DRV Eco-Platform White Paper

Driving the world - DRV Team

Contents

Chapter I. Project Background

1.1 Blockchain Brings about Great Changes for Digital Economy

In 2008, Satoshi Nakamoto published a paper titled *Bitcoin: A Paer to Peer Electronic Cash System* in which the concept of blockchain was proposed for the first time, established the technical base for encrypted transmission of transaction information, and structured the Bitcoin network.As the trust infrastructure in the non-trusted environment, blockchain reshapes the social relationship and the organizational structure, and creates a new decentralized economic mode. Thanks to blockchain system, people are able to break through the regional limitation to have mass collaboration and create abundant products and services, even though they do not trust each other. The digital economy will also become much fairer and more transparent.

Transaction Process of Blockchain
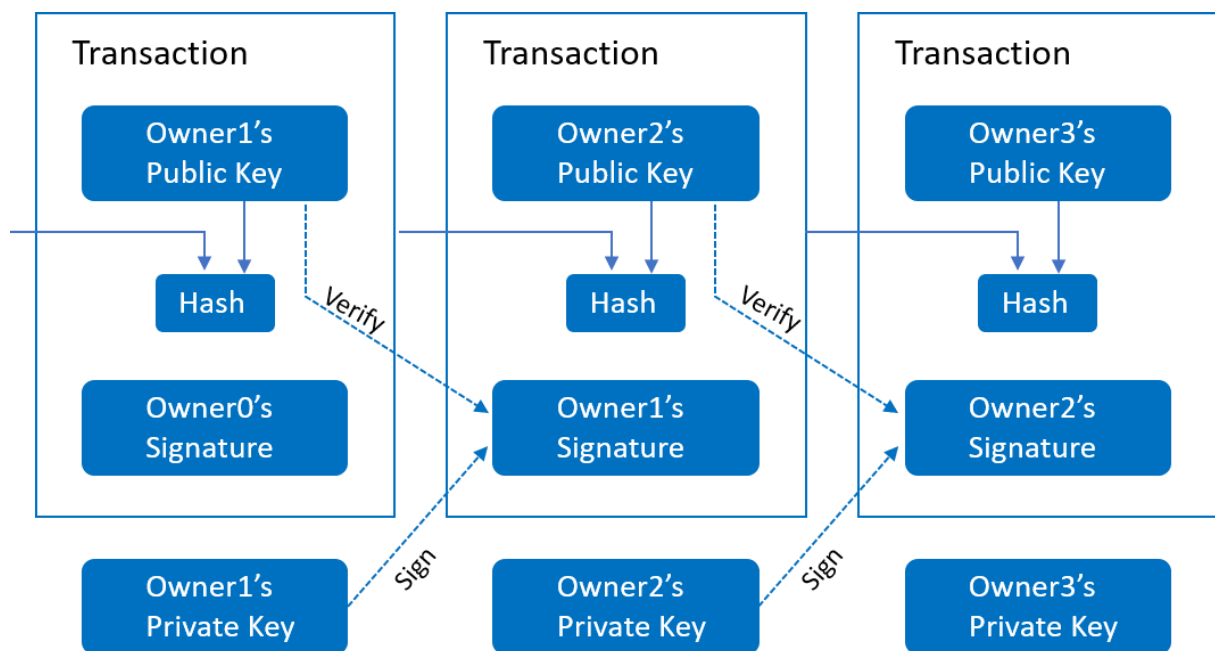
On January 3, 2009, the Genesis block of Bitcoin was dug out, and the first Bitcoin transfer transaction took place in the 170th block. Since then, the Bitcoin network has flourished as a point-to-point value exchange network. In spite of the crisis it underwent, the Bitcoin network has developed into a point-to-point payment network worth over ten billion dollars today from zero. After that, it took a long time for people to extract the concept of

blockchain.

The blockchain economy has a quite prosperous future. According to the report released by Reportbuyer, an industrial intelligence company, the size of global blockchain market will rise to 7.6837 billion dollars in 2022 from 411.5 million dollars in 2017, with the compound annual growth rate up to 79.6%. It is predicted by Gartner, a market research firm, that by 2020 the size of blockchain-based business will reach 10 trillion dollars or so.

Solving the problems of valued transmission and decentralization, blockchain is praised as the most subversive technological innovation since the Internet was invented, and even the next generation of "value Internet". Currently, more and more enterprises, after perceiving the powerful energy contained in the blockchain, are actively arranging the industrial layout, thus enabling blockchain to find commercial application in more and more industries and fields.

1.2 Online Shopping Becomes A New Fashion in the World

Since Amazon and eBay were founded in America in 1995, e-commerce, an emerging economic activity which carries out commodity and service transactions based on Internet, has rapidly gained enormous momentum worldwide. In recent years, online shopping has become a shopping habit in the world, with the increase of global per capita purchasing power, the rise of Internet popularization rate, the improvement of the third-party payment software and the perfection of supporting facilities such as logistics.

Diagram 1: 2016-2021 Global Online Retail Sales and Prediction (Unit: 100-million dollars)
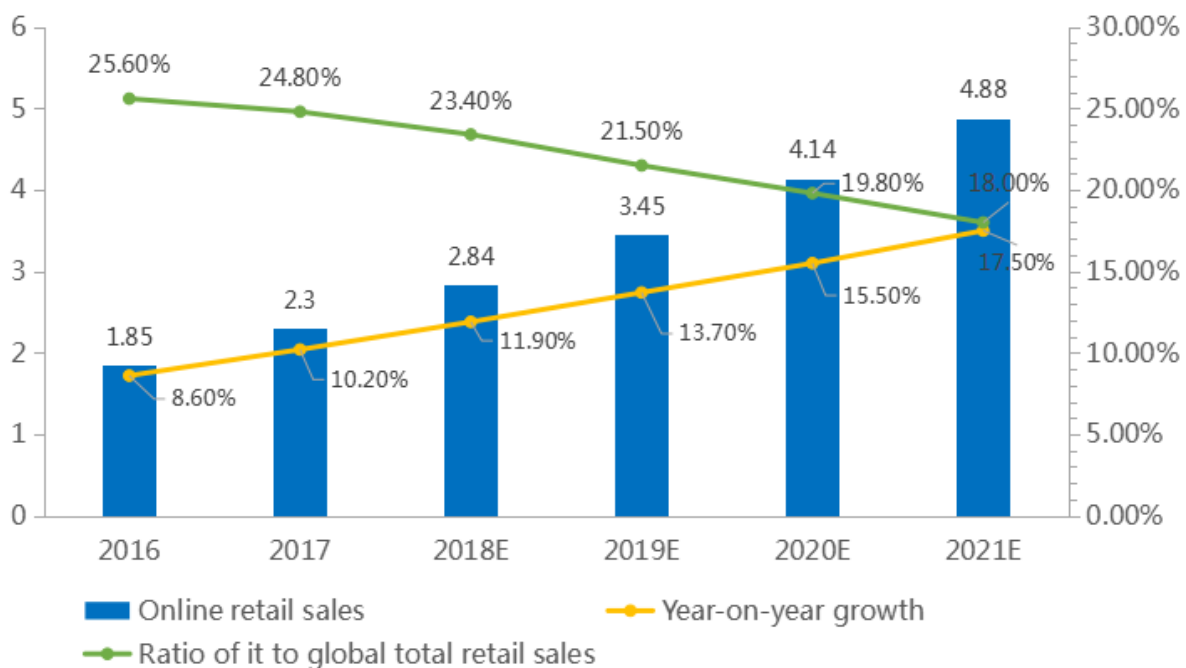
Data shows that in 2017, the global online retail sales came to 2.304 trillion dollars, up 24.8% from 2016, while the global retail sales was about 22.640 trillion dollars, up 5.8% from 2016. The proportion of online retail sales in global retail sales rose to 10.2% from 8.6% in 2016.

1.3 The Cross-border E-commerce Market Gains A Robust Growth

The cross-border e-commerce is a kind of international business activity that transaction bodies of different customs areas make a deal and make payment through the e-commerce platform, and deliver commodities through cross-border logistics to close the deal.

It is indicated by Accenture's research report that the cross-border e-commerce, especially B2C, is becoming increasingly active. From 2015 to 2020, the global B2C has its annual growth rate come to 27%. It is expected that by 2020, the size of cross-border e-commerce market will reach 994 billion dollars.

Based on Internet, the cross-border e-commerce builds up a free, open, universal and inclusive global trading platform to achieve the interconnection of the whole world. In the future, cross-border e-commerce will gradually take the place of traditional trading market to become the major form of trading in the world and the non-negligible new blue ocean for e-commerce enterprises.

1.4 Pain Points of Traditional Cross-border E-commerce Industry

1.4.1 High Cost

In the process of current cross-border payment and settlement, each remittance requires a lot of intermediate links which not only are time-consuming but also produce huge service charges. Hence, cost and efficiency are the bottleneck for cross-border remittance.

1.4.2 Trust Crisis

The traditional cross-border e-commerce platform adopts a centralized business mode, under which the business records of the sellers and the consumers can be forged, thus causing it very hard to have the compensation and fraud disputes settled. Due to numerous black-box operations and for a lack of public trust, the construction of ecological system becomes very slow.

1.4.3 Hard to Trace

On traditional platforms, misbranding, adulteration and so on happen very frequently. Due to technical limitations, it is very hard to trace products, thus making it almost impossible to protect the legal rights and interests of consumers.

1.4.4 Consumption Restriction

Traditional mode has a high threshold and lots of restrictions. Sharing between users cannot be achieved, thus lowering the circulation rate and frustrating users' interest in consumption.

1.4.5 Potential Safety Hazard

Consumers' personal data, consumption information and so on are liable to be attacked, thus causing potential risks.

1.4.6 Poor Effect

Traditional cross-border e-commerce platform has significantly weakened the marketing effect, and has greatly lowered users' expectation on the appreciation system.

1.5 Solving Idea of the Project

To solve the pain-point problems existing in the cross-border e-commerce industry, a safe, convenient and efficient decentralized cloud service platform is developed based on the

features of blockchain system such as high transparency, unalterable data and so on, as well as on the superior agricultural products in the central and eastern European countries, thus to enrich the application of blockchain technology and digital currency, promote their service in business and social development, and strengthen international trade.

Chapter II. DRV Solutions

2.1 What is DRV

DRV (DRIVER) is a decentralized and blockchain-based cross-border e-commerce eco-platform with distributed smart contract, which is initiated and operated by American's DRV Foundation. It is also a globalized and open blockchain ecosystem, with blockchain as its underlying technology. It is developed to solve the pain-point problems arising from industries relevant to cross-border e-commerce. It establishes big data about businesses and users for global superior products, traders, regulators, service providers and consumers, and provides trustworthy, incentive and commission-free ecological services for the cross-border e-commerce industry.
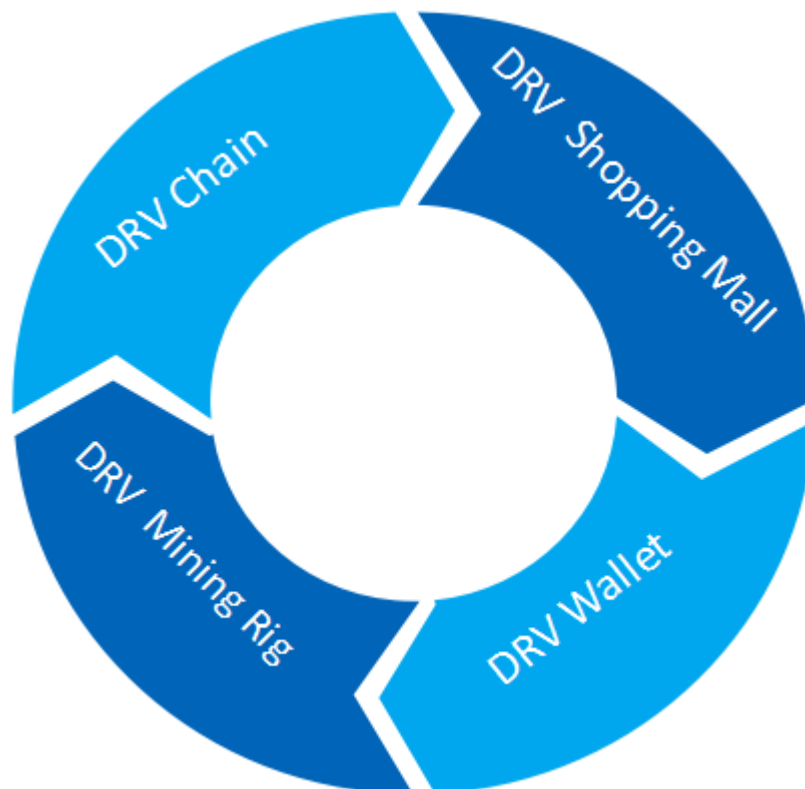
The DRV ecosystem is mainly made up by DRV Chain, DRV shopping mall, DRV Wallet and DRV mining rig. It aims to provide a safe, convenient and efficient decentralized cross-border e-commerce platform for the public. It works to link up the digital currency and the real world to make each one of you use digital assets to have cross-border online shopping and to promote the trade globalization and the business progress.

The platform opens its source code, which enables developers to establish and release

new projects, and promotes the application of blockchain technology in more fields. The projects function independently while cooperating with each, thus forming a powerful centripetal force. The project uses the incentive system of the blockchain to change the traditional mode of distribution and to share the business value between community members.

Based on the smart contract, DRV builds up a credit system, which significantly reduces the system cost. The reduced cost will then be returned to and benefit various participants in the DRV ecology (consumers, suppliers, service providers, logistics providers and so on). Secondly, people can judge whether the other party involved is reliable and credible. Each remark is created by the smart contract. Data is recorded in the block, which is authentic and unalterable. Ecological users and service providers' credit information will be recorded.

DRV will base itself on the whole world and abide by the existing laws and policies of countries, to cooperate with the payment institutions thus to provide compliance products and services.

2.2 Reasons for Designing DRV

We hope to combine the underlying blockchain technology, the value network thinking and the blockchain-based business operation system, to create a brand-new decentralized cross-border e-commerce ecosphere which can satisfy global people's overall and full-cycledemands.

In regard of the development of blockchain industry, we hope to create a new ecosystem for blockchain application. Blockchain faces many challenges no matter in technology or in industrial application, including:

●The current cross-border e-commerce industry has many problems, including high cost, trust crisis, hard traceability, consumption restriction, potential safety hazard, poor effect and so on.

● Lack of a new smart contract platform. For a lack of combination with the real world, Bitcoin ecology and Ethereum ecology fails to become widely used.

● The existing blockchain systems are highly closed. At present, most of the smart contracts only accept data on the chain as the triggering condition, and lack the interaction with the real world.

● The consensus mechanism itself is not flexible enough. The requirement on consensus mechanism varies with participant.

Therefore, we hope to structure a new blockchain ecosystem to make it as the Internet value delivery protocol for global cross-border e-commerce in the future, so as to promote the

development of global trade.

2.3 Vision of DRV

It is aimed to build DRV into the most influential decentralized cross-border e-commerce platform in the world, thus to achieve the free exchange, safe transaction and performance-based distribution of digital assets and the interconnection of the upstream industry and the downstream industry, and to enable all participants to use DRV to complete cross-border payment and credit rating. In addition, with DRV, developers can establish DApps (decentralized application) on the protocol.

DRV eco-platform will use DRV as the basic platform currency in circulation, and will support other mainstream virtual currencies, including ETH, BTC, BCH, LTC, ETC, EOS and XRP. The users may complete the automatic exchange with DRV in the DRV Wallet, and realize the instant real-time transfer.

Sustainable development: In order to achieve a sustainable development of DRV and to avoid the decentralized development structure and the differentiation of the underlying architecture, DRV Team will formulate a sound governance structure for the affairs such as general anecdotes, code management, financial management, compensation management and privileged operation range. What's more, the governance structure will continue to be updated with the development of the foundation and the community. Also, the monitoring and supervision functions, rule-making and change control management will be introduced.

2.4 Composition of DRV

2.4.1 DRV Mining Rig (Being Debugged)

(1) Profile of DRV Mining Rig

DRV mining rig, the exclusive minging tool of DRV, is equipped with the world-leading Intel chip for mining rig. DRV miners can get the contract which is automatically generated by the DRV developer, once they pass the verification by the community after buying the DRV mining rig. Once the contract comes into effect, miners can run the specific built-in algorithm to mine DRV chain.

DRV Mining Rig 1.0

(2) Advantages of DRV Mining Rig

●Professional and Efficient

DRV developer provides technical support and software and hardware optimization solutions, and provides and popularizes the community group customization hardware.

●Energy-saving and Environment-friendly

The mining rig, being energy-saving and environment-friendly, is quite suitable for home mining, and consumes only two kilowatt-hours of power in 24 hours.

(3) DRV Mining Rig Launch Program

A total of 3,500 mining rigs will be launched worldwide to compute DRV main chain. The launching program is

No.	Region	Launch Quantity (set)	Remark
1	Europe and America	500	Mining rigs are launched in batches, to ensure the stable running of the main chain.
2	Asian-Pacific region	3,000	Including countries in the South and North America such as Canada, America, Mexico, Peru, Chile, countries and regions in the west coast of Pacific Ocean such as Russian Far East, Japan, South Korea, Mainland China, China's Taiwan and Hong Kong, ASEAN countries, and countries in the Oceania such as Australia, New Zealand and so on.

(4) Subscription of DRV Mining Rig

Potential users can use the DRV digital assets in the DRV Wallet APP to exchange for the DRV mining rig, or top up the USDT with legal tender to buy DRV mining rig.

2.4.2 DRV Chain (under closed beta test)

(1) Profile of DRV Chain

DRV Chain is a flexible and public-blockchain-oriented consensus mechanism. It makes Bitcoin and ETH compatible with each other, and provides professional financial services, such as the transfer, exchange, transaction of digital assets. Besides, by designing and implementing Oracle and Data Feeds, DRV Chain becomes the bridge to link up the blockchain world and the real business world. A globalized digital currency application ecology is created, thus achieving the connection between global currencies and the blockchain entity application.

Thanks to the architecture of DRV Chain and of DRV platform, the problems have been completely solved, such as insufficient performance of blockchain, high cost of and great difficulty in blockchain development, waste of computing power, the interaction with real world and so on.

(2) Data Structure

The nature of the blockchain at the business level is decentralization, and its nature at the technical level is database removal, as shown in the following chart:
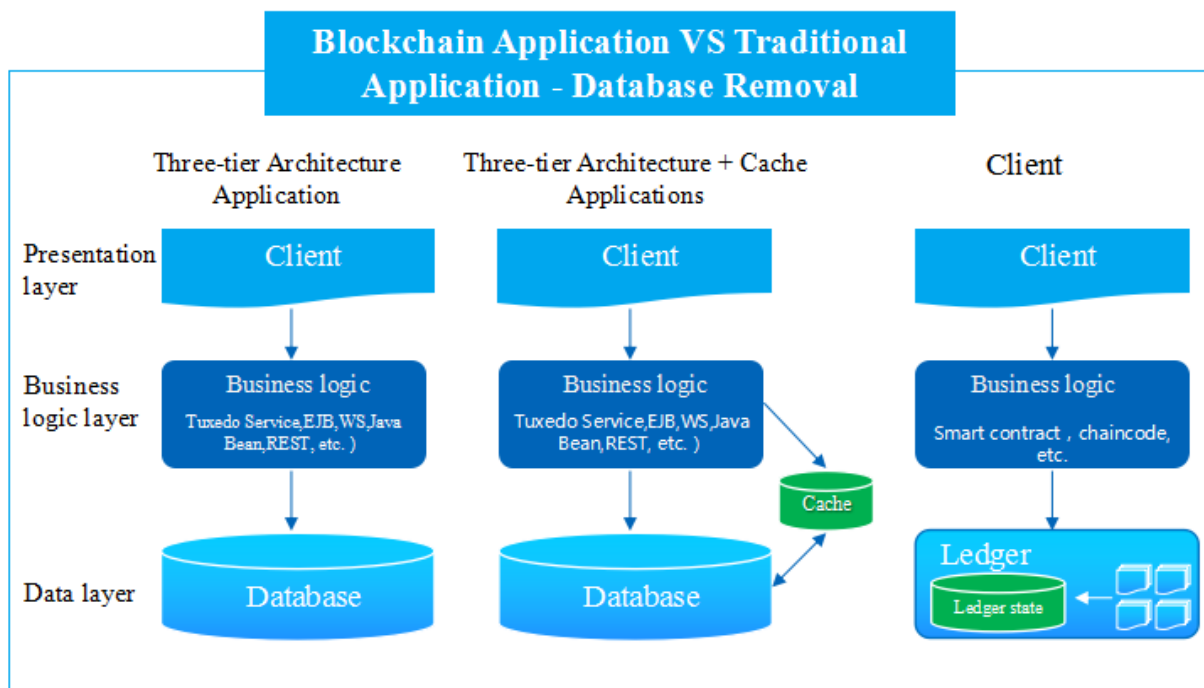
(3) Ledger Logic

Ledger mainly includes blockchain and state. A blockchain is a series of linked blocks that are used to record transaction log. The state database corresponds to the latest state of the ledger, which is a key-value database. Fabric defaults to Level DB, which can be replaced

with other Key-value databases such as Couch DB. For example, we use a blockchain to implement a marble transaction system. We have developed a consensus mechanism, in which each marble has the following attributes: Name, owner, color and size, so that users can define a JSON object, use the name as the KEY, the JSON object as the Value, and store it in the Level DB or Couch DB. As a result, the blockchain applications generally adopt the JSON data format and are stored directly in the key-value database and blockchain. This eliminates the need for traditional applications to do O/R mapping.
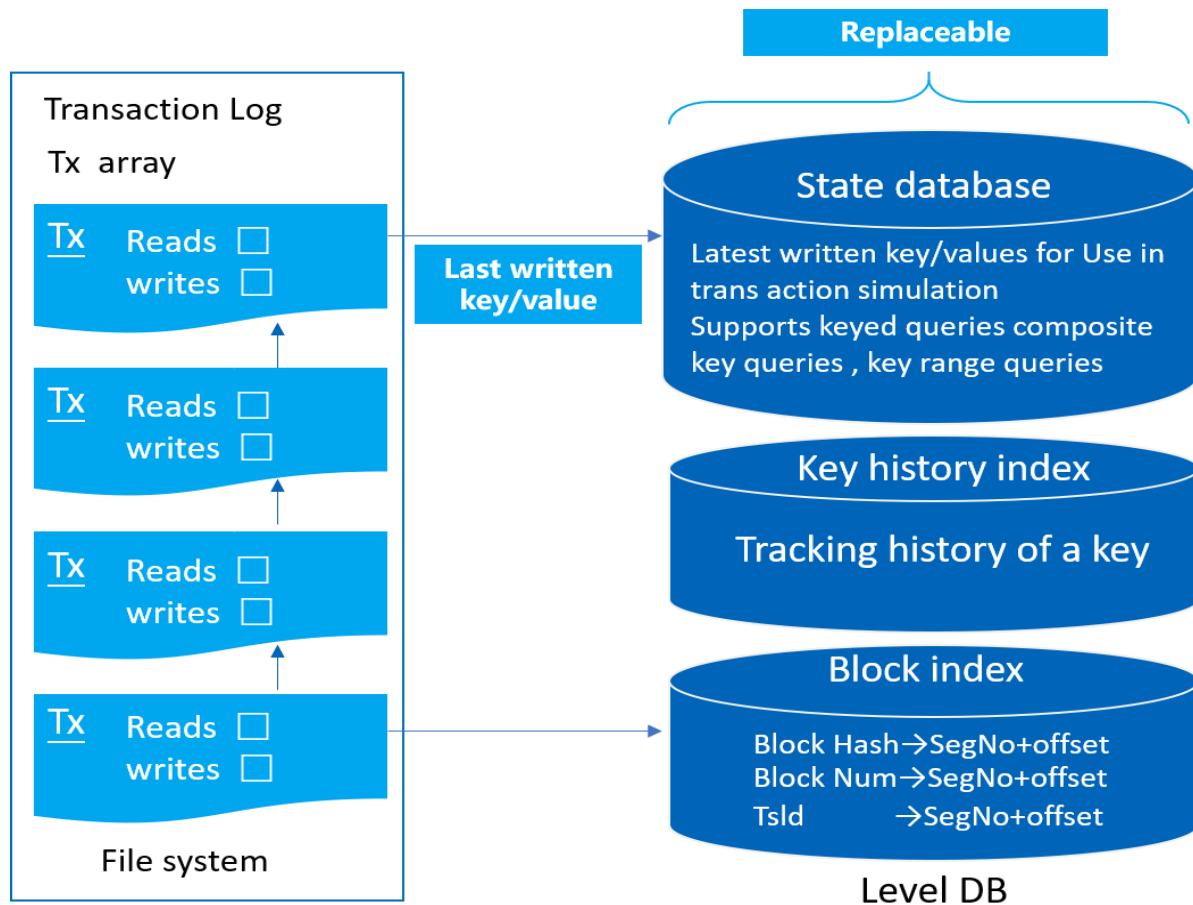
(4) Privacy Protection Mechanism

DRV Chain puts forward a zkSNARK-based interchain transaction privacy protection method. zkSNARK, a zero-knowledge proof algorithm, is one of the relatively mature and feasible privacy protection technologies. It offers better anonymity. In addition, it neither has to trust the central node, nor needs to be participated by other users of the network. By interacting with anonymous currency, users can trade anonymously, which effectively protect the privacy of users.

To transform the transaction validation rule into the QAP form, we firstly need to

transform the transaction validation rule function into the NP full-language RISC form. Firstly, the transaction validation rule is abstracted into the complex multinomial which is then decomposed into two forms: *x=y and x=y(op)z.* op can be an operator such as addition, subtraction, multiplication and division. y and z can be a variable, digit or subexpression. Secondly, the decomposed expression is transformed into a series of ternary vectors (a,b,c). Finally, the RISC form is transformed into QAP form according to the Lagrange's interpolation. The QAP form is shown as follows.

$$\left(A_0(\chi) + \Sigma_{i=1}^{m} S_i A_j(x)\right) \cdot \left(B_0(x) + \Sigma_{i=1}^{m} S_i B_i(x)\right) - \left(C_0(x) + \Sigma_{z=-1}^{m} S_i C_i(x)\right)$$
$$= H(x) * z(x)$$

The elliptic curve cryptography is needed to enable the validation nodes in the Interchain to verify the validity of transaction under the condition that they know nothing about the privacy information about the transaction such as transaction parties, transaction amount and so on. This function should satisfy the following conditions.

$$ee^{(P,Q+R'=eC_P,Q)*e(P,R)}_{(P+Q,R)=e(P,R)*e(Q,R)}$$

P, *Q* and *R* are the points on the elliptic curve. To verify the QAP form transformed from InterChain transaction rule, it is only necessary to verify the following equation.

$$e(\delta_a \delta_b) = e(\delta_c G) * e\left(\delta_{h_i} \delta_z\right)$$

The validating nodes of the DRV Chain network verifies the validity of a transaction in accordance with the verification rules for the registration of parallel blockchain.

(5) DRV Blockchain Performance

DRV Chain adopts an improved BFT algorithm to dynamically adjust the network topology and achieve the dynamic joining and active withdrawal of nodes. Meanwhile, users can also use non-Byzantine consensus protocols (such as Raft) with better performance according to their own needs, so as to improve the efficiency of the entire blockchain. To respond to diverse business scenarios, meet information security needs, and improve business throughput, DRV Chain supports multi-chain architectures. The irrelevant business runs on multiple concurrent blockchains, providing us with linear scalability for the business. For the interoperability between multiple chains, we adopt the relay chain model and participate in

the submission of proposals by relay chain nodes in all directions. The results are confirmed after consensus.

Business Sub-chain   **Cross-chain Interaction**
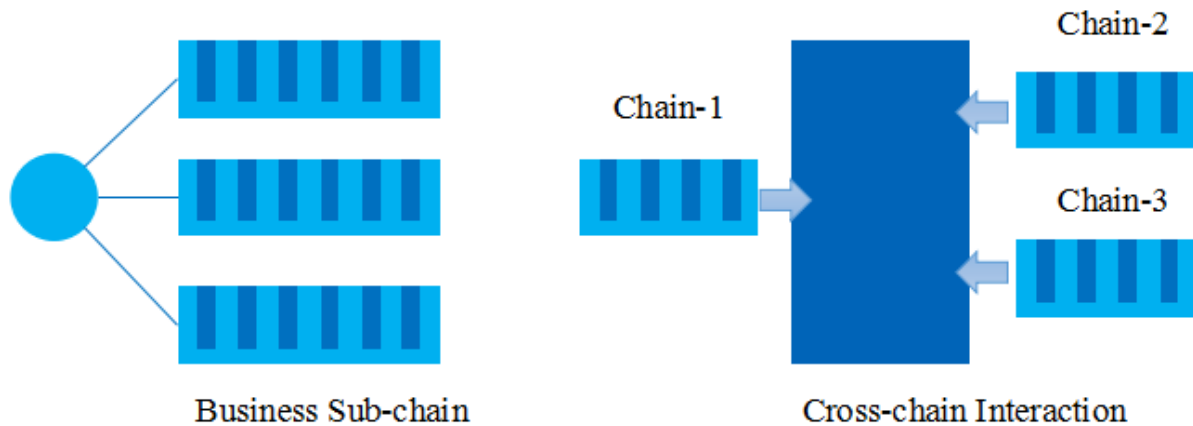
(6) Service Governance Framework

DRV uses a flexible data storage structure to support the separation of hot and cold data.

DRV supports the dynamic joining and withdrawal of nodes to achieve high availability of the system and ensure uninterrupted operation of the business.
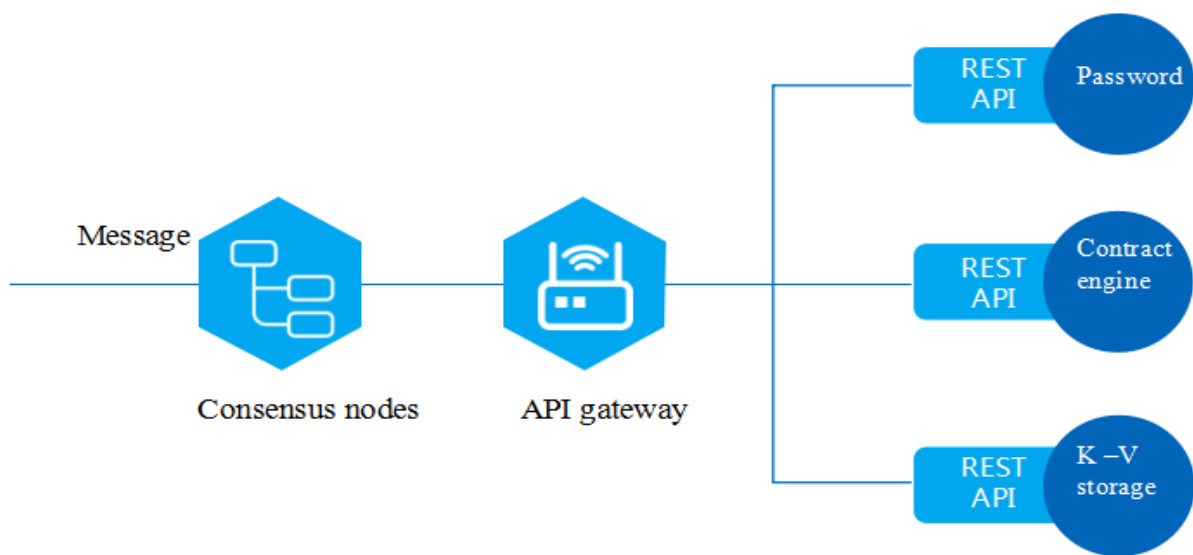
(7) Storage Ecosystem

DRV depends on an ecosystem of decentralized storage. Storage providers may announce themselves online with the fields of "Arbitrary Data", and it will be easier for users to read by using the standardized templates. These announcements might be used to create a database of potential hosts on the clients and enter into a contract only with the host they trust.
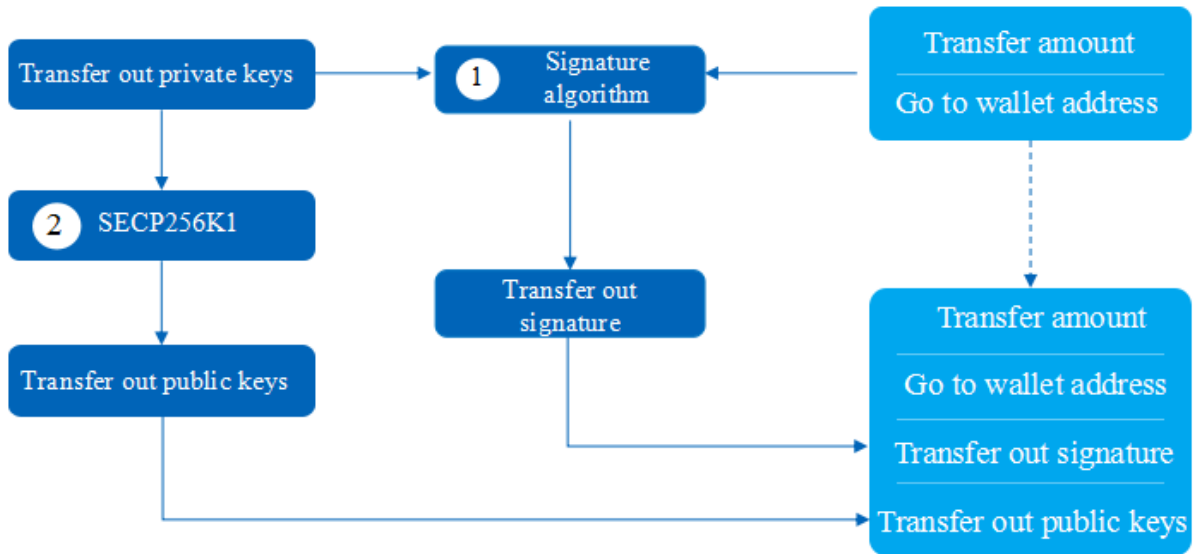
2.4.3 DRV Shopping Mall (under closed beta test)

(1) Overview

DRV international economic and trading mall is a decentralized cross-border e-commerce platform, with its commodities covering a great variety of imported products such as global luxuries, superior agricultural and sideline products, food and articles of daily use, cate from around the world, skin care products and beauty makeup products, nourishment and health care products, household supplies, clothing, bags and suitcases and so on. It aims to recommend a superior, environment-friendly, healthy and ecological life to global consumers. The fast delivery worldwide enables consumers to enjoy the one-stop shopping.

(2) Business Ecology
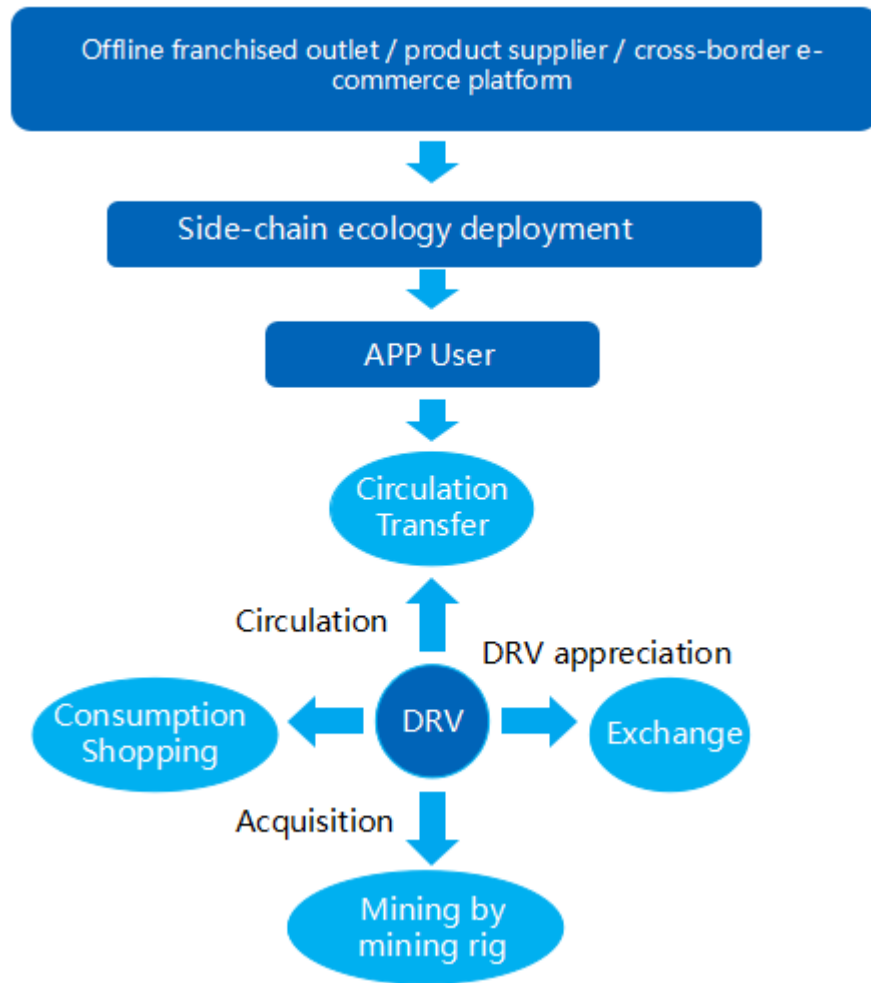
(3) Technical Advantages

●Wide Application

All the mainstream currencies can be used to buy goods in the shopping mall after being converted according to the prevailing exchange rate.

●Decentralization

It ensures the openness and transparency of data. It uses the smart-contract-intended code to automatically implement the transaction logic, thus ensuring the fairness of transaction and making possible the decentralized organization and operation.

●Tamper-resistance

The distributed database ledger technology of blockchain and the tamper-resistant function of hash encryption provide a better guarantee for users' information security.

●Higher Efficiency

Thanks to the distributed ledger, data becomes unalterable, traceable, safe and credible, and a high cost of account checking can be saved.

●**Automatic Transaction**

Some rules pre-defined in the blockchain are written into the smart contract. Once the condition is triggered, the smart contract will be performed automatically, thus achieving automatic transaction and improving the transaction efficiency.

●**High Stability**

The shared ledger of blockchain ensures the security of users' digital assets and prevents them from being stolen by hackers. Even though some nodes are attacked, the database will still remain intact.

●**High Security**

Based on the key signature and consensus algorithm, a highly secure underlying system is created. Users on each blockchain will have their own private key. Each transaction will be signed by the private key, so as to ensure a high security in the circulation process.

2.4.4 DRV Wallet (under closed beta test)

DRV Wallet is a decentralized aggregating payment ecological wallet, and also the important tool for users to store and use DRV (Token). DRV Wallet will provide multiple versions of wallets such as cellphone, PC, Web and so on, to have users store their DRV digital assets in a safe way. DRV Wallet interconnects and integrates the service functions of convenient payment, fast transfer and safe storage.

For DRV Wallet, these operations will not be achieved, such as password retrieval, transaction rollback and so on. The private key is held by users themselves, and should be properly kept. Users' digital asset storage and transaction are recorded on the blockchain ledger, instead of in the server of DRV Wallet, and can be controlled only by the one with the private key.

As the DRV Wallet project advances, the wide use of DRV digital assets will finally realize the following functions of DRV Wallet.

•Payment for and real-time clearing of overseas spending with DRV digital assets;

•Make daily payment and conduct real-time clearing with DRV digital assets;

•Exchange of DRV digital assets with mainstream traditional assets and mainstream digital assets;

•Financial management of DRV digital assets.

2.5 Technical Architecture

2.5.1 Overall Architecture

The base of DRV Chain's logic architecture is made up by four services including identity service, policy service, blockchain service and smart contract service. Based on these services, it provides the upper-layer applications with application programming interface (API), software development kit (SDK) and command line instrument (CLI), shown as follows.
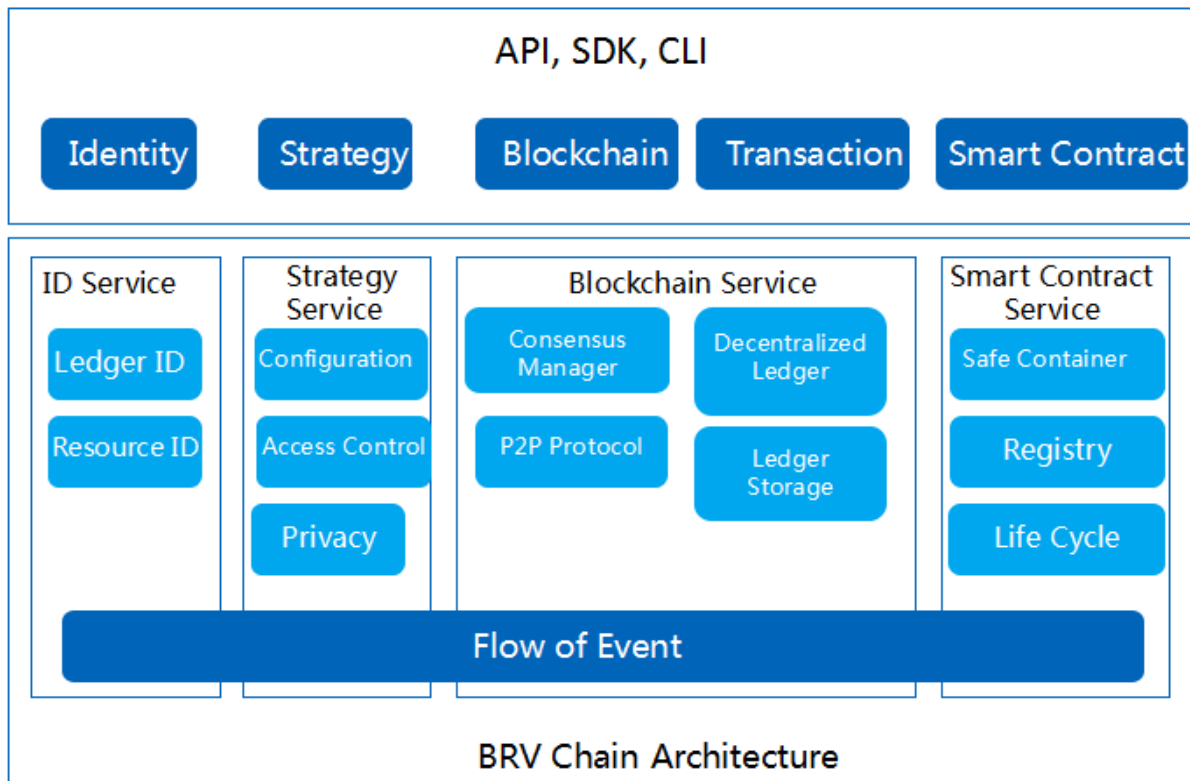
2.5.2 Execution of Transaction

The steps of execution of application codes are shown as follows.

1) The client side sends an execution request to any one validating node.

2) After receiving the request, the validating node will send the command of starting the transaction to local ledger.

3) The validating nodes create an isolated running environment, and start up the codes of application (smart contract).

4) In the process of application implementation, the state of local ledger will be updated.

5) After the application is completed, the validating node will confirm the transaction with local ledger.

6) Validating node broadcasts the transaction to other validating nodes.
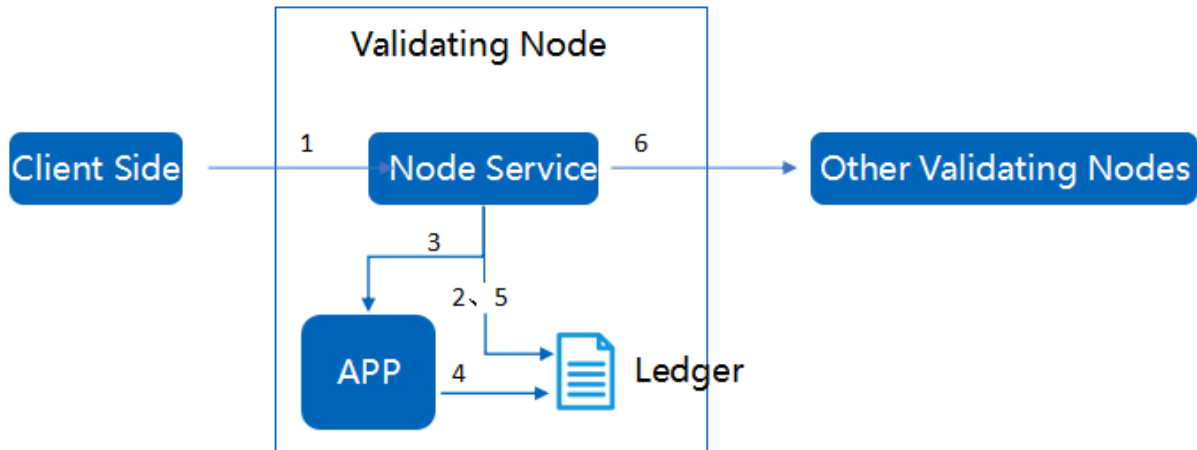
2.5.3 Hash Algorithm

The hash algorithm maps the binary value of any length into the binary value with a short and fixed length. This smaller binary value is referred to as hash value which is the only and extremely compact numerical representation form of a piece of data. In case a paragraph of clear text is hashed or even a letter of this paragraph is modified, the following hash will produce a different value. It is impossible to find out two different inputs that are hashed to the same value though computation. Therefore, the hash value of data can test the data integrity, which can be used for quick search and encryption algorithm generally, with the randomly generated code of character string as follows:

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <ctype.h>
#include <time.h>
#define STRINGSIZE 10
#define STRINGCOUNT 1000
{
char *str =
"0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopq rstuvwxyz";
int i,lstr;
lstr = strlen(str);//Calculate the string length
 srand((unsigned int)time((time_t *)NULL));//Initialize the random number by using the
    system time
Generator
```

```
for(i = 0; i < num-2; i++) //Return the corresponding character string according to the
specific size {
    s[i]=str[(rand()%lstr)];
    }
    s[i++]='\n';
    s[i]='\0';
    printf("%s",s);
    }
*/
int main()
{
FILE *fp1; //Define the document flow pointer, used for opening the file read
char text[10]; //Define a string array, used for storing the strings read
    int i=0,j=0,lstr;
char *str =
"0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopq rstuvwxyz";
lstr = strlen(str);//Calculate the string length
fp1 = fopen("d:\\test.txt","r+");//Open the file a.txt in the read-write only way
for(j=0;j<STRINGCOUNT;j++)
{   for(i = 0; i < STRINGSIZE-2; i++) //Return the corresponding character string
according to the specific size
    {
    text[i]=str[(rand()%lstr)];
    }
    text[i++]='\n';
    text[i]='\0';
    fputs(text,fp1);//Write the content into the file pointed by fp1
    }
fclose(fp1);//Close the file a.txt, which must be closed once being opened
    }
```

2.5.4 Mode of Deployment

The DRV Chain is made up by kinds of nodes, including identity service node, validating node, non-validating node and many application nodes, as shown below.
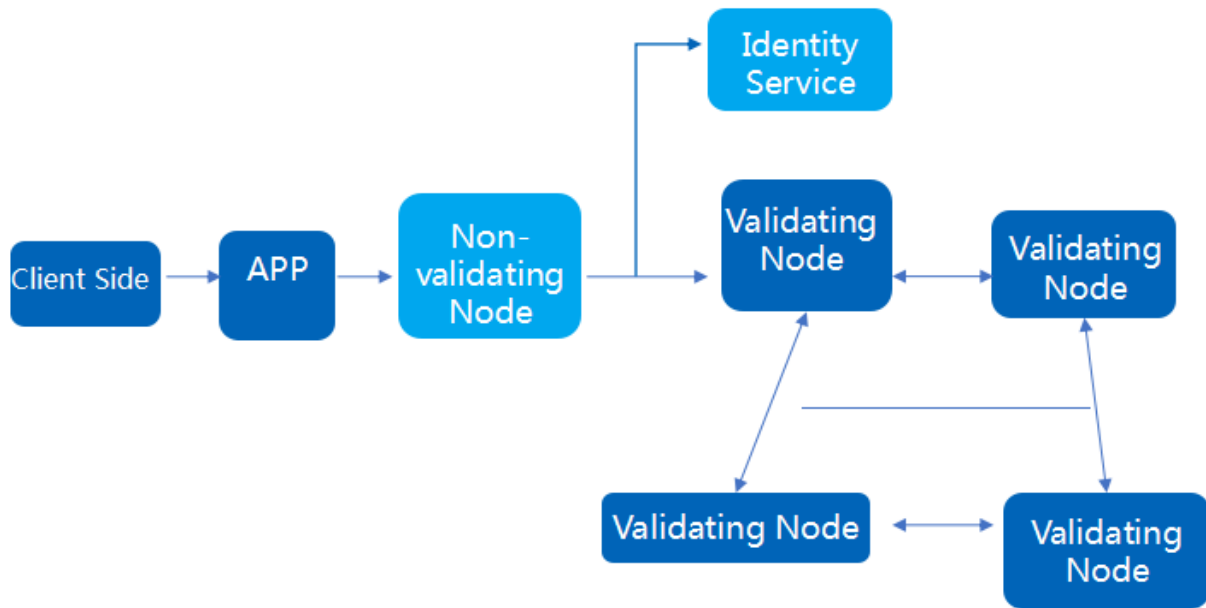
1) Identity service node;

2) Many validating nodes;

3) Non-validating node;

4) Application node.

2.5.5 Shared Consensus

The DRV Chain development team is an open network technology R&D team made up by a number of P2P enthusiasts who are interested in the cryptocurrencies such as blockchain. All its team members have about ten years' experience in technological development, and have an insight into and unique conception of the development of Internet. In addition, they focus on the potential value of the underlying technologies represented by blockchain, try to integrate the blockchain, and implement some neutral, open and open-source basic protocols and tool sets.

DRV Chain, the first project of TTL open team, is based on the independent, open, safe and reliable data of cryptocurrency blockchain. As shown in the following blockchain stack, the project targets at the overlay network and decentralized protocol that are above the Bitcoin blockchain. In the layers above, different developers can freely develop the open-source or commercial APIs, so as to support the APPs with more specific business functions.

DRV Chain
Open-source Project
Sketch Map
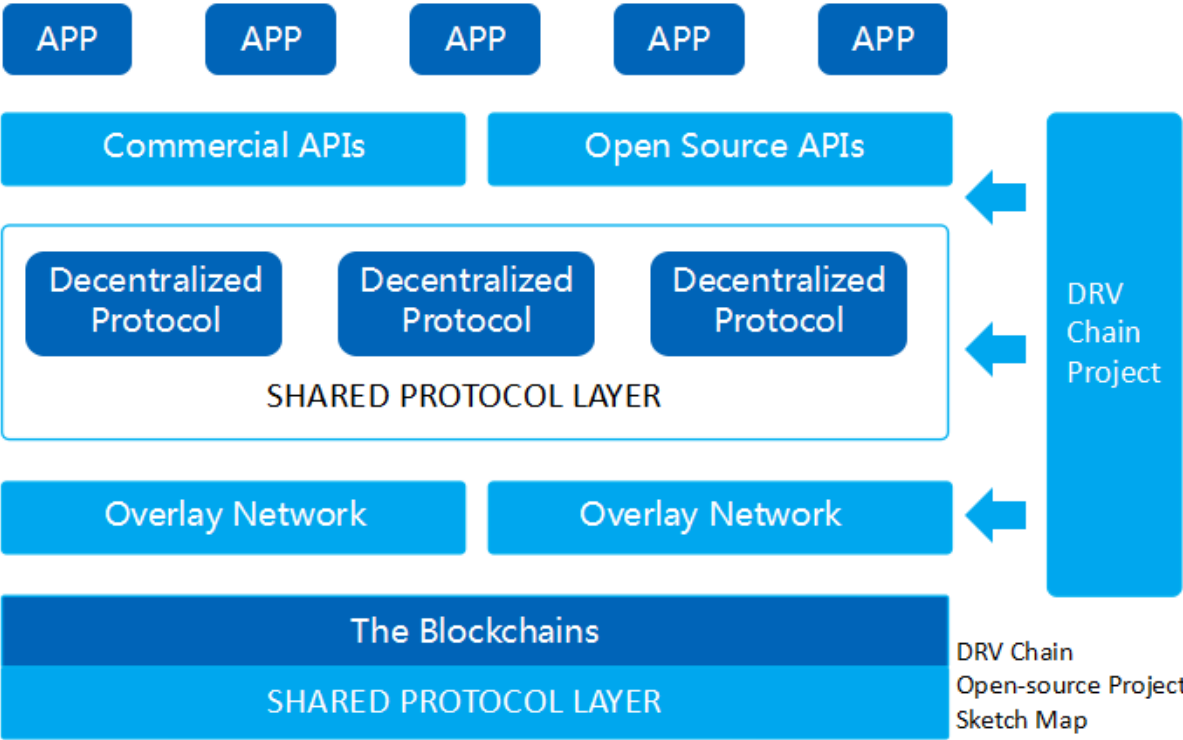
Chapter III. Application Scenario

3.1 Overview of Application Scenario

DRV provides an open platform for value circulation. It carries digital assets, and supports the free flow of digital assets. In the future, the digital assets on DRV Chain will cover various industries, thus to form a huge asset value network. Based on this shared database, the participants (individuals and organizations) will greatly simplify the connection process, reduce the customer acquisition cost, and improve the efficiency of asset circulation. More and more business opportunities will be created by value exchange.

DRV Chain Application Scenario

The application of DRV involves a number of fields such as cross-border e-commerce, trade finance, product traceability, digital assets and so on. With a decentralized structure, it directly links up nodes concerning health ecosystem, thus to achieve a seamless connection of

nodes in the ecosphere.

3.2 Respective Description of Application Scenarios

### 3.2.1 Cross-border E-commerce

Thanks to the powerful blockchain-based financial system of DRV Chain, a decentralized global settlement and remittance system is built up. According to the consensus mechanism of DRV Chain, users can use multiple currencies (including digital currency and legal tender) to successfully complete the settlement of cross-border e-commerce transaction. For the exchange between different currencies, DRV Chain establishes a set of algorithms, through which the market maker who offers the most favorable exchange rate will be found out. Then the market maker will receive the currencies from the paying bank and pay a required amount of currencies to the receiving bank. Here, the market maker plays the role of the above-mentioned gateway. The cross-border remittance is completed by clearing the credit and debt of both parties.

●Cross-border online shopping - When users need to pay for the shopping order on the overseas e-commerce platform with foreign currency, they can make the payment directly through DRV.

●Cross-border remittance - In need of transfer or remittance at home and abroad due to studying abroad, working abroad or business transaction, users can use the DRV Wallet to transfer the digital assets which can be spent or encashed locally and in real time by the receiving party. The speed and rate of transfer are remarkably superior to those of traditional service providers.

3.2.2 Trade Finance

In the fields of trade finance and supply-chain finance, business chains participated by a good many parties are formed naturally. With the help of DRV Chain, the separate, independent and individual centers can be integrated into a unified multicenter participated by many parties, and the links between the upstream trading and downstream trading can be smashed through, which improves the efficiency of trust transmission, reduces the cost of transaction, and drives the trade finance to develop in a sound and ecological manner.
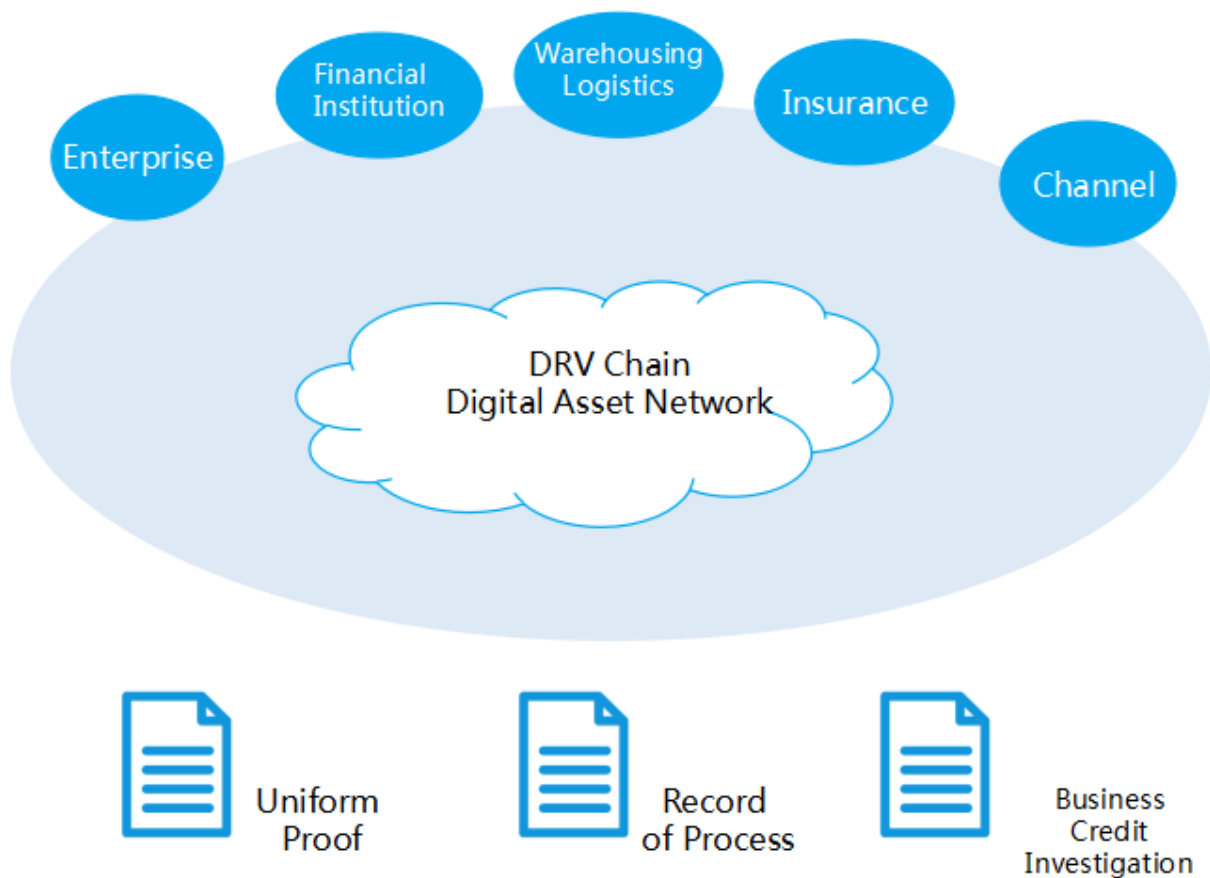
3.2.3 Product Traceability

The static (intrinsic property) and dynamic information (flow, credit and so on) of each object can be shared by manufacturing enterprises, warehousing enterprises, logistics enterprises, distributors at each level, retailers, online retailers, consumers and regulators. The DRV Chain platform effectively links up the upstream and downstream enterprises involved indirectly, while linking up the ownership and transfer relationship of the commodity supply chain.

1	2	3	4	5	6
Raw Material	Production	Put into storage	Delivered from storage	By stages	Retail

Regulator | Finished product supplier | Distributor | Retailer | Consumer
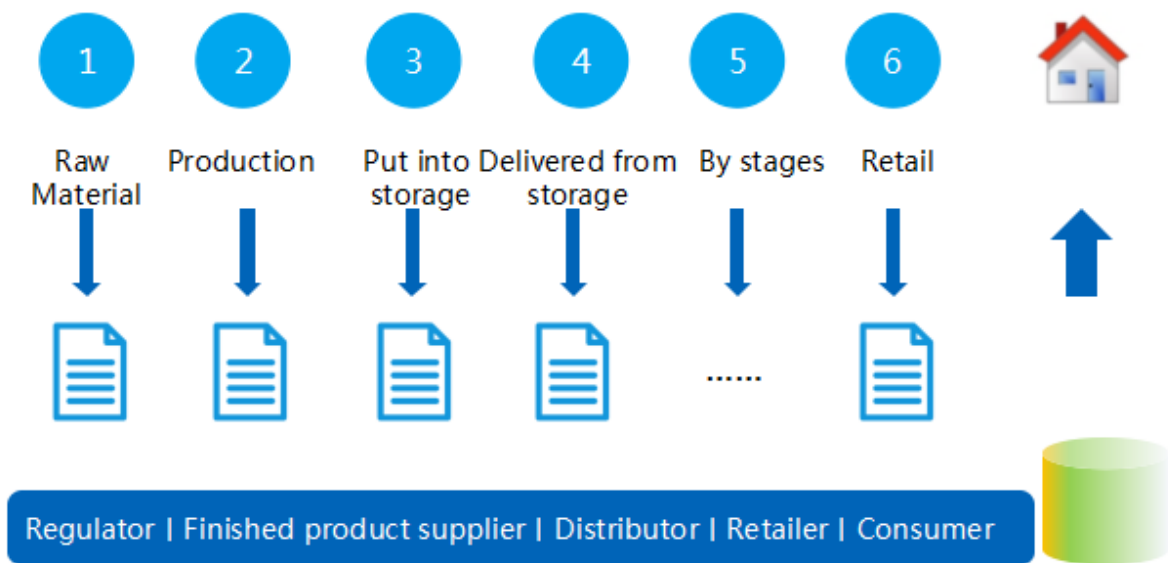
3.2.4 Digital Asset

In the digital asset issuance and circulation network, DRV Chain is used to register assets, confirm transaction, keep and check accounts, clear up accounts and so on. The DRV Chain digital asset network includes the upstream and downstream organizations such as asset issuers, asset traders, exchanges and the circulation channels, who will conduct business as their own role requires. Any asset that can be digitized can be registered and issued on the platform, and any body (individual and organization) can register and issue its own digital asset. The asset, once being registered, will be publicized, which facilitates the tracing and query and effectively reduces asset disputes. The key to asset circulation is the channel. DRV Chain technology has the asset circulation socialized instead of being controlled by a single center. Any channel with resources can become the catalyst for asset circulation to boost the circulation and improve the circulation efficiency.
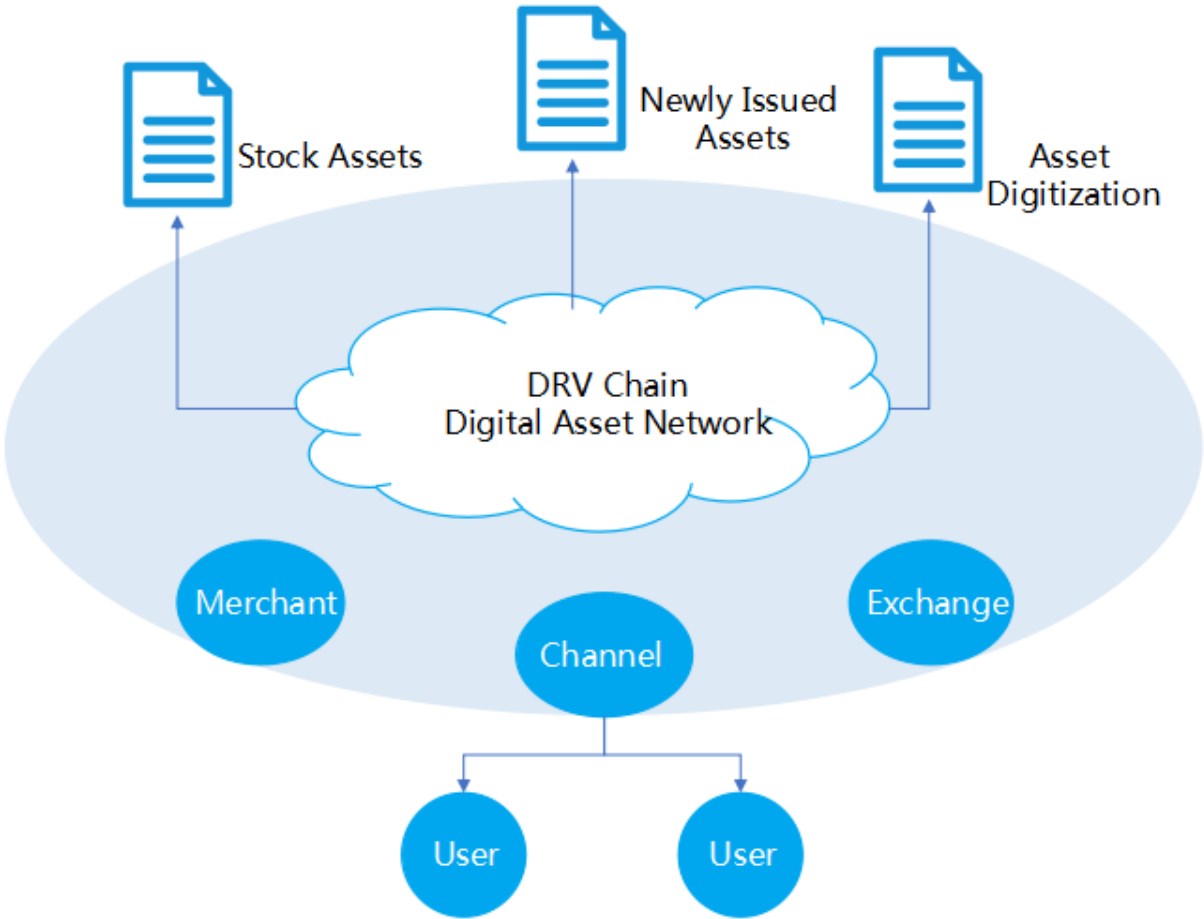
Chapter IV. Economic Model of DRV Chain

4.1 DRV Profile

DRV is the digital asset generated by DRV Chain system. It has a limited size of issue, and features openness, uniqueness and so on. The DRV Chain system is structured by underlying technology, thus achieving decentralized application. The DRV generated by the DRV Chain system is made as the fuel to power its commercial application and development, so as to have DRV Chain truly integrate with the real business world and to have digital assets truly flow. DRV adopts an innovative consensus mechanism - the TPOS (Super Proof of Stake) + POW + DPOS. Compared with the traditional POS, POW and DPOS mechanism, it greatly improves the system efficiency and the transaction processing capacity, and achieves a commercial level of enhancement.

DRV, a settlement bridge generated by DRV Chain technology, is used to give incentive to the DRV Chain system's builders, participants, developers and users, and to various commercial applications, digital assets and so on.

4.2 Issuing Mechanism

4.2.1 Size of Issue

A total of 95 million DRV tokens are designed.

DRV can exchange with ETH, BTC, USDT, HT and so on. DRV will be worked out by miners' mining rigs, and will enter into exchanges when enough DRV tokens become available.
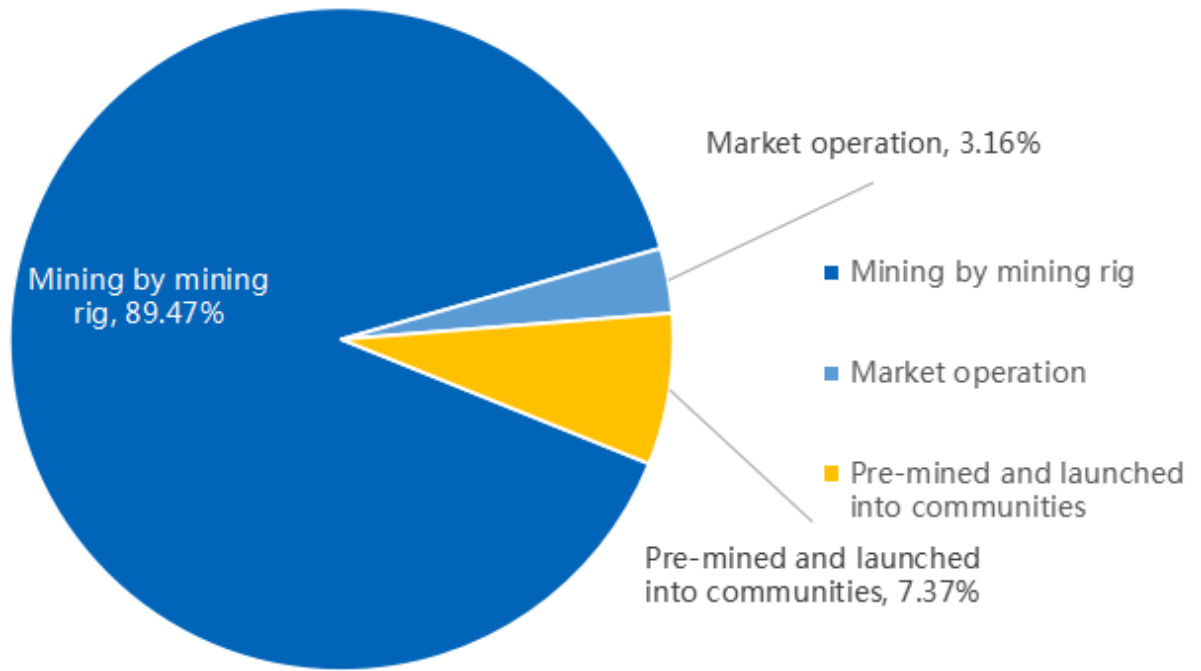
4.2.2 DRV Distribution Chart

4.2.3 DRV Distribution Table

No.	Distribution Quantity (ten-thousand)	Distribution Ratio	Way of Distribution
1	85,00	89.47%	Mined by mining rigs
2	300	7.37%	Pre-mined and launched into communities
3	700	3.16%	Market operation

4.2.4 DRV Buyback

By distributing a huge number of mining rigs, DRV will create one million nodes. A certain proportion of the sales profit will be used to buy back DRV, in order to prevent the inflation of DRV.

Chapter V. Implementation Roadmap

●In February 2018, the DRV Chain project was kicked off.

●In March 2018, the core mission and function of DRV Chain were laid down, and the architectural planning was made.

●In April 2018, DRV Chain team was established, when the cutting-edge talents from the fields of underlying technology, operation, management and so on came into place.

●In August 2018, the first batch of mining rigs came into service in European and American region.

●In September 2018, the cornerstone program for DRV Chain was announced, and the white paper was published to common investors.

●In October 2018, the cornerstone program will be officially launched.

●In the middle of October 2018, DRV APP 1.0 and PC version will get online synchronously.

●In May 2019, it will support the smart contract and side-chain projects.

●In June 2019, we will work with the world-class university to set up a blockchain technology research lab, so as to perfect the DRV Chain code.

●In August 2019, DRV Chain will be popularized worldwide.

Chapter VI. Legal Affairs and Risk Disclosure

6.1 Legal Structure

DRV Foundation, as an independent legal entity, will take full charge of the development, promotion and operation of DRV Chain project.

DRV Foundation will accept donation or cornerstone from specific groups strictly in accordance with local laws and regulations and in a proper way, and will give DRV. Considering the citizens or groups which are limited by law, DRV will not carry out public crowdfunding or public offering for DRV in some countries or regions. DRV is neither a kind of security nor a speculative investment instrument, but a kind of virtual commodity with practical purpose.

The income obtained by DRV Foundation will be used in technological development, community construction, market promotion, business cooperation, financial auditing and so on.

DRV Chain is still very likely to be questioned and supervised by competent authorities of different countries. It is possible that DRV Chain fails to provide normal services in some regions, in order to satisfy and abide by local laws and regulations.

6.2 Risk Warning

Except those explicitly specified in the White Paper, DRV Foundation gives no statement or pledge (especially for its marketability and specific functions) to DRV Chain or DRV. Anyone who participates in DRV donation / sales program and purchase, shall base on their knowledge about DRV Chain and DRV, laws and regulations, and the information provided by the White Paper. Under the premise that the universality of the above-mentioned contents is not damaged, all participants will receive DRV as is after the DRV Chain project is launched, regardless of their technical specification, parameter, performance or function.

The objectives and contents listed in the White Paper may change. Changes may be made to part of the document in the new version of white paper or in other documents, as the project progresses. Our team will publish the update by making announcement on the website or by updating the white paper or other documents.

The DRV Foundation hereby gives no acknowledgement and refuses the following responsibilities.

(1) Anyone violates the anti-money launching law, anti-terrorist financing law and other regulatory requirements of any county, in buying DRV.

(2) Anyone, in buying DRV, breaches such statements, pledge, obligations, promises or other requirements as specified in the White Paper, which causes the failure to use or

withdraw DRV.

(3) This DRV sales plan is abandoned due to any reason.

(4) The failure in DRV Chain development or its abandonment, and the consequent failure to deliver or use DRV.

(5) The postponing or delay in the DRV Chain development, and the consequent failure to complete the schedule announced in advance.

(6) Error, flaw, defect or other problems of DRV Chain and DRV source code.

(7) Failure, breakdown, crash, rollback or hard fork of DRV Chain or DRV;

(8) DRV Chain or DRV fails to accomplish any specific function, or is not suitable or any specific purpose.

(9) The use of funds raised by the DRV sales plan;

(10) Any participant discloses, loses or destroys the private key to DRV wallet;

(11) The breach of contract, violation of rules, infringement, system crash, breakdown, service termination or suspension, fraud, maloperation, misconduct, error, negligence, bankruptcy, liquidation, dissolution or business discontinuation, of DRV's third-party distribution platform.

(12) There is any difference, conflict or contradiction between what is agreed by anyone and the third-party distribution platform, and the White Paper.

(13) Anyone's trading of DRV or speculation;

(14) DRV gets listed, suspended or delisted in any exchange.

(15) DRV is prohibited, supervised or limited by law, for being classified or regarded as a currency, security, mercantile paper, negotiable instrument, investment or other things by any government, quasi-government body, competent authority or public authority.

(16) Damage, loss, claims, responsibilities, punishment, cost or other negative effects caused by or accompanying any risk factor published by the White Paper, and anything related to such risk factor.

In addition, there are other risks which are not mentioned or anticipated by DRV Foundation and team. To the greatest extent permitted by law, DRV Foundation and team shall not be held liable for the damages or risks arsing from the participation in the project, including but not limited to direct or indirect personal damage, business profit and loss, loss of business information or other economic losses. Before making decisions for the participation, participants should have a good understanding of the background of the team, and know well about the overall framework and thought.

Chapter VII. About Us

7.1 Initiator and Operator - DRV Foundation

7.1.1 Foundation Overview

To become international and standardize the management, a non-profit organization, DRV Foundation (hereinafter referred to as "Foundation"), is set up. The Foundation will practice democratic and transparent governance codes. It will build up a sound management framework to promote the development, construction and development of DRV Chain network, to manage affairs related to the open-source project, and to achieve a harmonious development of the open-source community.

The Foundation is made up by the Board of Directors and the Work Group, which are in charge of administration, technology, operation, management and so on, handle daily matters and special matters and jointly keep the pace of daily operation, in order to ensure a stable development.

The Board of Directors is the supreme decision-making body of the Foundation. It consists of more than three directors, and has one chairman which is elected by the board members. The Board of Directors is in charge of various affairs of the Foundation. It functions to appoint or dismiss the ECO, make important decisions, hold an emergency meeting and so on. The following matters should be decided by disclosed ballot. Every board member has a vote. The passing of resolutions made by the Board of Directors shall require a simple majority vote of in-service board members. The Board of Directors perform the following duties.

(1) Revise the management framework of the Foundation;

(2) Appoint or dismiss the CEO;

(3) Make decisions for important technological paths, business modes, market orientation and so on;

(4) Emergencies, such as the events that affect the whole community, software security, system upgrade and so on.

(5) Other matters concerning great decisions.

7.1.2 Community Governance

The Foundation provides a number of work groups as required which are in charge of different affairs. The Technology Group, Operation Group, Management Group, Project Group and other groups are introduced as follows.

(1) Technology Group

Made up by the core developers of the DRV Chain development team, the Technology Group makes decisions for the R&D direction, develop and review technologies and so on. In addition, its members, after gaining a deep understanding of the trends and hopspots, will communicate with participants in the community, and hold technical exchange seminars at irregular intervals.

(2) Operation Group

The Operation Group functions to provide services for community, and engages in DRV Chain technology promotion, market promotion, application promotion and so on. The Group holds press conference to announce important matters, to answer questions and so on. In case of events that affect the reputation of the Foundation, the Operation Group will act as the only channel to give authorized response.

(3) Management Group

The Management Group is in charge of human resources management, remuneration and other administrative affairs. The Foundation will recruit excellent management talents and technological talents as its full-time or part-time employees. It will also invite celebrities from different industries to work as the advisors. All the decisions about employment and remuneration shall be agreed by all the work groups and more than two members of the Board of Directors , and shall come into effect after being signed by the chairman of the Foundation.

(4) Project Group

The Project Group designs project plan, engage in network operation, application and implementation, and optimizes and makes changes for relevant functions of community according to the application of project, in order to ensure the sound development of network. As regards the projects concerning community construction, application ecology, research on frontier technology and so on, the Project Group functions to set up and advance projects.

(5) Asset Group

The Foundation uses multiple signature or other technological means to ensure the security and accuracy of asset. The Asset Group will supervise the use of digital assets by following the principle of openness and transparency.

7.1.3 On-Chain Management

DRV holders are the owners and keepers of DRV Chain network, who acquire the right of management by constructing vote trading in DRV Chain network and acquiring the right to use by trading in the DRV Chain network or paying the fuel fees specified in smart contract.

For the reason that the transactions or smart contracts initiated by users will occupy resources of blockchain network, users should pay a certain amount of GAS. GAS charges are measured by DRV. Parameters about GAS will be stored on the blockchain. In addition, there is a set of GAS adjustment algorithm used by the community to elect new GAS parameters by ballot according to the status of network development.

7.2 Strategic Partners

7.3 Exchanges to Cooperate

DRV Team has reached cooperative intention with many famous exchanges in the world, mainly including:

7.4 Introduction of Core Team Members

DRV Chain has a very experienced international team. All its members have many years of experience in internet finance industry, blockchain industry, cryptography and virtual currency community. The project development team has finished the development of DRV Chain prototype.

The main members of DRV Chain team and their experiences are shown as follows.


●**Founder - EliBen-Sasson**

Eli is a professor with the Department of Computer Science at Israel Institute of Technology. His researches include the theory (mathematics), implementation and application of the proof system, as well as zero knowledge (ZK) and possibility verifiability proof. As a part of his great efforts, he also co-founded the lab for Succinct computational integrity and privacy research. The lab members created the ZK system intended for the Zerocash academic edition.

●Co-founder - Madars Virza

Madars is a candidate doctor in computer science of Massachusetts Institute of Technology, focusing on zero-knowledge proof cryptography. He has published many papers about zkSNARK and about the core issues of Zerocash protocol. Madars showed its achievements on world conferences, including the 2013 and 2014 International Conference of Cryptography.
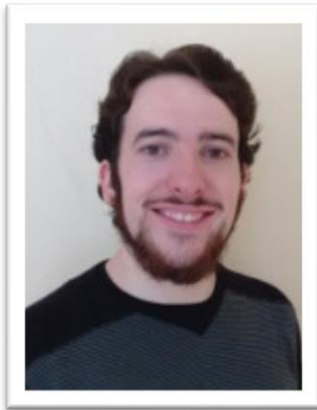
●Technical Engineer - Jack Grigg

Jack is the core developer of I2P anonymous network and the chief developer of I2P Android system. He shows great interest in privacy and anonymous research, and is ready to help other developers to create privacy-respect software. He is also an enthusiast of user experience. In his spare time, he got a doctor's degree in applied physics at New Zealand's Lincoln University.
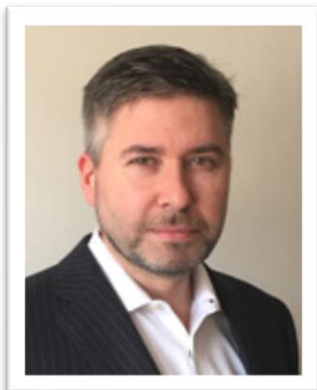
●Director of Operation - Jack Gavigan

Once working in Deutsche Bank, Swiss Credit Bank and Morgan Stanley (also work as a trader), Jack has gained rich experience in financial technology, cyber security and transaction system. He also worked as an advisor to the UK government in digital currency and blockchain technology.

●Technical Advisor - Arthur Breitman

Arthur focuses on algorithmic trading, financial cryptography and machine learning. Now he is working at Tezos, a universal and self-corrected password classification ledger. Before that, he worked in several large financial corporations, such as Goldman Sachs.

●Technical Advisor - Joseph Bonneau

Joseph is a postdoctoral researcher at Stanford University, and also a technology researcher of Electronic Frontier Foundation. He is specialized in cyber security, cryptocurrency and applied cryptography. His researches were published on the world's top conferences and periodicals. He won the 2015 The Best Critics Award (IEEE security and privacy) and 2015 The Best Student / Postdoctoral Paper Award (2015). He got a doctor's degree at the University of Cambridge

Chapter VIII. Disclaimer

As a new investment mode, digital asset investment has various risks. Therefore, potential investors need to carefully assess the investment risk and their own risk bearing capacity.

All documents herein are only used for the purpose of conveying information, and do not constitute investment, transaction and use of DRV's relevant opinions. The above information or analysis does not constitute an investment decision. This document does not constitute any investment proposal, investment intention or investment abetting.

This document does not constitute, nor is it understood to be, any offering or solicitation of any form of securities, nor is it any form of contract or commitment.

The interested users clearly understand the risks of DRV. Once investors participate in the investment, it means that they understand and accept the project risks, and are willing to bear all the corresponding results or consequences individually.

The DRV team shall not bear any direct or indirect asset losses arising from its participation in the DRV project.