

Peersafe presentation of trade finance blockchain networks in China for the Hyperledger Trade Finance Special Interest Group (TFSIG)

Honggang Chen, Vice President
Beijing PeerSafe technology Co.,Ltd
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Who are PeerSafe?

A leading Global Enterprise Blockchain Solutions and Service Provider

- Founded in Beijing China in July 2014.
- Focused on underlying platforms and the application of blockchain technology
- Branches in Singapore, Shenzhen, Nanjing, Shanghai, Changsha, Hefei and Suzhou
- 2018 Forbes China Innovation top 50
- HTP and HCSP



HYPERLEDGER
TRAINING PARTNER



**Technology changes the world and
creates a more credible future !**



**The first
Blockchain R&D
Enterprises**

**National High-tech
Enterprises**

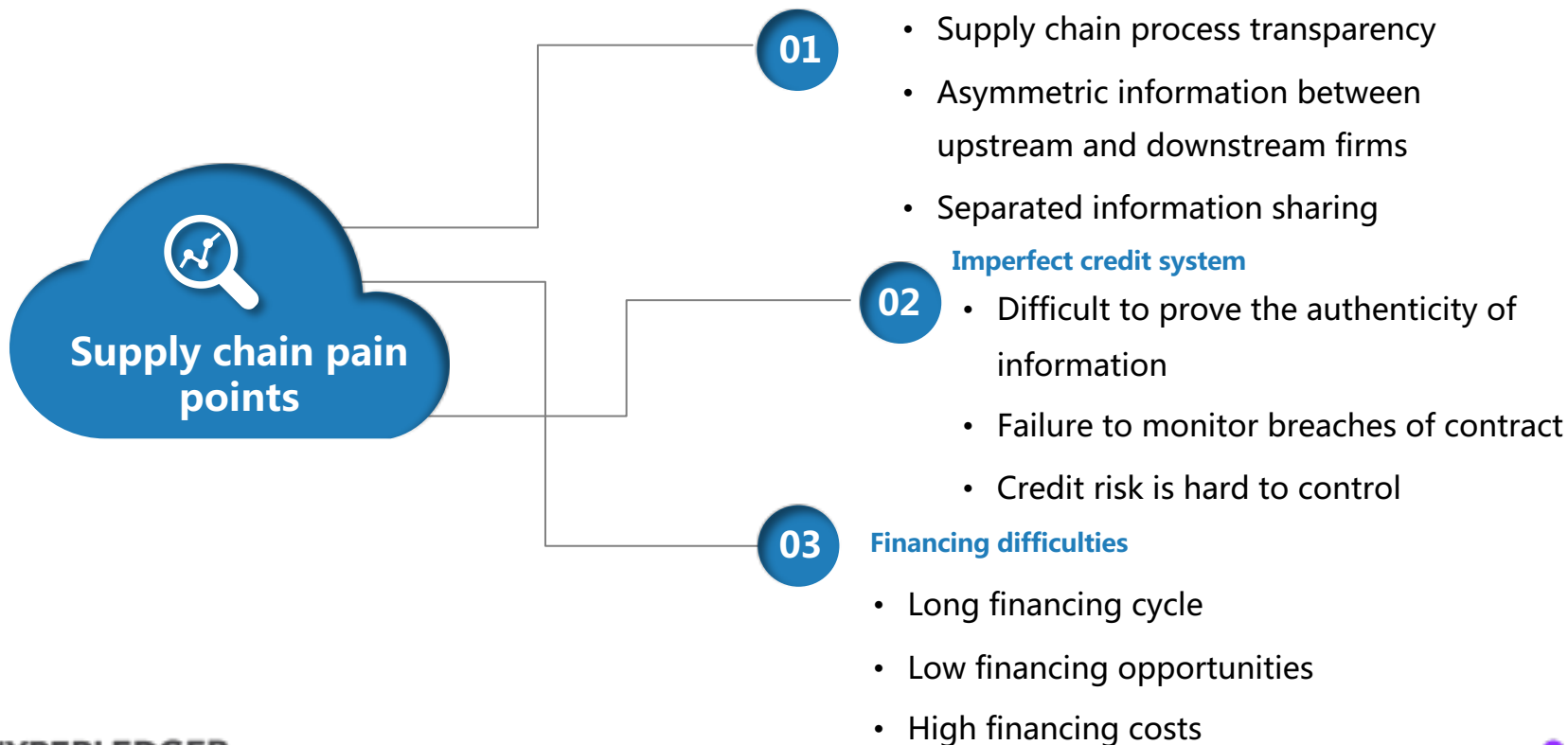


**Co-written Blockchain
White Paper of MII**

**71 Core Patents
80 items of software
copyright**

**Hyperledger member since
2016.6**

Supply chain pain points for the finance industry



Financial services blockchain strategies

Aim: Achieve increasingly safe and efficient financial business on blockchain



Overlay blockchain on the traditional financial information technology systems

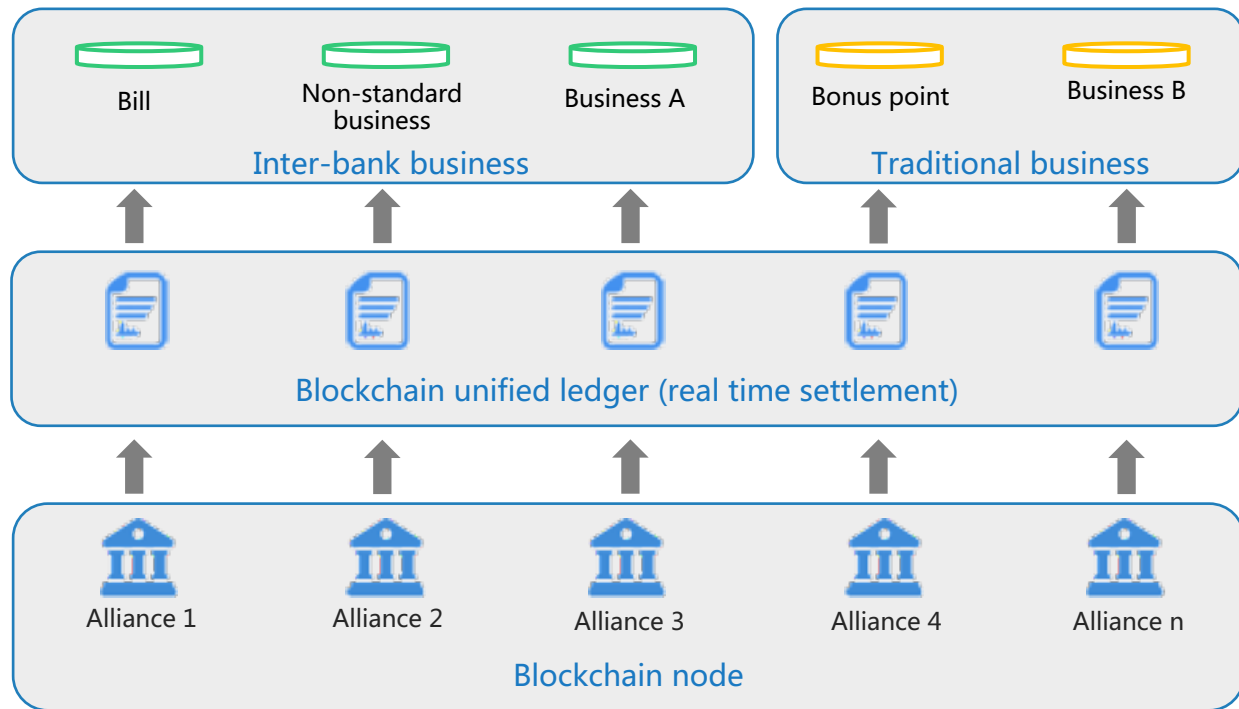


Turn a single center into a multi-center architecture, remove silos



Use distributed ledger to pull siloed transactions into a single account view

Example financial industry alliance chain



Common-Rule
(Smart contract)

One-ledger
(Consensus)

Multi-member
(P2P network)

The banks form a multi-center alliance chain, through sharing of ledgers to achieve business coordination

Use Cases

CITIC blockchain letter of credit system



Pain points

- The SWIFT agent bank model domestically in China leads to a long delays for CITIC bank.
- The paper letter of credit is easy to fake.



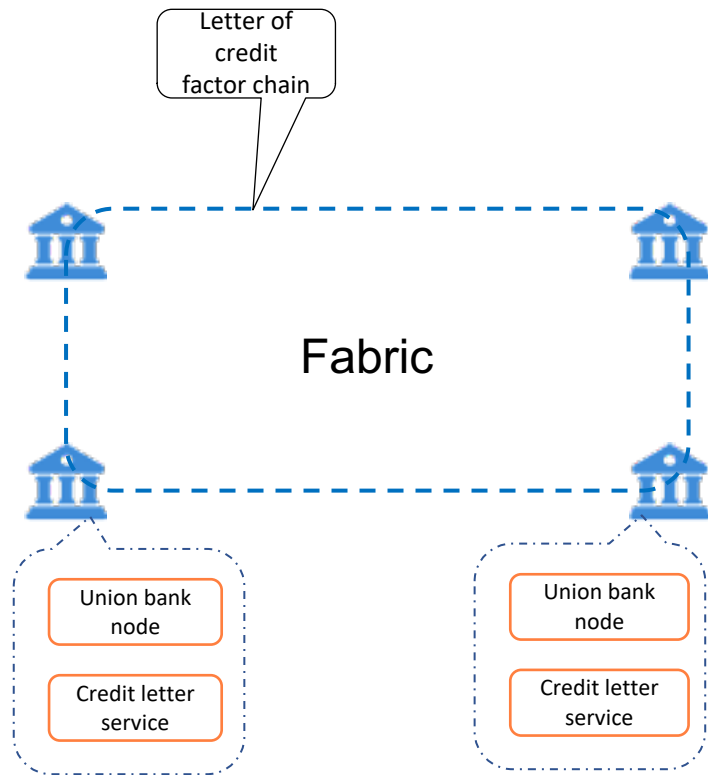
Solution

- Link multiple banks for the alliance chain and create electronic letter of credit.
- Partners in chain establish cash management. mechanism based on mutual credit.



Advantages

- Fast, processing speed is close to real time.
- Trusted, interbank automatic agent does not require additional mutual trust.
- Real time settlement of interbank credit on chain.



China Construction Bank forfeiting blockchain



Pain point

- Without a public offer platform, information transmission has security problems, and the cost of inquiry is high and efficiency is low.
- By fax or mail, the documents can easily be lost and the security is poor.
- Transfer of creditor's rights and notice of transfer are confirmed by SWIFT message, mail and fax, which are easy to be tampered with and difficult to confirm legitimacy.



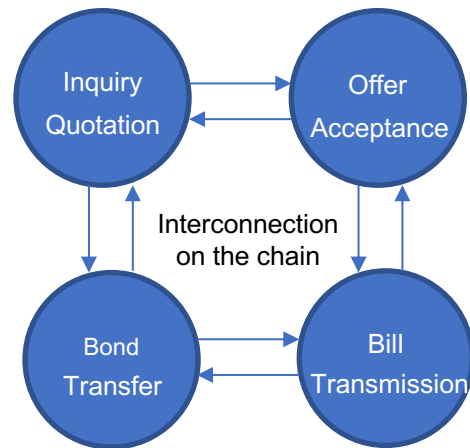
Solution

- Build a forfeiting business management platform based on blockchain to attract business related parties to join.
- Publish the information of forfeiting announcement on the chain. The information is then open, transparent, and cannot be tampered.
- The transaction process is automatically executed, the transaction details are stored in the chain, and synchronized to both sides in quasi-real time. The transmission is safe and reliable.



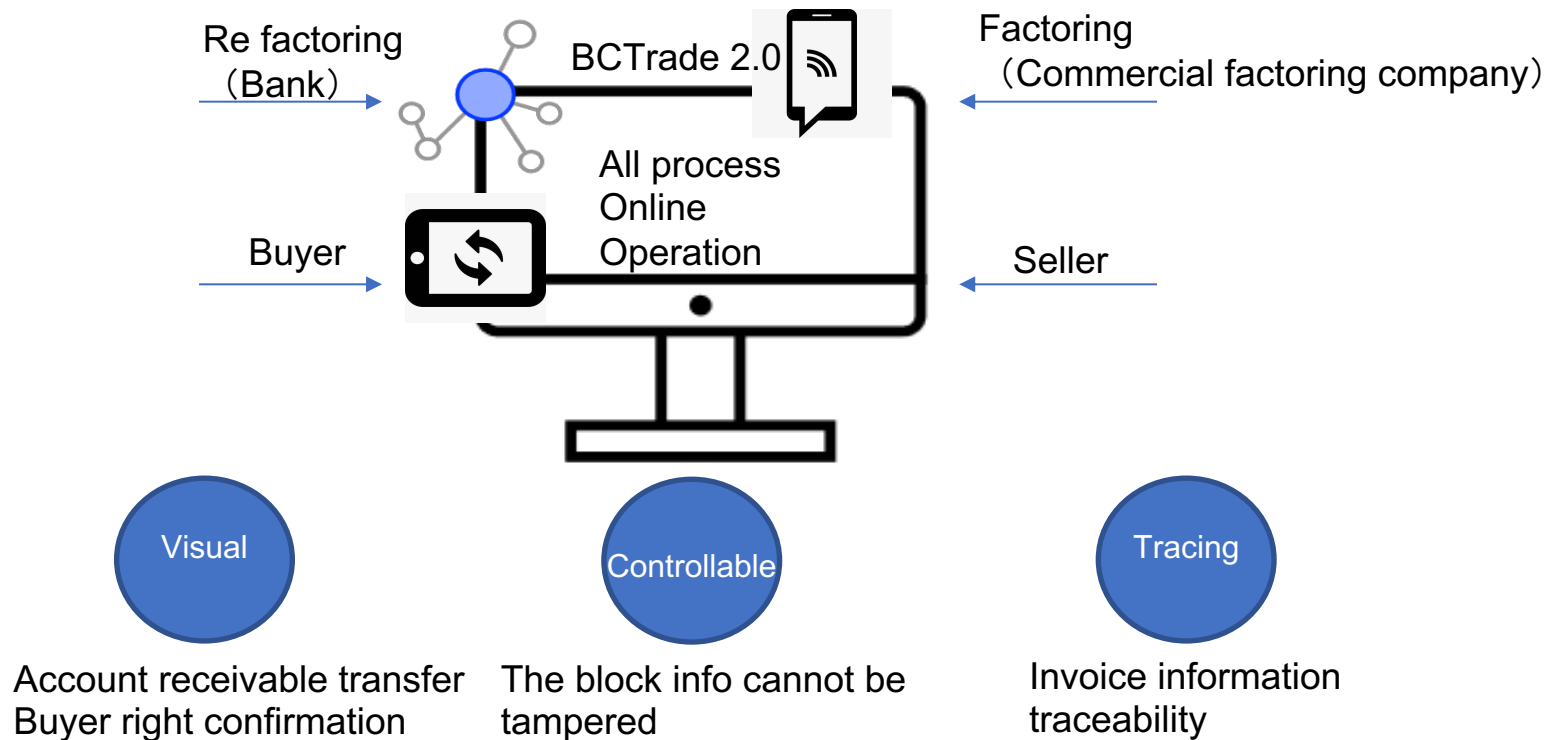
Advantage

- Reliable data transmission, not forgery, can not be tampered with;
- The transaction content is stored on the chain and traceable transaction records;
- The contents of the message also support both Chinese and English versions.



The transaction
volume has exceeded
360 Billion RMB
(approx. US\$50 Bn)

China Construction Bank Re-factoring



China trade finance cross-bank transaction platform



Status

The China Trade Finance Blockchain Platform for Interbank Transaction is planned by the China Banking Association as a whole. PeerSafe provides important technical service support for the platform. It is responsible for drafting various technical standards and interface standards and developing the underlying blockchain platform. It has developed and shared the source code of the national cryptographic algorithm besides system testing and joint adjustment work. With its solid technical strength and excellent project management ability, Peersafe has been recognized by a number of participants, and won a written letter of thanks from the China Banking Association.



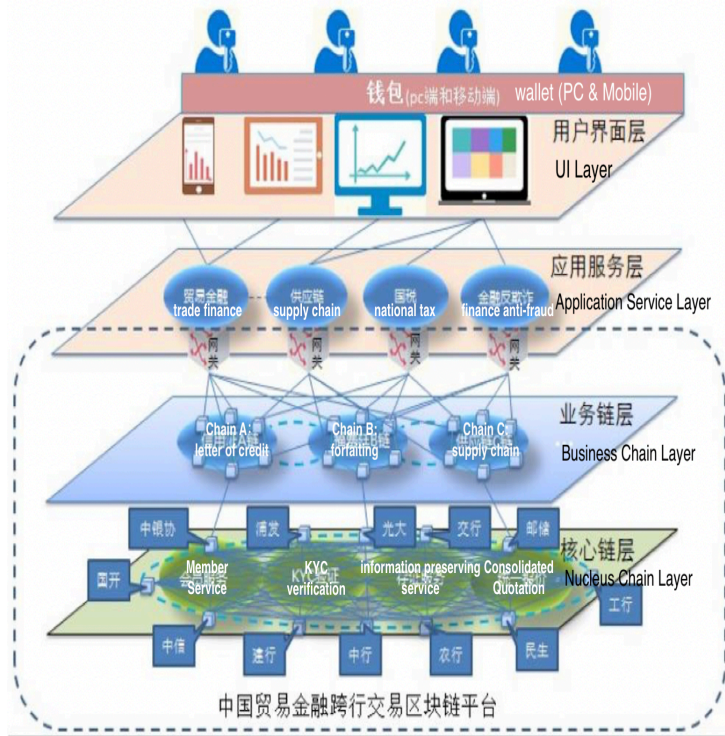
Solution

The infrastructure platform (Consortium Blockchain) has been constructed based on Hyperledger Fabric. It adopts the hierarchical and multi-chain overall structure with the purpose of constructing an all-embracing platform in which the public services can be centralized and each business and organization is moderately free. It has realized the standardization, electronization and intelligence of the transaction information of inter-bank trade finance products, and lays an important foundation for building a new trade finance ecosystem and improving the efficiency of financial services.



Outcomes and Impacts

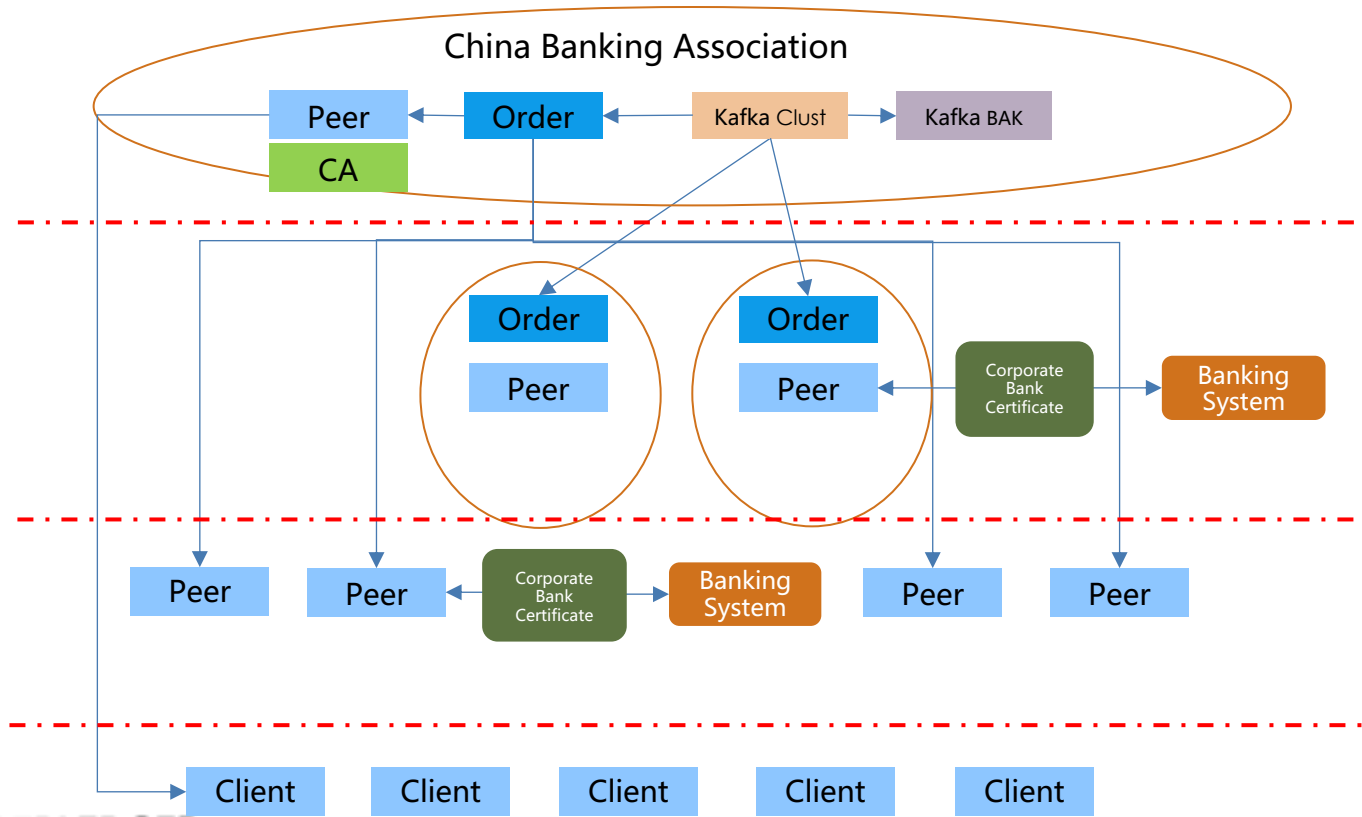
The platform was officially launched on December 29, 2018. Its members include the State Development Bank, the Industrial and Commercial Bank of China, the Agricultural Bank of China, the Construction Bank of China, the Bank of Communications, China Merchants Bank, China CITIC Bank, China Everbright Bank, China Minsheng Bank, Shanghai Pudong Development Bank, China Postal Savings Bank, Ping An Bank, HSBC (China) and so on. For now, its members are also its co-initiators.



Present Members



System structure



Suning Blacklist Data Sharing Platform



Pain points

- Blacklist data is not public
- It's hard to get the blacklist data



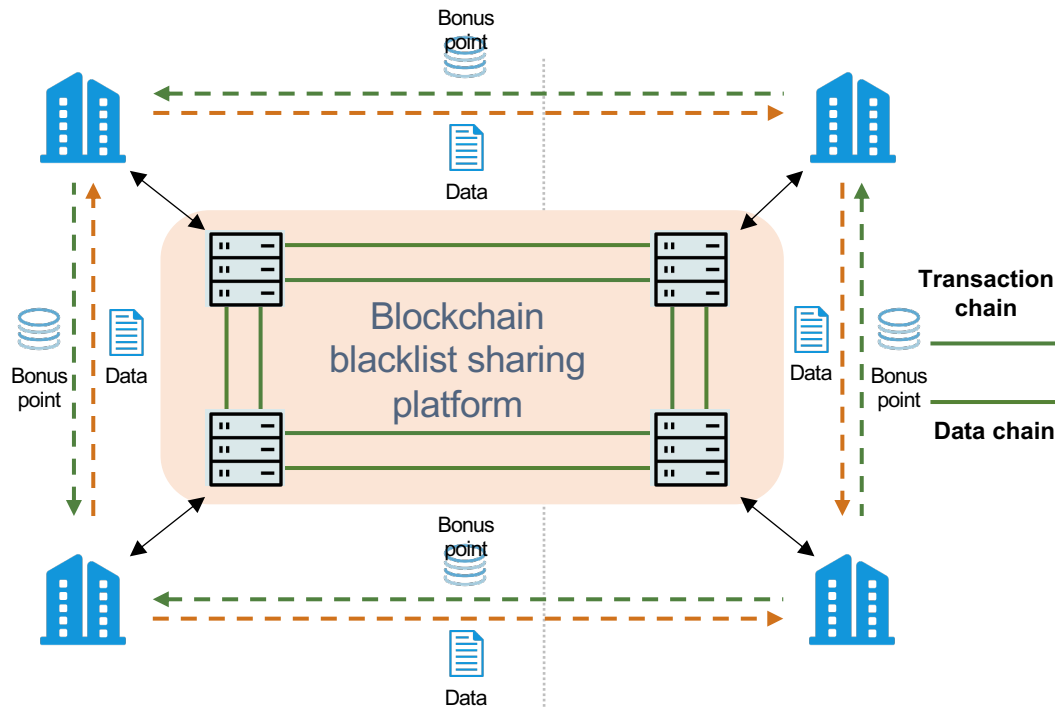
Solution

- Build a blockchain blacklist sharing platform
Institution A uploads its blacklist data to the platform and earns rewards of bonus points.
- Institution B pays institution A for query of blacklist data



Advantages

- Innovative: cross-chain technology is adopted to combine evidence storage chain with transaction chain
- Secure: Data desensitization, anonymous transactions between institutions, one secret key one time
- Economical: cost reduction of financial institutions' maintenance



GACC blockchain trade project

General Administration of Customs of the People's Republic of China



Pain points

- The custom clearance of import and export is inefficient and costly.
- Customs supervision is difficult.
- It is hard for enterprises in the import and export business to get financing



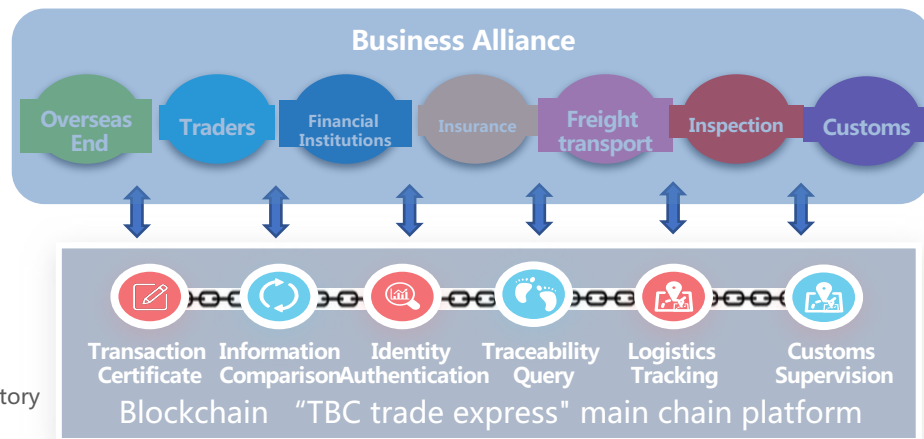
Solutions

- Build a trade alliance including all participants
- All key information and data in the whole cross-border trade process are secured to be true and fundamentally interconnected
- Participant data cross-validation to improve the credibility of the data and strengthen the transaction credit of the company.



Advantages

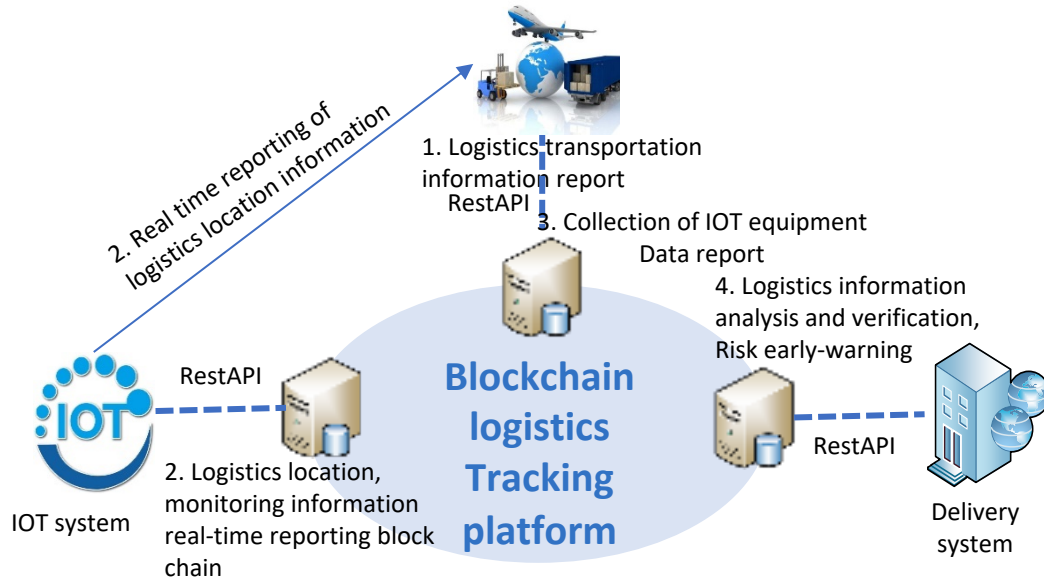
- Improve efficiency and reduce costs of customs clearance, and help regulatory institutes provide regulatory capabilities
- Provide credible data to reduce financing costs.
- Enhance the risk control capabilities of financial institutions and innovate



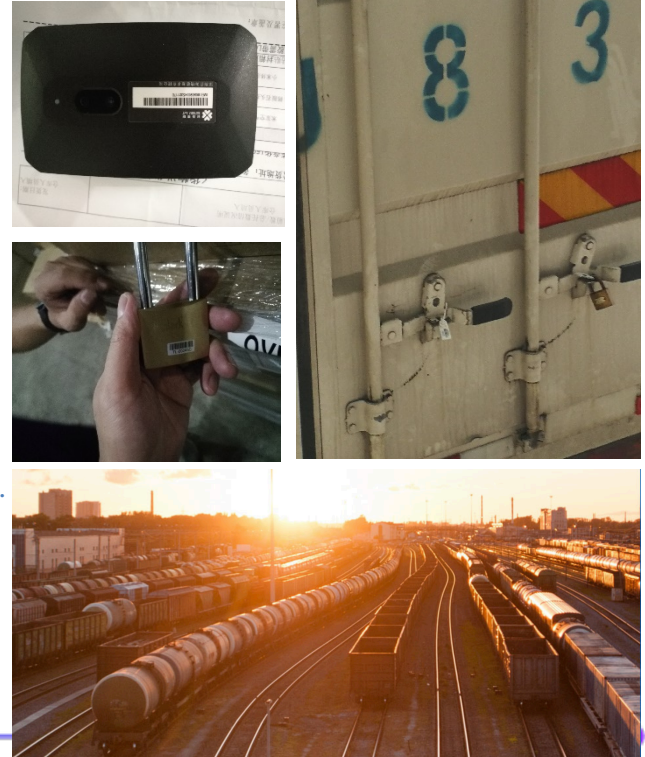


Other applications with the addition of IOT

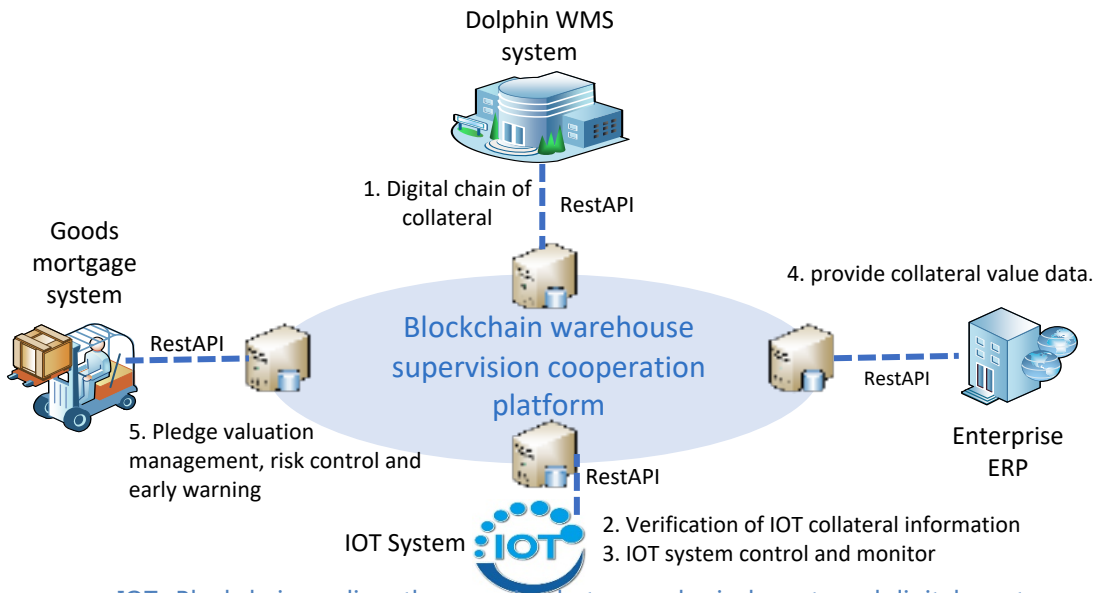
Fusion IOT + blockchain logistics tracking



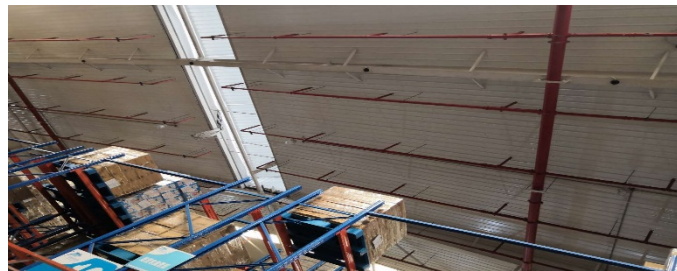
- The IOT + blockchain ensures the truth and non tampering of logistics information.
- Cross-validation of IOT system and logistics system data ensures that information can be self-evident in business chain.
- The real-time and non-real-time data of IOT devices are mutually verified. by the unchangeable data stored in blockchains to ensure data integrity.
- Reconstructing credit system, changing from subject credit to technology credit.



Fusion IOT + blockchain warehouse control



- IOT+Blockchain, realizes the mapping between physical assets and digital assets , ensure the truly and unchangeable information on the chain
- Smart contract: Pre-set the collateral value, Use IOT equipment to collect goods changes information, automatic control of goods, automatic risk warning
- Blockchain and IOT information verify each other to ensure that the goods control is reliable and effective.
- Reconstructing credit system from subject credit to transaction credit



Questions?

Email: chenhonggang@peersafe.cn
Wechat

