DISTRIBUTED CREDIT CHAIN

DRAFT FOR OPEN COMMUNITY REVIEW AND SUBJECT TO CHANGE.

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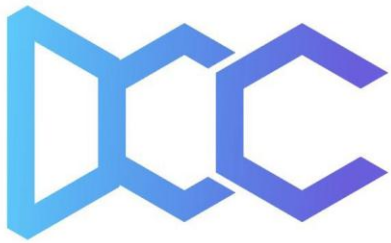

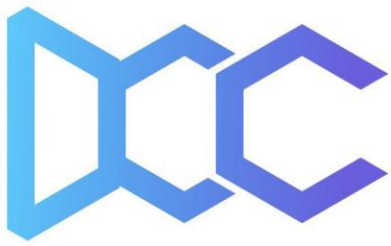

Distributed Credit Chain WhitePaper

Cyber Sheng Foundation Ltd.

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1. Brief Introduction

Accelerating digitalization, faster Internet transmission speeds, continuous accumulation of distributed computing resources, the application of mathematic and cryptographic technologies in the digital era: these are the factors that lead us to foresee that in the future, we will see an underlying public chain based on the features of Blockchain (including but not limited to: decentralization, openness, autonomy, irreversibility, and privacy protection). This underlying public chain will be utilized for distributed credit reporting, debt registration, wealth management, and asset transactions. It will enable business participants in different countries and regions around the world to provide financial services in a much more convenient way. A new type of virtual agency based on blockchain technology—"Distributed Banking"— will emerge. A Distributed Bank is not a traditional bank, but rather an integrated ecosystem of distributed financial services.

The concept of Distributed Banking is to break the monopoly of traditional financial institutions through fair financial serviced and return earnings from financial services to all providers and users involved, so that each participant who has contributed the growth of the ecosystem may be incentivised, thus truly achieving inclusive finance.

Through decentralized thinking, Distributed Banking will be able to change the cooperation model in traditional financial services and build a new peer-to-peer and all-communications cooperation model across all regions, sectors, subjects and accounts.

As it pertains to business, Distributed Banking will completely transform traditional banking's debt, asset, and intermediary business structure through replacing liability business with distributed wealth management, replacing asset business with distributed credit reporting, debt registration and replacing intermediary business with distributed asset transaction with . The tree-like management structure of the traditional bank will evolve into the flat structure of Distributed Banking, which will establish distributed standards for various businesses and improve overall business efficiency.

As it pertains to distribution, decentralization is disintermediation, a way of breaking up original excessive premiums that result from information asymmetry among intermediaries, and returning such premiums to ecosystem participants, thus achieving the redistribution of ecosystem value as well as fair distribution among participants through digital consensus algorithm.

As it pertains to regulation, the fact that all records registered in the blockchain cannot be tampered will enable regulators to penetrate into the underlying assets in real time. Big data analysis institutions can also help the regulatory bodies understand and respond to industry risks more quickly based on blockchain data analysis. It will be possible to develop a new "Basel Accord" on the management system of blockchain-distributed banks.

The Foundation will launch a main blockchain - **Distributed Credit Chain (DCC)** to establish business standards, reach consensus on the books, deploy business contracts, implement liquidation and settlement services, and so on, for a variety of distributed financial business.

The establishment of a distributed banking system will require a five- or even ten-year process. We hope that after a period of construction, the distributed bank can become an important node of new finance, and traditional businesses can enter the distributed business ecosystem through distributed banking.

We will begin with conducting credit business on DCC, and reconstruct the business ecosystem of traditional credit through decentralized thinking and distributed technology. In the following section, we are going to specifically describe the reforms of distributed banks in the credit field.

2. Distributed Banking Begins with Changes in Credit Businesses

2.1. Traditional Credit Businesses

Definition of credit business: a credit activity wherein the holder of certain currency positions temporarily lends an agreed-upon amount of money at an agreed-upon interest rate to a borrower, who repays the principal and interest according to the terms and period as agreed. As one of the most important activities in the financial market, its orderly management has an huge positive impact on the development of society.

The fundamental function of the credit market is to adjust temporary or long-term funding shortfalls: in economics, the players with surpluses have extra funds and do not wish to increase their current expenditures, while those with deficits are in search of spending, but fail because of their liquidity crunch. Within the credit market, assets and capital can be properly allocated, allowing the smooth functioning of our economic system.

The history of the credit industry goes back a long way. We can find traces of credit systems and the concept of interest at the very beginning of human civilization, with a 3,000-year-old written loan contract from Mesopotamia. Back then, the practical application of such paid economic activity had already been demonstrated.

Without credit, the massive expansion and progress of human civilization would not have been possible. The loans supported Spain's exploration into the New World, and made possible the colonization of the United States, thus propelling the Industrial Revolution. The utility provided by loans to the community is enormous, and has enabled some of the greatest projects known to mankind.

Until the 18th Century, the lenders still utilized collaterals, and the main type of loan was the contractual loan.

The early 19th Century ushered in a new era of loans and a more equitable platform. Established in December 1816, the Philadelphia Saving Fund Society(later Philadelphia Savings Fund Society (PSFS)) was the first of many savings and loan associations. As a highly

centralized financial intermediary, it aimed to provide the average Americans with savings and loans resources.

When assessing mortgages today, nearly 90% of lenders use FICO, which is recommended by the Federal National Mortgage Association (Fannie Mae) and Federal Home Loan Mortgage Corporation (Freddie Mac). In 1959, lenders officially began using FICO scores to make informed credit decisions.

With the development of mobile Internet, big data has rapidly emerged with a key role in making credit decisions in the United States and other global markets. There are three primary methods for big data in taking market share:

First, data mining, data monitoring, data comparison and differentiated competition;

Second, analysis and decisions based on experiments and data;

Third, marketing and adjustment based on big data;

The data-driven credit business offers us many inspirations and dramatically improves credit efficiency. However, the credit business in every country is replete with loopholes at every stage of the process, such as unclear rights and interests, high operating costs, inefficient operations, untrustworthy credentials, and privacy leaks.

The root cause of these problems lies in the provision of services by fragmented parties through various kinds of centralized systems. First, the centralized systems cause too much instability and heighten the risk of counterfeiting. Second, the fragmentation among systems significantly increases mutual verification and trust costs. Finally, data is neither well-encrypted during delivery, nor actually authorized by users during utilization, thus enabling abuses of privacy.

As human economic activities continue to develop, it is believed that the credit business will further flourish, which consequently raises the bar for credit efficiency, privacy protection, and cost reduction. It is believed that the idea of decentralization and the open consensus mechanisms of blockchain technology will offer a better solution.

2.2. Centralized Credit Service

Taking the intermediaries that provide credit services as examples, many credit agencies are mired in a terrible crisis. Many online credit agencies, taking advantage of information asymmetry, have become a centralized profiteering industry. Where do their huge profits come from? Data tells us that the highest proportion of their income comes from interest spread. From an industry-wide perspective of a particular developing country, the interest spread provides 80% of a bank's revenue. The lending-deposit spread stipulated by some central bank can reach as low as 3%-5%; however, these are only nominal rates earmarked for big businesses. For most ordinary small- and medium-sized enterprises, the lending-deposit spread can reach 7%.

The centralized credit model gives such centers monopolistic advantages monopoly . Due to information asymmetry, the lenders and borrowers lose direct trading opportunities. Therefore, people are thinking about a possibility for credit service without a spread made by intermediaries, which would allow lenders, borrowers, risk control models, collection offices, and insurance institutions to participate together. In such service, lenders and borrowers would be able to achieve debit -credit balance based on consensus and for the purpose of service.

2.3. Credit Dilemma Brought by Centralized Service

- Cost

The core cost model of a credit agency is to share the costs incurred by non interest-earning elements (client-gaining, data, credit review, etc.) and non-repayment of loans (bad debt) by charging the "good guys" who can pay back the money.

Obviously, this cost-sharing approach is extremely irrational. For borrowers, it brings an additional cost. For credit agencies, their profit margins are always limited, and cost management becomes ever more difficult. Efficiency is dragged down, and the profit margin cannot be improved.

From an industry perspective, the engineering costs of investing significant technological power in algorithmic and computation are redundant: nearly every financial institution repeatedly invests in science and technology building systems simply to determine the borrowing needs of roughly identical groups of people.

- Efficiency

Most borrowers in the consumer financial markets of most countries have little knowledge on application requirements, their own credit worthiness, and accessible services. This has spawned a large number of service agencies and loan intermediaries. CreditKarma, for instance, helps borrowers check their own credit scores and recommends consumer finance and credit card products to borrowers, which undoubtedly prolongs the loan application chain and reduces the efficiency of service delivery.

From the credit agency's perspective, significant amounts of time and energy are wasted in verifying the credit of borrowers who do not suit their risk appetites, which leads to resources waste and drastic decrease in efficiency.

- Borrower’s Interest

Borrowers lack the ability to self-certify their credit, which makes intermediaries more “important” in consumer credit underwriting. Setting aside false information and looking merely at normal operations, in consumer credit underwriting of both developed and under-developed countries, there are professional loan intermediaries/brokers or customer managers that help borrowers prove their “creditworthiness.” Especially in those countries where the credit information system is underdeveloped, the size of the loans available to a borrower is significantly affected by the material prepared.

This causes the borrower to be unable to know their rights and interests, and also bars borrowers from effectively accumulating their credit. For example, in China, the primary purpose for more than half of young credit card applicants is to “create a credit profile.”

- Joint Debt

The level of credit reporting in different countries in the world is imbalanced. Construction of credit reporting in some countries and regions is relatively backward, and the number of customers with credit records is insufficient, which also spawned the global entrepreneurial wave of Internet finance to serve customers who have no credit records.

Beneath this wave of progress, however, the issue of joint debts has largely hampered the industry development and triggered major social concerns. From a borrower's perspective, debt information is "hashed" by various credit agencies, but no one should know more about the history of their loans and repayments than borrowers themselves. The cost of establishing a centralized institution to carry out individual credit reporting is high.

- Profiteering

A centralized credit model confers monopolistic advantages to more centers, enticing many financial institutions to deviate from their primary purpose— serving customers. Aiming for profitability, they deduct lenders while squeezing borrowers, and expand their profits by extending their customer base. If these profits were not consolidated, we believe it would promote the sound development of more industries through improving talent recruitment, making better investment in technology, and increasing benefits to users.

2.4. The Value of Decentralized Blockchain to Credit Business

2.4.1. Eliminating Monopoly and Profiteering

Everyone will be able to choose their debtors, and in a decentralized market with numerous competitors, pricing power will rest with the market rather than intermediaries. Instead, market participants will get returns and reallocate the data value by providing algorithms and computation on the blockchain.

2.4.2. Protecting Privacy Reasonably

Original personal information and non-desensitization data should not be stored at third- party institutions for a long term. Retaining personal data with the user is the most secure storage method. Such storage can be local, or can be encrypted and stored in the cloud, with convenient retrieval via local addressing.

Personal data can be transmitted to the recipient in an encrypted, point-to-point manner. Only the data recipient may process the data, and theoretically, after processing, the data recipient can choose not to retain the data. Alternatively, data can be provided to the data demander in the form of zero-knowledge proof, which allows for verifying the data authenticity and ownership without revealing the original text of the information, in order to fulfill the business requirement.

2.4.3. Eliminating Data Monopolies

Blockchain technology allows individuals to own and use their data, and eliminates the value premium caused by the centralized storage and verification of data from third parties. It also prevents data from being misused or leaked by third parties: traditionally, the authenticity of data held by individuals is verifiable and individuals have only ownership of data rather than the right to use data (which can only be gained via authorization to agencies as a means of providing proof).

2.4.4. Improving Data Validation Efficiency and Reducing Data Use Cost

Personal data can be automatically validated and used for multiple times according to data categories, significantly reducing the cost of institutions who use the data. The institutions are free from repeatedly obtaining authorization from users each time they use or access the data.

2.4.5. Creating “Data Marketplace”

Establishing a standardized data marketplace helps data certification bodies better promote the data standards they processed, construct the brands and high-value niches in terms of big data processing, and helps fix the price according to data use frequency and through feedbacking data to data platforms. Financial institutions can also see the number

of available data modules within the data marketplace more conveniently, and thus drive their own IT systems to connect more valuable data.

2.4.6. AI Risk Control

Anti-fraud and modeling algorithms are provided on the blockchain through deep learning and AI risk control systems, in order to help financial institutions process personal data without storing data. This method helps financial institutions improve their risk control capabilities in accordance with compliance requirements.

Blockchain discloses risk strategies by providing an encrypted algorithm, and allows borrowers to apply for verification based on the algorithms published by algorithm providers and credit institutions and proactively screen lenders through the risk strategy service. Borrowers who can not access institutional borrowing can choose not to apply for loans from those institutions, thus preventing submissions of personal information by multiple institutions.

This would lead to drastic increase in transaction efficiency and further drop in transaction costs for credit institutions, eliminates the need to allocate computational resources and payment costs to borrowers who cannot receive lending services.

2.4.7. Disclosing Lending Behaviors

During the borrowing process, by creating a credit history report on the blockchain, data approved by both parties is accessible to other institutions that need to obtain the data, effectively preventing problems such as long-term borrowing and repeated test borrowing.

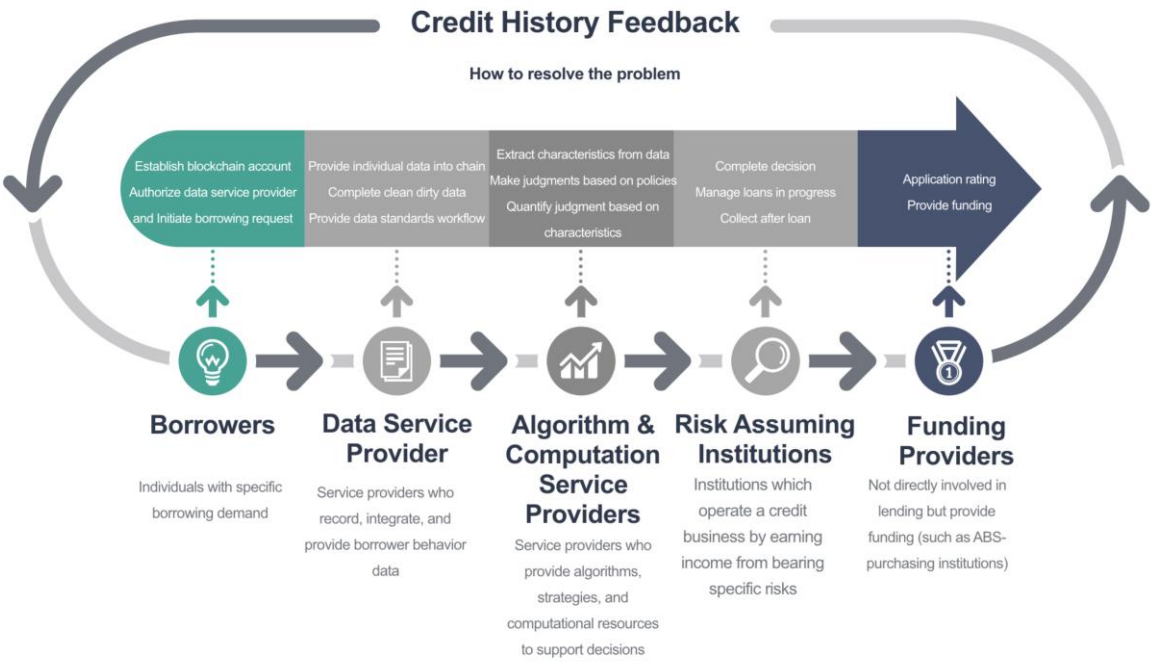
2.4.8. Positive Data Feedback

Beyond use by the lender, lending data can be used to help multiple institutions provide comprehensive analysis of the lender’s behavior and lending results, and help non-participants of single-time loans establish a more comprehensive personal credit rating system.

Partial data disclosed also allows more auditors and regulators to evaluate systemic risks more effectively.

Distributed Credit Chain applies the above solutions with Blockchain technology in real business scenarios, and develop a new super credit ecosystem that benefits the world.

3. How Distributed Credit Solves the Centralized Credit Problem

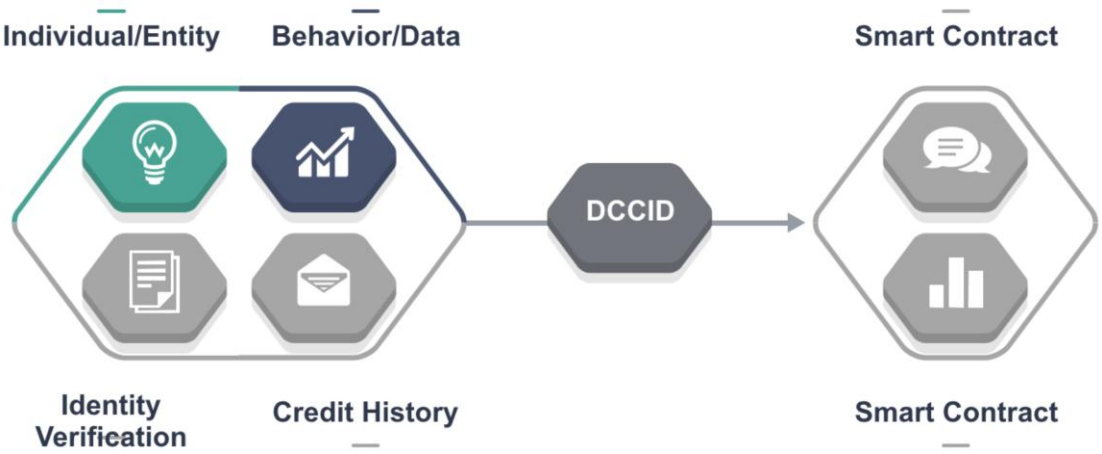


3.1. User Account Identification System

In DCC, each individual or institution has one DCCID generated through Public-Private Key Pair to form an address. This address acts just like a member ID in a traditional Internet system, identifying and associating various real-world attributes (such as real-name authentication, bank cards held, number of properties owned) and information on the credit chain—a loan request, loan, repayment, etc .

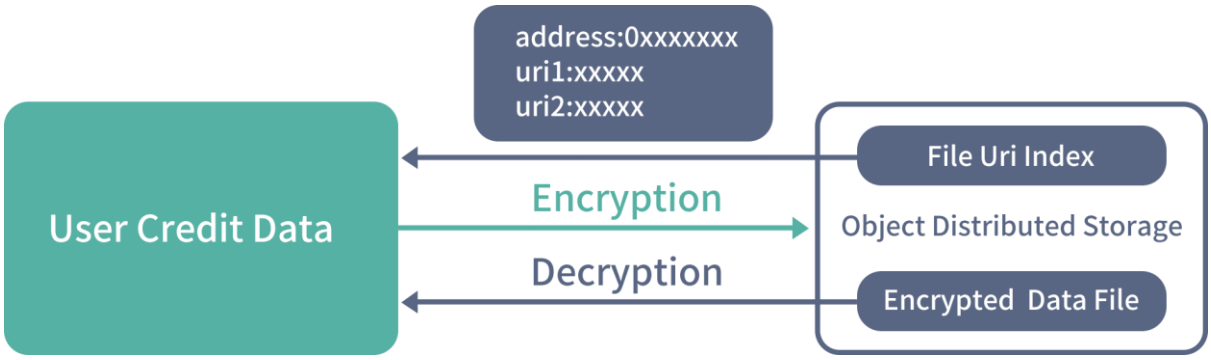
DCCID is a decentralized account system, and its generation does not depend on any individual DCC node. Any person, organization, or company can generate this DCCID offline. Only when there is information needing to be associated to DCC can information be stored on the DCC ecosystem.

DCC uses digital signature technology at every step of data exchange to fully guarantee the non-repudiation of individual-chain or institution-chain interaction of data.



DCC will provide an open source personal credit data management framework-DCDMF (Distributed Credit Data Management Framework) which is supported by a specific cloud storage provider, and developers are able to quickly rebuild users' personal credit reporting data using DCDMF based on their APP development needs. Users having a DCCID can exchange data in several APPs which use DCDMF by exporting their wallet addresses.

DCDMF uses AES symmetric encryption to encrypt data with the private key of DCCID and its input password (salt), and forms a data index with the cloud server through DCCID's wallet address. Users are able to obtain the data index at any moment conveniently through address of the DCCID, or quickly get the plain text data from the cloud using their own passwords.

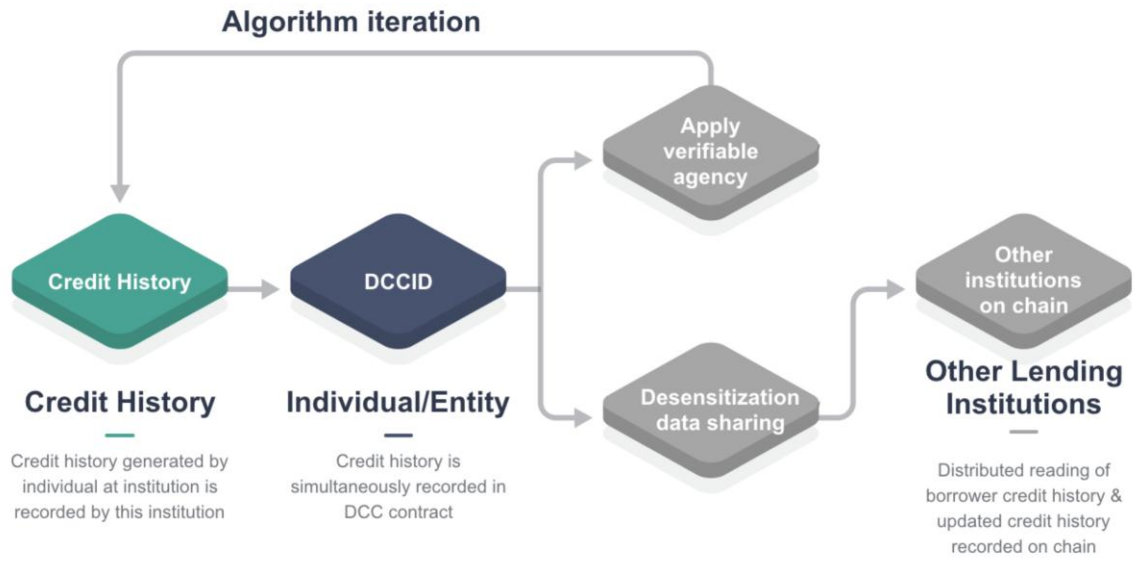


3.2. Distributed Credit Maintenance System

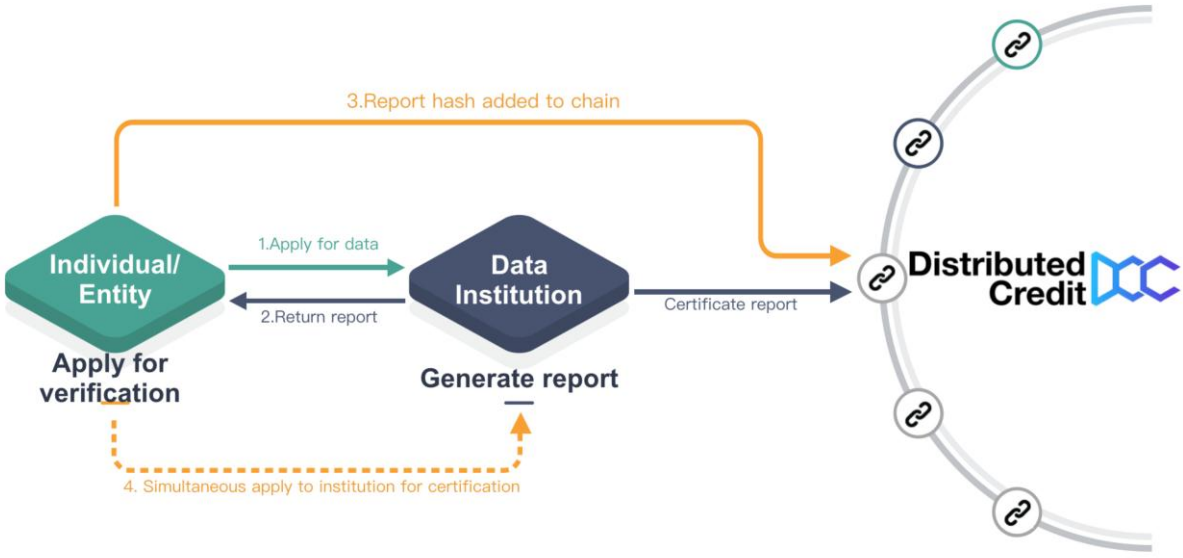
The Distributed Credit Chain entirely redefines the exchange process of personal credit. Individuals have ownership of the data through DIV (Distributed Identity Verification), and can determine the storage, presentation, and use of personal data. Data service institutions make profits by providing individuals with quality data services instead of storage and abuse of data.

Data in the DCC is stored distributed in the hands of users, thereby "returning control of credit to customers"

The DIV system protects data from falsification and deception by means of digital signatures and data digest in the circulation process. The DIV mechanism has the advantage that the data institution directly provides users with data authentication services, and the data would not be held by third parties. Such mechanism provides data sharing support to the institutions which were originally intended to provide data only to their own customers.



This all stems from decentralization, which transfers the center mastering data from original data oligarchs to individuals, stores decentralized data in decentralized hands. Distributed Credit Chain stores the nonrepudiable evidence proving the data's generation and accuracy, as shown below:



Personal data will be sent to the data institution for processing. The standard data processed by the institution will be returned to the individual as a data report. The individual will save the data report as a personal data asset locally or in the cloud, applies to

the data verification smart contract of DCC system for verification after hash summary of the report, while initiating chain vertification with the original verifying institution. After the verifying institution confirms the hash as consistent after verifying the original report, the data is labeled as authenticated and recorded within a limited period of time on the chain.

The risk of data leakage during the verification process is controlled to the minimum extent because the data being verified is passed only to individuals and data agencies. The digest algorithm used on the chain is irreversible, and therefore there is no risk of data decoding on the chain.

Through DIV interaction architecture, a decentralized peer-to-peer verification system can be widely established among individuals, between individuals and data institutions, as well as among data institutions. The more verifications an entity receives from entities and the more data assets it obtains, the more comprehensive the credit portrait of an individual will be. This provides more abundant and multi-dimensional data support for financial institutions to identify credit risks .

Data reports obtained by individuals can be used again as new data assets to enrich their own data accumulation and can be used again by the data institution, in which case more data validation is generated. The DIV mechanism reduces the barriers for big data companies and AI data processing companies to engage in user data services, and provides fundamental support to enable more scenarios to use users' data rapidly.

When financial institutions use personal data assets, they only need individuals to autonomously submit personal data reports required. The DIV framework ensures rapid recognition of the authenticity and effectiveness of the report.

This is a credit reporting system that breaks the boundaries of countries and limits of scenarios. The individual with DCCID can provide the data as required by the lending institution to complete the credit reporting under any scenario.

Summary: The DIV framework of DCC enables the change from centralized management by credit reporting agencies to decentralized individual ownership, which will fundamentally alter the original landscape in which the personal credit reporting system is maintained by

centralized credit information systems in each country and region. The mechanism integrates the credit records of different countries, regions, and in different languages under a DCCID, and creates a platform that does not interfere with sensitive data interactions through countless decentralized individuals and participating institutions, making it a truly decentralized and independent credit reporting system. This system is able to serve any individual or institution in the world and provide any business scenario that requires credit data.

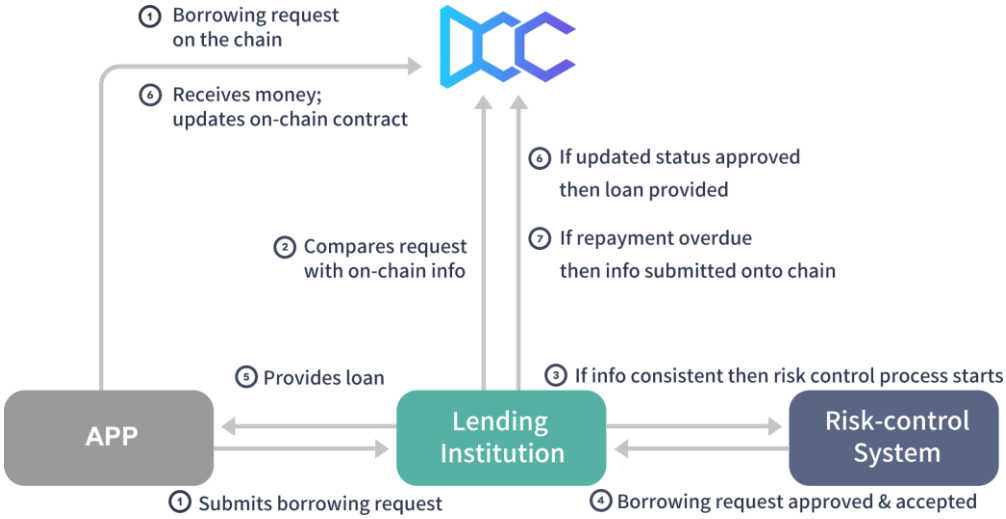
3.3. Blockchain-based Lending Business

3.3.1. Data entry

With the help of the open source framework SDV (Submitting Data Validation), the lending institutions can easily input the user's data to their existing risk control system. SDV continuously updates the data parsing and verification template libraries according to the data provider in DCC market, and after entry of the user’s data into the framework, SDV generates entry data that can be used by the risk control system based on the digital signature and submitted data digest of the DCCID (the valid data that has been verified as being submitted by the owner and not being altered).

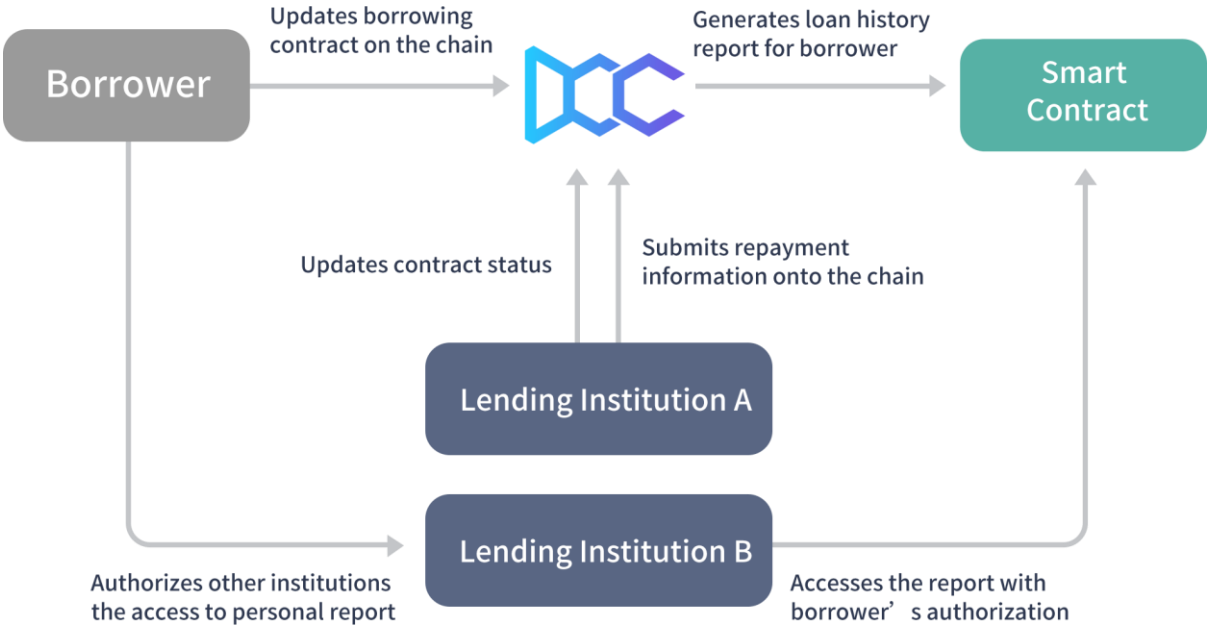
3.3.2. Lending process

DCC suggests that the lending institutions should use chain data to maintain the lending process. The user's loan application can be submitted to the chain directly by the user via signature, and the lending institution obtains the entry data through the SDV and updates the approval result to the corresponding order.



3.3.3. Credit report

Through contracts on DCR (Distributed Credit Report), there will generate a list of credit history index in the DCC system that records the individual's whole life cycle status from application for loans, review of loans, repayment, overdue loans, collection, and bad debt. The list of indexes alongside the plain text data of the actual loan contract held by the individual constitutes a user's credit history report in DCC system, which is also the embodiment of returning data to the individual by DCC system.



For each record in the DCR, only the borrower and lender hold the plain text data, and DCR has only the index list. Therefore, although the record index is shared in the

blockchain, such record is of little value to third parties. The mechanism also ensures that the sharing of data between the lending institutions happens on the premise of protecting their own privacy.

DCR mechanism is relatively inexpensive, and for credit institutions, applying a blockchain with “risk control data” is of tremendous value, which can address joint debt in the current credit ecosystem more effectively and at a lower cost.

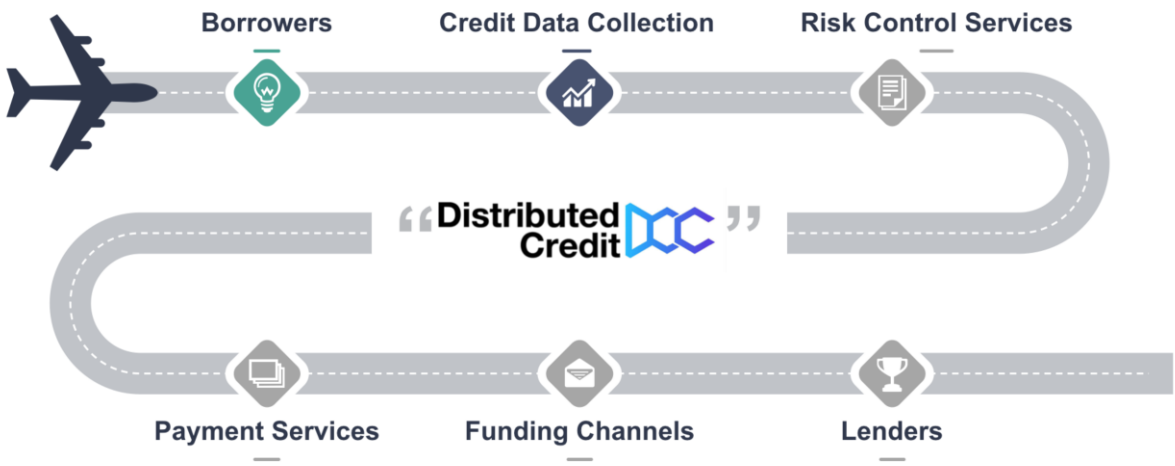
The data on DCC are retained in a tamper-proof format, providing data basis for confirmation of claims and the rating of claims via algorithms and compution in the subsequent asset securitization process .

For ecosystem data that needs to be integrated and calculated, DCC will build a multi-party computation (MPC) platform with leading universities and colleges in China. Thus the data from multiple participants can be analyzed without collection, and be saved locally for collaborative computing; all participants can share the data under identical computing and analysis scenarios without worrying about data abuse by third parties, and true cooperation with data privacy protection will be achieved.

Decentralized transmission model of DCR will greatly reduce the profits of lending information intermediaries, and truly allow profits to flow to parties needing credit and funding parties. It will also make ecosystem competitions more market-oriented, reduce the threshold for participants to enter the market, improve the influence of risk control capabilities on business, and truly facilitate the interest rate liberalization.

3.4. Non-Cooperative Game Between Participants

DCC uses the blockchain to expand the original interlinked credit ecosystem relationship consisting of many centralized systems into a flat credit ecosystem in which the blockchain smart contracts serve as the shared medium and all participants are be treated equitably.



The openness of the DCC ecosystem enables each participant to cooperate on an independent and equal basis Further cooperation between previous lenders and borrowers will not depend on the original relationship, and decisions made by any participant within the ecosystem will be entirely independent of other ones, thus creating a truly non-cooperative gaming environment.

Such independent bilateral cooperative model will greatly reduce the complexity of system interconnection. It is easier for credit system technology service providers to standardize the modules of credit services and provide the credit standard system that can be deployed rapidly.

Based on openness, DCC sets no access barriers for participants in the ecosystem, and has reached cooperation intentions regarding various basic service fields with some outstanding service providers in the world .

3.5. Advantages of the Ecosystem

- The unique and tamper-proof identity system The credit reporting system without data island or data monopoly
- Efficient, low-cost credit business system
- Cross-entity, permanent data storage and shared creditor's rights record

- Asset securitization with excellent asset liquidity
- Liberalized interest rate formation mechanism

4. Product Scenarios

4.1. Loan Registration Service

Loan registration service is intended for C2C loans among individuals and is generally divided into two types: directional loans and non-directional loans.

Directional loans between a lender and borrower occur when the two parties reach an agreement on the loan offline, then respectively download the loan receipt software and add each other's certification, and finally complete the signing of an electronic loan contract on Distributed Credit Chain, where payment partners complete the capital transfer simultaneously. Users may choose to complete the deduction of principal and interest through Distributed Credit services, or to transfer the money separately offline.

In the case of nonn-directional loans, the borrowers initiate a loan application (anonymously if preferred) through DAPP on Distributed Credit Chain, when the lender is not designated. The application will include the amount, duration, interest rates, repayment methods of the loan and the tamper-proof personal data integrated and stored on the chain by data service providers for the borrower. With the credit rating information generated through the algorithm and compution of algorithm service providers on the chain, the borrower’s first-degree friends (friends can be automatically added through DAPP authorization or both parties actively approve the friend relationship on the chain) can access the borrower's application and decide whether to lend. If they confirm to lend, both parties sign an electronic loan contract and the credit contract on the chain, during which funds are generally transferred through payment partners on the chain (third-party payment institutions). If the borrower's personal credit is insufficient, he or she can realize credit enhancement and obtain the loan through sponsorship provided by others on the chain.

4.1.1. Consumption Loans

Consumption loans, also called as Consumer Loans, refer to individual loans used for further study at abroad, housing decoration, purchasing durable goods or cars, etc.

C-end applicants will send their personal application information to B-end financial institutions through the chain, or test their own data against various screening algorithms of financial institutions. Qualified applicants may sign electronic contracts with corresponding financial institutions online, and borrow from them. The fund must be exclusively used to repay the debt on designated credit cards.

Because of the cross-regional nature of blockchain, a C-end applicant could be an ordinary African laborer in urgent need of home renovation. This hypothetical laborer has a good credit record locally, but the annualized interest rates of borrowing from local banks are up to 8% due to unbalanced credit development in his own country. Through DCC decentralized credit data sharing, a Canadian bank can assess his borrowing risk and usage scenario. Through the credit enhancement of the consumption scenario, the bank is willing to lend to him at an annualized interest rate of 4% through the blockchain network. Such scenario is inconceivable in the traditional banking network, but will occur frequently in the blockchain's distributed architecture.

4.1.2. Consumption Installment

Consumption installments usually refer to the commodity installment purchase agreement entered into between a consumer and a merchant, where the consumer promises to pay in installments within a given period as agreed after the merchant delivers the product.

In Distributed Credit Chain, consumers can upload their personal data to the chain and generate a credit rating report. In the event of a purchase, the merchant may be authorized to check the consumer’s personal data and credit report to understand and evaluate his or her credit status, and decide whether to offer installment credit.

In some consumption business scenarios, traditional banks cannot provide installment services for adequate consumption scenarios due to the limits of their own loan funds, while using a Distributed Credit contract set, the merchant can organize the user to set up virtual fund pools corresponding to consumption scenarios. These funds in the fund pool are still stored by individual users through the DCCID account. When consumption occurs, corresponding funds are quickly matched based on the big data risk-control model of the

blockchain and the risk appetite of different virtual pools. Diversified investment by multiple individuals can satisfy the funding needs of the consumer in the process, and reasonably reduce the risk borne by everyone.

For example, numerous food delivery couriers on the street may need to replace their vehicles' batteries for 3 to 4 times a day. If they were to purchase these batteries themselves, the cost would be extremely high. If battery swap stations were to provide these batteries, they would have needed great investment in batteries during the early business stages and would face high business risks. A distributed banking system could provide a customized installment plan which allows couriers to pool the funds needed for investing in targeted battery procurement. It could even introduce tokenization. Business income arising out of subsequent use of the battery, could be shared among couriers who made the investment. Such self-sufficient financial system is inconceivable under a traditional financial system, while in DCC ecosystem, this plan will be carried out quite smoothly and naturally.

4.1.3. Blockchain Credit Card

Based on the DCC contract set, various individuals and financial institutions can grant credit to specific users on DCC. The credit amount is maintained on the chain. Through zero-knowledge authentication and homomorphic encryption, many credit providers can, without disclosing the credit amount information to each other, determine whether specific consumption allows for overdraft. The overdraft consumption records will also be stored on the chain as the user's credit information and used by the ecosystem.

DCC-based credit cards can also easily integrate the amount limit given by various credit providers for portfolio consumption. Because of the combined credit card overdraft plans, the institutions that provide credit card reimbursement services can also offer services to customers at a lower cost through the distributed credit reporting system provided by the DCC system. This cost reduction is not only reflected in the acquisition number of customers and the single-time acquisition costs, but also in the reduction of the default rate and overdue duration. With blockchain technologies, DCC is expected to grow into the largest global credit card organization that does not issue credit cards.

4.1.4. Digital Asset Lending

At present, in digital asset lending, the lack of effective personal credit information association between the world of data assets and the traditional world, results in no accumulation of historical credit. And there also lacks effective means to avoid risk before, during and after loan processing. DCC distributed credit reporting system can help the blockchain-based credit lending platform open up credit reporting links, conduct pre-credit risk control, manage performance during loan, and foster the expansion of the digital asset lending market.

Imagine that people with different digital assets could pledge their digital assets through the loan chain and obtain mainstream digital assets (ETH, BTC, etc.) from different individuals for reinvestment through credit reporting data and credit records. Such loan market would create more liquidity for digital asset transaction markets and provide more financial derivatives.

4.2. Facilitating Asset Securitization

4.2.1. Mortgage Claims Registration

In the process of asset securitization, since the fund provider is not the owner of the asset, it will have a natural distrust in the authenticity of assets' historical performance, which results in its excessive costs in hiring external agencies for verification. In many cases, the historical data of an asset is not trusted even after due diligence by external agencies. If the project initiator has only existed for a short duration or is not rated sufficiently, then issuance is difficult to make successfully.

Through the DCC contract set, the ownership of the underlying assets (real estate, cars, sales contracts, bank notes, etc.) can be explicitly registered on the chain by law firms, certification bodies, notary offices, and the like. When these assets are re-used, the life cycle of the entire asset can be checked on the chain in a cheap and efficient manner, which effectively avoids repeated mortgage financing.

In the asset securitization business, the original equity owner, as the initiator, is only an investor in an inferior product after transferring ownership of the assets to SPV. In principle, the follow-up services for such assets should be completed by a third party—including recovery of repayment, collection of overdue assets, and disposal of non-performing assets. In a centralized world, these tasks are often still borne by the original equity owner, who might establish a team to finish such tasks or subcontract these tasks. Since the original equity owner is usually the holder of inferior products, the whole data closed-loop is not open to anyone, thus creating moral hazard risks.

Maintaining the distribution of the entire ABS through DCC effectively eradicates such problems, creates real-time shared data between the original equity owner and SPV, and makes the asset disposal process totally transparent.

4.2.2. ABS Asset Distribution

As the loan contracts formed through DCC ecosystem have decentralized, non-repudiatable and tamper-proof features and the decentralized credit reporting system is established, the assets are endowed with high divisibility and liquidity. Asset securitization no longer strictly requires the transfer of assets by a single equity holder. Instead, a new-type technology investment institution that emerges will package and sell lending assets stored in DCC through identification, screening, combination and structuring.

ABS products packaged through DCC assets have good penetrability, the disposal results of repayment recovery, overdue asset collection and non-performing assets are clear, and the cost of authentication is little. All these will bring new products to the asset securitization market, which will provide distributed asset management abilities through DistributedAssetManage services on DCC, greatly improving the technical content and liquidity of the entire asset management ecosystem.

5. Economic Ecosystem Model

5.1. DCC-Valuation Credentials of Ecosystem

DCC is the credential used to pay for jobs in the Distributed Credit Chain. Any work in the DCC needs to be paid for with DCC. DCC balance is managed through DCC token contract to maintain a fixed total amount of DCC. As the financial service system in the DCC grows, more and more distributed business scenarios are embedded and used more frequently, which greatly increases the liquidity.

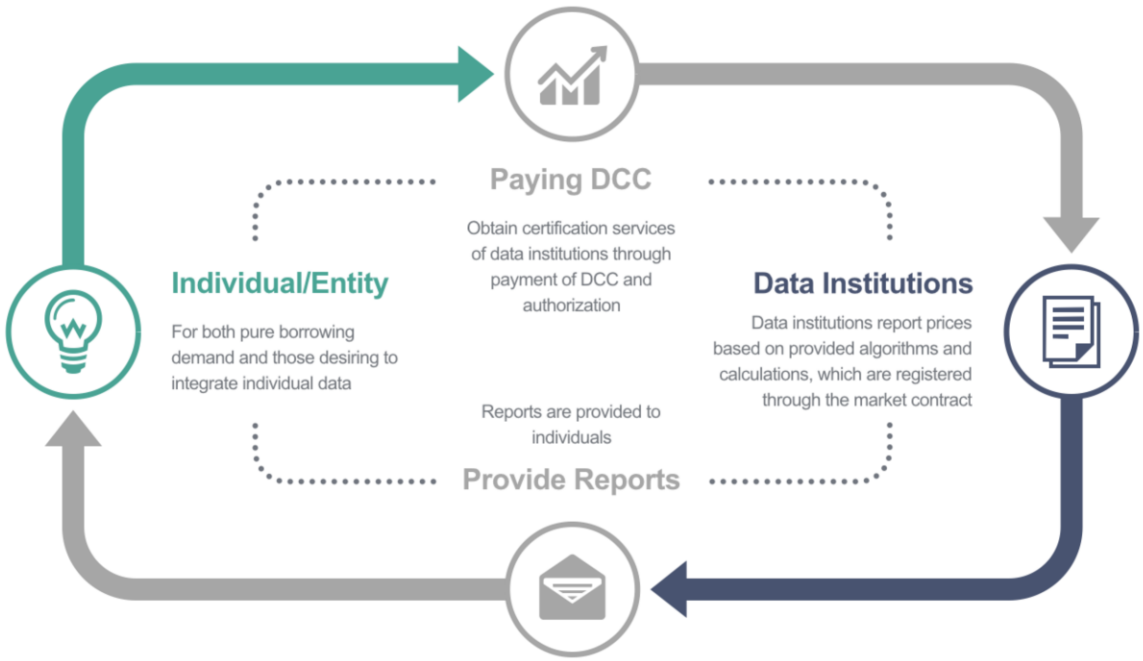
DCC's payment is handled based on the DCCpayment contract, which is responsible for the DCC payment rules for multi-payer participation.

5.2. Benefits of Ecosystem Contribution

As an important indicator of the value of contribution to the ecosystem, when a DCC-based financial system comes across a crisis, the amount of DCC (as the contribution value) held can be used as credentials for preferential enjoyment of financial liquidity support among ecosystem participants. Such liquidity support will help DCC-based financial institutions combat liquidity risk and create a contribution-based financial eco-protection mechanism.

5.3. Use of DCC in Distributed Credit Chain

5.3.1. Reconstructing Credit Cost with DCC



In DCC system, the individuals that require data or reports from data institutions need to pay DCCs. Such mode will transform the original way that data institutions generate revenue, that's, from making profit through collecting and reselling user data to through providing better services to customers.

Credit institutions also need to pay DCCs to the certification body when verifying the validity of the data. However, the changes in the revenue structure of the data institution will greatly reduce verification costs , which will further reduce overall cost of the borrower.

DCC's labor market is maintained based on the DCCmarket contract, which is responsible for registering, altering, and deleting DCC-priced remuneration from service providers in the Distributed Credit Chain. It recommends the most appropriate partner to individuals or institutions through AI analysis in the chain, effectively maintaining market equity and transparency. DCC pricing for services also avoids detrimental impact on the production of borrowers caused by DCC price fluctuations in the secondary market. In the

process of conducting business, various participants do not need to pay attention to the price performance of DCC in the secondary market; instead, they can decide whether to use the service through simply judging the corresponding legal tender value of o the service.

5.3.2. Using DCC to Redistribute Ecosystem Benefits

In the DCC system, individuals applying for credit shall pay DCCs for application contract. Some portion (for example, 50%) is allocated to data institution according to the use weight of data verification service by credit institutions as verification fees; a certain proportion (say, 2.5%) will enter the credit reward pool for that day as credit incentive loss; another certain portion (for example, 7.5%) is recycled and used for continued release of DCC; the remaining portion (for example, 40%) is distributed as a credit result reward. If the loan is granted successfully after verification and the borrower proactively confirms the loan contract, then the reward is returned to the borrower. If the loan contract is not confirmed within 1 day or the loan application is rejected, then the reward is assigned to lending institutions.

DCC amount paid for loan application is decided by the borrower at own discretion, and credit institutions can set the minimum threshold of DCC and handle the priority of borrowers' applications. In principle, the credit institution will give priority to borrowers who pay more DCCs.

Through establishment of such decentralized trading models, the entire ecosystem distribution pattern of interests can be dynamically adjusted so that the credit processing resources can be tilted towards individuals with more DCCs (those who contribute more to the ecosystem), thus maintaining the sustained vitality of the ecosystem.

5.3.3. Using DCC to Incentivize Credit Accumulation

In the DCC system, a portion (for example, 2.5%) of the loan in the application process is converted into the credit pool of the day and forms the total reward pool with ecosystem fixed incentives. According to DCCreward Agreement, on Day T+1, the money in credit reward pool will be distributed evenly to incentivise borrowers who repay loans before Day T. In the DCC ecosystem, different types of reward pools will be formed in different

businesses in the future, and ecosystem participants may receive incentives for different pools when using and contributing to different ecosystems.

The daily fixed incentive is dynamically adjusted by the foundation according to ecosystem development needs, and daily fixed accumulation will not exceed the total amount of DCC. When there is no DCC that can be excavated, the incentives will be no longer given.

DCC incentives ensure that good credit behavior can obtain more convenience in lending, which encourages everyone to establish their own good credit.

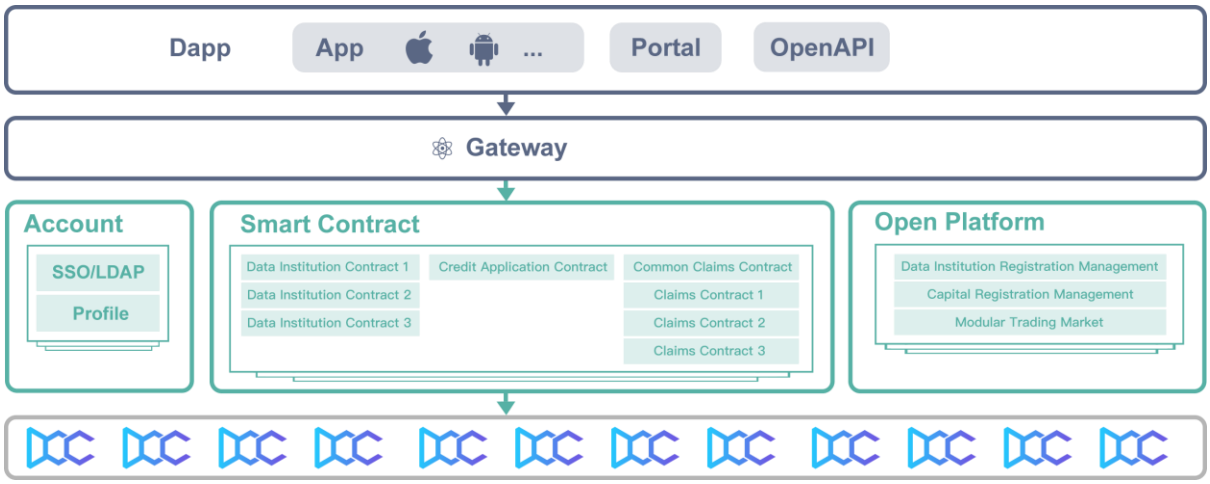
5.3.4. Cross-border Credit Credentials

Because the DCC system provides a cross-border, cross-scenario, and cross-currency credit service of digital assets, DCC can correspond to values of different legal tender of loans in various countries, which greatly facilitates the multinational business of lending service agencies.

Being more frequently used, DCC is expected to become the anchor currency of the multinational lending service ecosystem on Distributed Credit Chain, and open the value exchange of ecosystem service providers in various countries. Through DCC, users in one country or scenario will be able to purchase data reports provided by the data providers of another country or scenario, or apply for loans from various lending institutions in different countries. DCC transactions in different exchanges corresponding to different currencies can provide cross-border settlement services.

6. Technology Realization

6.1. System Structure



6.2. Dapp

DCC is a decentralized open credit platform. Any platform with traffic and scenarios can submit its own Dapp applications to DCC, provided that these submissions are based on Distributed Credit Chain standards. In the early stages, to ensure the health and stability of the ecosystem, the Foundation would review Dapp release applications. The Cyber Sheng Foundation encourages different scenario platforms to enter the DCC ecosystem to provide consumption scenarios of Internet finance through Distributed Credit Chain ecosystem.

DCC's R & D team will cooperate with the App R & D team to provide Dapp with customized development services in the early stages, in order to help lending institutions package and release the lending client based on the underlying technology of Distributed Credit Chain. Such lending institutions can use this client application to develop customers and complete customer registration, maintenance, data acquisition, risk control, and management during and after the loan.

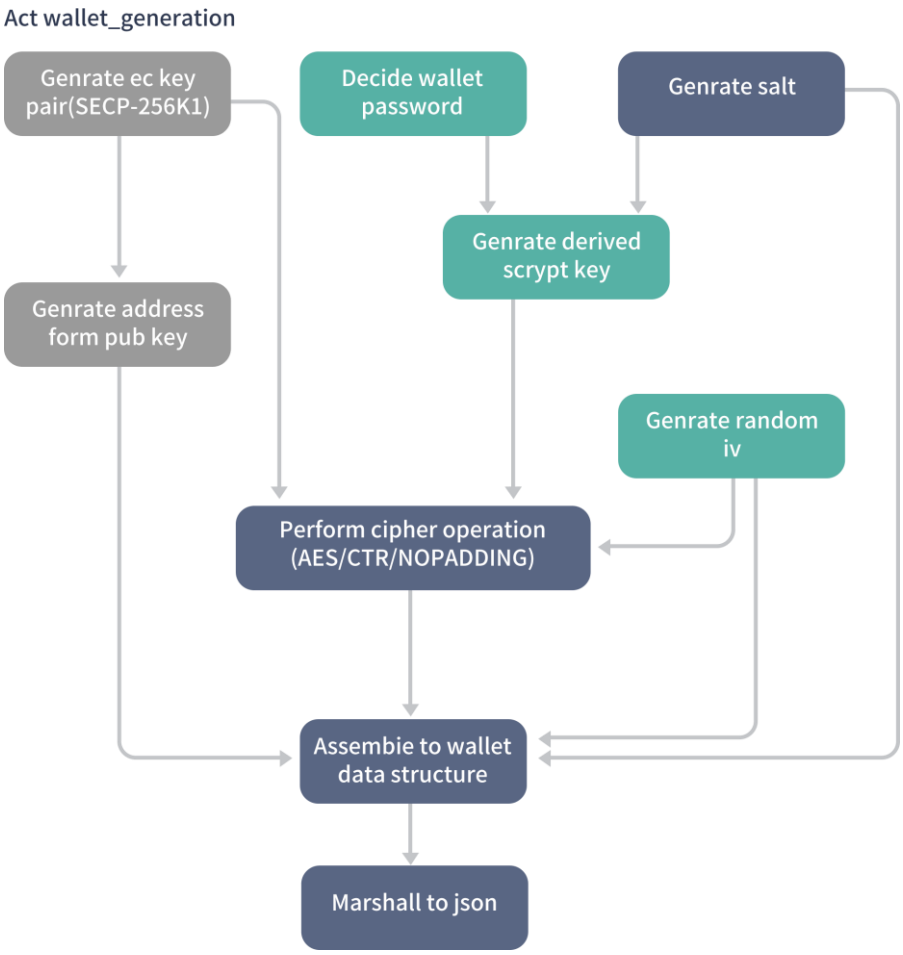
Customer addresses created through a custom App can be exported and imported by customers into either universal Dapp provided by DCC or into Dapp developed by other developers. These universal Dapps can use all service structures of DCCmarket to provide lending services to customers, thus providing customers with better lending rates through making use of price competition between lending institutions and data services providing customers with better lending rates.

6.3. Account (Wallet) System

DCCID uses the wallet generation mechanism identical to Ethereum. The Wallet consists of the private key, public key, and address.

DCCwallet uses the “elliptic curve algorithm” to generate public-private keys. The elliptic curve algorithm is an asymmetric encryption algorithm and has higher security, faster speed, and occupies less space than common RSA algorithms.

Each wallet account contains a key pair, i.e., a private key and a public key. The private key (k) is a randomly-chosen number, after which the unidirectional cryptographic function is multiplied using the elliptic curve algorithm to generate public key (K). Then the public key (K)generates the account address (A) using unidirectional cryptographic hash function.



DCCwallet uses Private Key and Keystore & Password to save the private key. The private key can be saved in Dapp, and can also exported to be stored elsewhere after backup.

```
ECKeyPair ecKeyPair = Keys.createEcKeyPair();
byte[] salt = generateRandomBytes(32);

byte[] derivedKey = generateDerivedScryptKey(password.getBytes(UTF_8), salt, n, R, p, DKLEN);

byte[] encryptKey = Arrays.copyOfRange(derivedKey, 0, 16);
byte[] iv = generateRandomBytes(16);

byte[] privateKeyBytes = Numeric.toBytesPadded(ecKeyPair.getPrivateKey(), Keys.PRIVATE_KEY_SIZE);

byte[] cipherText = performCipherOperation(Cipher.ENCRYPT_MODE, iv, encryptKey, privateKeyBytes);

byte[] mac = generateMac(derivedKey, cipherText);
WalletFile walletFile = new WalletFile();
walletFile.setAddress(Keys.getAddress(ecKeyPair));

WalletFile.Crypto crypto = new WalletFile.Crypto();
crypto.setCipher(CIPHER);
crypto.setCiphertext(Numeric.toHexStringNoPrefix(cipherText));
walletFile.setCrypto(crypto);

WalletFile.CipherParams cipherParams = new WalletFile.CipherParams();
cipherParams.setIv(Numeric.toHexStringNoPrefix(iv));
crypto.setCipherparams(cipherParams);

crypto.setKdf(SCRYPT);
WalletFile.ScryptKdfParams kdfParams = new WalletFile.ScryptKdfParams();
kdfParams.setDklen(DKLEN);
kdfParams.setN(n);
kdfParams.setP(p);
kdfParams.setR(R);
kdfParams.setSalt(Numeric.toHexStringNoPrefix(salt));
crypto.setKdfparams(kdfParams);

crypto.setMac(Numeric.toHexStringNoPrefix(mac));
walletFile.setCrypto(crypto);
walletFile.setId(UUID.randomUUID().toString());
walletFile.setVersion(CURRENT_VERSION);
```

During the iteration of the DCCwallet version, the collaborative distributed key recovery service will be launched with the MPC platform, under the precondition of safety verification. Private key clients are separately stored in multiple independent organizations that cannot independently recover the password. When the key needs to be recovered, multiple institutions will coordinate in key recovery to help users store their keys more safely.

6.4. Gateway Service

Gateway Service is a centralized system, which primarily serves ecosystem participants that do not have the ability to directly access DCC through RPC. They may access DCC via open API through the gateway provided by DCC, which greatly reduces business interfacing time.

The DCC system also provides SDK and other access methods, based on the Gateway Service, so as to facilitate ecosystem expansion and provide easy ways to enjoy the credit services on DCC.

6.5. Open Platform

The Open Platform on Distributed Credit Chain is a centralized system which serves as a data provider and market. The transcation market serves data collaborators, AI risk control algorithm providers, credit structuring institutions, and other institution partners. Through this platform, institutional partners can check, screen, contact and reach cooperation with other partners based on their needs through DCC, while using the services on DCC .

The Open Platform interfaces with DCCmarket contracts. All cooperating institutions can publish their labor costs through this platform. After analysis and processing, these data will be sent to users and institutions as their price basis for choosing the services they need. The real-time quotes will smoothen the exchange of information across the institutional service market .

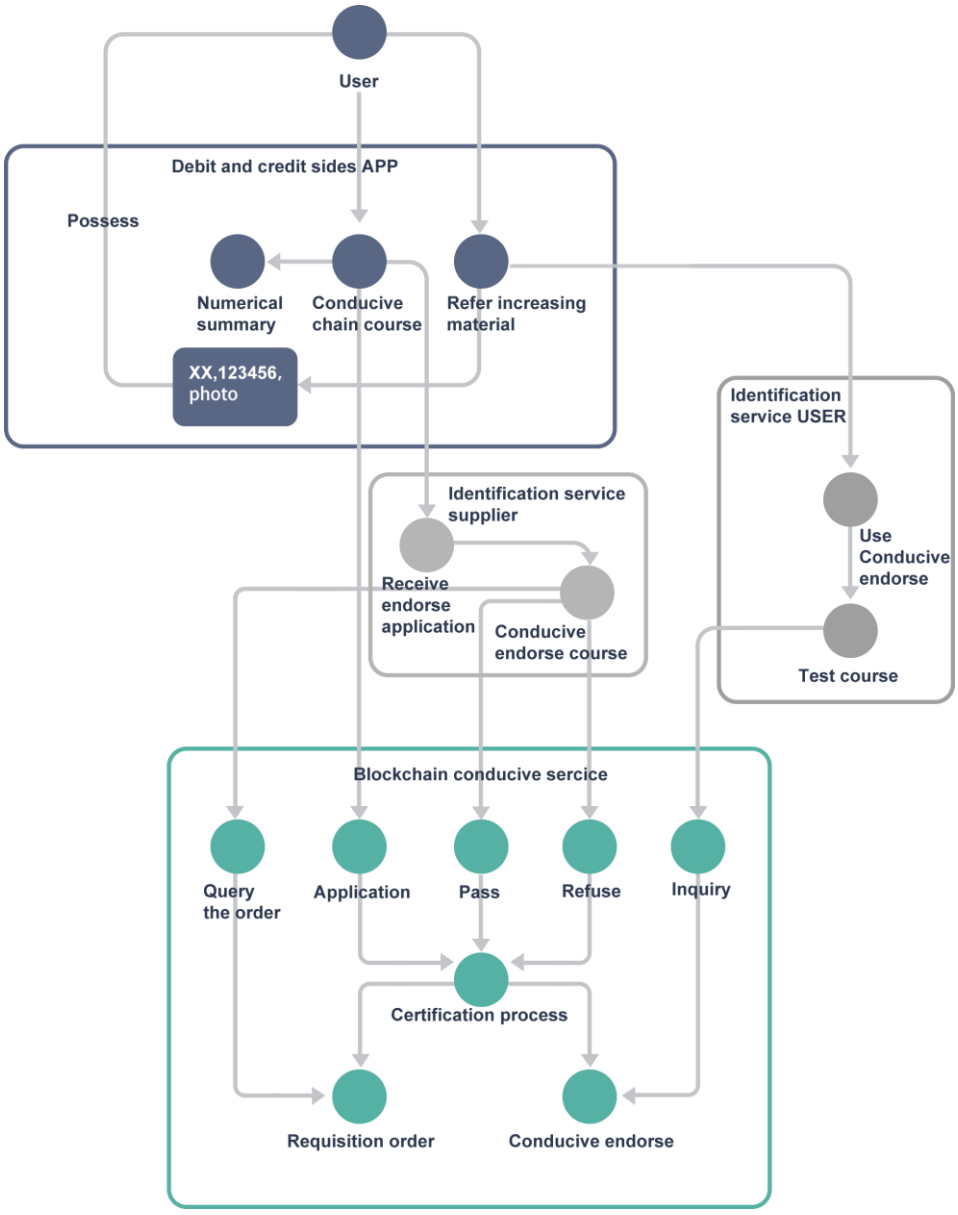
The Open Platform will provide a blockchain browser to view all node operations, block loan request, transaction flow and other blockchain basic information on DCC.

6.6. Open source framework

Frameworks such as DCDMF, DIV, and SDV will be open sourced at github given with open source on github. Partners are welcomed to modify these frameworks for more customized services.

DIV framework flow diagram

Object:


User
Debit and credit sides APP
Possess
Numerical summary
Conducive chain course
Refer increasing material
XX,123456, photo
Identification service USER
Use Conducive endorse
Test course
Identification service supplier
Receive endorse application
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Blockchain conducive sercice
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Application
Pass
Refuse
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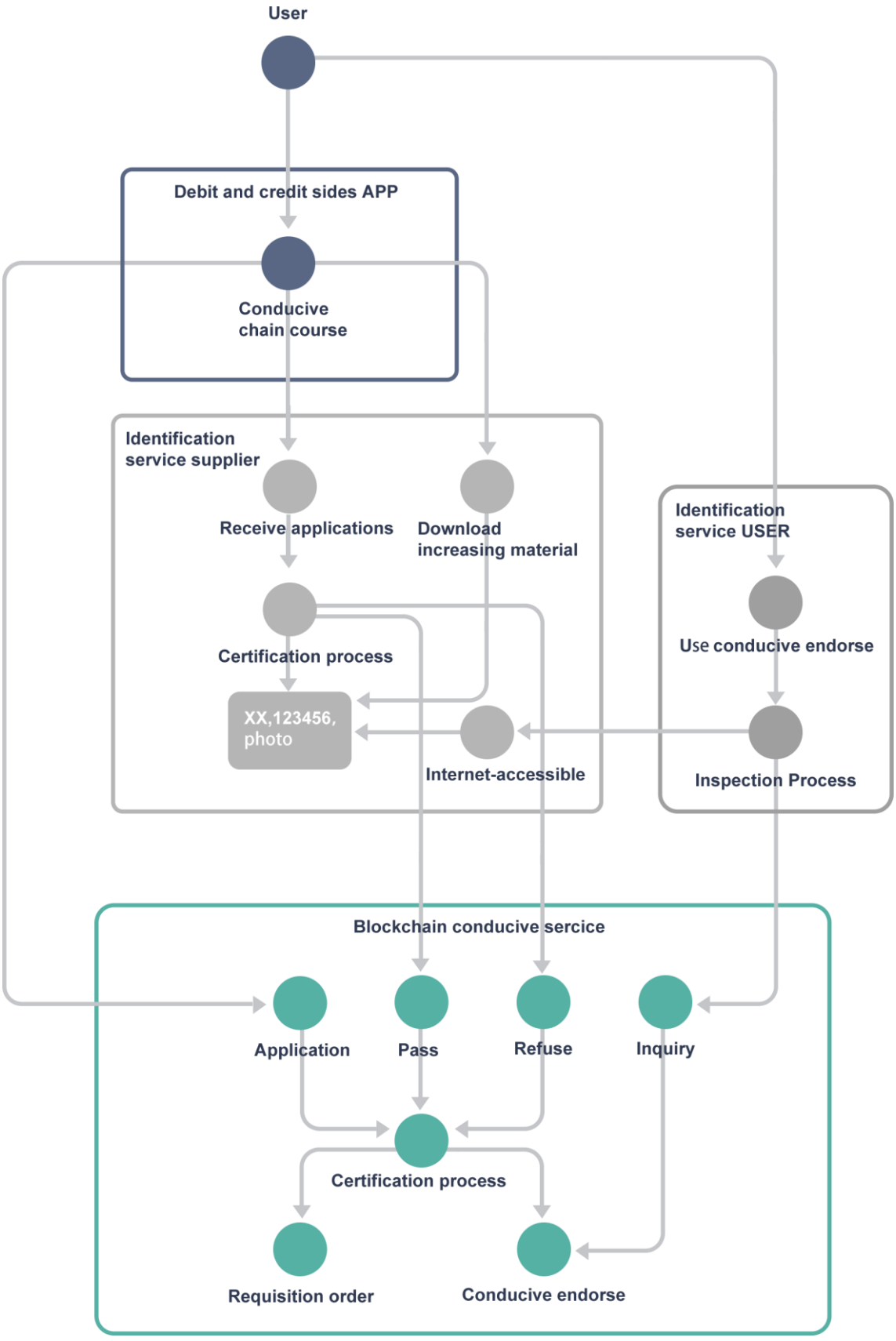
Certification process
Requisition order
Conducive endorse


User
Debit and credit sides APP
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Identification service USER
Use conducive endorse
Inspection Process
Blockchain conducive sercice
Application
Pass
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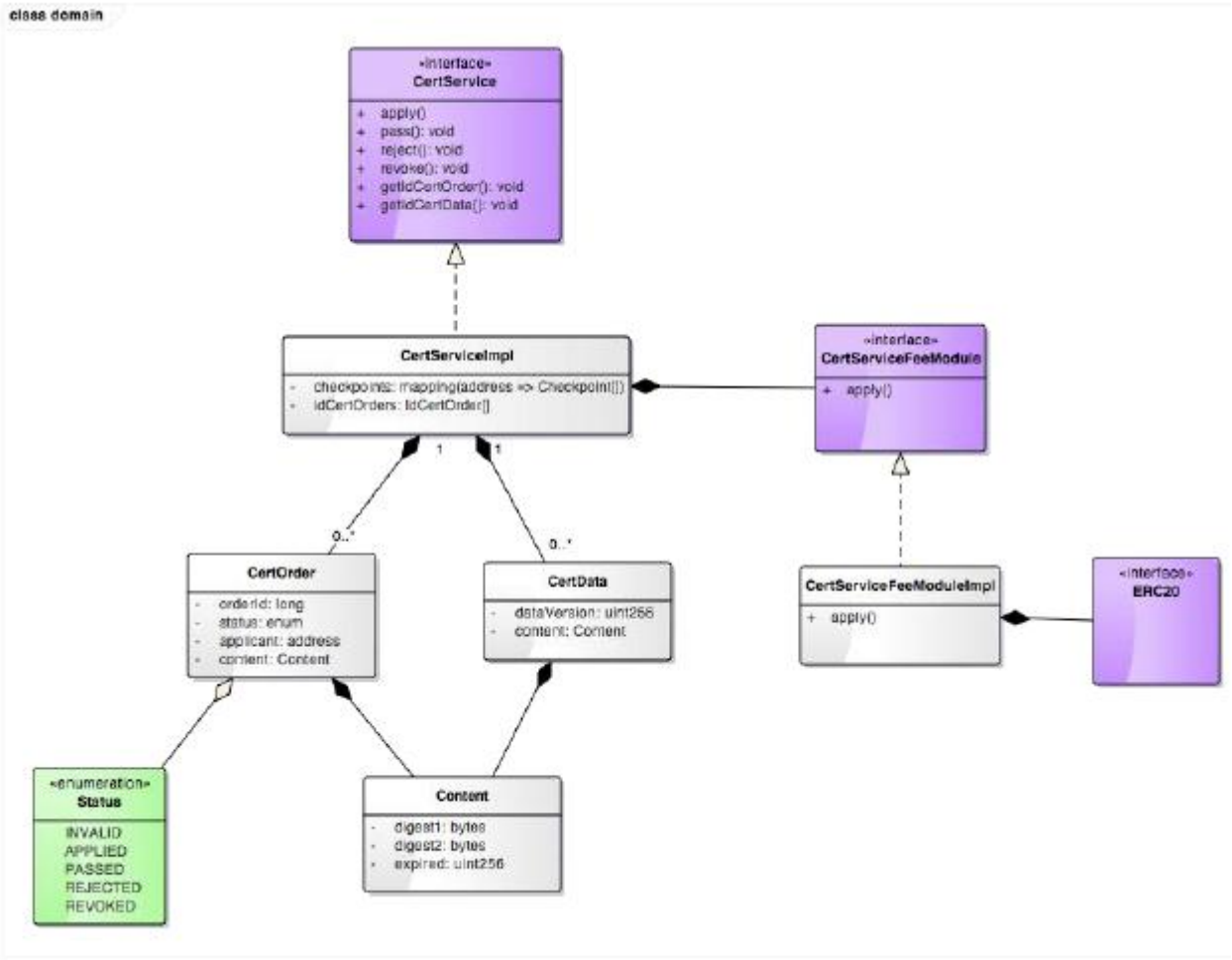
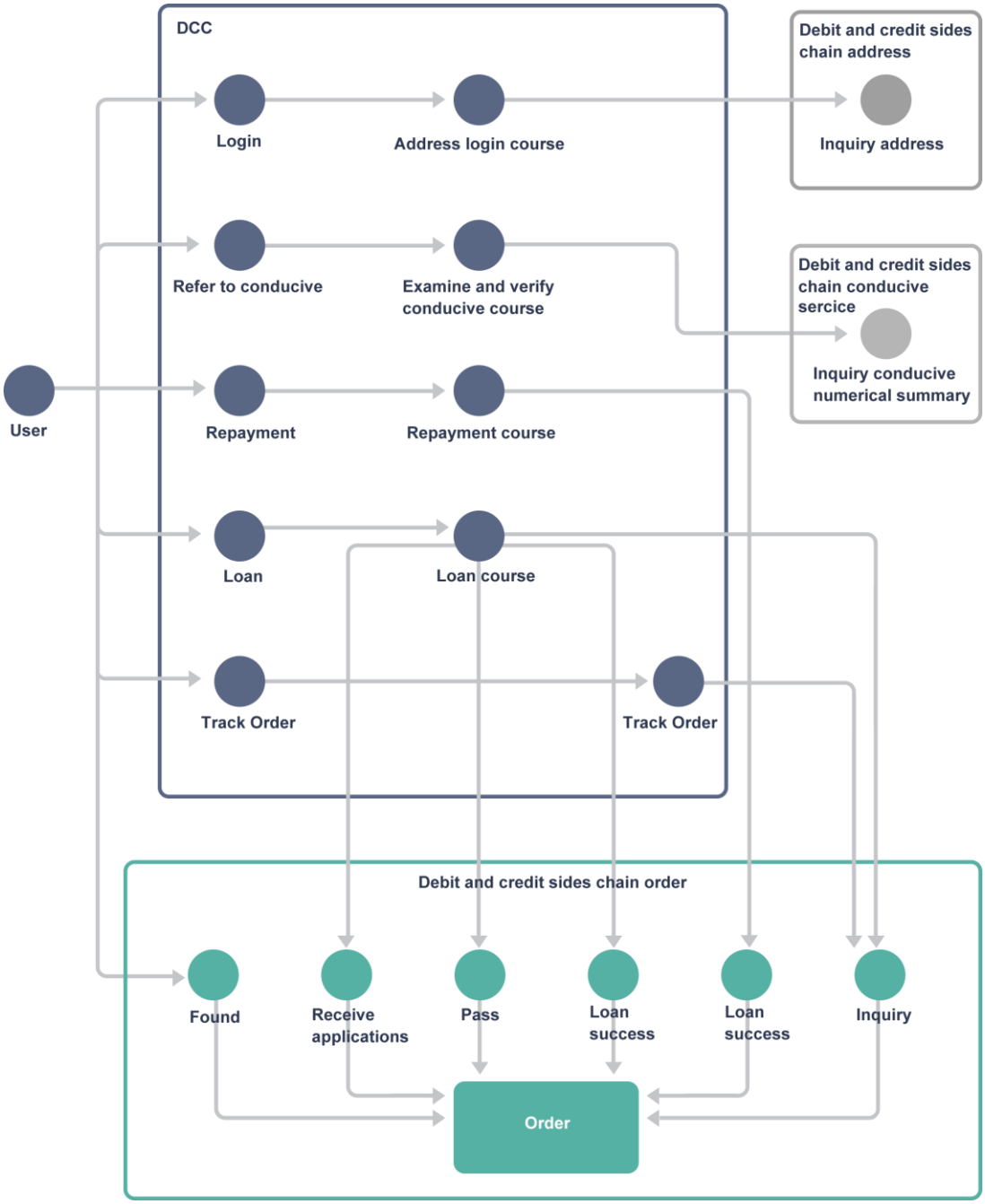
Inquiry
Certification process
Requisition order
Conducive endorse

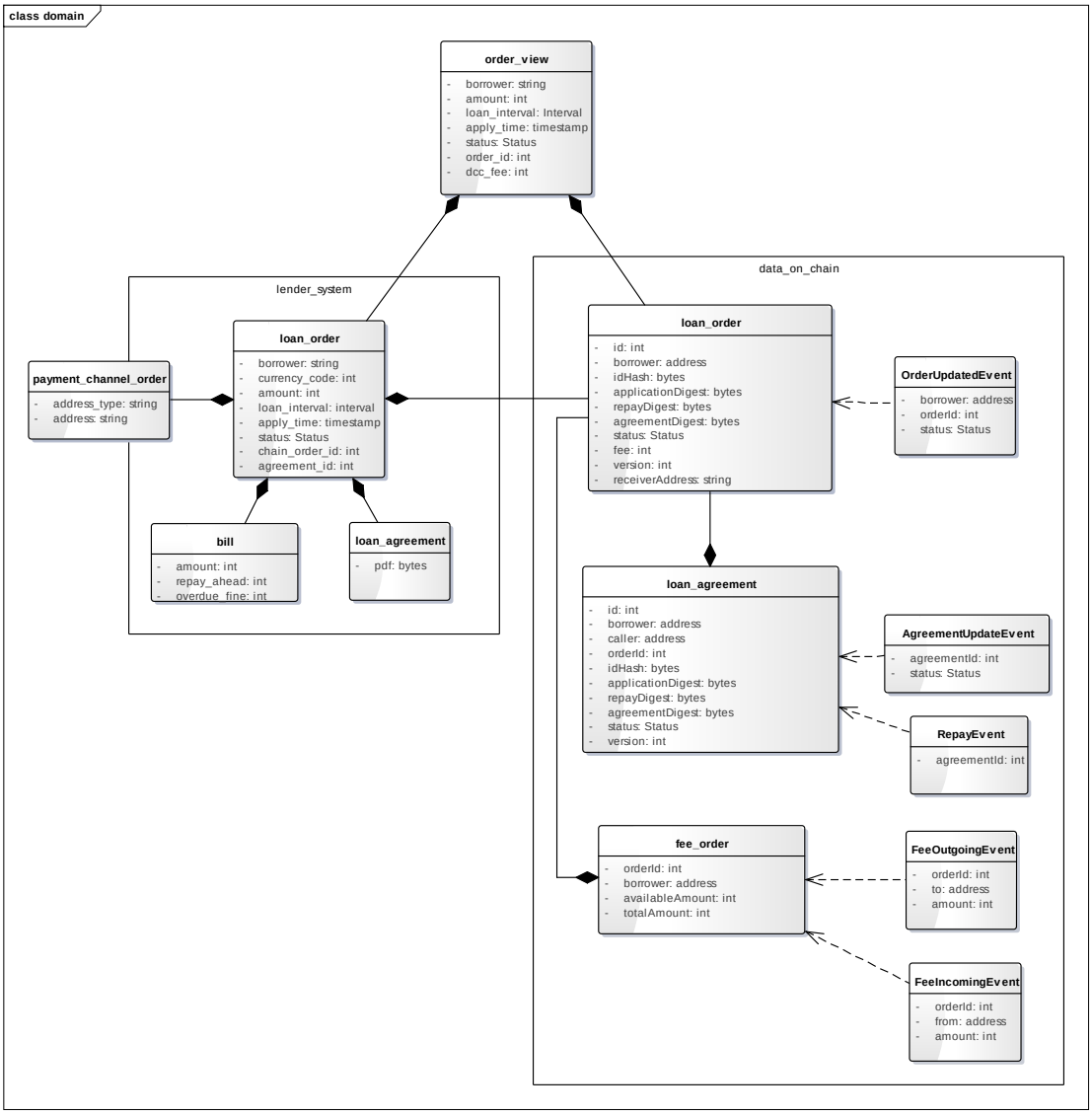
Domain model design:



SDV Framework:



Domain model design:



Visit https://github.com/DistributedBanking/DCC for more open source information.

6.7. Blockchain and Smart Contract

6.7.1. Consortium Chain Governance Architecture

DCC is a blockchain system that will be opened gradually. As the ecosystem slowly becomes stable, DCC will evolve from a consortium chain to a public chain. (After the DCC main chain is online, all tokens will be converted into the wallets of DCC main chain in a 1: 1 translation from the Ethereum ERC20 contract.)

In the first stage of the ecosystem, DCC will exist as a consortium chain. Billing nodes that access the chain will be allocated as “billing nodes” or “non-billing nodes.” A billing institution may apply for one or more nodes and can also apply for either type of nodes.

The application institution can qualify as a billing node by pledging certain percentage of DCC and apply to the Cyber Sheng Foundation. After the Cyber Sheng Foundation reviews the availability and stability of the node, and institutional qualifications, the application institution will become an billing node. In this case, DCC pledged for the billing node will not increase, and the ecosystem will not provide the billing node with billing incentives because billing is considered a form of public service provided to the ecosystem. DCC will not be a consensus token in the consortium chain and will not be consumed during the transaction consensus process. All billing in the consortium chain stage will be a public service.

DCC will work with software vendors that provide credible computing to authenticate compute nodes by deploying persistent immunity plug-ins in billing nodes. The billing will only be allowed after the billing node has satisfied credible authentication. If the credible authentication node is found to have any abnormal operation, its billing rights will be canceled. After the system is deployed and launched online, the Cyber Sheng Foundation will cancel the strategy of obtaining billing rights through pledging DCCs, and gradually open the entry of public billing node

Any applicant institution can apply to become a non-billing node, and there will be no limit to the amount of such nodes. The Cyber Sheng Foundation promises to complete the access approval for non- billing nodes within one week at the maximum, gradually open codes of non-billing nodes and provide self-service deployment guidance procedures.

In the second stage of the ecosystem, DCC will customize the most appropriate consensus algorithm based on common features of the distributed bank business and evolve from the consortium chain governance architecture to the public chain architecture. Any individual may apply to join in the billing node for billing. At present, existing consensus algorithms in the world lack the capability to support the credit chain. Therefore, the Cyber Sheng Foundation will release updated plans in time based on developments in algorithm technology.

In the public chain stage, DCC will reconstruct the account system, use Schnorr Signature (which is safer than ECSDA) to generate, expand on the default data structure of the account, and maintain the basic data structure on the chain by means of zero knowledge proof, so that the users can directly access it and the implementation of subsequent financial business will be facilitated.

In terms of data preservation, contract deployment and consensus node openness, with reference to the experience of DistributedLedger, DFINITY, Zilliqa, Stellar and other projects, DCC also conducts business through different business channels based on the needs of the different businesses of distributed banks

DCC settlement services will be anchored to blockchain's underlying logic and inserted into the business ecosystems of each channel in a smoother manner, so as to more closely link the financial services and consensus together.

In the process of transformation and reconstruction, the experts hired by the DCC team and the Foundation will provide technical services for constructing the main chain and opening the billing, resetting the incentive mechanism of the public chain billing, and migrating the original consortium chain data to the public chain, so as to ensure smooth remote control of the project.

6.7.2. Consensus Algorithm

The consensus mechanism is an important mechanism used by DCC to maintain the correctness, consistency and continuity of data. Given current ecosystem needs, DCC uses the PBFT algorithm as its consensus algorithm.

The properties of PBFT algorithm include:

- Consensus nodes generate block in turn and have the same billing right, reflecting peer equivalence and preventing any individual accountant from doing evil.
- Block generation can happen within seconds, which can satisfy the needs of transactions within a short period.

- Supports 1/3 node fault tolerance: the failure or doing evil of less than 1/3 of the total number of nodes will not affect the consensus;
- In the block synchronization process, signatures are strictly verified to ensure data security.

PBFT consensus algorithm, with its high consistency, high availability, and strong anti-fraud ability, is widely used in other consortium chain projects. It is mature and fairly stable.

6.7.3. Smart Contract

A smart contract is a chain code deployed on DCC, a string of codes that contain business logic.

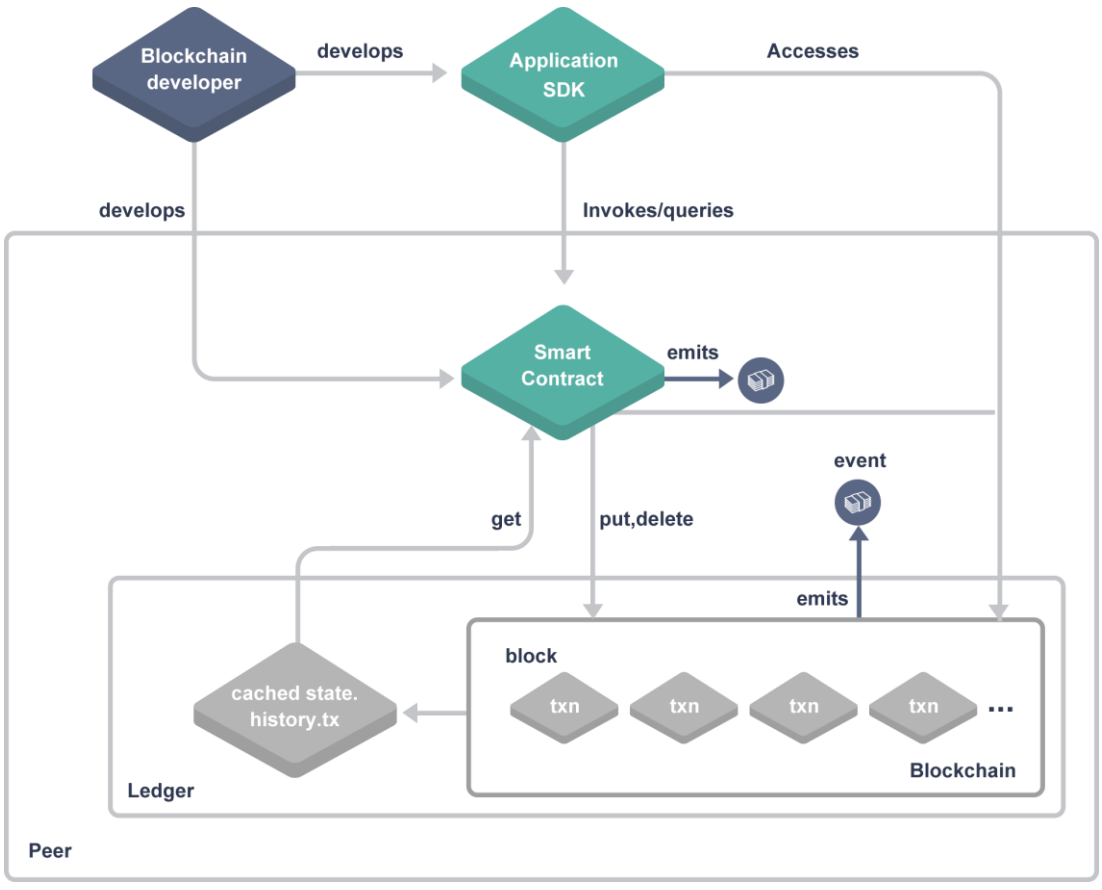
In the first stage of DCC's ecosystem, an EVM container compatible with Ethereum will be deployed as a container for implementing smart contracts, and Distributed Credit Chain will support development using Solidity language.

Since DCC adopts a consortium chain architecture in its first stage, participants do not need to pay for costs to reach consensus in block generation. Therefore, the mart contracts of partners must be submitted to the Foundation for review on the open platform and verified in the test environment before they are deployed on the chain.

Smart contract code is shown as follows:

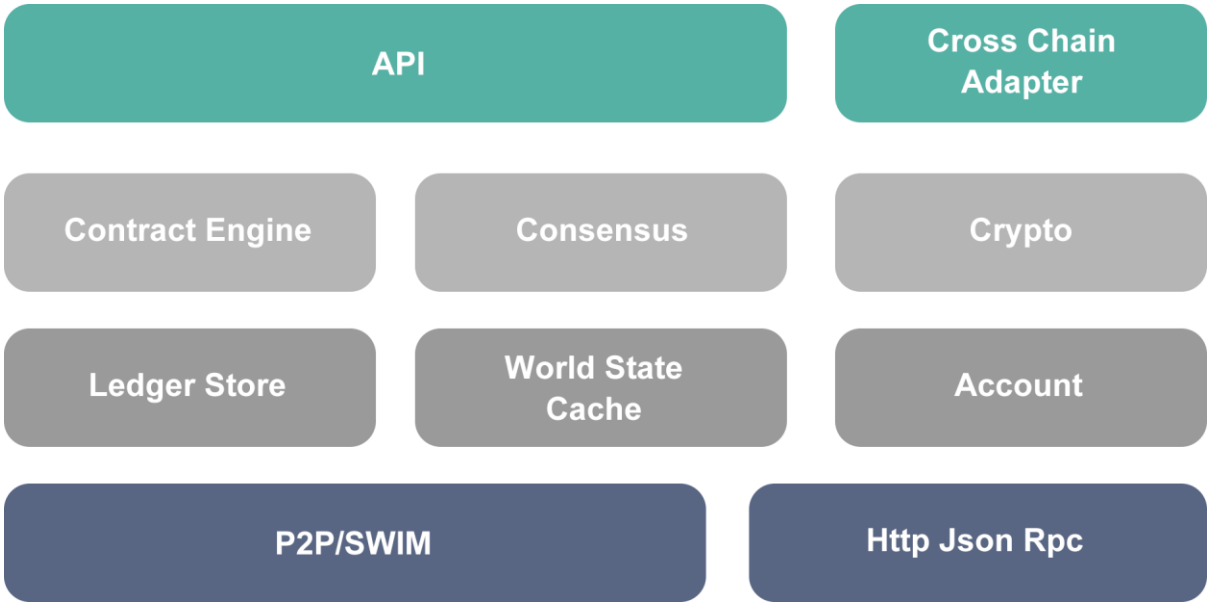
```
function CertService() public {
    insertOrder(address(0), Status.INVALID, Content("", "", 0));
}


function apply(bytes digest1, bytes digest2, uint256 expired) public returns (uint256 _orderId){
    require(digest1.length > 0 && digest1.length <= 100);
    require(digest2.length <= 100);
    require(expired > 0);

    return insertOrder(msg.sender, Status.APPLIED, Content(digest1, digest2, expired));

}

function insertOrder(address applicant, Status intialStatus, Content icc) internal returns (uint256 _orderId){
    uint256 orderId = orders.push(Order(applicant, intialStatus, icc));
    orderUpdated(applicant, orderId, intialStatus);
    return orderId;
}

function revoke(address applicant) public onlyOperator returns (uint256 _orderId) {
    require(applicant != address(0));

    Checkpoint memory cp = getCheckpointAt(applicant);

    //表示有有效的验证信息
    require(cp.content.digest1.length > 0);

    //插入订单
    Content memory icc = Content("", "", 0);
    uint256 orderId = insertOrder(applicant, Status.REVOKED, icc);

    //压栈
    appendElement(checkpoints[applicant], orderId, icc);

    return orderId;
}

function pass(uint256 orderId) public onlyOperator {
    audit(orderId, Status.PASSED);
```

Flow chart of smart contract：



6.7.4. Public chain structure

6.7.4.1. System structure



6.7.4.2. Network layer

We use SWIM as the network layer protocol. SWIM is an acronym for Scalable, Weakly-Consistent, Infection-Style, and Processes Group Membership Protocol. Its features are as follows:

1. Scalable. It can be used to build tens of thousands of large-scale P2P networks.

2. Weakly-consistent. It does not emphasize strong consistency for the member relation view of the nodes. The ultimate consistency is achieved by means of information exchange. Compromising consistency improves availability of the entire network and ensures the feasibility of large-scale networking.

3. Infection-style. Disseminate information fast through the gossip-style message exchange protocol.

4. Separate fault detection from updating of member relationship dissemination, avoid flaw that traditional Gossip heartbeat detection is not available to large-scale networks through specific default detection algorithms.

On the basis of maintaining the membership relationship by SWIM agreement, we provide HTTP Json RPC to provide exchange protocol data for nodes.

6.7.4.3. Core layer

- Book storage

We provide a plug-in book storage interface to adapt to different book storage implementations, and provide a book storage implementation which is based on an embedded K-V database, an embedded relational database and separate Sql/NoSql databases.

- World status cache

The transaction on the blockchain essentially refers to the process of obtaining the next new blockchain status through calculation of the current blockchain status. The book storage retains complete and immutable changes in all statuses, and is therefore undeniable.

To increase the efficiency to obtain the current world status, we save a snapshot of current status in the cache for quick reading. At the same time, the cache can be reconstructed based on the book storage, so the world status cache does not affect the availability of the entire network.

- Functional smart contract engine and virtual machine

Different from other smart contract engines, we believe that the smart contract of finance is a pure function F. Assuming the current world status is S, there are: S'=F(S) and S' is the status after the contract has been executed.

Viewing smart contracts from a pure function perspective have the following benefits:

1. Easy to test. Because it is a pure function, there are no side effects. The contract can be tested without relying on the blockchain environment.
2. Contracts are algorithms, and contractual regression rules are only used to describe business rules without causing side effects on the blockchain, thus improving the stability of the blockchain.
3. Easy cost measure. Because it only describes the business rules, the complexity of the measurement of smart contract costs is greatly reduced, without having to consider the cost of side effects such as storage, IO and so on.
4. Reliable playback. Since it is a pure function, implementation of the same S' is repeated and the result is the same S, i.e. it supports idempotence.

We will use JAVA as development languages of core smart contracts. At present, JAVA is a relatively common development language for financial back-end systems. We use the JVM as a container for running smart contracts.

- Account

Built-in account system, including support for multiple native tokens.

Encryption and decryption

The DCC public chain uses ECDSA for digital signatures and verification and uses ECDH exchange key for encrypted communication.

- Consensus algorithm

The DCC public chain is an open chain available to the public. Anyone can join the DCC public chain as the billing node. We propose a REBFT algorithm to randomly generate N communication nodes to participate in the consensus from the whole network nodes. The other nodes synchronize for the Follow node. After completing a round of consensus, the next round of Leader nodes is re-selected.

6.7.4.4. Interactive layer

- Open API

The DCC public chain will provide a large number of open source API interfaces for the participants, and SDK, so that some mobile APPs and WEB can be engaged in chain interactive development.

- Cross-chain adaptation

Through the development of a cross-chain adaptation mechanism, DCC's public chain is compatible with the current mainstream main chains, such as bitcoin and ethereum, to carry out cross-chain asset exchange and financial services supporting digital assets.

DCC's public-linked R&D will also be open sourced at github. Developers are welcomed to participate in the research and development of DCC's public chain. Cyber Sheng Foundation will provide developers with DCC rewards.

7. Distribution Plan

The Cyber Sheng Foundation plans to issue a total of 10,000,000,000 tokens of the encrypted digital currency DCC. 12 months after this issuance, the total circulation volume will be 4,100,000,000, accounting for 41% of the total.

In the private round , famous qualified investors in the fields of credit and banking will be invited for the investment, with the fundraising percentage no more than 15%, and the investment amount of single investor no less than 100ETH. At this stage, DCCs will be locked, with 25% of the total to be unlocked before the opening of exchange, and another 25% to be unlocked every two months, with the full amount to be unlocked in 6 months.

In ICO round, 1,000,000,000 DCCs will be issued to Non-Chinese and American investors. All these will be directly circulated. The ICO hardcap is 1,000,000,000 DCC tokens, DCC token will be exchanged by ETH and BNB. BNB is more preferred.

The contributions in the token sale will be held by the Distributor (or its affiliate) after the token sale, and contributors will have no economic or legal right over or beneficial interest in these contributions or the assets of that entity after the token sale. To the extent a secondary market or exchange for trading DCC does develop, it would be run and operated wholly independently of the Foundation, the Distributor, the sale of DCC and Distributed Credit Chain. Neither the Foundation nor the Distributor will create such secondary markets nor will either entity act as an unlocked in 6 months.

Other allocation details of DCCs are as follows:

Item	Amount	Allocation	Explanations
Private Round	2,000,000,000	20%	● Used for follow-up project development, recruitment and marketing etc. ● Tokens are locked by private keys for a total period of 6 months, with 25% of the total to be unlocked 3 working days prior to any exchange listing, and another 25% to be unlocked every two months thereafter, with the full amount to be unlocked in 6 months.
ICO	1,000,000,000	10%	● Qualified individual investors accepted (Except American Chinese) ● No lock-up ● Accept 50%-100% BNB for exchange
Foundation	3,000,000,000	30%	● Service for further DCC research, eg. Project development, business cooperation, etc. ● Lock-up for 1 year, second year lock-up will be announced by the foundation
Market & Cooperation Agency & Consultants	1,000,000,000	10%	● Using as bonus reward for early project partners like promote and publicize DCC, start up system team and consultants ● Lock-up for 3 years, consistently release year by year

Eco Reward	1,000,000,000	10%	● 100,000,000 DCC tokens for the first year reward ● 90,000,000 to 50,000,000 DCC tokens will be reward for each next year in next 5 years ● After 6 years rewarding, the annul reward would be fixed at 50,000,000 level ● 17 years+ consistently rewarding
Management Team	2,000,000,000	20%	● Used to incentivise and motivate the founding team for their huge efforts in program design, resource organization, commercial environment incubation, and to encourage follow-up investment of manpower and intellectual resources in ecosystem formation. ● Tokens are locked by private keys for a total period of 3 years, with 25% of the total to be unlocked 6 months after any exchange listing, 25% to be unlocked one year after any exchange listing, and another 25% to be unlocked every year thereafter, with the full amount to be unlocked in 3 years
Total	10,000,000,000	100%	

8. Use Plan for Raised Funds

Item	Proportion	Explanation
Labor Costs	30%	The project to develop Distributed Credit Chain requires a large number of elite researchers and developers who can integrate the mobile internet, distributed networks, blockchain, financial payment, financial risk control and marketing promotion.. The establishement of such ecoystem requires adequate funding for human capital.
Marketing	25%	DCC is committed to building a decentralized financial system in the future, during which commercial promotion and dissemination will incur significant cost.
Business Cooperation	10%	In the future, more cooperation in ecosystems will gradually support various distributed business scenarios.
Consultancy	5%	With further development of blockchain technology, we need to engage enough technical consultants to provide technical support.
Ecosystem-Operations	5%	Maintaining low ecosystem operation costs.
Reserve Fund	25%	A risk reserve fund for overall operating, to respond to operational risk and force majeure factors.

9. Development Timeline

August 2017	Establish Project to develop Distributed Credit Chain
September 2017	Construct unified identity system based on the Ethereum test network
October 2017	Build underlying Distributed Credit Chain testnet
December 2017	Deploy online credit declaration contracts based on underlying testnet
February 2018	Token exchange
March 2018	Launch the first loan product Dapp based on Distributed Credit Chain
April 2018	Launch Distributed Credit Chain open platform online
May 2018	Interface with more than five institutions of loan, data providing and risk control
Q3-4 of 2018	Open self-creation API of Distributed Credit Chain
Q3-4 of 2018	Establish unifed MPC of DCC
Q4 of 2018	Enter Indonesia lending market
Q1-2 of 2019	Enter lending markets of Vietnam & other countries in Southeast Asia
2020	Migrate the platform to public blockchain system

2020	Develop Distributed Asset Manage system based on publc chain Develop Distributed Settlement system

10. Cyber Sheng Foundation Ltd.

Cyber Sheng Foundation Ltd. is a non-profit organization established in Singapore. The Foundation is committed to maintaining the healthy growth of the entire ecosystem in the first phase of building of Distributed Credit Chain. As the ecosystem evolves to a public blockchain system, the Foundation will gradually withdraw from ecosystem protection, and hand over maintenance rights to the public blockchain governance structure. The Foundation does not receive any eco-benefits from maintenance and does not derive any benefit from DCC.

The Cyber Sheng Foundation is composed of the DCC startup team, core partners, and early supporters (if such parties are institutions, the members of said institutions) responsible for the daily operations of Distributed Credit Chain of the Foundation is the Board of Directors. Each year, the top 30 holders of DCC may apply to be on the Community Supervisory Board of the Foundation, and may join the Community Supervisory Board if more than 50% of the original Community Supervisory Board members approve of their applications. Community Supervisory Board members who drop out of the top 30 holders of DCC must withdraw from the Community Supervisory Board. The role of the Community Supervisory Board is to provide balanced views on the overall direction of the project. For the avoidance of doubt, while the views of the Community Supervisory Board would be acknowledged, ultimately the assets and funds of the Foundation remain under the sole control of the Board of Directors.

DCC held by the Foundation during the initial stages of development of Distributed Credit Chain may be used for purposes beneficial to the ecosystem such as technical team incentives, eco-rewards and expanding the service institution relationship. Such purposes require audit reports issued by audit authority.

11. Core Team

Stewie Zhu

- Serial entrepreneur in the internet and Fintech industry
- Led a leading SaaS financial technology company in China to develop internet-based credit systems for over a dozen of trusts with multibillion USD annual loan facilitation amount, which was successfully sold to a publicly-listed company in three years.
- Bachelor in EE, Nanjing University; MA in statistics,
- Yale University M.s Statistics,
- Oxford University M.s in Financial Economics
- Ph.D. (Candidate) in Finance, London School Of Economics
- Research focusing on finance and game theory.

Daniel Lu

- PhD in Mathematics, Yale University, USA; Postdoctoral Research in Financial Engineering, focusing on the Representation Theory, University of Leipzig, Germany
- Head of investment banking and asset management, general manager of financial department of a large commercial bank
- Years of experience in financial institutions at home and abroad, working successively at Deutsche Bank headquarters and Finance Department at a joint-stock bank headquarters.
- Possesses solid professional knowledge and research abilities, and has been invited to give keynote speeches at academic conferences and financial conferences in China and abroad. Specializes in capital & capital market business, asset management, bank assets and liabilities management, internal fund transfer pricing,

product pricing, market risk management and modeling, financial derivatives pricing, and the Basel New Capital Accord in investment bank/commercial bank

Stone Shi

- J.P. Morgan, Vice President, Quantitative Research, Focused on Derivative Pricing, Quantitative Model Risk
- HSBC, Internship, Rates, Education
- TELECOM, Ingenieur, Majored in Computer Science and Applied Maths
- Nanjing University, Majored in Electronic Science and Engineering

Vanessa Cao

- Years of experiences at Sequoia Capital, focus on early stage of fintech sector
- Director at Keywise Capital
- Partner at Bridge Capital , focus on China A-share listed companies M&A(mainly Fintech)
- Tsinghua University, MBA, CFA
- Vanessa is mainly focused on DCC program administration

12. Advisors

Chen Yu

- Net name is “Jiangnan Young Cynic (Jiangnan Fen Qing)”
- Partner of JX Capital; famous angel investor; Invests in nearly 200 internet companies
- Author of *Payment Revolution* & *Wind of Jiangnan: Internet Finance* bestsellers in financial field in China
- Voted Top 50 Figures of Internet Finance in China for five years in a row
- Selected in the list of Man of the Year by Hurun Report in 2016 and 2017

Guo Yuhang

- Chairman of Xinghe Capital, founder and co-chairman of Dianrong
- Previously, managing partner of a famous Shanghai law firm with more than 10 years of practice. Founded Dianrong in 2012, and made it a unicorn company within 3 years
- Founded Xinghe Capital in 2016, focusing on early investment in financial technology
- Awarded "2015 Shanghai Financial Industry Leader" and "2015 Shanghai Top Ten Internet Entrepreneurs" by Xinhua News Agency and Shanghai authoritative financial regulation institutions
- Starwin Digital Pte. Ltd., a leading Singapore institution, has been involved in various blockchain project investments since 2017, including projects such as Loopring, Gifto, Scry, and Measurable Data Token

Yao Ming

- Managing director and CTO of China Chengxin Credit (CCX Credit)
- Spent his early years at Bell Labs, then worked in the mobile Internet and financial industries with extensive experience in big data technology, and has long been committed to exploring the innovation and application of financial big data technology
- Joined CCX Credit in 2014 to help the company complete preparatory work for personal credit card issuance, and established the Wanxiang Credit Internet Big Data Credit Reporting Platform. He led a team to independently develop and successfully apply many core technologies such as big data anti-fraud and credit assessment to become one of China's first practitioners in the big data credit rating industry, and was hired by a number of large banks as an external technical expert
- Since 2016, he has focused on the application and innovation of technologies such as blockchain, machine learning, and artificial intelligence in the financial field, and is dedicated to promoting intelligent credit assessment

Chen Zhiwu

- Former Professor of Financial Economics at Yale University (1999-2017), currently serves as research director of Asia Global Institute of Hong Kong University, and Feng Foundation Professor (economics) at School of Economics and Business Administration. Also serves as Distinguished Professor at School of Economics, Peking University.
- International Consultant, China Securities Regulatory Commission, member of Global Advisory Committee of China Minsheng Investment Company, and independent director of IDG Energy Investment Group, Bank of Communications and Noah Fortune. Professor Chen served as a member of the Yale-China Association of Yale University, a member of Advisory Committee of Beijing's 12th Five-Year and 13th Five-year Planning Experts and general academic director for

CCTV documentary "Wall Street" and "Monetary Affairs." Professor Chen was a member of the preparatory expert group when China Investment Corporation (CIC) was founded in 2007; an independent director of PetroChina Company from 2011 to 2017, an independent director of Nordisk Fund Management Co., Ltd. from 2007 to 2015, an independent director of Shiji Jiayuan Network from 2011 to 2012, and a director of China Eagle Securities from 2002 to 2005.

- Founder of Zebra Capital Management fund management company
- In 2012, Burson-Marsteller, a global consulting firm, listed Professor Chen as one of "China's Ten Most Influential People" in its "G20 Influencer Report" (G20 Nations Most Influential People Report).
- Research awards include the Graham Trophy Award (2013), the Pacesetter Research Award (1999), the Merton Miller Research Award (1994), and the Chicago Board Options Award (1994). Professor Chen's Logic of Finance won 23 Best Annual Book awards
- Bachelor of Computer Science from Central South University of Technology in 1983, Master of Management Science from National Defense University of Science and Technology in 1986, then Ph.D. in Financial Economics from Yale University in 1990

Henry Cao

- Renowned financial economist, now a Professor of Finance at Cheung Kong Graduate School of Business, academic director of Financial MBA
- Member of Financial Club, former professor at the University of California, Berkeley, University of North Carolina at Chapel Hill.
- Published a number of papers and is widely cited in internationally renowned journals including Journal of Finance, Review of Financial Studies, and Journal of Financial Economics;

- Nominated for Best Paper for Journal of Finance twice in 1998 and 2000; Best Paper Award in Emerging Markets field selected by the Northern Finance Association; Best Paper Award for the Most Invested Value by the Western Finance Association; won the best paper third prize at the 2004 China International Financial Conference;
- Editorial board member of Annals of Economics and Finance and editor-in-chief of International Financial Review and China Financial Review.

Matthew Chang

- Matthew Chang is a Managing Director on KKR's China Private Equity team and was previously the Head of KKR Capstone China. Mr. Chang has over 20 years of experience in a wide range of companies such as start-ups, multi-national corporations, and professional service firms in Mainland China, Europe and North America.
- Prior to joining KKR Capstone, Mr. Chang served as global senior partner at Roland Berger Strategy Consultants, leading its Asian operations and restructuring practices.
- Earlier in his career, Mr. Chang was the China managing director at Alix Partners, an associate principal at McKinsey Company, and the Asia strategy director at Diageo PLC.
- Mr. Chang has an M.B.A. degree from IMD International and undergraduate degrees in mathematics and physics from Coe College and the State University of New York.

13. Partners

TONGNIU Tech

TN Tech is the leading SaaS financial technology company in China. It is committed to providing consumer finance SaaS system services to licensed financial institutions such as trusts, banks, and small loan companies. TN Tech ranks first in China in trust industry market share. In the process of building the Distributed Credit Chain, TN Tech will provide historical credit data application support for historically accumulated data.

JUZIX

JUZIX is the global leader in distributed ledger technology and is committed to providing distributed data exchange and collaborative computing services in the digital age. Providing a full range of governance services for the flow of data, it makes data exchange and collaboration easier, safer and more efficient.

Based on a completely self-developed data exchange infrastructure technology platform, JUZIX integrates distributed ledgers, secure multi-party computing, pluggable cryptography frameworks, future-proof cryptography algorithms and protocols, and software and hardware-in-one solutions. It provides basic technical platform-level services in the fields of finance, transportation, logistics, aviation services, intelligent manufacturing, internet of things, HealthCare and other fields. It also fully cooperates with the world's leading cloud platforms to provide a complete solution for distributed industrial applications.

As an important technical service provider in the DCC consortium chain stage, JUZIX will provide comprehensive technical support in the construction phase of the consortium chain.

Deepfin

Deepfin is a decentralized blockchain-based asset securitization platform. In Deepfin, holders of digital assets (e.g., copyrights, articles, traffic, etc.) on different strands can easily

complete asset collateralization and fundraising and use different quantitative analysis tools and services to price different assets on different strands, opening up digital assets in different chains so that users with financing needs in disparate communities can easily obtain financing through the digital assets they own. Using the blockchain technology to transform traditional ABS business can accomplish with low cost and high efficiency asset ownership, data validation, and other authenticity validation work.

WXY

A one-stop global marketing and business consulting services platform for highly valuable digital projects, WXY is headquartered in Singapore and its business covers brand names, media promotion, global traffic access, business consulting, capital interfacing, and more. WXY is comprised of former Ogilvy & Mather executives, former vice presidents of the Krypton market, former Citigroup marketing and finance investment banking executives, core resources such as media and funds, and is the most formal and professional marketing platform in today's currency market.

14. Early Investors

JRR Capital

Professional Investors and Entrepreneurs driving innovation based on Blockchain technology.

Based in Switzerland, JRR is committed to make investments in the best entrepreneurs who are fostering innovation in the Blockchain technology and related fields. In addition, JRR is an angel investment institution, which also has funded in binance.com.

With years invest experience, JRR has successfully invested on binance.com, wax, hooah.com and DCC up to now.

The Blockchain, a novel financial technology, holds the promise to disrupt legacy parts of financial services and create new markets.

BTX Capital

BTX Capital is a global crypto fund focused on the blockchain industry. BTX keeps boosting the valuable internet organizations to adopt blockchain technology through technical consultation, investment and resource connection, as well as promoting the awareness and realization of the value of blockchain. Unlike traditional VC equity investments or other purely digital currency funds, BTX Capital specializes in sophisticated Internet platforms in different scenarios. By assisting them in applying blockchain to business, BTX seeks to reshape the business ecosystem, improve the eco-cooperative environment, scale-up the real economy, advance technologies and rejuvenate the internet industry with blockchain technology.

The core team includes senior investors from Sequoia, executives of listed China and USA companies, Ph.D.s from top universities.It has support from many top-level senior executives of investment institutions and project sources behind the top-tier financial

institutions, as well as in-depth technical cooperation with universities in Silicon Valley and Europe to provide the support of professional talents to the project partners.

Xiong Guicheng

- Binance angel investor, who has invested in a lot successful ICO projects
- Managing director of A-share listed company, and senior internet specialist
- Former general manager of Baidu Mobile Distribution Division, 91 Wireless co-founder and senior vice president

Hu Sen

- Repeated entrepreneur, ex-Googler
- Bachelor of Computer Science, China University of Science and Technology, Guo Moruo Scholarship; Master of Computer Science, Yale University; PhD student entrepreneur, founded and operated Fengyun Broadcast and Zhangyu TV; in 2015, Zhangyu TV was acquired by LeTV.
- Awarded 30 Under-30s by Forbes China in 2014 and by Forbes Asia in 2016 for outstanding achievements of founding CLOUNDACC.

Mai Zizhao

- Telegram-Ton Cornerstone Investor
- Co-founder of Blockchain Laboratory MathTrust

  MathTrust is a laboratory jointly established by many world-renowned universities, focusing on research, experiments from theory, logics, and practices of blockchain consensus mechanism. The latest theoretical model brought by MathTrust is that blockchain is a chain of smart contract series. The main topics covered by its consensus mechanism research include but are not limited to guarantees of smart

contract, node ecosystem-related loophole recognition and solutions for node-based security.

- Co-founder of AbilityChain

  AbilityChain is a blockchain-based platform for global education underlying application. Being a public chain collectively built based on global developer community, AbilityChain is initiated by MathTrust, who, together with AbilityChain's shareholder, are non-profit organizations.

- Founder of Feiyue Education

  Feiyue Education is China's first bilingual educational institution targeting at K12 students. Its comprehension-based pedagogy and core curriculums are entirely self-developed.

15. Risks

You acknowledge and agree that there are numerous risks associated with purchasing DCC, holding DCC, and using DCC for participation in Distributed Credit Chain.

Uncertain Regulations and Enforcement Actions

The regulatory status of DCC and distributed ledger technology is unclear or unsettled in many jurisdictions. It is impossible to predict how, when or whether regulatory agencies may apply existing regulations or create new regulations with respect to such technology and its applications, including DCC and/or Distributed Credit Chain. Regulatory actions could negatively impact DCC and/or Distributed Credit Chain in various ways. The Foundation (or its affiliates) may cease operations in a jurisdiction in the event that regulatory actions, or changes to law or regulation, make it illegal to operate in such jurisdiction, or commercially undesirable to obtain the necessary regulatory approval(s) to operate in such jurisdiction.

After consulting with a wide range of legal advisors and continuous analysis of the development and legal structure of virtual currencies, the Foundation will apply a cautious approach towards the sale of DCC. Therefore, for the crowdsale, the Foundation may constantly adjust the sale strategy in order to avoid relevant legal risks as much as possible.

Competitors

It is possible that alternative networks could be established that utilise the same or similar code and protocol underlying DCC and/or Distributed Credit Chain and attempt to re-create similar facilities. Distributed Credit Chain may be required to compete with these alternative networks, which could negatively impact DCC and/or Distributed Credit Chain.

Failure to develop

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

Security weaknesses

Hackers or other malicious groups or organisations may attempt to interfere with DCC and/or Distributed Credit Chain in a variety of ways, including, but not limited to, malware attacks, denial of service attacks, consensus-based attacks, Sybil attacks, smurfing and spoofing. Furthermore, there is a risk that a third party or a member of the Foundation or its affiliates may intentionally or unintentionally introduce weaknesses into the core infrastructure of DCC and/or Distributed Credit Chain, which could negatively affect DCC and/or Distributed Credit Chain.

Other risks

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