FLUX

ENCRYPTED VOUCHER TOKEN PLATFORM

VER. 3.3.2
Legal disclaimers

Please peruse through this entire section carefully. If you are in any doubt as to the action you should take, please consult your legal, financial, tax or other professional advisor(s).

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(ii) Fluctuations of the value of FLUX post-issuance due to the general global market and economic conditions. Such volatility in the value of the FLUX may lead to FLUX not being able to fund the development of the FLUX ecosystem, or may not be able to maintain the FLUX ecosystem in the manner intended;

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(xi) FLUX and other cryptocurrencies are a new, untested technology and constantly developing. The full functionality of the FLUX is not yet complete and no assurance can be provided of such completion. As technology matures, developments in cryptographic technologies and techniques or changes in consensus or algorithms could present risks to the FLUX, the FLUX sale, the FLUX project and/or the FLUX ecosystem, including the utility of the FLUX;

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FLUX is

FLUX CHAIN’s encrypted voucher token platform (Encrypted Voucher Token Platform) is based on the transparency and trust that the participants can use the EVT Platform through the public ledger of blockchain and freely issue vouchers (vouchers, coupons, gifticons, etc.) to reduce the cost of entering a tributary voucher that exists in the existing market and allow distribution without risk of forgery.

The FLUX Token can be used as a voucher, and can also be exchanged for a voucher using the FLUX Exchange App and also to settle the fee for sending. The amount of FLUX Token that is distributed is limited, and the value will increase as the number of participants on the EVT Platform increases due to the scarcity of FLUX Token.
Abstract

4th Industrial Revolution has entered into full-scale virtualization wave.

Virtualization of the Society has delivered SNS services like Facebook, virtualization of intelligence has made artificial intelligence such as alpha-Go, and virtualization of space have made VR services.

Conclusively, such a virtualization process will lead to the virtualization of money/currency.

The world is prepared for CASHLESS SOCIETY,

But the people’s recognition of Cryptocurrency is still considered as speculation.

Assuming that Bitcoin plays the role of gold in the Cryptocurrency Era, Cryptocurrency must have a currency function that can maintain fluctuation free exchange value.

Flux (FLUX) can develop and supply blockchain-based encrypted voucher token platform (EVT Platform) to issue vouchers (gift vouchers, coupons, gifticons, etc.) and can be distributed and managed.

FLUX aims to solve the problems of the existing paper form vouchers issuance, circulation, disposal, and storage, which are the problems that vouchers have, and to create a market network of a new concept.

Flux (FLUX) can be trusted by the participants through the public ledger based on blockchain, and it will be made available for use in the global market by utilizing common standard data.

Ultimately, Flux (FLUX) is to develop a new voucher market, thereby opening up an effective market where issuers, users, etc. can all explore and enjoy higher standard values.
1. Market Status

1) Market Changes

Countries like China and India etc. that have skipped the credit card market have adopted smartphone base settlement/payment tools via the usage of points, mileages, coupons, D/C coupons as the popular method. Due to the massive penetration of smartphones, various types of payment tools are quickly replaced the existing methods, which has become an important key for global settlement markets.

More than 24 countries around the world have invested in blockchain technology, and many companies have begun to develop blockchain-based payment methods.

Singapore's central bank has completed the first steps to bring Singapore Dollar to DLT-Ethereum sector and DLT (Distributed Ledger Technology) is expected to have a very significant impact, especially in the financial industry. Thorough discussion and trials are needed to complete the process. Almost all P2P service providers are moving into the DLT area.

The amount of deposits made by online payment providers have already reached and expanded to the level of existing banks.
2) Paper Gift Voucher

A) Market Status

After the 1999 Gift Voucher Act was suspended, the voucher market has been left in the blind spot of the control and management. However, even though the scale of the gift voucher market has grown to over 11 trillion won and many harmful effects have been mass-produced and no regulatory bills nor government entities were existing to control the situation.

According to the KOMSCO and Statistical Office of Korea, there are more than 200 types of gift vouchers in circulation such as department stores, shoes, refueling, restaurants, lights, books, and cultural gift certificates.

The total number of gift vouchers (including paper and mobile) issued in 2019 reached 11.08 trillion won. It is estimated by the financial industry that the annual amount exceeds 14 trillion won including the coupons such as cultural gift certificates that are circulated without the control or management of KOMSCO.

B) Problems

Companies can issue an unlimited number of gift certificates with no restrictions if they only issue stamp duties.
Stamp duties based on the par value of gift certificates, they are 50 won for 10,000 won vouchers, 200 won for over 10,000 won and 50,000 won or less, 200 won for over 50,000 won, 400 won for 100,000 won or less, and 800 won for over 100,000 won vouchers. In particular, mobile gift certificates can be issued without the need for stamp duties (Stamp duties only apply from 2020 on over 30,000 won vouchers).

A company can purchase gift certificates without any restrictions. This is because the Gift Voucher Act of 1999 was suspended and the regulation was removed. Before the law was banned, the government-controlled the volume that was issued annually by the companies and needed to report to the tax authorities when requested. Currently, department stores do not keep the sales record of gift certificates that make it difficult to track the distribution channels resulting in illegal money laundering for criminal activities.

Since 2002, when it became possible to purchase gift certificates with corporate credit cards, there was a secret fundraising through the so-called “Voucher Discounts” (exchanges vouchers for cash for a value lower than the face value). Gift certificates can be exchanged for cash at about 5% commission with offline exchanges and through SSG pay application (application) carried by Shinsegae.

Countries such as the United States and Japan strictly regulate gift certificates. These laws and regulations stipulate the definition of gift certificates, prohibit the setting of fixed expiry periods, and provide consumer protection measures such as a full refund. In order to prevent damage to consumers due to the bankruptcy of voucher issuers, the government set mandatory regulations for the issuers to have safety deposits and priority reimbursement systems.

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<td>Canada</td>
<td>Customer Protection Act</td>
<td>Banning Expiry Date and Prohibit imposing Commission</td>
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The US prohibits imposing expiration dates of gift certificates. The issuer must confirm the identity of the purchaser and keep a transaction record in accordance with the “anti-money laundering act”. In Japan, in order to issue a gift certificate, the issuer must report to the finance ministry, and also submit a report on voucher sales on a regular basis. There is also a consumer
protection provision that, if the unused amount exceeds a certain amount, a deposit of 50% must be deposited and other bonds must be prioritized. There is clear legislation in place for safeguards against bankruptcy and non-delivery of gift certificates companies. Professor Kim of Hanseong Univ said, “There is a possibility that a Voucher issuing company may issue gift certificates on a large scale to raise funds to overcome the financial difficulties.” Therefore, it is necessary to systematically manage the issuing companies”.

3) Mobile Gift Vouchers

A) Market Status

It was confirmed that the number of mobile gift certificates issued by 14 companies in 2019, the so-called “Gifticon”, was 170 million, and the total sales volume reached to 2.1 trillion won level.

Stamp duties on Mobile gift vouchers have been imposed since 2020, and the resulting tax burden amounted up to 400 million won, which is estimated to reduce operating profit by up to 2.5%.

According to the report submitted to the Ministry of Strategy and Finance by the major 14 of the 23 mobile gift certificate companies, there were 173.48 million mobile gift certificates sold last year, and the total amount was 2,128 trillion won.
The sales transaction of mobile gift certificates increased from 108.19 million in 2016 to 126.18 million in 2017 and 173.48 million in 2018. This is 1.6 times increase in 2 years and the sales volume also increased 1.6 times in 2 years from KRW 1,333 trillion in 2016, KRW 1,591 trillion in 2017, and KRW 2,1122 trillion in 2018.

The sales of Mobile Certificates with 30,000 Won or below composed predominantly higher percentages than others. It composed 93.6% with 162.31 Million cases. It was followed by 30~50,000 Won (3.7% with 6.38 million cases), 50~100,000 Won (4.15 Million cases), and Above 100,000 Won (0.4% with 630,000 cases).

The ratio of sales for 30,000 Won composed 5.5% in 2017 and 6.4% in 2018 with 0.9% increase.

Based on the face value of the voucher, 30,000 Won or below composed 1.1344 trillion won (53.9%) taking up over 50% of the total sales. It was followed by 50,000~100,000 Won (17.4% with 364.9 billion Won), Above 100,000 won (16.3% with 343 billion won), and 30,000~50,000 won (12.4% with 260.6 billion won).

Mobile Certs with 30,000 won or above that are subject to stamp duties from 2020 decreased in 2018 by 4.9% from 46.1% in 2018 to 51% in 2017.

The mobile cert issuance range among 14 issuers differed greatly in 2018 with the minimum issuer having 8,812 cases to the maximum issuer with 64.18 million cases. These in terms of monetary volume, it ranges between a minimum of 1.9 billion won to a maximum of 594.95 billion won.
There are 7 companies that have issued mobile gift certificates over 100 billion won or more based on the sales amount, while 4 companies were in the 10 billion 100 billion won range, and 3 were below 10 billion won.

If the government imposes stamp duties on mobile gift certificates for over 30,000 won, the estimated stamp duties total KRW 3.4 billion last year, and the maximum duties by a company will come to 400 million won.

Assuming if stamp duties are imposed, the operating profits of mobile gift vouchers will be deceased by a max of 2.5% on average.

8 out of 9 companies that submitted the financials with a surplus, the average profit margin for 2016-2018 was 1.3-34.1% range, but it will drop to 0.6-31.5% if they were to pay stamp duties.

In addition, if stamp duties are imposed, all the duties will be borne by mobile gift certificate issuers, but it is possible that the duties will have an impact on the adjustment of the commission rate shared by the service providers, platform operators, and inter-company fees.

Mobile voucher issuers sell their vouchers on KaKao talks, SNS (Coupang), open markets (11th Street), etc., and the platform commission paid ranges 3~10%, and it was found that the service providers paid 5~10% of the commission to mobile voucher issuers in return for mobile gift voucher sales.

B) Problems

Imposing of Stamp duties have affected the mobile voucher industry to shrink. The largest mobile gift voucher issuer, Coup Marketing, has announced that 80% of the mobile vouchers exceeding 30,000 won has already been terminated.

Mobile gift vouchers exceeding 30,000 won, such as Starbucks exchange vouchers that are familiar to us, will be liable to pay stamp duties from 2020 based on the Stamp Duty Act passed in 2018. The issuer will be paying 200~800 won for the vouchers exceeding 30,000 won. The industry is predicting that the mobile voucher market will retract due to the levied tax.

According to the industry, the mobile gift voucher market centering on "KaKao Gift" will reach 3,28 trillion won this year. According to the analysis by Coup Marketing, the number of mobile gift voucher transaction volume in 2017 was 1.56 trillion won and increased to 2,15 trillion won in 2018 and to 2.68 trillion in 2019. It is growing by 20% annually. According to industry officials, “Korea has the largest market for mobile gift vouchers in the world”, and “The mobile gift voucher market is growing rapidly.”
voucher industry is gradually expanding overseas, but imposing tax will have a negative impact resulting in slow down of the market."

Mobile gift voucher issuers having merely 1% of the average profit margin has been complaining about the stamp duties. The profit margin of gift vouchers exceeding 30,000 won or above is 300 won and they would need to pay 200won for the duties.

**90% of the current mobile gift vouchers are issued by 3rd party agents**

Due to the cost burden of installing the in-house system, small and medium-sized brands, small business owners, etc., use mobile agents to issue mobile gift certificates. If the issuer takes care of the stamp duties, there is a worry that the expense can be imposed back to the service providers or to the customers to make up for the loss.
2. FLUX Introduction

FLUX is a blockchain network developed independently via DAG (Directed Acyclic Graph) algorithm.

The encrypted voucher token platform (Encrypted Voucher Token Platform; EVT Platform) is executed via the FLUX blockchain network and issues flux tokens (FLX) for the transaction of the encrypted voucher (EVT).

Existing paper gift vouchers involve too many cost factors such as printing, collection, disposal, and forgery prevention security costs making it difficult for small businessmen and small and medium-sized enterprises to absorb. Furthermore, costs to build a management system, and maintenance costs after development makes it difficult to manage because it requires a high level of security system to prevent hacking.
FLUX is a blockchain-based EVT Platform to ensure anti-forgery prevention and secure transparent issuance to provide a platform for anyone to easily issue/manage the voucher without a professional.

FLUX seeks to develop the EVT Platform for issuance/management of vouchers within the legal boundary and policy guideline provided in cooperation and support of the highly skilled developers and top-level financial advisors.

By using the EVT Platform, issuance information of encrypted voucher tokens (EVT), company information, and distribution information of coupons, and recording the necessary information on the blockchain at the time of issuance of EVT, it provides a trustworthy public ledger. Information stored can easily be accessed by platform participants, but cannot be forged or altered that enables to provide transparent information essential for platform participants.

It allows to solve the problem of the obstacles and transparency issues of the existing voucher industry and provide a safe environment.
When issuing the EVT, the respective issuer needs to provide data transparently based on trust, clarify responsibility, and minimize the possibility of a discrepancy. Currently, individual voucher issuers issue/manage vouchers independently and the issuance/managed data is not shared.

Under such circumstances, when a problem occurs, the voucher issuers can always adjust the data in their favor that makes it difficult to trust the data provided.

Data forgery prevention and openness are characteristics of blockchain technology, which is suitable for providing data that EVT issuers can trust. It allows to provide trusted data to participants and minimizes the disputes caused by untrusted data.

Issuers and participants can clarify responsibilities for services provided based on the reliable data recorded in EVT. In the case of a voucher, the most important purpose is to settle for goods and services. However, how and who compensates when a problem occurs in the EVT is a very sensitive issue. On the EVT Platform, respective issuing and issuer information will be recorded in the blockchain, so that the responsibility matters can be clarified. This makes it clear for the participant whether one is responsible or not without the efforts for extra preparations.

In addition, when using the EVT Platform, sharing information about the respective issuers’ past history and available resource information can support to find the optimized partner for collaboration. Even if a company wants to collaborate, it is difficult to assess who can be the best collaborator. Even if one finds the right target for collaboration, it is difficult to ascertain whether there are resources available for collaboration at that point of time. Such limited information makes it difficult for companies and increases the cost of exploration for collaboration, creates entry barrier, and prevents smooth collaboration.

EVT issuers will be able to easily obtain reliable information from the collaborators by using the tracking information provided by the public ledger. It will also be possible to find the most suitable collaboration partner at that point of time based on the information on the distribution data in the EVT that was conducted. This is not only allowed to increase the service rate of each issuer, but it is also allowed to exchange the EVT to make the voucher market more efficient.
3. FLUX Innovative Objectives

Based on blockchain, FLUX aims to build an efficient and transparent market, which is impossible in the existing centralized voucher industry.

In addition, FLUX aims to make the participation of various issuers and to strengthen the compensation system for each customer behavior to maximize the participation, FLUX provides the following elements to achieve the goal.

1) Efficiency Maximization

Flexible collaboration among voucher issuers offers a new level of exchange services that never existed before. In the existing service environment, users faced difficulties for the efficient usage of vouchers due to the lack of collaboration among the issuers. The voucher that the user possessed to purchase goods and services had various limitations and inconvenience. However, by providing flexible and convenient exchange services across the various issuers will resolve such problems and will provide a better user environment.
In order to provide the above services, FLUX is planning to develop an EVT Exchange App that will allow transparent info sharing and collaboration among the issuers to build integrated exchange services.

The existing voucher market was characterized by an independent voucher issuer to have exclusive issuing, collecting, settlement system or through a 3rd party agent that provides services on behalf of the issuer. Such an approach has the problem that one company is responsible for all strengths and weaknesses by themselves or through a 3rd party agent. The cost for running the operation increases while providing less efficient services to the users.

FLUX enables transparent exchanges between vouchers based on transparent information among issuers, so that vouchers are not only used within that issuer, but between EVTs. The rate of EVT usage can be improved through mutual exchange. The voucher users can verify the most effective and beneficial vouchers based on the information of respective issuers provided on the blockchain. This allows users to use EVT in the most efficient way that satisfies their needs.

When exchanging EVT through EVT Exchange App, EVT settlement is not requested to the issuer, and instead, the settlement amount is switched to Flux token (FLX) based on the market rate at that point of time and then cashed or purchase other goods and services. By doing so, respective issuers can focus on their advantageous areas and make utilization of their limited resources more efficiently.
Therefore, FLUX reduces unnecessary costs incurred for marketing, settlement, system management, etc. through collaboration between issuers and maximizes the advantages of each entities resulting in low-cost and maximized efficiency for operation.

Through collaboration among the issuers, respective issuers can verify the issuer’s information based on the data of the public ledger, and if necessary, they can trade the EVT with one another. This will allow the circulation structure rather than settlement to optimize the transaction.

The EVT Exchange App will analyze the purchase and interest patterns of the EVT users and will provide optimized information back to the actual users to support their best possible purchase decision for goods and services. This enables EVT users to reduce costs incurred when making purchases or consuming services while eliminating unnecessary time consumption and provide a better user experience.
2) Market Expendability

Flexible collaboration among EVT issuers enables a new dimension of settlement service. The existing market is mutually exclusive due to different means and methods of settlement that isolate one another.

For example, in the case of a franchise coffee shop, the voucher can be used across the same franchise stores, but it cannot be used when ordering necessary goods from the franchise headquarters. Despite having the same objectives, it was not possible to make use of the vouchers for settlement/management for efficiency.
Respective vouchers have their own strengths and weaknesses, and these factors have the potential to complement the weaknesses of other services. Therefore, the collaboration between issuers will be able to provide efficient services that were not existent in the past.

The EVT Exchange service provided by the EVT Platform invites the FLUX ecosystem. Not only existing voucher issuers such as department stores, markets, franchise coffee shops, beauty salons, but also small business owners who have stores in the region, even those who are not related to voucher services. FLUX can provide a step by step services that allows issuers to collaborate within the FLUX ecosystem.

In addition, companies with financial licenses can trade stocks, bonds, bills, etc. by using EVT. For example, a typical stock company can go to EVT and buy stock through the OTC exchange that has a financial license.

The evolution of the EVT Platform based on versatility has allowed vouchers to be used efficiently and creates new EVTs circulation in the market. Therefore, the EVT Platform will be able to easily absorb into the FLUX ecosystem, provide new services, and gain additional benefits by allowing the company to register its information.

### 3) New Innovative EVT Exchange

In the process of issuing vouchers, there are lots of information that cannot be solved by simply printing / collection / storing / disposing. From the perspective of voucher users, direct information on the issuer’s financial info or amount of vouchers issued cab be needed.

For example, a user who purchased a voucher should always be able to use it safely within the franchise outlets or stores.

For such reasons, the issuer must input accurate information when issuing EVT via the EVT platform. If the information is incorrect, it must be validated in the EVT platform and the information must be notified to the users.

Issuers participating in the EVT Exchange service, the issuers with low credit level must charge FLUX coin in the EVT Exchange System in order to protect the safety of settlement and to reduce risks for the voucher users.
EVT Exchange offers new and diverse services that were unable to provide in the past through its mobile application. For these purposes, the EVT Exchange System will analyze and utilize big data such as user’s usage patterns and interests to achieve and design optimized vouchers, thereby providing customized services to satisfy users’ needs.

This EVT Exchange will provide innovative and differentiated services compared to the existing services currently in the market.
4. Process for Growth

FLUX aims to provide an EVT platform globally to develop an ecosystem integrated with EVT.

The initial service stage of the project will be a singular vertical process.

FLUX is blockchain-based voucher issuance technology with a convenient distribution management system that enables anyone to easily issue and distribute EVT through the EVT Platform and substitute existing vouchers.

Mid to Long Terms service Stage of the project will be Integrated Horizontal Process.

Flux (FLUX) is a new system that replaces various settlement services by building a global ecosystem that is compatible and expendable with each voucher cross borders and businesses, as well as exchanges between vouchers via EVT Exchange.

1) Phase 1: EVT Issuance via EVT Platform

Through the EVT Platform, FLUX enables then issuance and distribution of EVT by anyone without the worries of forgery.

EVT, which can be directly settled via EVT Wallet for B2C transactions, is cheaper and easier to develop than existing financial networks resulting in maximizing the profits of the issuers.

For example, if one wants to make a payment through an existing channel, they must go through PG, VAN, Credit Card, etc., and the participating issuers inevitably need to pay the fees to the involved intermediaries.
EVT is an innovative settlement method maximizing the advantages of blockchain within the current legal boundary. It enables to settle directly via B2C through the EVT Wallet rather than going through the existing financial network. It minimizes the cost involved for the settlement.

A) Integration of On/Offline Settlement

The user can easily make payment through QR Code for goods, services (on / off-line) using the service via the EVT Wallet installed on the smartphone.

Issuer distributes the EVT by charging the EVT Platform with Flux (FLX), and the user does not have to pay the fee when using the EVT.

B) Integration with Points/Mileages

The issuer of EVT running the point/mileage system can apply the point/mileage to the EVT Wallet. There is no need to operate the system separately and the issuer can just merge it to the EVT Wallet. EVT usage points can be earned and used with one wallet, which can be conveniently used by issuers and users.

The points used in the EVT Wallet are also the points of the blockchain-based token and issuers can optionally provide its own points to the users, or one can select and provide the points as the integrated points provided by Flux (FLUX). The issuer can exchange for an integrated point according to the value of the point at the time of the request.

The integration point has the 1:1 value as the original, and various EVTs can be purchased with the integrated points.
C) Integration with Financial Networks

When the user wants a refund for the EVT, the issuer will automatically refund the amount via the financial network with one click on the EVT Platform administrator page, or it can be refunded by FLX according to the market price at the time of request.

Users can get a refund to one’s registered bank account or through a FLX token. It is also possible to get a refund via the Flux Affiliate application and withdraw cash from the bank ATM machine.

D) Integration with Smart Concierge (Reservation/Order)

EVT Wallet can be integrated with services via room navigation, GPS, beacon (location-based reservations), and related services. With EVT Wallet, one can book and order via Chatbot via messenger, make payment with EVT, and search the information for benefits/needs, time, and place the user desires.

2) Phase 2: EVT Exchange through EVT Exchange

Users can exchange unused EVT to other EVT that one is planning to use in the future. Users can simply exchange at EVT Exchange for the one that wishes to use.

Even though the market volume of the vouchers is continuously growing, issuers of the vouchers, customers using the voucher, and authorities controlling the voucher market have different perspectives and the continued growth cannot be assured for its persistent growth.

The existing voucher issuers are centralized and face multiple institutional risks. First, consumers are not able to ensure the fulfillment of the Terms of Service, and the Confederacy Law, which can control fair compensation, is also inadequate. It is uncertain whether the conduct is willing and capable of timely and accurately shifting obligations for a centralized system in the private sector even if the institutional arrangements to supervise and regulate this are differently secured.

EVT issuers participating in EVT Exchange service must charge the EVT Exchange System with Flux Token (FLX) for settlement and maintain contract fulfillment. With the EVT Exchange App, users can exchange EVTs after verifying the credit rating of the issuer and can use it safely. By having to purchase a certain amount of Flux token (FLX) for performance guarantee and
protection, the company contributes to the increase in the value of Flux Token (FLX) and is the driving force for maintaining the EVT Exchange service.

A) Exchange between EVT

EVTs issued by each issuer can be exchanged by users using the EVT Exchange App. For such reason, common standard data used when issuing EVT. For the EVT around the world can be exchanged regardless of its boundary. However, the EVT value will be evaluated and exchanged based on the exchange rate.

B) Settlement for Logistics

The logistics service provider issues the “logistics service EVT”, and the logistics service user issues the “logistics service utilization EVT”. Both service providers and users provide Flux token (FLX) to EVT Exchange as a guarantee of EVT performance. The logistics service provider can request payment for the portion of the logistics service that has been completed and will
receive the payment based on the time when it is confirmed that the condition of the cargo the user has confirmed the reception of service. If there is no problem with the cargo of the logistics service user, the EVT will be automatically exchanged via the EVT Exchange, and at this time, Flux Token (FLX) provided by the logistics service provider as insurance will be returned. It will be automatically returned to the logistics service provider Wallet.

Conversely, in the event that of a freight problem, the payment will be withheld and temporarily retained on the EVT Exchange. Eventually, if the recipient of the cargo uses the uploaded information about the condition of the cargo and confirms that there is no problem, the payment will be paid with the reservation. If a problem arises, compensation will be provided through the deposit.

C) Integration with OTC Stock Trading Platform

OTC stocks can be freely traded by companies with financial licenses by issuing the EVT.

Early-stage ventures such as start-ups and Small and medium-sized enterprises, etc., that do not issue shares can be transferred to EVT and registered on the exchanges by the companies that have financial licenses. The entire process from depositing the transaction price to updating the shareholder registry will be recorded on the blockchain network, and a new form of service will be provided.

3) Partners

Tentative EVT Issuers

<table>
<thead>
<tr>
<th>Company</th>
<th>Content</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jade Group</td>
<td>Domestic top 10 shipping company Hanaro Shipping, Logistic Vouchers Issuance (Annual Volume of 70 Trillion Won “S” Logistics Co.)</td>
<td>Contract Completed</td>
</tr>
<tr>
<td>W Co.</td>
<td>China beverage giant</td>
<td>Negotiation Completed</td>
</tr>
<tr>
<td>Shopping</td>
<td>OO dept. store, OODuty Free, OO Shopping Center etc</td>
<td>In negotiation</td>
</tr>
<tr>
<td>C Co.</td>
<td>China Entertainment Magazine (700,000 copies/month)</td>
<td>Negotiation Completed</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Motor bike center + Electronic motor bikes</td>
<td>In negotiation</td>
</tr>
</tbody>
</table>
Affiliate Network

Draper Athena: Tesla, SKYPE, Bitcoin, HOTMAIL 1st round investor.

Nautilus Co.: Integration with top 4 Financial Institution in Korea for ATM (Mobile Cert and ATM integration).


Payment Integration

PG (Payment Gateway)
- Acquisition of existing settlement retail stores via development of Gift Cert System and Exchange System
- Cooperation with Square Holdings and integration with respective Gift Cert Issuers for retail stores settlement interfacing

(Domestic)
- Settlement integration in major coffee shops and dept. stores by interfacing with Mobile Gift Certs
  - Starbucks, Krispy Kreme, Dunkin Donuts, Paris Baguette, Lotte Dept. Store etc.)
- Yonsei Ferry (Ferry reservation, Duty free etc.payment integration on 14 Ferries)
- Coverage of overall Dongdaemun market (Mammoth scale Shopping Mall)
- In negotiation: Payment integration for Subway, Bus, CVS, Taxi etc.
- Duty free, Prepaid Gift Certs in ATM, Casino etc.

(Overseas)
- Guangzhou Logistics Complex in China
- South East Asia: Motor bike centers
  - Regional Motor bike centers: Regional Exchange)
- Vietnam/Cambodia Motor bike apps integration
- KOREAN PACKAGE
- Trade LC: ADCA, Yonsei Port etc.

- Settlement Integration: Starbucks, Twosomeplace, Ediya, Toure Jour, Nambu, Holly’s, Dunkin Donuts, Baskin Robbins, Paris Bageuette
- Fixed Amount Certs: Lotte, Shinsegae, e-mart, Lotte Mart, Cultureland, Krispycream, TGI, Villadcharlotte, Lotteia, Robs, HImart, Junggwangjang,
- Coupaing 13th street. GS;Casino, 5; KAL in-flight Gift Certs
- In negotiation: Subway, Bus, Taxi, CVS payment
5. Value Enhancement of FLUX Token

Flux (FLUX) has issued Flux Token (FLX) as an intermediary for transactions with EVT Platform participants. Flux Token (FLX) is a blockchain-based encrypted currency that can be traded through the Crypto exchange and has a fixed distribution volume for scarcity value.

Flux Token (FLX) is used by EVT issuers to operate on the EVT Platform, and can also be used for the purpose of settlement EVT Exchange services and for contract performance guarantee. Ultimately, it can be used as a means of settlement for all transactions that take place on the EVT Platform.

As the EVT Platform activates and the EVT issuance volume increases, the scale of the fee will increase, so the value of Flux (FLX) will increase in proportion to the growth of the EVT Platform. Flux (FLX) was issued via Ethereum-based ERC20 Token and planning to develop an in-house Flux (FLUX) mainnet in the future. Upon completion of the mainnet development, the Flux Token (FLX) will be converted into a Flux coin based on the new Protocol.

Flux (FLUX), unlike the alternatives offered by the blockchain companies, does not emphasize on speed and cost issues as the Next Generation. It ensures USE CASE for free use based on a user-focused market that can leverage the shared economy. In addition, the profits generated by using the leverage will provide an incentive pool for the community.

Through the diverse development experience and in-depth financial knowledge of various industries, it is our goal to structure a newly advanced payment system to outperform the existing payment methods for the convenience and benefit to all related parties including the users and operators EVT platform.

Once the settlement network developed on the basis of EVT is consistently expanded and becomes successful, many users will naturally use EVT in increasing levels resulting in the usage of Flux. An increased level of usage for FLUX will continuously enhance the value in proportion to the increasing level of the users.

Flux Token (FLX) is driven by the market by applying flexible fees according to the changes of the market.

The main goal is to list Flux Token (FLX) on all exchanges where major cryptocurrencies are traded so that Flux Token (FLX) can be traded anytime, anywhere, and without the time and place constraints. In addition to the exchange value of the Cryptocurrency, the ultimate goal is to become the key-currency of the settlement network.
6. FLUX Technology Actualization

1) Flux Network & Algorithm

A) Objectives & Purposes

As the internet had introduced a new way of communicating information, Blockchain has changed the society in a very different structure. Immediately after the US financial crisis in 2008, credit evaluations and banking systems that maintain transactions with powerful control mechanisms such as central banks emerged as an alternative in criticism that led to a monetary crisis. Bitcoin and blockchain are now evolving as a role in the possible solutions and governance that transform the ecosystem of not only finance but also the industry as a whole. Ethereum’s smart contract, which is a typical platform of “Blockchain 2.0”, has been changed to “Turing Complete Code” with multiple scripts. Designed to include more complex scripts in smart cryptocurrency, the order is contracted in all processes, including sending, making, depositing, and paying. In case of payment, transfer, refund will be done automatically through a program.

However, despite these advances, many concerns and problems of the blockchain experts have recently been announced. In the case of Bitcoin, trading is validated every 10 minutes from the blockchain, but it takes a lot of time due to the network, such as the appearance of more than 11,700 Node computers. It can take more than a day to approve the settlement. In the case of Ethereum, a few ICOs have drastically increased which saturated the Ethereum network, and recently there have been cases of using higher fees to get into investment faster than other investors.

Many blockchain-based coins are emphasizing decentralization, but most of them are actually centralized. Miners form mining pools to increase mining productivity, form forces, and focus their efforts on centralization rather than to keep the spirit of the blockchain of “decentralization”.

In order to overcome such a problem, FLUX was created.

FLUX has outstanding expandability, agility, and decentralization, and provides the platform with its own decision-making capabilities. Based on this technology, blockchain technology is applied to the entire society beyond specific fields, and it extends to the governance area.
In order to solve the problem of process time delay, Flux (FLUX) applies its own distributed ledger management technology based on DAG (Directed Acrylic Graph) instead of the existing blockchain consensus algorithm method.
The advantage of Flux (FLUX) is that traders can directly perform approval tasks. In the existing blockchain, a separate entity was required to approve the transaction (Miner or Stakeholder) in order to connect the chain. Therefore, the approval process also took a longer time, and the maintenance structure and fees associated with it also had to be paid. However, in the case of FLUX, the transaction speed has been improved because the person who proceeds with the transaction can proceed with the approval process only by using a certain CPU.

### <Comparison of Settlement Related Platform>

<table>
<thead>
<tr>
<th>Classification</th>
<th>Omisego (OMG)</th>
<th>Stellar Lumen (XML)</th>
<th>Terra (Terra)</th>
<th>FLUX (FLUX)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Characteristics</strong></td>
<td>Ethereum based real-time Crypto, Fiat, Gift Voucher/Points assets trading Crypto</td>
<td>Spin off from Ripple. Crypto for Cross border remittance and payment</td>
<td>Blockchain based settlement system provided to diverse e-commerce platforms</td>
<td>Encrypted Voucher Token. Anyone can issue vouchers (Gift Vouchers, coupons etc)</td>
</tr>
<tr>
<td><strong>Platform</strong></td>
<td>OMG Network</td>
<td>Stellar Network</td>
<td>Columbus</td>
<td>FLUX DAG Network</td>
</tr>
<tr>
<td><strong>Consensus Method</strong></td>
<td>POS</td>
<td>SCP (Stellar Consensus Protocol) FBA based Algorithm</td>
<td>Tendermint, synchronous BFT Method</td>
<td>DAG based network POW</td>
</tr>
<tr>
<td><strong>TPS</strong></td>
<td>2,000 TPS</td>
<td>1,500 TPS</td>
<td>7,000 TPS</td>
<td>Min. 4,000 TPS~60,000TPS (Process speed faster when users increase)</td>
</tr>
</tbody>
</table>
B) Technology Actualization

Flux (FLX) can handle numerous transactions by approving each transaction as one block.

In the case of the blockchain adopted by Bitcoin, multiple transactions are grouped into one block and approval work is implemented, and the records of past transactions are linked. In addition, since the capacity of each block of Bitcoin was set to 1MB, if the transaction volume exceeds 1MB, the transaction can be delayed and high fees can be incurred.

By approving each transaction as one block, FLUX eliminates the block size concept like a blockchain, and can handle a large number of transactions at high speed can be infinitely processed.

<Comparison of Existing Blockchain Network with DAG based FLUX Network>

In the existing blockchain, the “transaction requester” and the “transaction approver” were separated, and discrimination between the participants occurred resulting in a waste of resources for the solution and causing conflict. Since FLUX is an acyclic graph, not a circular graph, there are no cyclic cycles and it has a work direction, so it can play the same role as a chain in the blockchain. Column rows can be performed asynchronously at the same time having strength in process speed.
It also removes the transaction approver who removes the mining, and the request for a new transaction progresses, and the two "Unapproved transaction node" and approval are performed to register the transaction. At this time, the validation line of trading is done in columns rather than serially, and multiple nodes are run at a very fast rate at the same time, adding to the expendability. There are no nodes that are concentrated to generate blocks, such as large miners, and all nodes are of equal level and implements decentralization.

Approval of a transaction has "direct approval" and "indirect approval", and when it is directly connected by an arrow between nodes, it is "direct approval" and it is contacted through an intermediary node , "Indirect approval". The work is done from left to right over time, with Node A "directly approving" Node B and C and Node E (ACE) and Node F (ACEF) "indirectly approved".

A typical blockchain network requires all nodes to have the same information (transaction info) to prevent forgery. However, in Flux, each node has different transaction info, and each node has a weight (W, Weight) value. These values indicate how much work (POW, Proof of Work) each node has done in the system to make a transaction, and the higher the value, the more the node makes a transaction. It means that more work information has been completed in order to do so, and the larger the character, the higher the credibility of the node.
Also, the weight value grows larger and larger over time and this is due to the accumulation of the value. This is called Cumulative Weight (CW), and Cumulative Weight is a measure of the potential of a transaction and is the sum of the weight of the transaction and the weight of the transaction that approves the weight. The weight of each node is defined by a 3n value (1, 3, 9, etc.) and is proportional to the amount of work invested in the operational information when that node requested a transaction. In other words, it can be easier to understand if you think of the node as a time of work that has been implemented to this point.

Ways to add a new transaction to FLUX are as follows:

- The algorithm randomly specifies two nodes.
- The two nodes check to see if they have same information to one another.
- If the any of the node is manipulated in any way, it will be ignored and a new node will be searched.
- When validation is complete, a new transaction information is added towards the end of the two nodes.
- All nodes become transaction issuer and go through the same process.
The following shows how the cumulative weight of each node changes as new transactions is added. For example, the cumulative weight (CW) is displayed at the top of each node, and the weight of that node (W) is displayed at the bottom right. When a new X node is added, node A and node B perform a work statement (POW), and at this time, the cumulative weight (CW) of node A is updated from 3 to 6 including the weight of X. It will. It also updates the cumulative weight value for all nodes indirectly approved by Node X.

The two nodes approved by the new node (POW) trade weights with a POW-style hash puzzle as the release load, as to whether or not there is a conflict between transactions such as a duplicate transaction. In the event of a conflict, an algorithm called “Tip Selection” is used to solve the problem.
The greatest advantage of the (DAG Directed Acyclic Graph) based FLUX network is expandability. Because it maintains a directed acyclic graph, it has the advantage of a network that is not repeatedly or connected to other places in the same pattern and is connected in an unspecified number of ways. Flux has a high transaction speed because many transactions occur simultaneously in multiple locations, and even if there are many users, the network speed is not slow. If the existing blockchain method is serial, then the flux method is columnar. Flux uses a topological sorting method in a real-time basis to maintain the DAG, even when many nodes are added at the same time.

The below is phase-aligned by the following code progression, which consists of the node added in real-time, the new node of the network node for which the DAG has already been done, and the node that advances "direct approval". Topological sorting is determined in real-time so that the FLUX network does not have expendability problems.

- Topological sorting Source Code

```java
package Sort;
import java.util.Iterator;
import java.util.LinkedList;
import java.util.Stack;
// DAG Topological Sorting

class TopologicalGraph {
    private int V;
    private LinkedList<Integer> adj[]; // Node Adjacency List
```
TopologicalGraph(int v){
    V = v;
    adj = new LinkedList[v];
    for(int i = 0; i < V; ++i) {
        adj[i] = new LinkedList();
    }
}

// Function to add corner part of the graph
void addEdge(int v, int w) {
    adj[v].add(w);
}

// topologicalSort Recursive Function
void topologicalSortUtil(int v, boolean visited[], Stack stack) {
    // Specified the node as it is
    visited[v] = true;
    Iterator<Integer> it = adj[v].iterator();
    while(it.hasNext()) {
        i = it.next();
        if(!visited[i]) {
            topologicalSortUtil(i, visited, stack);
        }
    }
    // Save the stack currently passing the vertex
    stack.push(new Integer(v));
}

// Execute, topologicalSortUtil() Call recursive function
void topologicalSort() {
    Stack stack = new Stack();
    boolean visited[] = new boolean[V];
    for(int i = 0; i < V; ++i) {
        visited[i] = false;
    }
    for(int i = 0; i < V; ++i) {
        if(visited[i] == false) {
            topologicalSortUtil(i, visited, stack);
        }
    }
    // Stack Output
while(stack.empty() == false) {
    System.out.print(stack.pop() + " ");
}

2) EVT Platform

A) Objectives & Purposes

EVT Platform services include diverse blockchain-based technologies and the components for the role has been combined and developed with validated and stable technologies.

The structure of the EVT Platform will be configured with a blockchain network so that the issuers and the users can use it conveniently.

B) Technology Actualization

The EVT Platform consists of two layers and many modules and systems.
The Application Layer is an entry point for using the FLUX participant’s service, allowing users to enter the service anytime, anywhere through the Smartphone App and PC Website.

Service Layer is a system for cooperation and management with EVT issuing companies such as shopping malls, coffee shops, financial institutes, and companies. "Alliance admin" manages contracts and general management with EVT companies, and "Interface admin" manages computer interfaces for system integration with various companies.
i. **Developer Support Tools**

- Users can easily experience EVT and manipulate necessary functions.
- EVT can be issued after selecting the menu and inputting the necessary info.
- Checking of EVT test result.
- Provides necessary API modules for EVT issuers to develop their own Wallet App.
- Develop a stable application within a short period of time.
- Provide module for integrating user DB with ledger data of FLUX.
- Supports a module for existing business system data into FLUX data.
ii. EVT Operation Management Tools

- Member Management, Settlement management, Basic Management.
- EVT Performance Monitoring.
- Category Analysis, Transaction Analysis, and Other diverse analysis.
- Member Transaction Info and Interest Area Analysis via Big Data.
- Transaction Status, Exchange Status, Hacking, etc (Problem Monitoring & Prevention).
iii. **EVT Consolidated Wallet**

EVT Consolidated Wallet can manage the acquisition, settlement, etc. of the points that the user of the APP owns in the place where the points used by the user are managed, and the preference and characteristics of the user. It provides an algorithm to analyze the points and manage the points efficiently for the users.
iv. **Point/mileage management Tools**

Point system is where users can accumulate points at EVT Wallet from the point providers and users can provide the point DB info to FLUX and can be converted points and manage it by the users.

v. **Partnership Ad System**

The partnership ad system is a system that provides points to users who see the exposed ads by partners of FLUX and the users will accumulate points in their EVT integrated wallet.
APP. It can monitor activities and loyalty level of the users to the ad and the point given may vary depending the user activities.

3) EVT

A) Objectives & Purposes

Voucher Token (EVT) is a Token that allows you to show ownership of a voucher. This voucher standard is based on ERC 20, but the Voucher service validates whether it meets the standard for EVT before sending the Voucher. The EVT was designed to be exchangeable only when the transaction is in accordance with the provisions specified in the smart contract.

B) Technology Actualization

By adding a smart contract specialized for Voucher Token (EVT), we have added a function that can play the role of Voucher Token. The EVT standard consists of three modules, Voucher Token, Voucher Service, and Service Registry, which work together. By adding a function that could not be done according to the characteristics of the voucher in ERC20 due to the following dynamic principle, we have made it possible to perform the function of Voucher Token.
As shown in the structure above, the Service Registry can route the address of a Voucher Service with the rules of a Voucher company with a particular EVT. As a result, when sending a token, Voucher Service check () checks if the if a statement is stipulated, and if there is no problem, the token is transferred (). And end the transmission. If there is a problem during the check, it alerts an error message that matches the problem and records it on the log.

i. Voucher Token

This module basically has the functions of Detailed ERC20 and Mintable Token of ERC20 standard, contains basic information such as the name and symbol of the Voucher Token (EVT) to be performed, and has the function of sending.

```solidity
function _check(address _from, address _to, uint256 _value) private returns (bool){
    var reason = _service().check(this, msg.sender, _from, _to, _value);
    CheckStatus(reason, msg.sender, _from, _to, _value);
    return reason == 0;
}

function _service() constant public returns (VoucherService){
    return VoucherService(registry.service());
}
```

Unlike the general standard, _check () and _service () exist, where _check () is the voucher (EVT) stored in the Service Registry defined by _service (). Notifying the address of the Voucher Service
that you want to check for compliance with the rules defined by that check (EVT) so that you can take into account the additional features.

ii. **Voucher Service**

This module provides an interface that allows you to define various provisions that should be linked to the voucher's Token (EVT). It can now share an Interface, accept its Smart Contract, and perform the functionality.

```solidity
function check(address _token, address _spender, address _from, address _to, uint256 _amount) public returns (uint8);
```

Voucher Service calls check (), which can compare the EVT address with various rules. It is designed to define "_spender" to specify "_spender", "_from, _to" to specify transmission / reception, and "_amount" to specify EVT transmission.

In order to express various rules, it is necessary to code the rules that are clearly stated at the time, but the grammar of these rules is usually designed and added to the function. It seems, otherwise, it is done by returning an error message.

iii. **Service Registry**

In this module, the voucher Token is in direct contact with the various regulations that the voucher’s issuers (EVT) must comply with. The module allows companies to functionalize, transmit, and leverage the various provisions that each EVT needs to do. In particular, the reason for the need is that module is that we need to be able to "update the rules". In some cases, the regulation is changing, so the regulation update function is a point that should be taken into consideration when conducting EVT.
The most important feature of that module was the use of 2 functions. Service Registry () sets the Contract address, which is the provision that Voucher Token (EVT) must comply with via Voucher Service, and uses this to perform the contract routing role described above. This will allow the EVT to recognize the address of the Voucher Service that it must comply with.

```solidity
function ServiceRegistry(address _service) public{
    service = _service;
}
```

Update Service () is responsible for updating the address of Voucher Service A, which was previously linked with EVT, and replacing it with the newly deployed address of Voucher Service B, if the regulation is updated. Update Service () now allows you to check the log of the previous version of the history when the default is updated.

```solidity
function UpdateService(address _service) onlyOwner withContract(_service) public{
    address pre_service = service;
    UpdateService(pre_service, service);
}
```
7. Process Schedule

Flux Token (FLX)’s issuer, CETOB Foundation, will launch the EVT Project based on its innovative technological capabilities.

For the purpose of speedy development and smooth trading of FLUX Token based on ERC20. FLUX Token will be listed in the Crypto Exchange and migrated to a mainnet coin in due course.
8. Issuance of FLUX Token

In order to attract investment, total of 600 Million FLX out of 1 Billion FLX will be issued to the project participants.
9. FLUX Founding Members

“FLUX CHAIN” is composed of blockchain, software, design, and marketing experts, and internal experts and external community groups will communicate for the success of the FLUX CHAIN projects.

CEO / CTO Daniel An

YAP Chain
KAIST / Ph.D. in School of Computing
Tsinghua University / BS, MS in Computer Science

CFO / Sean (Yung Soo) Ryu

Cynergy Global (IT Consulting) CEO
GPM (VR Theme Park) / Global Chief Advisor
ENDO Protocol Singapore / Ambassador Korea
EX) KG Mobilians Co., Ltd. CMO
EX) ORC International Korea CEO
EX) AC Nielsen Korea International Research Manager
University of Maryland - Business Administration
Sogang Univ. MBA
General Engineer / Jongbu Kim

Flux chain
Zipdoc / Director
TISquare / Director
Herit / Manager
Chungnam University / BS in Computer Science

Advisor / Yongduk Kim

Hyosung Capital CEO
EX) Standard Chartered Korea Capital CEO
EX) NewYork Bank Korea CEO
EX) Commerz Investment Trust Management CEO
EX) samsunlife Overseas Investment Officer
EX) Samsung Secretary

Advisor / Henry Chung

Draper Athena Fund, DFJ Athena Fund
CEO/Partner
Venture Leaders Club Chairman
Mechanism Angel Fund Partner
EX) eCommunity CEO
EX) Arthur D. Little Korea Director
EX) SK Group Restructuring - Manage
EX) Monitor Group Staff Consultant
Seoul National Univ.
Graduate School of Business M.S.
Seoul National Univ. – English Literature
Advisor / Perry Ha

Draper Athena – Founder / CEO USA
EX) Amicon R&D Group – Principal
MIT - B.S / M.S.
Harvard Univ. – M.B.A.

Advisor / Hyosung Won

Enable Market / CEO
EX) BC Card Vice President, Smartro Ltd. CEO
EX) KB Kookmin Bank Vice President
EX) Hanmi Bank Vice President

Advisor / Sungkon Cho

Enable Korea / CEO
Korea Banking Institute adjunct professor
EX) Citi Financial Korea CEO
EX) Aisa Head of CITIBANK DS
Advisor / Hwangkyun Lee

Enabled Daonsoft Vice President

EX) New business of Samsung Electronics

EX) Hansol PCS / KTF Team Manager KT Smart Finance

Business Executive (Mocha Wallet & Clip)

Syracuse University-MBA

Dongguk University, Ph.D. in Fintech Blockchain, Graduate School of Industrial Engineering.

Advisor / Leeor Groen

Blockchain Valley Ventures Principal

WIF Foundation Founding Member

University of St.Gallen