

一番身近で大切な存在



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# **Planet Project (PLA)**

## **—Innovative Payment Technology by Virtual Banking System—**

### **Summary**

Although dozens of payment methods are available in Japan, the cash usage rate is still extremely high. Meanwhile, the world's major countries are becoming cashless, and Japan lagging behind in this transition. The benefits of cashless payments are wide-ranging, such as transparency of uncertain fund, prevention of theft, combined management of spending and balance, saving of payment time, freehand shopping, prevention of accounting mistakes, reduction of labor costs, etc. In addition, because the cashless payment does not require close contact, it can be expected to prevent the epidemic of diseases such as the coronavirus. Payment methods that utilize blockchain will make up for the deficiencies of existing cashless payments (credit card payments and electronic money payments for transportation) and will become the core of payment methods in the world in the future. Japan, which lags behind the world in the payment field, is expected to utilize blockchain technology and lead the world in the future. Planet tokens are cryptocurrency assets that specialize in payments, and can be used in a variety of situations, from Internet payments to over-the-counter payments. Since all payment history is recorded on the blockchain and cannot be tampered with, fraud such as money laundering can be prevented. Furthermore, while traditional payment methods have been through a tyrannical central administrator, Planet Token operations are decentralized without a specific central administrator, and the network is managed by nodes around the world. Planet tokens not only will be an innovative payment method in Japan, but also have the future of becoming a crypto asset that can be used worldwide.

A virtual banking system is used for payments in Japan, IDs such as nicknames are used instead of addresses when sending and receiving money, transaction fees between individuals are virtually zero, and a mechanism to prevent fraud risk and double payment is established. All transaction history in virtual banking is recorded on the Hyperledger blockchain, creating a highly transparent payment system.



## 1. Introduction

In the "Cashless Vision" announced by the Ministry of Economy, Trade and Industry in April 2018, the goal of increasing cashless payments in Japan to 40% by 2027 was set. In response to this goal, this project will promote Japan's cashless policy, pursue the diversification of payments on the Internet while using blockchain technology, as well as promote the improvement of convenience and efficiency of various payment methods.

### [Reason for Working on Cashless Payment]

The declining birthrate and aging population, the declining population, and the accompanying decrease in the working population have become major issues in Japan and improving national productivity has become an inevitable issue. Cashless payments are expected to lead to unmanned labor saving in stores, visualization of uncertain fund flows, improvement of tax revenue by deterring uncertain cash distribution, and revitalization of consumption. The methods for realizing cashless payments are diversifying, and it is expected that cashless payments that utilize innovation in various ways will continue to appear in the future.

In addition, the number of foreign tourists visiting Japan is increasing year by year, but it is said that 40% of them are dissatisfied with the fact that they can only use cash, it is estimated that if this situation does not improve, an annual opportunity loss of about 1.2 trillion yen will occur. The spread of cashless payments in Japan is behind of the world is because of security concerns about cashless payments and the Japanese citizens' preference for using cash. In view of this, we propose a method that utilizes blockchain technology to solve this problem.

### [Blockchain Technology Based Payment]

All money sent and received on the blockchain is recorded in the ledger and managed in a decentralized manner, so it cannot be tampered with and cannot be fraudulent. Therefore, it is expected to visualize the flow of funds and deter uncertain cash distribution. In addition, even if some nodes are attacked, the system will not go down, as it has strong security.

With payments that utilize blockchain technology, users can immediately check how much they have used and all of it is recorded in the ledger, so users can prevent it from being overused compared to credit cards. The purpose of this project is to pursue the convenience and efficiency of cashless payments utilizing blockchain technology and to diversify payments on the Internet.



## 2. History of Planet

Planet Token is a token specializing in open-source payments issued on the Ethereum blockchain by Mr. Akio Ito, the representative director of D.H.G. Corporation(ERC20 standard). We have launched the Planet Token project without raising any funds from investors through ICOs and have listed it on numerous overseas exchanges and sales offices. We distribute tokens to users of exchanges and sales offices by airdrop (free of charge) to expand the number of users and holders of Planet tokens. As a token originating in Japan, we will promote cashless payments in Japan and lead the world in the field of payments using blockchain. Furthermore, in the future, we will use the virtual banking system currently under development to speed up transactions, remittance by ID, virtually free fees, prevent double payment and fraud.

2019.6.19	Planet token birth
2019.7.19	Distributed by airdrop (free of charge) to users of the Etherflyer exchange
2019.8.1	Distributed by airdrop (free of charge) to users of Livecoin exchange
2019.8.28	Listed on Bithumb Global Exchange
Future	Handing in Bitgate Co., Ltd
Future	Operation of Virtual Banking

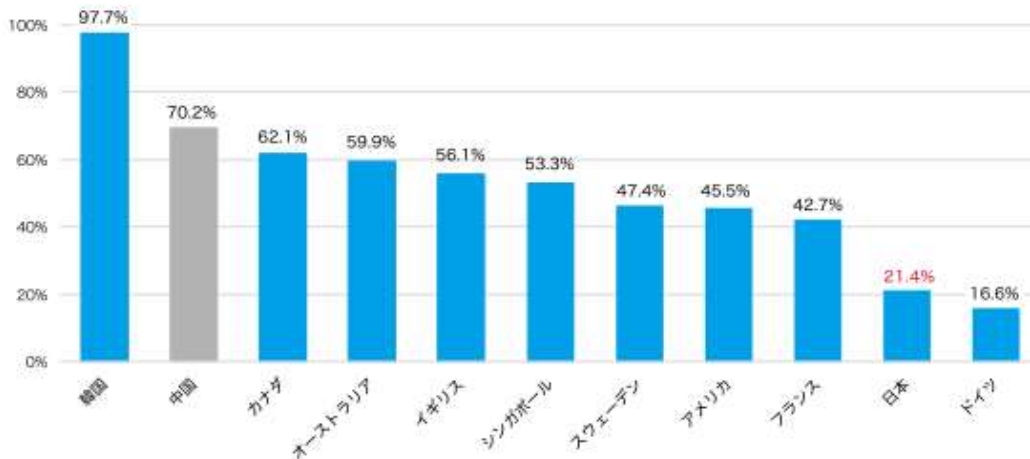




### 3. The Merits of Cashless Society

The ratio of cashless society in the world has reached the 40-60% level in major countries, and among them, the cashless society in South Korea is outstanding, about 90%, while the ratio in Japan is only about 20%.

Figure 1. Cashless payment status in major countries around the world (2017)



(Source) General Incorporated Association Cashless Promotion Council "Cashless Roadmap 2020" p.13

Cashless has merits not only for consumers but also for companies that provide products and services, and even for the entire country. The merits of each are divided into "consumers" and "businesses that provide products and services." show as follows.

#### Benefits for Consumer

- There is no need to carry cash with you, and users can save the trouble of searching for coins and adjusting the amount at the time of checkout.
- Users can make a payment just by holding a QR code or barcode.
- Users can always check the amount and balance of money used. Receipts are also recorded electronically so users can check them at any time.

#### Benefits for Businesses

- Smooth settlement can be realized by simplifying the cash register.
- Closing procedures such as cash register becomes easier. Since it is not necessary to check whether the numbers on the system match the cash, time can be saved and accounting mistakes such as calculation mistakes can be prevented.
- Various costs such as labor costs can be reduced.
- It will be easier for foreign tourists to make payments, and opportunities for further profits at tourist destinations will increase. According to a survey commissioned by VISA \* <sup>1</sup>, about 40% of tourists visiting Japan are dissatisfied with the fact that they can only make cash payments, and if the number of tourists visiting Japan reaches 40 million annually (about 32 million in 2019). ) \* <sup>2</sup>, it is estimating an opportunity loss of about 1.2 trillion yen.

#### 4. Barrier of Cashless

It is necessary to consider the background of the lack of cashless society in Japan compared to other major countries from the perspective of social conditions, consumers, businesses. The cashless payment ratio in Japan has changed from 11.9% in 2008 to 21.4% in 2017, and it can be seen that it is gradually increasing, but the Japanese citizens' preference for using cash still could be consider as a reason why cashless payments are difficult to spread.

According to "Cashless Vision" \*, the reasons why cashless society is not widespread are as follows.

##### [Social situation]

- ① "Good Public Security" – Theft cases are rare and dropped cash usually will be return.
- ② Little circulation of clean banknotes and counterfeit notes and high confidence on cash
- ③ "POS (cash register) processing is fast and accurate" at stores, thus less complexity in handling cash at stores.
- ④ High convenience of ATM, "it is always easy to get cash".

##### [Physical stores (businesses)]

###### [Implementation]

< Terminal installation cost >

Costs are incurred in introducing "payment terminals"

Space cost for terminal installation and burden of network pull-in will also occur

###### [Operation & Maintenance]

<High cost comparing with Cash>

When compared with cash payment, costs for using cashless payment methods are incurred on the physical store side. Existence of physical stores that appear to be part of the points and miles that businesses (issuers) give to consumers, but they do not feel that they are fully benefiting from the points and miles.

###### [Burden of Operation]

Operational burden for handing out paper sales slips (user side), which does not occur with cash payment.

###### [Cash Flow]

< Monetization time lag after payment >

Cash payments can be instantly monetized, but credit card payments generally have a time lag of about half a month to a month before monetization.

## [Consumer]

- ① Customers are reluctant to transfer to cashless as the physical stores do not support the payment method.
- ② There are various anxieties related to cashless payment.

The good public security and high trust in cash in Japan, as well as the burden on the business side (implementation cost, handling fee, etc.) are the main reasons for the left-behind cashless progress. As a result, there are many physical stores that do not support cashless payment, and the penetration rate in Japan is pretty low.

## 5. Blockchain Payment Method

All crypto assets payments are recorded on the blockchain, and tampering is theoretically impossible, which making it impossible to make fraudulent payments (transactions). In addition, since users can check the records of remittances such as "who paid to whom and how much you received", the accuracy of payment is guaranteed, and users can trade 24 hours a day, 365 days a year. In addition, the recipient's address is encrypted to increase anonymity, and the privacy-friendly design allows users to trade with confidence. However, if users make a mistake in the remittance address, the token may be sent to another destination, or the token itself may become irreversible forever. Recently, the utilization rate of cryptocurrency assets has increased, which causing transaction delays, not to mention users' dissatisfaction towards expensive handling fee. In addition, some users will try to use the complete anonymity for money laundering.

Cryptocurrency assets have various merits in settlement, but conventional cryptocurrency assets also have the above-mentioned problems. Here the birth of Planet Token has solved these problems. Part of Planet tokens are issued on the ERC20 standard and others are issued on Hyperledger. Each Planet token is closely interrelated with each other and plays an important role in running a virtual banking system. Each function is introduced below.

### 5.1 PLANET TOKEN

Planet Token is a next-generation payment tool that not only enhances the convenience of Internet payments and promotes cashless payments by non-cash payments, but also overcomes the problems of existing non-cash payments (credit payments, electronic money, etc.). Planet tokens are issued in accordance with the ERC20 standard and are operated by nodes around the world. Since it uses the same blockchain as Ethereum, there are no usage restrictions and anyone in the world can use it borderlessly.

#### 【Basic information】

Name: Planet Token

Symbol: PLA

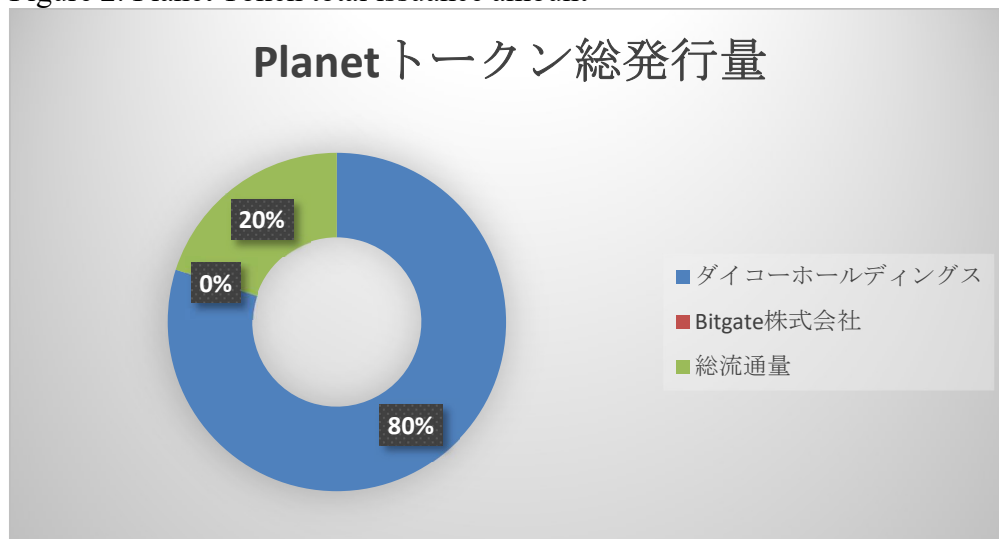
Total issue quantity: 5 billion

Minimum decimal unit: 18

Contact Address: 0x307d45afbb7e84f82ef3d251a6bb0f00edf632e4



Figure 2. Planet Token total issuance amount

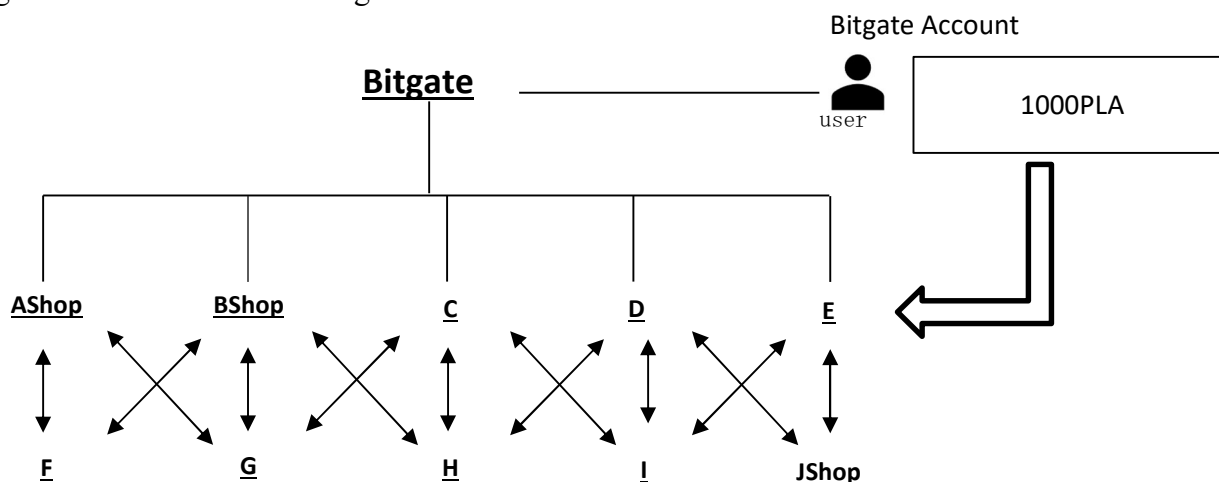


The total issuance of Planet tokens is 5 billion PLA, of which Daiko Holdings owns 80% and the remaining 20% is on the market. However, Bitgate Co., Ltd. manages and operates 80% of the PLA owned by the Daiko Holdings Group as the issuing entity. (Refer to 6. Operation method)

## 5.2 Virtual Banking

We use a virtual banking system for payments in Japan and provide not only existing non-cash payments but also innovative payment systems that make up for the shortcomings of existing crypto assets such as BTC. Virtual banking is operated by Bitgate Co., Ltd., and customer assets are thoroughly segregated and managed. Virtual banking has a structure that uses Hyperledger, and the advantages are virtually zero transaction fees, fast remittance speed, hacking resistance, and prevention of fraud such as double payment. In addition, virtual banking allows user to "refund" when you purchase the wrong item in the payment. Also, Virtual Banking will be able to use the Planet tokens it holds as collateral. The mechanism is very simple, and users in Japan can use it simply by purchasing or depositing Planet tokens at Bitgate, a cryptocurrency sales office. Virtual banking is not used when sending money overseas or to a personal wallet.

Figure 3 Use of virtual banking Part 1



It can be used by various companies (shops, online shopping, etc.) affiliated with Bitgate and Daiko Holdings Group. Business-to-business transactions are possible as well as individuals.

### [Internet shopping]

As with conventional blockchains, payments made through Internet shopping using virtual banking not only record the "sender," "receiver," and "quantity," but also include information such as "order ID" and "item ID." It will be recorded. However, information about these individuals is not seen by third parties other than the purchaser and the shop and is displayed anonymously on the blockchain to protect privacy. It is a mechanism that can comply with laws and regulations such as the Personal Information Protection Law.

The following are the items displayed on the virtual banking system when used as a "payment method" and when only "remittance" is performed.

#### <When used as a payment method>

ブロックチェーン上でAさんが購入した品物の  
ITEM\_ID  
PAYMENT\_ID(TRANSACTION\_ID)  
ORDER\_ID  
DATE  
STATUS が記録される。

#### <When used for remittance>

ブロックチェーン上でAさんが送金した  
PAYMENT\_ID(TRANSACTION\_ID)  
DATE  
STATUS が記録される。

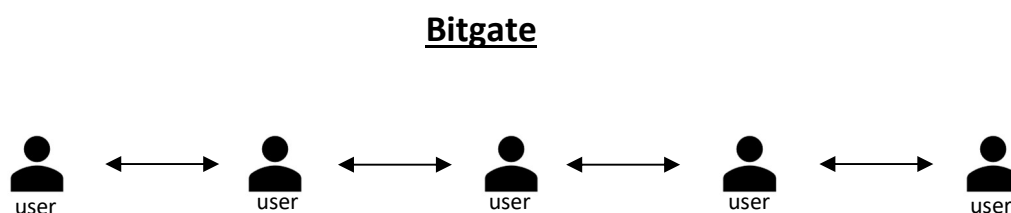
### [Use in physical stores]

When using at physical stores, payment will be made using the same procedure as existing cashless payment (bar code, QR code, etc.). If user wants to use a credit card, he/she can't even hold the card unless you meet certain strict conditions, but anyone can use virtual banking payments. In addition, all transaction history is stored on the blockchain, cannot be tampered with, and there is no unauthorized use of data by the central administrator, so user can trade with confidence.

### [Remittance between individuals]

Remittance between individuals of Planet tokens is faster than existing major crypto assets (BTC, etc.), and it is safe with virtually no fees. In the case of remittance by BTC etc., it takes a long time from the remittance to approval, and if the remittance fee is small, it may not even be approved and reach the other party. In addition, BTC has a low limit on the number of remittance transactions per second, limited to about 7 transactions per second. The higher the number of transactions, the higher the fees and the more difficult it is to be approved. However, remittance of Planet tokens using virtual banking in Japan solves such problems and can achieve about 3,000 to 20,000 transactions per second.

**Figure 4 Use of virtual banking Part 2**



Planet tokens can be used as payments between businesses that have adopted the virtual banking system, and remittances between users are also possible.

## **6. Operation Method**

The issuer of Planet tokens is the Daiko Holdings Group, and Bitgate Co., Ltd. manages the operation of the tokens. Bitgate Co., Ltd. is a Japanese cryptocurrency sales office and investment advisory / agent established on March 31, 2010. The Daiko Holdings Group is the parent company of Bitgate Co., Ltd., but there is no interference with the operation and management of Planet Tokens, and Bitgate Co., Ltd. manages the operation and management of Planet Tokens from an independent standpoint. Bitgate manages Planet tokens in accordance with the operation management guidelines, and if it becomes necessary to increase the inventory of tokens as a result of following the supply and demand balance and operation management guidelines.

### **6.1 RoadMap**

The role of virtual banking payments will be used not only for Internet shopping and payments at stores, but also for game coins such as e-sports. Furthermore, we will invest in blockchain-related companies with Planet tokens to promote corporate revitalization. The invested tokens will be a conditional investment that locks up (makes it impossible to sell or exchange for a certain period of time) and keeps the balance between supply and demand in the market.

In the future, all Planet Tokens on the Ethereum network will be converted to Hyperledger's virtual banking system.

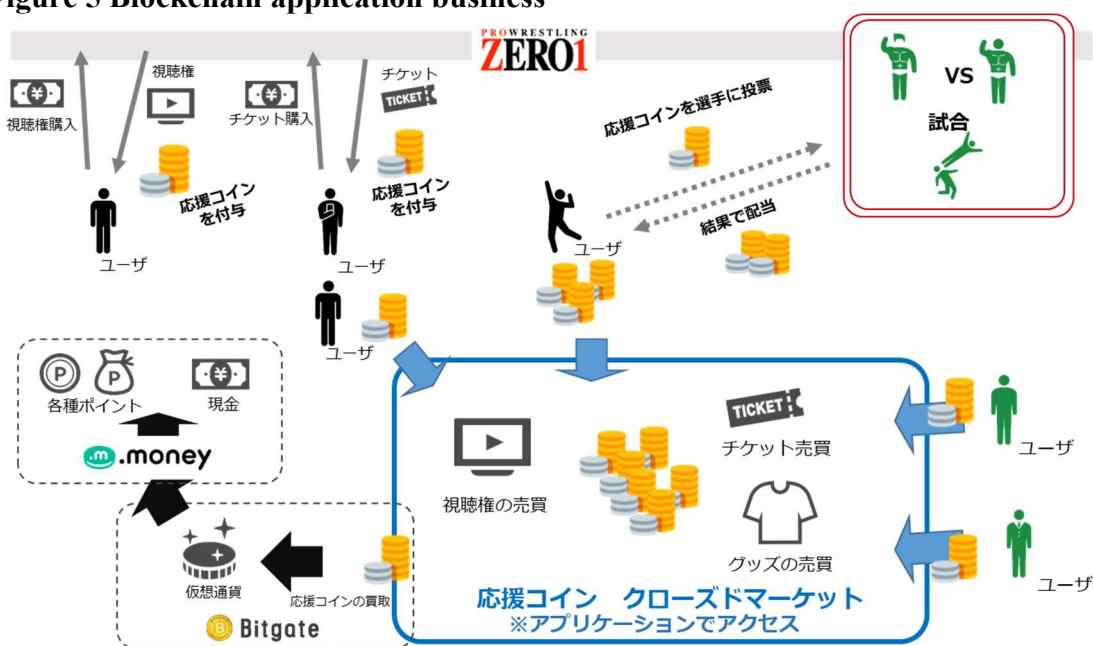
May 2021 Scheduled to start accepting payments at Plat Mall

May 2021 Scheduled to start accepting payments on the OSU platform

[Blockchain server business / blockchain application business]

In addition to the virtual banking system, we will build various digital assets for purposes other than payment methods by using a distributed ledger. For example, it can be used as a payment method for entertainment such as matchmaking and voting tickets used on the OSU platform, or an NFT system for only value transfer such as ERC721's Non-fungible Token can be constructed. We will continue to develop application software that makes it comfortable and safe.

**Figure 5 Blockchain application business**



## 6.2 Development team

Software service development  
Development cooperation:

Daiko Holdings Group  
Bitgate Co., Ltd

Daiko Holdings Group will develop the Planet Token system and virtual banking system. Bitgate Co., Ltd. will take charge of the overall operation and management of tokens from an independent standpoint and will cooperate with the Daiko Holdings Group in the system development of Planet tokens.

ERC20 Audit Report (John Wick <https://johnwick.io/verify/d076664476716ffb1aec613892621490>)

## 7. Disclaimer

This white paper outlines tokens and the token-based ecosystem. This white paper is for informational purposes only and shall not be liable to the extent permitted by applicable law for any loss of investment, income or data resulting from its use or disability.

Please refrain from fully complying with the future outlook described in this white paper as we do not guarantee its realization. In addition, these forward-looking statements contain known or unknown risks and uncertainties that may result in significant differences from the actual outlook.

This white paper does not assume any warranty or liability arising out of or in connection with the accuracy, reliability or completeness of commercial transactions. In addition, the white paper is subject to update and change, in which case the latest information will take precedence. We are not obligated to notify you of the facts or details of the changes.

## 8. Reference

Changes in the environment surrounding cashless payments and points to be discussed at this study group

June 10, 2020

<https://www.meti.go.jp/press/2020/06/20200612006/20200612006-4.pdf>

Cashless Roadmap 2020

<https://www.paymentsjapan.or.jp/wordpress/wp-content/uploads/2020/06/roadmap2020.pdf>

Cashless Roadmap 2020 Summary Version

[https://www.paymentsjapan.or.jp/wordpress/wp-content/uploads/2020/06/roadmap2020\\_summary.pdf](https://www.paymentsjapan.or.jp/wordpress/wp-content/uploads/2020/06/roadmap2020_summary.pdf)

Hyperledger Iroha Enterprise blockchain

<https://soramitsu.co.jp/ja/iroha>

Etherscan: Planet Token (ERC20)

<https://etherscan.io/token/0x307d45afbb7e84f82ef3d251a6bb0f00edf632e4>

Policy Research Institute: Changes in household settlement behavior due to the spread of coronavirus infection

June 3, 2020

[https://www.mof.go.jp/pri/publication/research\\_paper\\_staff\\_report/staff05.pdf](https://www.mof.go.jp/pri/publication/research_paper_staff_report/staff05.pdf)



## PLANET- Virtual Banking System

### Overview of Virtual Banking System-Architecture-

**PLANET Enterprise Banking System is a highly reliable system built on the very trustworthy Hyperledger.**

- **Membership Service**

The membership service manages personal information, privacy, confidentiality, and auditability on your network.

- **Blockchain Service**

The blockchain service manages Hyperledger via a peer-to-peer protocol built on HTTP/2. The data structure is highly optimized and provides the most efficient hashing algorithm for maintaining data distribution and replication.

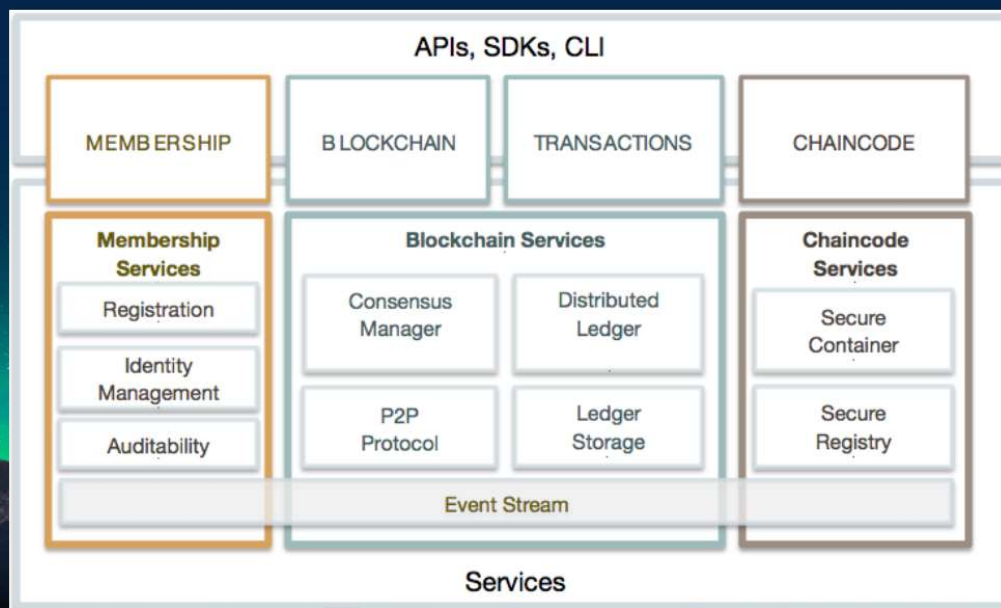
- **Chain code Service**

The Chain code service provides a safe and easy way through sandboxing chain code on authentication node

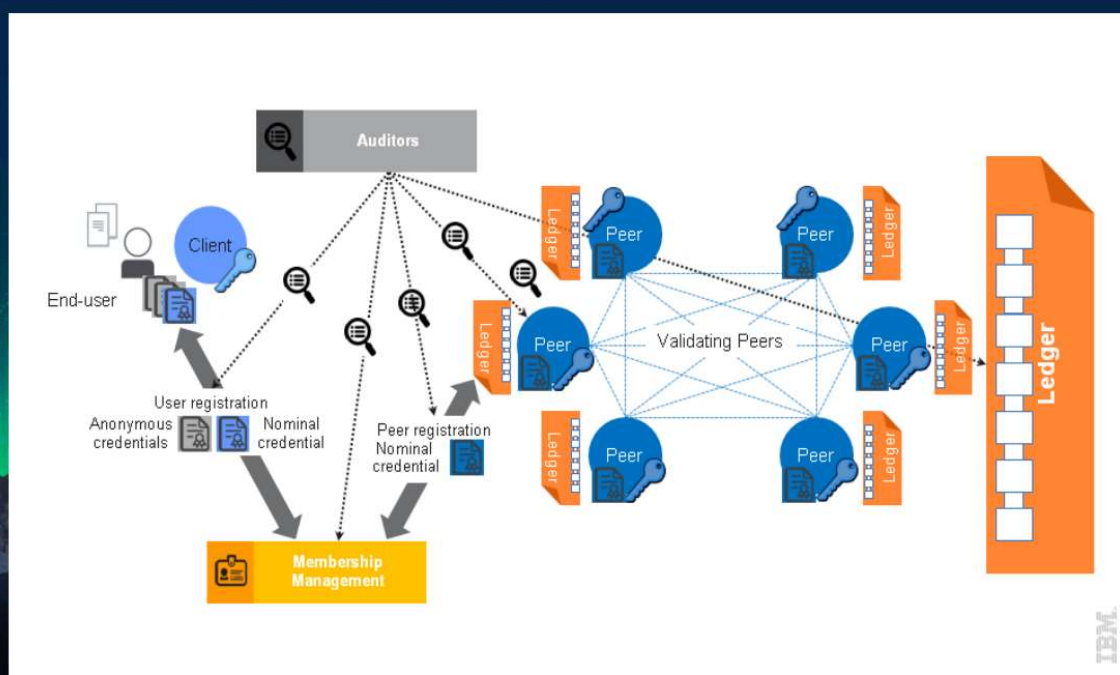
- **Ledger Service**

Hyperledger (Linux Foundation) uses a reliable open source distributed ledger.


## Overview of Virtual Banking System-Architecture-



## Overview of Virtual Banking System-Architecture-



## Virtual Banking System Overview-User Interface-



**Welcome back**  
Login to your account.

\* Username:

\* Private key:


Don't have an account? Click to [sign up](#)  
Or visit the [Block-Chain](#) directly.

[LOGIN](#)

Users could choose a nickname to create an account, which makes the distributed ledger system easier to use.

The private key is used for login.

By using a private key, users could use a combination of login ID and password log in anywhere in the world without managing the database.



**Register a New Account**  
It's free to create an account.

\* Username:


\* Public key:

Already have an account? Click to [log in](#)  
Or visit the [Block-Chain](#) directly.

[REGISTER](#)

The private key uses the same algorithm as Bitcoin. Users could create an account by using the public key generated from the private key.

## Virtual Banking System Overview-User Interface-



**Dashboard**

[Home](#) [User Review](#) [Assets](#) [Block-Chain](#) [Logout](#)

To:

Amount:


Message:

Private key:

[SEND](#)

Digital assets remittance

Users could transfer assets to a nickname account by using the private key.



**User page**

[Dashboard](#) [Assets](#) [Transactions](#)

**Assets List**

Asset	Balance
PLA	100

**Transactions History**

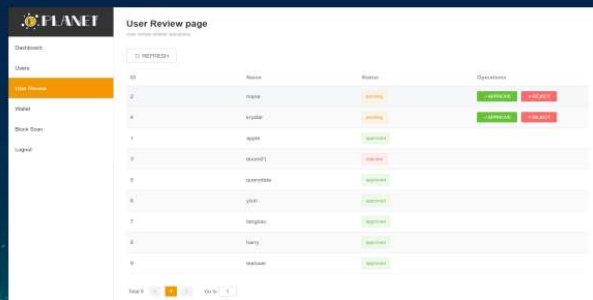
From	To	Amount	Currency	Message	Date
apple	apple	1	PLA	DEFUND TRANSACTION	Apple
apple	apple	1	PLA	DEFUND TRANSACTION	Apple
apple	apple	1	PLA	DEFUND TRANSACTION	Apple
apple	apple	1	PLA	DEFUND TRANSACTION	Apple
apple	apple	100	PLA	DEFUND TRANSACTION	Apple

After logging in, users could view the status of digital assets and transactions records.

In addition to PLA, BTC and ETH, prepaid point transition are also supported.

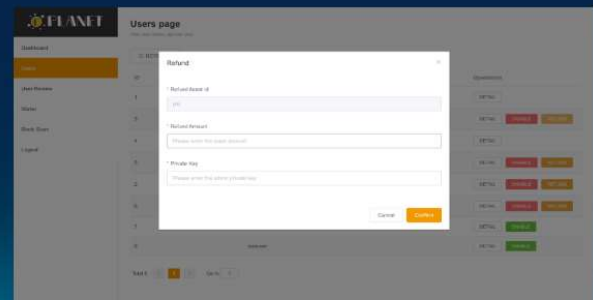


## Virtual Banking System Overview-Admin Interface-



The administrator can approve user account registration using the super key (private key for administrator).

The super key is multi-signature compatible and supports multiple approvals.



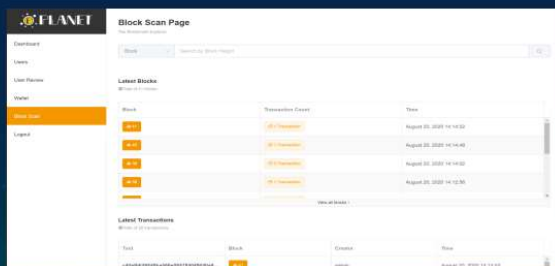
### Refund function

If users made a mistake or have a problem with a remittance, users could disable the remittance or perform a refund process.

The refund process requires an admin super key.

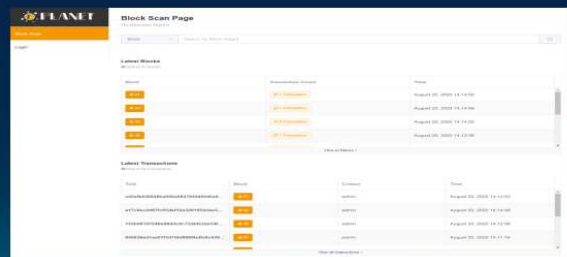


## Virtual Banking System Overview-Admin Interface-



With the Hyperledger blockchain explorer, users could search for all user approval and remittance records in the distributed ledger.

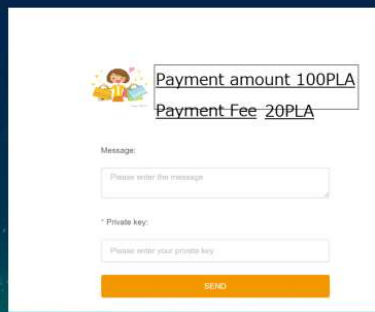
As for the advantage of blockchain, which is the weak point that rewriting is impossible, we have realized safe asset management by invalidating the remittance transaction from the backend. This allows financial institutions to process refund. In addition, multi-signature management supports cases where approvals from multiple administrators is required.



By making the distributed ledger open to the public, we can provide highly reliable data. The administrator role can manage all transactions, while general user could search and review the current status of digital assets.



## Overview of Virtual Banking System-Payment Interface-



Payment amount 100PLA  
Payment Fee 20PLA

Message:

\* Private key:

SEND

Users could use the payment agent system to pay the specified account. This allows payments made with digital assets to be realized on the blockchain.

Payment is realized by transferring digital assets by escrow services and by placing plugins on EC sites.

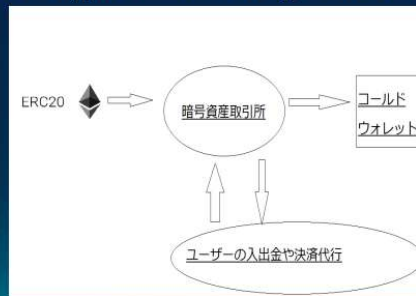
When fraud occurs, the transfer of digital assets can be invalidated or refund, which ensures convenience in the enterprise domain. Also, fees can be added to payments between accounts.

## Overview of Virtual Banking System-Use Case-

Compensation for employees using company currency




For crypto asset exchange-Off-chain transaction service-





## Overview of Virtual Banking System-Payment Interface-



### Order Payment

Please check your order and complete the payment.


Order Number	978248960064452862
Order Content	Books-370
Price	100.0 PLA
Fee	2 PLA
Total	102 PLA


\* Private key:

Please enter the private key to confirm the order.

CONFIRM

## Overview of Virtual Banking System-Payment Interface-



 **Order Payment Succeed!**

Congratulations on completing a payment.

Order Number	978248960064452862
Order Content	Books-370
Price	100.0 PLA
Fee	2 PLA
Total	102 PLA

BACK TO THE HOMEPAGE