LITEX - A Decentralized Instant Payment Solution for Cryptocurrency

1. Abstract

With the rapid development in recent years, a boosting of value and kind can be found in cryptocurrency, which has drawn many attentions in the society. However, the applicable situation is still very limited. The lengthy conformation time and high transaction fees have made micropayment an obstacle in cryptocurrency usage. From another perspective, the high level of relevant knowledge required in understanding and accepting cryptocurrency has limited the number of qualified merchants. The risks come with the volatility in value, which could deflate the total income to 50% of its original in just fe days. Apparently, the only way to diffuse cryptocurrency into people's daily life is settling instantly with merchants using fiat money, increasing the transaction speed while lowering the cost. Moreover, just like there's no official institution to run Bitcoin, there should not be a centralized organization to convert cryptocurrency into fiat money to make settlement with the merchants. Otherwise the ecosystem would heavily depend on that organization. This dependency would hold the ecosystem back from growing , and it does not fit the idea of blockchain's core value of decentralization.

The growth in the volume has crowed the main net which leads to problems like long transaction time and high transaction fee. Some teams support the idea of creating new chain with larger blocks or shortening time of generating new blocks; however, these methods can not solve the problem fundamentally. To ensure there are enough miners that can meet the requirements of storage and Internet, there must be limitations on growth of block size and generation speed. Otherwise, the decentralized architecture would be destroyed. Also, with the increasing speed in transaction boosting, the ceiling will be reached easily. It is predictable that the majority of the upcoming transactions will be micropayment, which could not bear the high transaction fee and long confirmation time. If those payments could happen off-chain under a secured environment, using main net only for confirming the final results, the solution can adapt to the growing transaction volume. Lightning Network is a technical solution to those existing problems, through RSMC

and HTLC in BOLT protocol, Lightning Network ensures the security of off-chain transactions the same as on-chain. With the faster speed and lower fees, Lightning Network is the most promising upgrade proposal at present.

After the SegWit being activated, Bitcoin's Lightning Network is developing rapidly, and there are several proposals by other teams in payment area, but few of them pay much attention to the fiat money settlement. For those who did mention fiat money, their proposals are using self-built asset pool to draw cash in the secondary market and settle with merchants through corporate account. Therefore, whether BitPay, the largest Bitcoin payment gateway, or TenX, the ex-partner of Visa, could not bypass the step of exchanging fiat money, which has made the centralized risks unavoidable. First of all, the exchanges themselves are unstable, attacks from hackers or accidental crashes could happen any time. By then, solutions depending on exchanges will be affected, and their assets in those exchanges are under the risks of complete loss. Secondly, the inevitability of making settlement with merchants through corporate account creates the solid link between the official organization and payment solution. Ecosystem will be out of action when this organization has problem. Therefore, a stable and long-lasting cryptocurrency payment solution must be decentralized in fiat money settlement.

LITEX is a completely decentralized payment ecosystem for crypto currency, which is built on the business model of YeePay's star product -- non-bankcard payment solution along with BOLT protocol. LITEX team designed LTXN（LITEX Network) to enable a crypto purchaser pays fiat money to the merchant on behave of a customer for products, and the customer repays cryptocurrency to the purchaser. The whole process is insured by smart contracts, and no centralized organization is needed. In LTXN's architecture, the payment requests and the fiat money requests are matched through upper-layer decision-making network. Then it uses the under-layer lightning network to build high efficient and secured payment channels to transfer the cryptocurrency. The merchants receive fiat money payment from cryptocurrency purchaser through the acquirers. On the other hand, the incentive strategies in the decision network could effectively avoid the tendency of centralization in the Lightning Network.

Advantages:

- **Decentralized ecosystem**: fiat money is provided by crypto purchasers, the transaction fees is shared among all participant in one transaction. There's no dependency on centralized organizations like exchanges in LITEX's ecosystem, no capital pool for fiat money and official operator is not necessary at all.

- **fHigh performance with low costs**: With the growth of node number, LITEX has the ability to handle millions of payments per second which can meet the requirement of timeliness in daily life payments, in the meanwhile keep the transaction fee extremely low.

- **Stabilized settlement**: Litex Foundation and its partners are very experienced in the payment industry and loaded resources to spread out benefits of using LITEX ecosystem so that we could avoid the risks of cooperating with bankcard companies.

- **Accessibility of merchants**: Merchants do not need to make any changes in their current payment gateway. In the user end, the process of using the LITEX to collect money is exactly the same, there's no risk associating with value change in cryptocurrency for acquirers.

- **Eliminated the risk of losing centralized capital**: The payment channels are built on smart contract, which have strict rules of using the assets. The balances are stored in the channel, no capital loss would accrue even if it is being attacked with third party.

We believe LITEX will be the fundamental structure of the future digital world. Even though we are living a life of using fiat money, but cryptocurrency is not far from us. More and more people are accepting crypt occurrence as form of payment. With the developing platform like Ethereum, more value are creating in the main chain, people are gradually adapting to cryptocurrency. Unlike speculators, those holders prefer using cryptocurrency like LITEX Tokens directly to purchase merchandise or service. From another perspective, there are many people of underdeveloped area who can not enjoy banking services. Connecting them to LITEX ecosystem could positively benefits them regarding charity business.

2. Background

2.1. Current Situation of Cryptocurrency

According to incomplete statistics, the total kind of cryptocurrency listed on exchanges have exceeded 1600 by now. It was just 9 years ago, when Satoshi first came up with the concept of Bitcoin. Those cryptocurrencies include the competitive coins(such as LTC), tokens of application platforms based on blockchain technology (such as ETH , and various Tokens generated by DApp developed based on Ethereum), and self-defined coins based on side chain technology, etc. The prosperity of cryptocurrency highly reflects the recognition and expectation of the blockchain technology from the whole society.

However, the application scenarios of cryptocurrency are quite limited. Circulation of cryptocurrency is mainly from exchange transaction and fiat currency exchange because of the varieties and unstable currency value of cryptocurrency. Comparing with fiat currency in circulation, nowadays cryptocurrency is more like an investment. Thanks to the overheating investment market, blockchain technology becomes well-known to the public, which could be beneficial to the development of cryptocurrency. But this will not be the future direction. At the end of the day, cryptocurrency shall return to the essence of currency in circulation. The maximum value of cryptocurrency can only be optimized when people begin to consume with cryptocurrency, merchants are accepting cryptocurrency, and the whole society will gradually turns into cryptocurrency world in the near future.

Some external factors like incomprehensive cognition from the society and impediment from traditional interest groups lead to limited application scenarios of cryptocurrencies. However, some internal factors can not be ignored either, such as imperfect technology of cryptocurrency, large divergence in technical solution within community, etc. BTC , as the footstone of global cryptocurrencies, still can not be used as currency in circulation. Since it can not meet daily usage requirements due to insufficient design capacity, slow processing speed and increasingly impairment of anonymity. Bitcoin has no close connection with ordinary life.

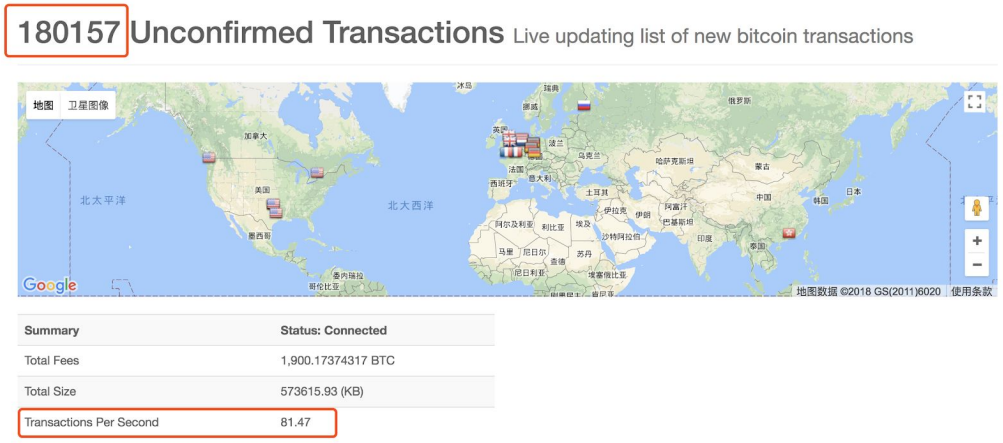
2.2. Challenges in Micropayment

A qualified currency in circulation shall have the capacity of micropayment and instant payment. From this perspective, cryptocurrency has innate advantages over cash. After 9 years, the mainstream cryptocurrency system is gradually losing their ability to process micropayment promptly. For example, Bitcoin becomes a value symbol and a channel for transferring large amount of assets, just like gold in the past. The reason why micropayment becomes a problem for BTC is that the Bitcoin architecture sacrifices efficiency to guarantee consistency and stability of its distributed ledger system.

At the beginning, a distributed ledger system was adopted to make sure irrevocability of transaction and increase the attacking cost of evil node. The ledger system stores data in the chain structure after packing data, and it guarantees that all nodes in the net reach a consensus spontaneously at all time via a POW (Proof of Work) system. An asymmetric cryptographic algorithm is adopted for each data package called 'Block' to make sure transactions recorded cannot be modified. This is known as blockchain technology today.

Blockchain technology has become an advanced technology researched and developed by commercial giants and various countries governments. This technology contents immense potential value. Because of the intrinsic monetary attribute, BTC greatly limits blockchain technology feature of itself. To guarantee the safety & stability and storage efficiency of the system, the upper limit of one block size is 1MB. On the other hand, to balancing the earnings among miners, the system is equipped with a dynamic difficulty adjusting mechanism to keep a speed of verifying block at 10 minutes per one, while each transaction costs 226B on average.

Theoretically, these factors ensure the constant processing speed of the BTC transactions is about 7 transactions per second. But the fact is the actual transaction volume often reaches to 500B and the processing capacity of BTC system reduces to 3 transactions per second. Congestion of BTC main net is increasingly severe along with the increase of BTC transactions. The following figure is a real time data cited from blockchain.info on January 16th, 2018.



180157 Unconfirmed Transactions

It is observed that average transactions generated by the main net per second reaches 81.47, nearly 11 times of processing speed. The total unconfirmed transactions reach 0.18 million. The system still needs 6 more hours to deal with those transactions even if all new transactions stop coming in immediately. Thus, BTC main net is very crowded already.

Congestion of BTC main net further delay the confirmation of micropayment. As the transfer charge of BTC is constant not on proportion, so service charge offered by micro amount payer is not competitive at all. The miners will verify the transaction with high service charge preferentially to gain higher profit. As a result, the priority of micropayment is always lower than large figure payment. In fact, currently some micropayments may be ignored in the system for 24 hours, which means, if you want to buy a cup of latte in Starbucks with your Bitcoin directly, you may have to wait until the next day to get your coffee.

Besides, BTC system set limit for micropayment. In 2013, BTC's core team modified the system with 'Dedusting Patch' to forbid BTC transaction under certain amount to relieve main net congestion. At present, the dust threshold is 5.46μBTC, about 14 cent in USD. Transfers lower than the threshold will be ignored directly (won't be relayed, won't be mined). Because of the difference in price, transactions lower than 14 cent are not uncommon in real life in different parts of the world. These transactions, however, are unsupported as 'Uneconomic dust' in BTC system.

High service charge hindered micropayment transaction by Bitcoin as well. Service charge of BTC transactions in December 2017 rise to 1000μ/byte. Service charge for

one transaction reached up to 30 dollar (assuming transaction volume is 226 bytes and current price of 1 BTC≈15000 USD.) Obviously, this is not what micro consumption could afford.

In conclusion, BTC network cannot meet the instants, low service charge requirements for micropayments. Now BTC network can even filter out small amount under certain circumstances. Therefore, BTC cannot expand its application scenarios to daily consumption, which severely restricts the development of cryptocurrency.

2.3. The Dawn of Bitcoin - Lightning Network

Since the Bitcoin advocator Gavin Andresen pointed out the urgency of scaling up the main net in 2015, the Bitcoin core team and the whole community have been debating on where the future of Bitcoin is. One side proposed to directly expand the room of the block (2MB, 8MB or even no upper limit) at the cost of sacrificing the stability of system, as the Bitcoin will be inevitably weakened by a hard fork. The other side insisted that Block size should remain unchanged, meanwhile solve the capacity and malleability problems with off-chain methods in the long run through a soft fork. After a fierce debating process, the SegWit2x hard fork program, originally scheduled in November 2017 (block height 494,784), had come to an end. While SegWit , featuring soft fork, which was successfully activated 3 months ago, was determined as a smooth and sustainable road for Bitcoin eventually.

The principle of SegWit is to adjust the storage place of the witness information (about 40% of the transaction capacity) used to verify the transaction in the block. When verifying the block size, the node does not have to calculate this part of the data in a block. When witness information is ignored, actual block scale up to about 2MB while the logical block scale is still under 1MB simultaneously. Moreover, SegWit perfectly solved the Transaction Malleability problem, where a transaction ID (TxID) is possible to be changed by a third party before final confirmation. Although Transaction Malleability will not cause systemic consequence, its resolution the way for the most anticipated upgrade of Bitcoin - Lightning Network.

Lightning Network is expected to be the upgraded "higher level" to the Bitcoin network, which also bring the Bitcoin network to a higher dimension in some way. Its basic mechanism is guaranteed by two smart contracts, RSMC and HTLC. These

two contracts ensures off-chain transfer of bitcoin payments is as safe as the on-chain transaction. Lightning Network has the following advantages in solving the bitcoin dilemma:

- Funds Security: Users can close the trading channel at any time and apply for withdrawals. The process is protected by smart contract.

- Fast: Both parties only need to submit one transaction request to main network when they open or close the channel. When the channel is open, all transactions are conducted off main net. Each transaction can be completed in milliseconds regardless of the amount, and the system processing speed can reach to several millions per second.

- Low service charge: It is well-known that the main net relies on professional miner organizations to record transactions. On the contrary, every node in the lightning network can function as a hub, which is fully automated and economical. This means that transactions can pass quickly in lightning network with a very tiny amount of service charge.

- Privacy protection: Since the transaction information in the channel is not recorded on the main net, each node on the main net can only obtain the data of its upstream and downstream nodes. That is to say, the node cannot have the access to the details of the transactions conducted in lightning network (such as sponsor, payer, total amount of transactions), which protects the privacy of both parties.

However, lightning network still stays at the infant stage of program development, far away from wide usage. Combining with small micro-payment scenarios, currently there are issues in lightning network like:

- Cross-chain channel: the more other main nets being compatible with lightning network, the more influential the lightning network will be.

- Smart routing: The upper limit of the payment channel is determined by the smallest link in the channel. Each transaction needs to find a channel with a higher limit than the former one to reach the receiver.

- Complete anonymity: Need additional encryption protocol to achieve complete anonymity.

- Light node: Each node on lightning network has to run a full bitcoin node, which will undoubtedly limit the applicability of lightning network. Hence, a light node which can run on the mobile device is required to meet daily use requirement.

- Centralization tendency: It will cost a certain amount of service fee to open and close the lightning network channels. The channel capacity varies in sizes, so there exists a risk of node centralization. Some mechanisms such as feedback regulation can be added by customizing the protocol to maintain a healthy topology and decentralized network by using adaptive algorithms. LITEX uses a two-layer network architecture that enables self-adjustment for complex routing and network health, minimizing the risk of centralization.

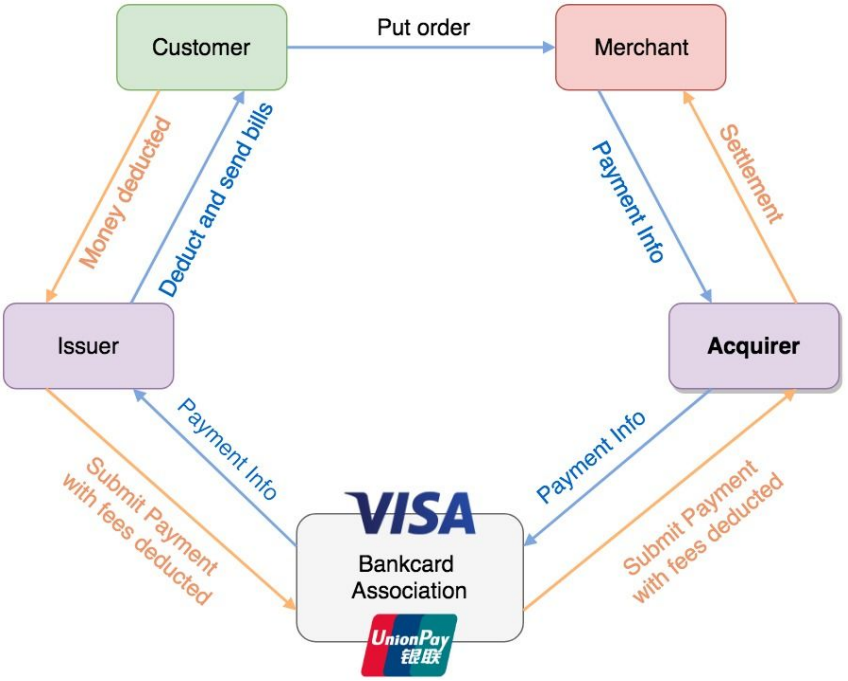
Lightning Network is currently the most promising evolution, and some technology companies have invested in lightning network R&D. About one month ago, Blockstream announced that the lightning network RC1 was successfully tested on the main net. We can expect more teams to join in improving cryptocurrency ecology.

3. Key Issue：How to Proceed

For a long period of time, merchants are unwilling to accept of cryptocurrency as payment. On one hand, they need a deep understanding of technology which is beyond their abilities and willingness. On the other hand, the volatility of cryptocurrency are still very high, thus cryptocurrency could not be incorporated in the cost-benefit analysis. Therefore, in the solution of cryptocurrency payment the key issue is when to convert cryptocurrency into fiat currency and to settle with merchants efficiently with low risk at the same time.

First of all, cryptocurrency exchange process could be optimized. Currently, cryptocurrency is converted to fiat currency in the Exchange, a completely centralized institution. The risk of losing the fund along with the low effectiveness of processing the transactions restricts the feasibility of directly linking the exchange's API as part of the payment solution. Some project based on exchange's API introduced a self-financing asset pool, but this approach also brought new problems, including the capacity of the pool, and volatility risk. Only when conversion to legal currency could be realized smoothly, cryptocurrency can be used in daily life.

Secondly and more importantly, the settlement. As it happens on a daily basis, the settlement of a legal currency requires coordination among many payment agencies, the merchants bear the full cost (the international average fee is 2% to 3% of the transaction amount). The figure below describes the collaboration of the agencies briefly:



In payment industry, "acquiring bank" actually represents an industrial ecology composed of the acquiring bank, acquiring institution and service provider. The acquiring bank itself refers to the bank of whose POS machines is placed at merchants'. The acquiring institution refers to a professional company with a third-party payment license, such as YeePay, WeChat payment, Alipay, etc. They directly cooperate with the banks to complete the instant payment and other agreements as well as risk control. Service provider refers to the service company that assists the acquiring banks to equip the merchants with software and hardware systems, such as Duolabao, which mainly involves interacting directly with consumers, merchants and maintaining merchant relationships.

As can be seen from the figure above that the easiest way is to cooperate with bankcard organizations directly because they have been cooperating with global issuing banks and acquiring banks. To an extent, the borderless cryptocurrency payment is in direct competition with card organization's cross-border settlement, which is their main income resource. It also means that card organizations are unlikely to be supportive of cryptocurrency. Visa and MasterCard have formerly announced to stop the functions of their all encrypted currency (i.e. cryptocurrency) co-branded cards, and they have also publicly criticized Bitcoin, stating they would neither recognize Bitcoin as fiat currency nor provide Bitcoin payment and exchange service. Since most of the existing cryptocurrency payments relied on the services rendered by card organizations in the last few years, now they have to find another way.

It is not stable, sustaining or even feasible to rely merely on card organizations to complete payment settlement. LITEX team, with a background in payment industry, will go further in the area of global payment in the future. LITEX will try our best to independently cooperate with local acquiring organizations all over the world, which will make the cryptocurrency payment more stable at a remarkable level. LITEX is looking forward to competing with bank organization, and overstep them one day with the power of technology.

4. Evolution of Solutions

In order to improve the acceptance of cryptocurrency in transactions between consumers and merchants, a qualified solution shall be able to solve these basic problems:

- Long confirmation time
- High transaction fee
- Low Acceptence from merchats

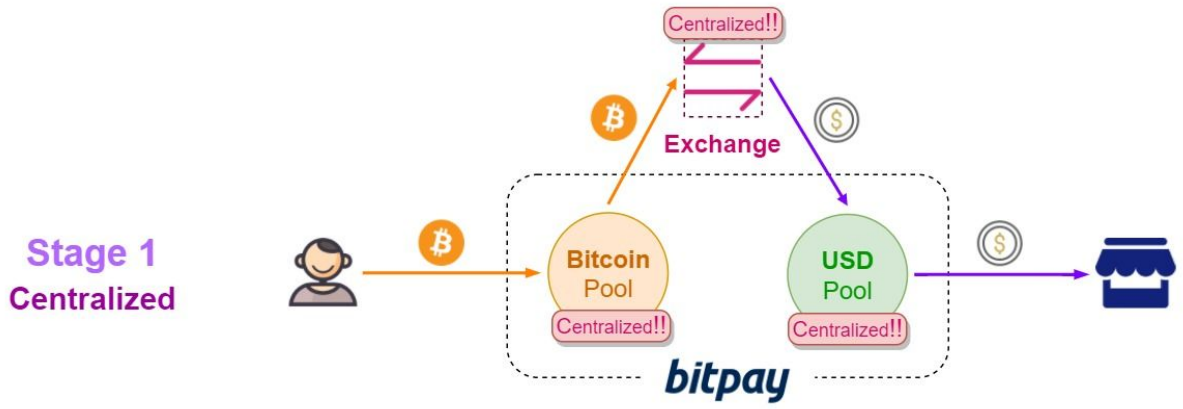
The best way to solve the first two problems is to avoid trading in the main chain, which brings safety issues inevitably. The last problem is relatively easy to solve, as long as merchants do not need to exchange cryptocurrency to fiat currency themselves, they can receive fiat currency directly.

However, to what extent the solution sticks to decentralization, the core value of cryptocurrency, determines the solution's vitality.

Because, only the fully decentralized solution can reflect the core value of cryptocurrency in future, otherwise the solution can not operate in the long run.

According to this standard, we define the current solutions into three categories: centralization, semi-centralization and decentralization. In the end, we will discuss which solution more viable after the cryptocurrency circulation is fully realized.

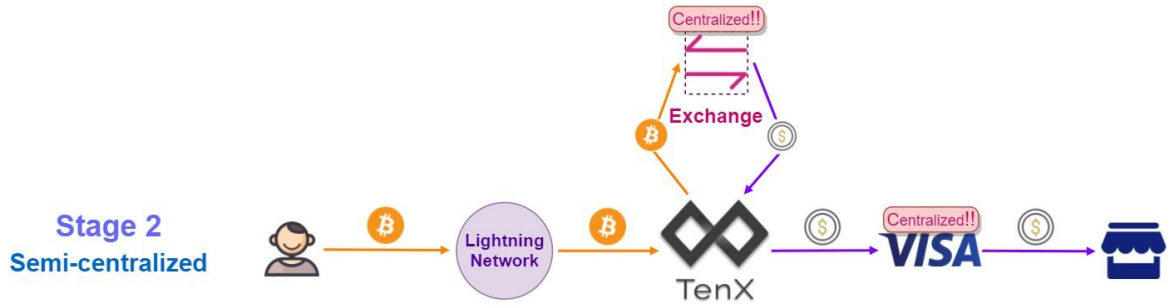
4.1. Stage 1: Centralization Solution – BitPay



BitPay is the world's largest cryptocurrency (mainly Bitcoin) payment solution at present, known as PayPal in the Bitcoin world. It provides a way for merchants to settle in fiat currency, and encourages more merchants to accept Bitcoin payment. Since its foundation in 2014, BitPay has already cooperated with more than ten thousand of partners around the world.

BitPay's service mode is as following: merchants transfer their Bitcoin to Bitpay first, and Bitpay converts the Bitcoin received to fiat money. However, this service model is out of date. The increasing high service fees have crowded out Bitcoin users, which forces BitPay raises the minimum withdrawal threshold of merchants to $100. Besides, BitPay's fully centralized operating model can no proyect the assets safety. In order to save service fees, users tend to transfer a large amount of Bitcoins to BitPay wallet, while merchants could only withdraw money over the threshold. If BitPay is hacked, then the corresponding users and merchants will lose their assets.

4.2. Stage 2: Semi - Centralization Solution – TenX



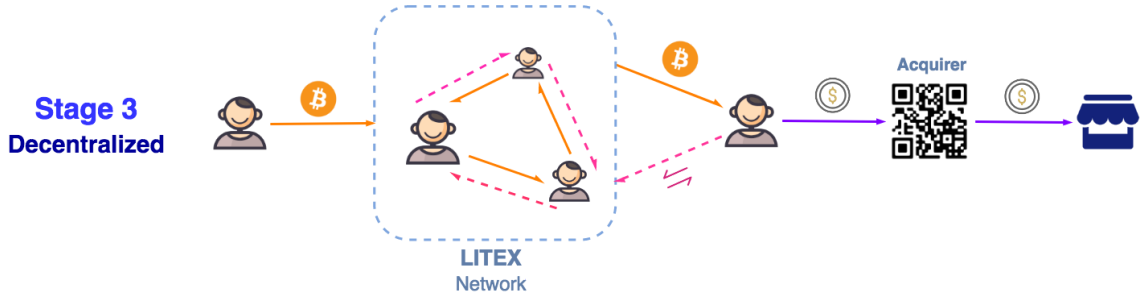
After the Bitcoin community has reached a consensus on SegWit, the prospect of the lightning network is also brighter. Many teams are starting to build solutions based on the lightning network. TenX, an outstanding team, has collected 100000 ETH within 36 hours in ICO stage, which also a reflected the industry's great expectations on lightning network.

TenX innovatively adopted lightning network to transfer cryptocurrencies, which avoids the centralized risk caused by storing assets in their official account. Even when TenX is being attacked, users can still use RSMC, smart contract, to withdraw the money back to their own wallet on the main chain, without worrying about losing them. But the is only half done in the full payment process, because the

cryptocurrency still needs to be exchanged to fiat currency for merchants' settlement. In this step TenX chooses to cooperate with Visa to issue a co-branded credit card. However, Visa has officially announced that Visa does not involve service in the field of converting cryptocurrency to fiat currency. So conversion is executed by the issuer or administrator through an encrypted program. That is to say, Visa is just a settlement channel to help TenX to be incorporated into the merchants' settlement process. Moreover, its so-called supports for cryptocurrency consumption is very similar to reward points. In summary, TenX does not offer business of exchanging cryptocurrency to fiat currency; so TenX can only finalize the transactions with the help of centralized exchange centers.

Besides, settling with merchants through bank organizations like Visa means entrusting half of its core business to its partner, as a cryptocurrency payment network, TenX will definitely grow into a competitor of Visa, which will lead to an unstable relationship. On January 6th 2018, Visa announced to end its cooperation with Wave Crest, a debit card supplier. Wave Crest has issued cryptocurrency co-branded cards with TenX, CryptoPay, Bitwala, Wirex, which leads to debit cards jointly issued by TenX and Visa cannot be used anymore.

4.3. Stage 3: Decentralization Solution – LITEX



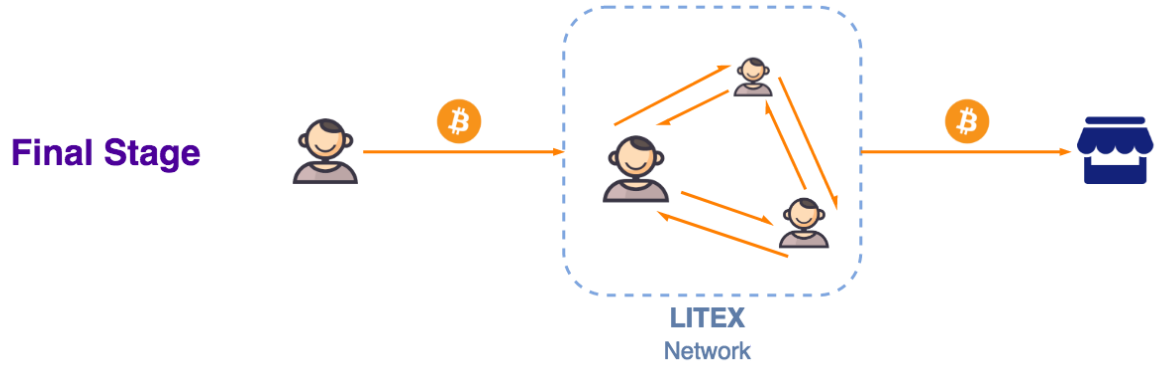
Both the BitPay and TenX are highly dependent on card organizations like Visa or centralized process to exchange cryptocurrency to fiat money, which have brought potential risk and strike to their business model. This problem can only be solved all at once by designing a fully decentralized payment model, and LITEX is exactly such a solution.

There is no centralized node in LITEX framework at all. Both the cryptocurrency transfer and the fiat currency settlement are done independently and coordinated by LTXN users' nodes. This whole process is carried out by LITEX Network (LTXN) nodes applying complicated matching model and routing algorithm. During this process, customers complete payment with cryptocurrency immediately even if the amount is small; merchants receive the corresponding amount of fiat currency, without being restricted by minimum withdrawal threshold; coin purchasers also get cryptocurrencies they need at low cost, which can be used for consumption or any other purpose.

LITEX not only solve the problems in cryptocurrency payment with high efficiency and low cost, but also guarantees security of the users and merchants' assets to the greatest extent. During the transaction process mentioned above, if any problem happens to one node, the transaction can be switched to other path to continue automatically; even if most of the nodes are paralyzed and failed the transaction, the users' funds will be withdrawn automatically back to the account in the main chain or refunded to the fiat currency account in accordance with RSMC protocol, instead of facing the risk of being stolen or lost.

4.4. Final Stage: Cryptocurrency Circulation

Users pay with cryptocurrency, merchants settle with cryptocurrency, and the demand of exchange between fiat currency and cryptocurrency is greatly reduced or even vanished in the future, all of which is the new ecosystem of cryptocurrency we longe for.



LITEX will play a very important role in facilitating towards this new ecosystem, but it does not mean that the value of LITEX will only limit in the transition stage. Even

in a completely cryptocurrency trading scenario, the large-scale and fully-connected LTXN of LITEX has gain advantages in this field. LITEX will still be the most efficient and economic payment channel to use. The first mover advantage will be used to maintain users, making LITEX users' first and best payment choice.

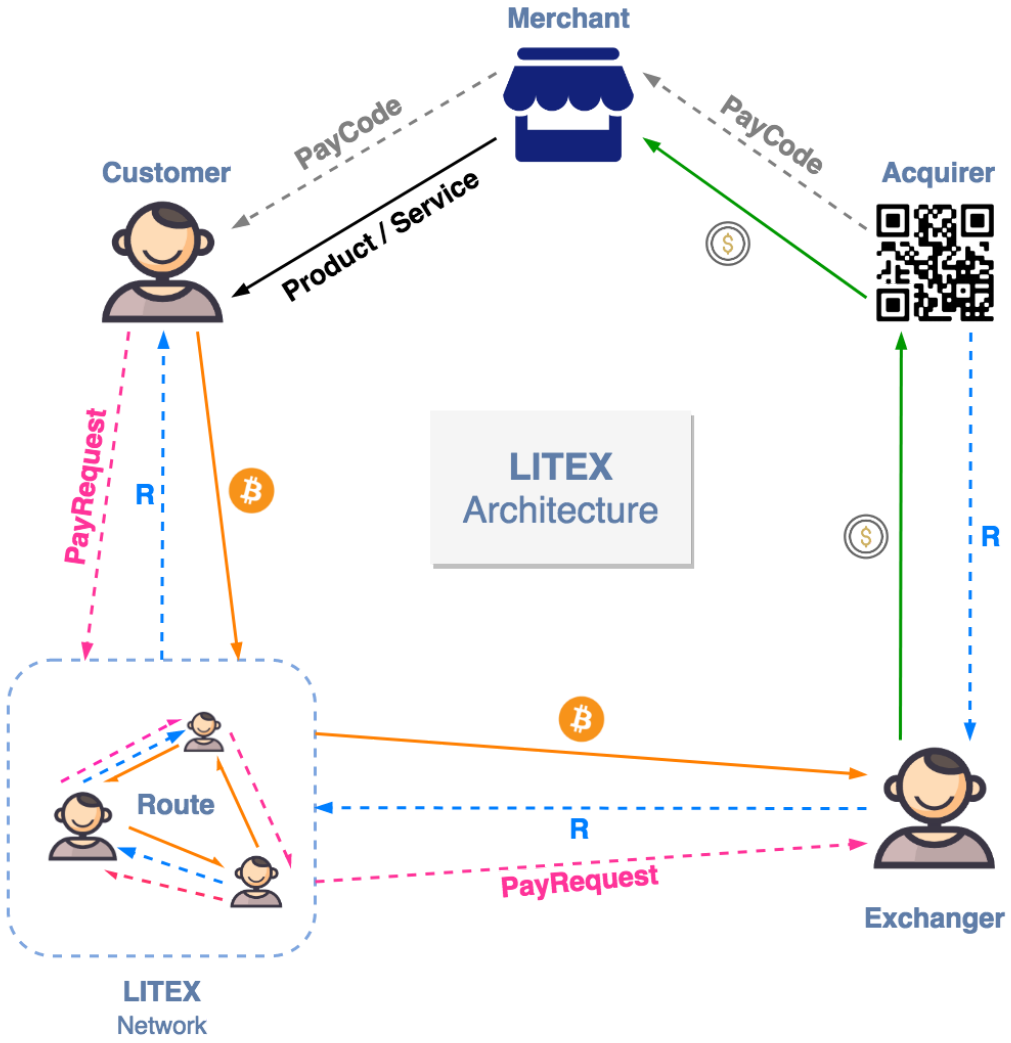
5. Decentralized Payment Solution - LITEX

5.1. Defination

- **LTXN (LITEX Network)**: The fundamental network of LITEX ecosystem. Based on BOLT protocol, modified and improved, LTXN can realize the automatch between payment and coin purchasing, intelligent routing. Through a set of smart contracts, LTXN can achieve compound game theory with good operation rate and high respond speed , while suppress the trend of centralization of nodes, making LTXN's Topology more balanced and efficient.
- **Customer**: Users that pay with cryptocurrency
- **Exchanger**: Users that exchange fiat currency to cryptocurrency
- **Nodes**: Professional user who provides connection service to gain profits
- **Acquirer**: An institution who is responsible of settling between charging exchangers and paying merchants

5.2. Designing

5.2.1. LITEX Architecture



The diagram above shows the overall architecture of LITEX. The solid arrow represents the flow of the real elements of transaction, like currency and products; the dotted line represents the flow of data and controlling information in the LITEX system. R is called preimage which can be simply understood as an argot. Users with this code can ask for cryptocurrency from their upstream. The mechanism of HTLC smart contract can guarantee the automatic transactions in the whole chain.

The operation of LITEX ecology is mainly driven by two processes. The main process is the process of consumer consumption using cryptocurrency, basically follows a counterclockwise direction in the model mentioned above. The sub-process is a

process in which the coin purchaser changes the fiat currency into a cryptocurrency, and basically operates clockwise in the figure mentioned above. These two processes are coordinated by LTXN's, mutually operating to meet the demand in different scenarios.

In the main process, acquirer has set QR code or NFC equipment like Apple Pay at the merchant's in advance, consumers will send a PayRequest through an App Wallet that is compatible with LITEX. The request will be broadcasted to LTXN, and gets a pay Route through the matching engine. The pay route will send consumers' pay request to the best matched exchanger (into the sub-process), and then the exchanger will pay the fiat currency to merchants. The acquirer will send a code R to the exchanger once they confirms the fiat money is received. The exchangers will get corresponding amount of cryptocurrency as soon as they send the R code to LXTN. At last, R is sent back to consumers through nodes in LTXN. Consumers then verify code R and then send it to the matching downstream node in LXTN. The entire transaction process is then finished.

The system is designed with priorities as follows:

- **Fund security**

Ensuring the security of fund is the prerequisite of off-chain transaction. An off-chain transaction solution is qualified only if it can eliminate trust risk of centralization through technical designing . LTXN is based on lightning network technology, and it ensures fund security through two types of smart contract: RSMC and HTLC. Even when LITEX's official nodes are attacked, LTXN can automatically submit users' digital assets to the main chain for withdrawal by the smart contracts after a certain period of time, and then returned to users' digital wallet safe and sound.

- **Payment and settlement experience**

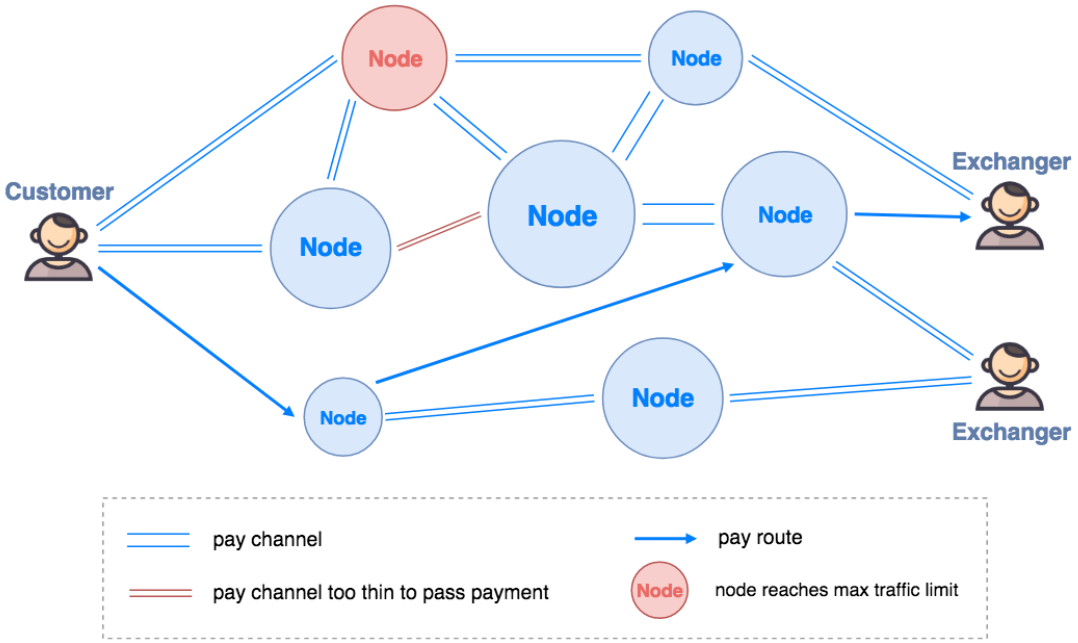
In instant micropayment scenarios, consumers need to pay quickly and smoothly, so that merchants can easily get their settlements. Due to the extremely high volatility, if the product is priced at cryptocurrency, both consumers and merchants will suffer from changing prices. LITEX's app, users could input prices in fiat currency, and determine the corresponding cryptocurrency price with the assistance of smart matching engine. Therefore, consumers only need to know that

they have paid for a particular fiat currency price using cryptocurrency. At the merchant's end , merchants can choose to settle with with fiat currency in real time. Therefore, their user experience is indifferent to other payment gateways (such as Visa), may even be better for less time in transferring money.

- **Exchange efficiency**

The system can provide corresponding product proposals for different exchange demands, and the specific option is chosen by exchangers freely. If exchanger's demand for currency exchange is stable but not urgent (for example, they can wait for the money to arrive one day or even one week later, and bear the volatility risk), the system can meet this demand with relatively low service charge. If the exchanger has a very urgent demand, the system can also match the corresponding order at highest priority through matching engine, but the exchanger may need to pay a slightly higher service fee in this case.

5.2.2. LTXN Overview



The graph above shows the routing situation of a transaction passing through LXTN between consumer and exchanger.

In the classic Lighting Network, each lightning network node maintains a full node corresponding to the cryptocurrency by default. By HTLC's design, when a

transaction passes, all nodes in the payment channel must proactively sign for the transaction.

However, in practical applications, ordinary users can neither maintain a full node for small payments nor do they have the energy to manually sign each transaction that passes through their own channels.

A more realistic scenario is that the users sign their payment through a mobile application (such as a smartphone which cannot carry all nodes), and disconnect to the payment network until the next transaction is initiated.

Therefore, it is unrealistic to rely on ordinary users for passing transactions. LTXN designs a professional user role-Node like the miners in the other public chain, to provide transaction transfer services.

Bitcoin miners earn mining incentives and transfer fee revenue by recording transactions. Similarly, Node in LTXN earns payment and exchange commissions by maintaining services such as maintaining full nodes, establishing transaction channels, auto-signing, and securing online rates. The price oracle machine ensures that LXT commissions are lower than other local exchanges.

In order to ensure the stability of Node's service provision and to suppress the centralization tendency, Node needs to deposit a certain amount of Tokens to smart contracts (Token's designing will be explained in details later) to obtain the corresponding amount of transaction transfer rights. During the transaction process, tokens will continue to be consumed, and then automatically distributed to consumers, exchangers and other ecological parties by smart contracts. Since the number of Tokens pledged by Node is different, its ability to transfer transactions is different. In the figure above, the red Node cannot carry this transaction because it reaches the upper limit of the transfer amount, so it is bypassed by the smart route.

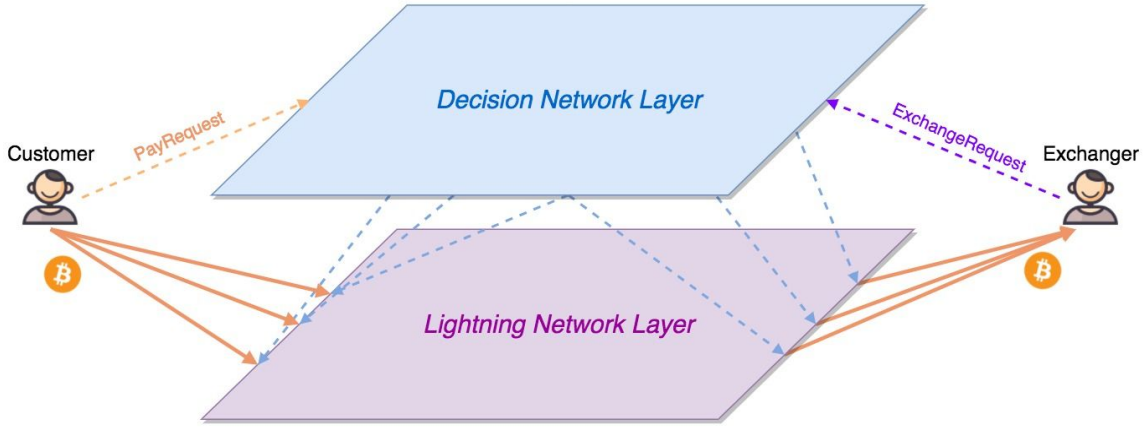
According to the design of RSMC, the payment channel between Nodes is different in size, the differences are shown by distance in the figure. If the amount of a transaction exceeds the upper limit that can be transmitted by the current channel, the route will abandon the path. In the figure, the red double line indicates the channel that the current transaction cannot pass because the amount is too large.

In order to balance the efficiency, stability, cost, and topology, LTXN has many specific mechanisms, including the pledge system and game strategy, etc. There's

need to customize and optimize the BOLT protocol. Due to space limitations, technical solutions that are too obscure will be specifically introduced in the Yellow Book.

5.3. Technology Innovation

5.3.1. Compound Decision Lightning Network



Lightning Network is a common name of distributed network based on BOLT protocol. The classic lightning network can only realize the off-chain point-to-point transaction and transfer of cryptocurrency. It would be useless in the field of matching of fiat currency transaction. The "complex decision lightning network" comes from LTXN aims to merge a decision network layer and lightning network layer into the same distributed system, which can share the nodes and achieve deep linkage. As a result, the lightning network will be more intelligent. Advanced routing functions such as matching the exchange request and payment request can be achieved. It can also make the whole network topology efficient and decentralized by designing, which can avoid the emergence of centralized nodes.

5.3.2. Matching Engine

Matching engine is the collection of a series of distributed intelligent algorithms, which is the most complex core component of LTXN. The following example's description is mostly based on the simplest business categories in the system. It neither involves the specific data structure nor discusses the core strategy - how

"non-bank card payment" business logic is applied to complex business processing and to enhance system stability.

There are many payment requests and exchange requests in LTXN system at the same time. Payment request is characterized by relatively small amount and very high real-time requirement, while the exchange request varies in circumstances. To be more specific, in order to enjoy lower exchange costs, some users would accept an exchange to be done in a longer period of time or can even just set an upper limit to end the exchange at any time as required. Other users, in order to obtain cryptocurrency immediately, can choose to pay a higher exchange service charge to complete exchange in a very short time. In the actual design, the time / cost ratio required by users may be somewhere between the ratios computed in the two situations mentioned above. We will find a way to quantize the preference of users in a certain way to serve as the reference data for the self-adapted matching decision of the node.

In addition to time / cost matching, the matching of the two parties' amount is also very important. It is very common that the amount of exchange request is greater than that of payment request. LTXN nodes need to match multiple requests that meet the requirement in the whole network to form the optimal solution. The factors that need to be considered include, but are not limited to, currency, amount, channel time cost, channel transfer loss, etc. If the amount of payment request is larger than that of exchange request, the payment demand is higher. In this situation, in addition to the above-mentioned factors, the timeliness and cost of the main chain channel should also be considered comprehensively. If the amount is too large, users are advised to make payment through the main net.

Finally, the matching strategy also needs to consider the cost of connectivity. If the two parties of payment and collection are in two separate networks, the cost of establishing cross-network channels is also to be considered. That part is to be discussed in the intelligent routing section below.

5.3.3. Smart Routing

On-chain transaction is required for both the open and closure of a lightning network channel, which would result in higher costs of time and money. Consequently, there is no direct channel between consumer and exchanger in most

cases. They usually carry out transaction and conduction through an intermediate node according to the HTLC contract. Intermediate node may be a single node or multiple nodes that are directly interconnected. In order to find the shortest path (or path with the lowest cost) quickly, each node of LTXN has a set of independent negotiation algorithm and cache synchronization of node information, so as to find the path and complete the transaction as soon the demand is generated.

The payment channels have to be closed for the withdrawal operation in lightning network, which makes the topology of the whole network keep changing all the time. On one hand, the channels may be closed or opened at any time. Some transactions would be denied accidentally if the original legal channel chosen be closed. In this circumstances, a new channel needs to be found immediately. On the other hand, due to the different demands of payment, the channel capacity (like the diameter of a tube) between nodes is also different. In addition to considering the channel capacity in the initial routing stage, it may be necessary to split and merge payment in the whole process. This business logic beyond the traditional routing algorithm problem model needs to be realized with more developed and detailed strategies.

5.3.4. Light Node

According to the BOLT protocol, the lightning network nodes are designed as complete Bitcoin network nodes, which means that users joining the network have to maintain a complete data backup with a volume of dozens of GB. But this is unrealistic in practice. We design LTXN nodes based on Simplified Payment Verification (SPV) and only add some part of the data records needed by business on this basis. In this way, LTXN nodes neither need to maintain a full node, nor to store all users' transactions in the whole network. Specifically, it only needs to store the related transactions via channel with this node. Once the channel is closed and the transaction is confirmed in the main chain, the balance of the nodes at both ends of the channel would be submitted to the main chain. In this occasion, users can choose to delete the previous transaction data to optimize the storage space. The optimized LTXN node would not occupy too much storage space, which could be fully run by general smartphone.

5.3.5. Further Plan

In order to realize the design of LTXN and meet the demand for micro instant payment, LITEX Lab continues to dig deeper into the lightning network topology design and complete a more efficient routing scheme by improving the BOLT protocol.

At present, LITEX Lab is working on the preparation of the LITEX Yellow Paper (Technical White Paper). With the continuous development of scientific research and development, our technical solutions will continue to improve, ensuring the stable yet rapid development of the LITEX ecosystem.

6. Application Scenes

First of all, we will discuss what the consumption scene of cryptocurrency is like without LITEX:

Supposing that Alice only has Bitcoin and wants to buy a cup of coffee from Bob, a cafe owner. However, Bob is just an ordinary businessman who does not know much about technology, then the chance he has a Bitcoin wallet is almost zero. This means that Alice won't be able to pay Bob until she converts her Bitcoin into fiat currency. In this situation, Alice should log in to a cryptocurrency exchange to sell her Bitcoin. But in order to get the fiat currency as soon as possible (Bob may have started grinding coffee beans), she has to hang out at a lower price and pays a relatively high transaction charge. Since the transaction amount is small, even if Alice sells her Bitcoin successfully, the settlement time could be as long as a few hours, and the coffee would be cold by then.

After experiencing the last failed deal, Bob has learned something about bitcoin. He appreciated the idea of Bitcoin, but he does not want to suffer the risk of volatility by accepting payment from Bitcoin. So he sign up with a provider of Bitcoin payment gateway. In this way, when he accepts Bitcoin payment, what he receives in the end is fiat currency exchanged by the payment gateway. It looks much normal than before.

For the sake of payment convenience, Alice also recharges in advance to the payment gateway (the main network transaction requires higher service charge and longer time). So far, the Bitcoin payment experience is satisfactory, Alice gets her freshly made coffee. Bob logs in to the application of the network gateway and is going to withdraw the $5 he just received. But it turns out that the payment gateway has raised the withdrawal threshold to $100! Then Bob has to wait for the withdrawal when Alice buys 20 cups of coffee, which would take at least 20 days---providing that Alice comes every day. But on 19th day, Bob finds that the payment gateway has lost a lot of Bitcoins and cash because of hacker attack and the payment gateway company has declared bankruptcy (centralizing risk). Consequently, the $95 he fails to withdraw ends in naught. Alice also complains to Bob that the Bitcoins that she has not used is also stolen by the hackers.

Now let us introduce LITEX, and you could feel the convenience and security brought by decentralized payment network.

Bob suffers a loss, but he does not give up on Bitcoin. He introduces LITEX, a brand-new solution. The installation process is the same as other payment gateways (such as Visa), very smoothly. Then Bob tells Alice that he can accept Bitcoin payment again. In order to avoid the centralization risk like last time, Alice has also become a LITEX user and sets up her own payment channel. She opens LITEX's App and scans Bob's receipt QR code, and then directly inputs $5, the equivalent amount of a cup of coffee in fiat currency. Clicking on 'Pay', 1 second later, Bob's cashier App asks him to confirm a $5 of payment. After clicking the enter button, Bob finds that the $5 has entered directly in his account. Alice's phone also alerts her that the payment has completed and the Bitcoin equivalent to $5 has been deducted from the channel balance with no service charge. With the help of LITEX, Alice buys a cup of coffee easily with Bitcoin and pays no service charge; Bob, on the other side, receives the legal currency converted from Bitcoin immediately. He finally can continue to accept Bitcoin payments. Actually, even if LITEX is attacked and some of its nodes are lost, the established LTXN can still fulfill Alice's payment demand; even if most nodes are damaged and the transaction fails to be executed, both Alice and Bob's existing assets wouldn't suffer a loss.

7. Token Design

7.1. Name and Purpose

As an ecosystem built with many parties, LITEX needs a series of incentive rules to ensure the healthy operation and rapid development, and redistribute the values generated by the ecosystem to all the participants. For this purpose, LITEX has designed an encrypted token, LITEX Token (LXT as symbol), to carry this function.

7.2. LXT System

7.2.1. Generation and Annihilation of LXT

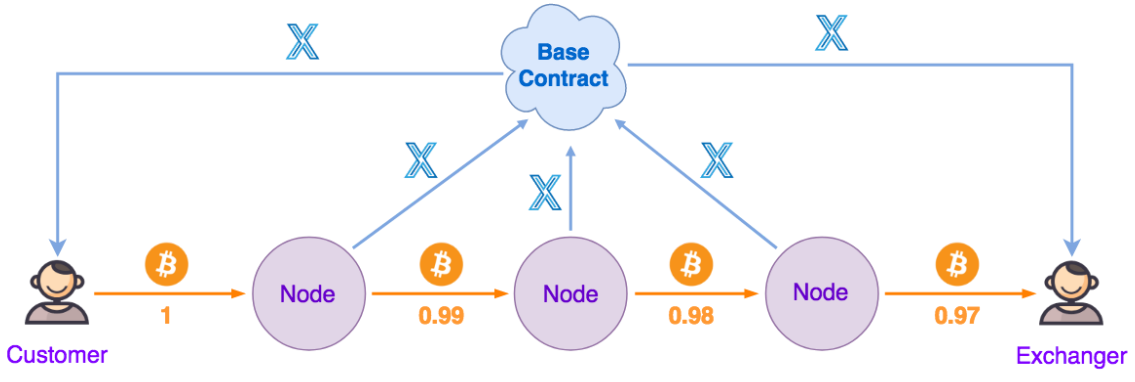
LXT is generated based on ERC20 standard of Ethereum Smart Contract with the total number of 2 billion (2,000,000,000). It is configured by the system in one time, and will be never issued additionally. LXT has no annihilation mechanism.

7.2.2. Supply and Demand

Supply : According to the transaction amount, LXT is dropped to consumers, exchangers and other ecological parties.

Demand :

- Node: Certain amount of LXT is pledged to the system to obtain the corresponding volume of management rights, and it continuously supplements the consumption of LXT in the transaction process, and consumes part of it as a source of supply
- Users: User who uses LXT can get discount (service fee discount or reduction, etc.)



The above diagram approximately describes the flow of LXT in the ecology. The data is for description purposes only and does not represent actual values.

In actual design, according to the policies of different countries and regions, tax laws and other factors as well as the parameters provided by the price oracle machine, the ratio of fees, LXT consumption, and the proportion of drops will vary.

In addition, as an ERC20 Token, LXT is bound to incur costs in ecological distribution. As a system with positive returns, LITEX can fully bear this cost, and further reduce costs through proper mechanism design.

7.3. LXT Distribution Plan

Amount	Percentage	Purpose	Detail
700,000,000	35%	Pre-sale	For institutional investors, later used in LITEX project's research and development, recruitment, market promotion and so on. The use of this part of fund will be disclosed periodically.
300,000,000	15%	Ecosystem Development	For ecological launch requirements such as airdrops and node incentives
600,000,000	30%	Development Fund	For the development of partners, team building and so on. The use of this part of the funds requires foundation resolutions and public announcements in advance.
300,000,000	15%	Founding Team	Return on the exploration and development of the founding team in the field of cryptocurrency and the efforts to maintain the technical and operational development of LITEX and other products in the future. This section will be locked by a smart contract when the token is issued, unlocked after 1 month, unlock 1/36 of this section every month, and fully unlocked in 36 months
100,000,000	5%	Advisors and Cooperatives	For various organizations and advisors that need cooperation

8. Roadmap

Steps	Time	Plan
stage one	2017Q4-2018Q1	Design the system architecture; Test the basic functions of the BOLT protocol. Consult with acquiring parties
stage two	2018Q2-2018Q4	Launch LITEX payment APP . Complete the LTXN architecture and test the theories. Connect the acquiring parties and service providers to test.
stage three	2019Q1-2019Q3	Launch the Alpha version of LTXN. Launch the official LITEX payment APP. Connect the merchants. Expand the acquiring parties . Test run of transaction.
stage four	2019Q4-2020Q2	Launch the Beta version of LTXN. Complete the safety test. Open LITEX's official payments. Software Development Kit. Further expand acquiring parties
stage five	2020Q3-2020Q4	Upgrade the APP, SDK and LTXN constantly; Incease the application scene. Merchants are connected in large scale; Constantly expand acquiring parties cooperation to enhance the stability of service

9. Organization Structure

9.1. LITEX Foundation

LITEX community foundation was established in Singapore, which is the legal entity of the LITEX community, responsible for technology development, business operation and market promotion of LITEX. It undertakes all the legal liability of LITEX at the same time.

Executive departments:

- Technical department

Mainly responsible for the work such as technical route enacting, scheme selection, architecture design, project development and management, Github codebase updating and maintenance of the open source project of the LITEX community.

- Operation department

Mainly responsible for operation and management of the LITEX user community, including community activity planning, activities execution and carrying out community incentive plan, etc.

- Market department

Mainly responsible for brand communication and business expansion of the community, and improving the ecological construction of the community.

- Human resources and financial department

Mainly responsible for recruiting volunteers for the LITEX foundation, and managing finance related affairs of the foundation members on a daily basis.

9.2. LITEX Lab

- **Guanghong XU**

She graduated from the Department of Mathematics, Peking University, majored in cryptography, applied mathematics and computer science at Illinois Institute of Technology. Her research interests include the PKI encryption system. Worked on digital certification at VeriSign. Served as a risk strategy and information security consultant at Deloitte. Participated in payment information encryption compliance certification of VISA's IPO in the United States, and top global projects such as information encryption and digital certification systems for companies such as Apple, Electronic Arts (EA), Broadcom, etc. Currently work as Kaiser's Director of Corporate Risk Strategy, she has extensive cryptography and commercialied application experience.

- **Leo WANG**

Bachelor (2003-2007) and master (2007-2010) in Computer Science of Peking University, former product operation director of the star product "Non-bank card payment" of Yeepay, serial entrepreneur, executive director of CEO club in Peking University, revivalist and practitioner of blockchain technology.

- **Johnson ZHANG**

Bachelor (2003-2007) and master (2007-2010) in Computer Science of Peking University, expert in blockchain and network security, full stack engineer, designer of the "Composite decision lightning network" model, used to work as an senior research and development engineer in platforms such as IBM and Sina weibo.

- **Frank**

Bachelor (2007-2011) and master (2011-2014) in Computer Science of Peking University expert in blockchain, project structure engineer, full stack engineer, with abundant project experience, good at designing solutions by combining product demands and cutting edge technology.

9.3. Cornerstone Investors & Advisors

- **YU Chen** - Investor

Graduated from computer science, Peking University, he is a co-founder and the president of Yeepay. With 20 years of experience in Internet, E-commerce and software, he was awarded the "100 most influential people in the Mobile Phone Circle" in China and also the "100 outstanding E-commerce marketers of 2013 in China". Additionally, he is the author of the best-selling book called "See People Who Will Change The World of The Internet in Future".

- **CHANG Dawei** - Investor

Founder and CEO of Duolabao. Former founder and CTO of Yeepay. He also worked for Riverside Company in Silicon Valley as a former senior software engineer. He has a bachelor's degree in Physics from Beijing University, a master's degree in computer engineering from Maryland University. He is also a member of the Association of Ethnic Chinese Engineer in the U.S.

- **CHEN Bin** - counselor

He is the former architect of Paypal. In 1989, he obtained a master's degree from Jilin University. Afterwards, he once worked as director of integration for Hitachi U.S. system, chief architect of Abacus, chief engineer of the Nokia U.S. network application, which provided him with rich oversea experiences and years of experience in architecture of payments industry. He has translated and published many works such as "The Architecture and Its Future", "Scripture of Architecture", and "Big Data Is The Future - Road of King", which makes him a practitioner and evangelist of the cutting-edge network technology.

9.4. Cornerstone Investors & Advisors

- **Sparkling Star Capital**

- **Node Capital**

- **Double Spend Capital**

- **JLAB**

- **Lightning Capital**

10. Risk Statement

10.1. Risk Warning

Litex Foundation believes that there are many risks in the process of LITEX's development, maintenance and operation, most of which will exceed the control of Litex Foundation. Each LXT token participator shall read carefully, understand and consider the following risks, then determine prudently whether to participate in the token exchange program. Once involved in the program, participants will be deemed to have had full knowledge of the following risks and agreed to take them.

- **Risks of legal policy and regulation**

Encrypted tokens are being or may be supervised by competent authorities of different countries. In different countries, LXT is likely to be defined as virtual good, digital property, or even security and currency at any time. Therefore, in some countries, according to the local supervision requirements, Litex Foundation may be ordered to suspend or end all token exchange programs. If the competent authorities adopt relevant regulations, the development, marketing, advertising and other aspects of the LITEX are potentially badly affected, hindered and ended. For the regulatory policy is changeable at any time, existing regulatory approval and tolerance of LITEX or the open sell plans in any country are temporary. If this LXT public exchange program is canceled in advance, only part of the amount paid will be refunded to holders due to the fluctuation of the tokens price and the expenditure of Litex Foundation.

- **Risks of team and project**

Currently, there are many teams and projects in the field of blockchain technology, making the market competition rather intensified and the project operation pressured. Whether the LITEX project is capable of standing out among other excellent ones and widely recognized, it is not only related to its team capability and vision planning, but is also affected by the market competition, including the probable vicious one. Core members of the LITEX community has many years of technological accumulation in the insurance industry and blockchain, which can help to rally more talents in blockchain and insurance industry to join the

community, but it can't rule out the possibility that the overall project will be negatively affected due to the leaving of core members and internal conflicts.

- **Risks of Technology**

Computer technology is keeping developing, and cryptography is in constantly progressing. There is no guarantee on absolute security at any time, which may lead to stolen, lost, destroyed, or devalued of LXT of the holders.

Although Litex Foundation will try to protect the security of the LITEX network, it does not guarantee that LITEX has no weakness or authority. While any person may intentionally or unintentionally take weakness or defect into LITEX's core infrastructure factors, LITEX Foundation cannot solve these weaknesses or defects by taking safety measures to prevent or make up.

This may eventually lead to the loss of participant's LITEX or other crypto tokens. In addition, LITEX's source code may have some flaws, errors, defects, and vulnerabilities, which may prevent users from using specific features, expose users' information or create other problems. If such a defect exists, it will damage LITEX's usability, stability and security, and thus adversely affect the value of LITEX. Transparency is the basis of the open source code, to promote the identification and problem solving of code in the community.

The LITEX foundation will work closely with the LITEX community for the continuous improvement, optimization and perfection of LITEX's source code. The rapid development of LITEX will be accompanied by sharp increase in transaction and demand for processing capacity. If the demand for processing capacity exceeds the load provided by the nodes in the network, the LITEX network may be paralyzed or stagnant, and may produce wrong transaction.

In the worst case scenario, anyone's LXT may lose. This will damage LITEX's usability, stability and security, and the value of LXT. In addition, LITEX is still in the development stage. Due to the technical complexity of LITEX system, the Litex Foundation may sometimes face difficulties that cannot be predicted or overcome. Therefore, the development of LITEX may fail or be given up at any time for any reason (e.g., lack of funds). Failure to develop or waiving will cause LXT unable to deliver to the participants in this exchange plan.

- **Risks of Security**

The external attack may bring negative effects, stagnation, paralysis, and even calculation error to the LITEX system, thus leading to the delay of transaction and even temporary failure to perform, and it may also lead to the error, breakdown and missing of data, damage the availability, reliability and security of LITEX and the value of LXT. In addition, there may someone attempted to steal the funds from public sales of the LITEX foundation (including the parts that have been converted into legal currency). Such theft or attempt of theft might affect the LITEX foundation's ability to fund LXT's development. Although the LITEX foundation will take measures to protect the safety of crowdfunding, theft is still hard to stop.

- **Other possible risks.**
    - The risk of source code upgrade

LITEX's source code is open and may be updated, modified, or modified by any member of the LITEX community from time to time. No one can predict or guarantee the exact result of an upgrade, amendment, modification or change. Therefore, any updating, correction, modification, or change may result in unforeseen or unintended consequences, which will have a significant negative impact on the operation of LITEX or the value of LXT.

    - The risk of unauthorized claim of LXT

Any person who has access to registered email or registered account by decrypting or decrypting LXT holder's password will be able to maliciously obtain the LXT token of the LXT holder. Accordingly, holder's LXT token may be sent to the LXT address of someone else, which is irrevocable and irreversible. Each LXT holder shall take measures such as the following to properly maintain the security of his/her registered email or account : (i) use complex and high security password; (ii) do not open or reply to any fraudulent mail; (iii) strictly keep secret from personal information and other related security measures.

    - Market risk

The value of LXT is largely determined by the market development and user’s acceptance of the LITEX platform. LITEX is not expected to be popular or be widely used within a short period of time. In the worst case scenario, LITEX may even be

marginalized over a long term, attracting only a small number of users. In contrast, a large part of the LXT demand may be speculative. The lack of users may lead to the increase of price fluctuation in LXT market, which will affect the long-term development of LITEX. When such price fluctuation occurs, LITEX does not have the responsibility to stabilize or influence the market price of LXT.

- Liquidity risk

LXT is not a currency issued by any individual, entity, central bank or national organization, and it does not have any hard asset or gets support from other credit. LXT's circulation and trading in the market is not the responsibility or pursuit of the Litex Foundation. LXT transaction is based only on the consensus reached by relevant market participants on their value. No one is obligated to exchange any LXT from LXT holders, and no one can guarantee the liquidity or market price of LXT at any time. If LXT holders want to transfer LXT, they need to find one or several interested persons to exchange. The process can be costly, time-consuming and ultimately unsuccessful. In addition, there may be no encrypted token exchange or other market LXT for public transactions.

- Risk of price fluctuation

When trading in an open market, the price of encrypted tokens usually fluctuate wildly. Price shocks often occur in short term. The price is likely to be calculated in Bitcoins, ether, dollars, or other legal currencies. Such price fluctuation may be caused by market forces (including speculation), regulatory policy changes, technological innovation, availability of exchanges and other objective factors, which also reflects the changes in the balance between supply and demand. Whether there is a secondary market for the LXT transaction or not, the Litex Foundation does not take responsibility for LXT transaction of any secondary market and does not have the obligation to stabilize the price fluctuation of LXT, and it does not care about it. LXT traders shall bear the risk involved in the LXT transaction price.

- Competition risk

The underlying protocol of or LITEX is based on open source computer software. No one claims copyright or other intellectual property rights to the source code. Therefore, any person can legally copy, remake, design, modify, upgrade and

improve, recode, reprogram or use LITEX source or the underlying protocol in otherwise ways to develop competitive protocol, software, system, virtual platform, virtual machine or smart to compete with LITEX contract, or even surpass or replace LITEX, which cannot be controlled by the Litex Foundation. The Litex Foundation is unlikely to eliminate, prevent, limit or reduce such competitive efforts aimed at competing with LITEX or replacing LITEX under any circumstances.

- Risk of insufficient information disclosure

By the publication date of this white paper, LITEX is still in the development stage, whose technical details and parameters such as philosophy, consensus mechanism, algorithm and code may be updated and changed frequently. Although this white paper contains the latest key information of LITEX, it is not absolutely complete and will still be adjusted and updated from time to time by Litex Foundation for specific purposes. Litex Foundation has no ability no obligation at any time to inform participants of LITEX development in every detail (including its progress and expected milestone, whether delay or not), so it will make the holder fail to be timely and fully exposed to the new information of Litex Foundation. The sufficiency of information disclosure is avoidable and reasonable.

10.2. Disclaimer

This white paper is for informational transmission only, and the contents of this document are for reference only, which do not constitute any investment advice, solicitation or invitation to sell digital goods, shares or securities. Such invitations must be made in the form of confidential memo, and shall meet the relevant securities laws and other laws. The contents of this document may not be explained as compelled to participate in the exchange. No behavior related to this white paper may be considered as participation in the exchange, including the requirement to obtain a copy of this white paper or to share this white paper with others. Participation in the exchange means that the participants have reached the age criteria and have complete civil capacity, and the contract signed with LITEX Foundation is true and valid. All participants voluntarily sign the contract and have a clear and necessary understanding of LITEX prior to signing the contract.

Litex Foundation will continue to make reasonable efforts to ensure that the information in this white paper is true and accurate. During the development

process, the platform may be updated, including but not limited to platform mechanisms, tokens and their mechanisms, token distribution. Part of the document content may be adjusted as the project progress in the new white paper, and LITEX Foundation will make the updates available n forms of announcements or new white papers on the website. Participant shall be sure to obtain the latest white paper, and make timely adjustments to their own decisions based on the updates. LITEX Foundation disclaims all liability resulting from participants: (i) reliance on the contents of this document, (ii) inaccuracies of the information in this document, and (iii) any loss actions caused by any action due to this document. LITEX Foundation will spare no efforts to achieve the goals mentioned in the document, but cannot fully promise to complete due to the existence of force majeure.

LXT is an important tool for platform to function, not an investment product. Having LXT does not imply owner's ownership, control, or decision-making rights to LITEX platform. As an encrypted token LXT does not fall into the following categories: (a) currency of any kind; (b) securities; (c) shares of legal entities; (d) stocks, bonds, notes, warrants, certificates or other files granting any right.

Whether LXT appreciate or not depends on the laws of the market and the demand after application is implemented, which may not have any value. LITEX Foundation does not promise its appreciation, and is not responsible for the consequences due to the increase or decrease of its value. To the maximum extent permitted by applicable law, LITEX Foundation is not responsible for the damage and risk arising from the participation in the exchange, including but not limited to direct or indirect personal damage, loss of business profits, loss of business information, or any other economic loss. LITEX platform complies with any regulations and self-declaration of the industry conducive to the healthy development of industry. Participants' participation implies that they fully accept and abide by such inspection. At the same time, all information disclosed by participants to accomplish such inspection must be complete and accurate. LITEX platform expressly informs participants with the possible risks. Once participants participate in the exchange, it means that they acknowledge and understand the terms and conditions in the rules, accept the potential risks of this platform, and bear the consequences.