApps on the eChain.

- Traceability: origin insurance, shipping origin insurance
- Anti-fake: anti-fake insurance
- Security of supply chain: quality insurance
- Personal asset management: Personal asset can be insured any time anywhere by the management of asset and traceability.

eSure will be developed by DSB Technologies. DSB is a world-leading cross-border insurance technology company and has completed a cross-border e-commerce insurance eco-circle including insurance companies, merchants, customers and supply chain covering millions of customers and hundreds of cross-border e-commerce industry chain nodes. Policies will be over 10 million in 2018.06 with 10 million users and over 1000 merchants.

eTrack in cross-border e-commerce

In allusion to the specificity of commodities’ traceability, the write in of the data must be authorized and each side should trust each other ensuring the authority of the write in data. On the other hand choosing to connect to eChain platform’s data sub-chain can ensure the information to be
open and transparent which can be read by anyone. Furthermore win-win will be achieved by collaborating with different quality inspection organizations.

The full traceability process of an international commodity includes 3D appearance information, basic information of commodities, information of customs record and the information from quality inspection agency and so on. According to those information, eTrace can establish traceability model to judge what kind of commodities need to do traceability, what kind of indicators need to be used for the traceability and support white list for letting some commodities or merchants skip traceability setting.

(picture)

eTrack’s web service can support both app in mobile terminal and commodities’ basic traceability information’s write-in and background configuration. Meanwhile open API will be provided to manufacturer for secondary development. Traceability configuration can be changed flexible online, lest business decision has to be changed by releasing each time. For example, how to use block chain technology to identify the origin of an orange and offer traceability insurance to it? We use a scanister to scan the exterior of this orange by 3D scanning technology and eTrace traceability application to establish the 3D eigenvalue of it. This value will be stored into the block chain network through eTrace dApp(Once the value is stored into the network, it cannot be falsified).
Meanwhile this orange will be allotted a corresponding ID which is a unique symbol on the eChain. After a merchant send the orange to a consumer by physical distribution or any other ways, the consumer can check the eigenvalue of this orange by using eTrace App to take a photo. Through the blockchain, consumers can check if it matches the eigenvalue of the merchant. If the matching rate is lower than a specific value, the orange is considered to be replaced during the transportation. You can get the payment of traceability insurance by using eSure which is an insurance App. If the matching rate is equal or greater than the specific value, it is considered that the orange may be squeezed during the transportation which cause the damage of the orange. It is concluded as risk of breakage and you can get the payment based on how badly the orange was damaged. If the orange was damaged so bad which cannot even be compared with the eigenvalue, consumers can visit AI on Chain through chain technology to do the judgement by AI technology. If the situation belongs to the breakage, you can get the full payment of risk of breakage. This realizes how to trace the origin of the orange and the best application of insurance and AI technology into the block chain.

**Token Released**

**How to release**

2 billion eCoins totally
Corner stone: 10%
Private placement: 35%
Team: 20%
Pool: 15%
Ecology: 20%

Uses

Foundation frame: 20%
dApp development: 20%
Security: 10%
Operation: 10%
Marketing: 10%
Legality: 5%
Investing: 10%
License: 15%

Roadmap

First stage
2016 Study of blockchain infrastructure
2017 Problems are found by the research of cross-border e-commerce market and insurance industry. During the exploration and analysis of new tech and block-chain framework, the market vacancy is found. The
eChain project get started.

**Second stage**

2018 Q1 establishment of eChain foundation; cornerstone investment launching

2018 Q2 Project started

2018 Q4 eChain infrastructure development completed

2019 Q1 eChain 1.0 released

**Third stage**

2019 Q2 complete the first dApp: eSure

2019 Q3 1000+ eSure nodes, 10 million transactions monthly

**Forth stage**

eChain community construction

**Team Introduction**

**Core Team**

- Byron, CEO, worked for Ping An Insurance Company of China and IBM, was responsible for technology R&D and consulting, the co-founder of ShenPu Technology Company for providing fintech R&D service to insurance, bank and the third party payment platform, manages a technical team with hundreds of people, leads the company listed on NEEQ, starts to study blockchain in 2015 and founds DSB Tech with two rounds and 10 millions of financing in 2016 leading
the innovation model of global e-commerce insurance.

- Louisa, COO, was the consultant of IBM and EY insurance department, has provided prospective business, technical solutions to global insurance companies and landing project to multiple core systems, inaugurator of the cross-border e-commerce insurance and the AI pricing engine of cross-border insurance, and is good at combining insurance expertise with new technology and applying it into cross-border ecoinsurance.

- Steven, CMO, worked for Paypal and Bizark, was responsible for the expansion of cross-border e-commerce market and cooperation channels, has extensive source of cross-border e-commerce market and rich experience of market expansion and management.

- Jason, CTO, chief software engineer of Rovi, Undertone, Pandora and Airbnb, was responsible for algorithm study, internet and software development project management, enters blockchain area in 2015 and has very rich experience in blockchain and digital cryptocurrency technology.

- Bian, leader of Ping An’s new technical framework, devotes to the new technical framework of Australia senior high school financial insurance system application since 2007, is proficient in the framework and process of financial insurance analysis and prediction of risk management under the blockchain platform.
Kane, technical consultant, was the consultant of Telstra and the biggest Australia insurance agent platform: Iselect, has rich experience of overseas insurance agent and information analysis system.

Robin, blockchain engineer, tech geek, full stack engineer, joins a start up internet company after graduation, builds a whole set of technique framework alone, acts R&D engineer since entering blockchain area in 2016.

Cornerstone Investors

PreAngel

Albatross Venture

Huashan Capital

Jlab

Consultant

Lijie Wang --- PreAngel Founder

Jian Sun --- Jlab Founding Partner

Albatross Venture

Primary Partners

Developer

DSB Technology, leader and founder of global e-commerce insurance and
developer of eSure which will be the first dApp on the eChain. Development of other dApps and open source community can be accelerated by connecting ten thousands of global e-commerce merchants into eChain.

Industry Partner

Excerpts:
(picture)

**eChain Foundation**

Foundation

eChain foundation(for short as “foundation”) is established in Singapore, a legal and non-profit organizations. The foundation devotes to the development and research of digital currency, blockchain underlying technology, smart contract and consensus algorithm and the operation of eChain community. Any person or organization can join eChain open community as a member. Foundation will formulate rules to manage the situation of raising cryptocurrency. Sustainability, effective of management and security of raising fund. Foundation is composed by decision committee, financial affairs and market and public relations committee.
Decision committee

Decision committee is composed by foundation chairman, core developer and private placement member. Tenure is 2 years. Any decisions can be passed only by the agreement of more 50% people.

What decision committee needs to decide:

- Modify the management structure of foundation
- Appoint and dismiss executive champion and principal of other functions.
- Make important decisions
- Appoint and dismiss of the member of decision committee such as violating responsibility range, law, regulations, resign voluntarily and so on.

Financial Affairs

Responsible for the operation and audit of raising fund, salary management of developer, daily cost audit and so on. Daily financial affairs is outsourcing to the third party.

Market and public relations committee

Responsible for the management of announcement. If foundation’s reputation is influenced, market and public committee will response after the audit inside.
Risk statement and disclaimer

This white paper is the introduction of only eChain and eCoin formulated by the initiator of foundation and exchange which will not be the professional idea of investment and eCoin. The white paper will not guarantee anything to private placement and exchange investors and the legality of the description. The white paper will not be any parts of the agreement of the investment of exchange or eCoin. The information and analysis in the white paper cannot be the advice of investment. Readers should decide the investment by themselves according to the feasibility, rationality and legality described in the white paper. The white paper will not offer any trade or invitation to investors and formulates any contracts and promises.

If the intended investors decide to invest it, they should accept the risk and result of their own decisions. The initiators of the foundation will not assume any loss caused by eChain project, including but not limited to:

- Economy loss caused by users’ trading operation
- Any mistakes, negligence and inaccurate information caused by personal understanding
- Loss by personal blockchain assets transaction and any action resulting from this,

eCoin tokens is encrypted tokens used by the blockchain platform. eCoin
is not an investment. We do not guarantee the appreciation of the eCoin. It may even be devalued in some situation. Users who cannot use eCoin correctly may lose the right of using eCoin and even lose their eCoin. eCoin is not a ownership. Control the eCoins does not represent the ownership of the foundation or eChain. eCoin will not be awarded the right of any individual, any participation or any rights of foundation and exchange.

Initiator of foundation and exchange should tell the risk of eCoin transaction. Once investors participate into the investment. It is considered that the investors know the risk of investment:

Technique security

Many blockchain platforms are stopped because of the security problems. We pay much attention to the security. Still 100% security does not exist, such as loss caused by force majeure. We promise we will do our best to ensure the technique security of the platform.

Competition

Competition in blockchain area is fierce. Thousands of teams are planning to develop blockchain platform. The competition will be cruel. eChain may be beaten or even be weeded out. The foundation will do its best to expand business and develop the platform.
Law

Most of countries in the world have law blank and uncertainty of the industry law because of the creative of cryptocurrency. The possibility of being judged as illegal exists.

Anything in the white paper will not consists the introduction of investment attracting. The document is not formulated under any law of protecting the investors and also not taken charge of any laws of that.

There is some predictable information in the white paper. These information may involve unknown risk which may lead to the difference of the result with the predicted. The white paper is the main information source of INSERTECT foundation. We will keep updating the information of the white paper and the information in the white paper will be translated into other languages and used during the communication of the partners. The information may be lost or damaged during the translation and communication. It is subject to the latest version of the white paper when there are conflicts of other translation version with the white paper.

The participants of eCoin have to accept “eCoin released terms and conditions”. As the participants of eCoin, you need to state and ensure:

1) You need to have whole right or authority of participating the issue of the eCoin.

2) You are not the citizen, resident or permanent resident of America,
Singapore and Mainland China and can not represent them to participate in the issue of the eCoin

3) Token crowdfunding is not defined as securities issuance in the local laws of where you live.

4) You have read and understood the white paper and risk statement, are able to and willing to accept and participate the risk of eCoin issuance.

5) You participate into eCoin issuance is to become the early provider and supporter.

6) Understand and accept eCoin issuance under the Singapore’s law system which is developing and improving.