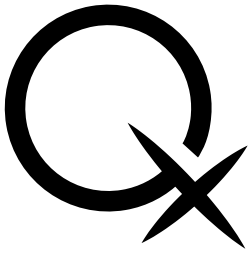

QuickX

PROTOCOL

TECHNICAL WHITEPAPER - v1.5

Abstract

Demand for the blockchain technology has been tremendous ever since its introduction in 2009 with Bitcoin. This drive towards decentralized systems has resulted in many different public and private blockchain protocols developed for various purposes. However, these blockchains operate within themselves and currently, there is no effective way to communicate and interact with different blockchains. Quickx sees this situation as similar to how different intranets operated within themselves prior to the internet was created. Just as TCP/IP protocol enabled connecting different intranets to form the internet, which has made a huge positive impact on human lives, Quickx envisions that connecting different blockchains could bring similar benefits to the world.

Quickx proposes a new protocol that overcomes the various critical problems with blockchain technology such as time, cost, scalability, and cross chain transfer of blockchain assets while making cryptocurrencies suitable for mass adoption in day to dayday-to-day transactions. Quickx solves these problems by building a decentralized platform that provides a solution to time, cost, and scalability by doing the transactions off the chain for same blockchain assets and having Pooling Facilitators who are providing a liquidity pool for cross chain transfer of Crypto Assets. connects different blockchains through an off-the-chain mechanism enabling instant transactions between different blockchains. Quickx makes use of Payment Channels and Hashed Timelock Contracts (HTLC) to solve the double spending problem with no requirement for a settlement to be added to the blockchain. Connectivity for Quickx is provided by Pooling Facilitators (PF) who function as payment hubs on individual blockchain transactions and liquidity providers for cross-chain transactions.

In essence, Quickx not only connects different blockchain protocols but also overcomes the inherent weaknesses of the blockchain technology with its instant execution and next to zero transaction costs.

This whitepaper details how Quickx works, its ecosystem components and the potential benefits to the users, which would make blockchain technology suitable for mass adoption in day-to-day transactions.

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1.0 Introduction

This whitepaper discusses the development of a new decentralized platform referred to as “Quickx Platform” (Quickx) that is intended to provide effective solutions to some of the critical problems with blockchain technology such as time, cost, scalability, and cross chain transfer of blockchain assets while making cryptocurrencies suitable for the mass adoption in day-to-day transactions.

The whitepaper first introduces the traditional banking system and the blockchain ecosystems in general and then discusses the problems in this context followed by the in-depth discussion of the proposed solution to overcome the identified problems.

1.1 Centralized systems

The banking system is the typical example for centralized systems, which forms a major part of financial systems. Banks can be seen as financial intermediaries between the depositors and borrowers. Since the wealth of the people is closely connected with the banking system, it is one of the most tightly regulated industries in the world[1].

In its most simple forms, banks accept deposits from the depositors and then utilize those funds to issue loans to borrowers. These borrowers can be individuals or firms who are in need of funds to purchase goods or expand business operations, which in turn results in more deposits back into the banking system and this process continues.

Although a bank can have many sources of income such as fees, charges, and commissions, banks basically make profits when it lends money to borrowers at a higher interest rate than the interest rate they pay to depositors.

Other than this basic function of being an intermediary between the depositors and lenders, there are many other financial services provided by the banks:

Agents for payments: Banks can carry out the role of a payment agent both locally and internationally between countries with mechanisms like wire transfers. Banks make personal and business payments more convenient with products like checking accounts, debit card, and credit cards.

Payments settlement: Banks play an important role in settling payments in large volumes on a routine basis in the form of check payments, wire transfers, etc.
Creation of money: Money creation is one of the most important roles of the banking system. Banks can create money through what is known as “fractional reserve banking” which enables banks to lend more than the deposits they receive from depositors.

Provide safety and security: Banks provide safety and security for depositor funds. People are not required to keep large sums of money at home; they can simply deposit the funds at the banks while earning an interest on them.
As in the case of any other industry, the banking system is faced with many risks such as credit risk, liquidity risk, interest rate risk, legal risk, etc.

Credit risk: The borrowers may not repay the loans as agreed with the bank. This is the most obvious risk for a bank.
Liquidity risk: Depositors can demand the withdrawal of their funds at any time. On the other hand, the bank makes a profit from lending those funds to borrowers. This can lead to a situation where the bank has not enough funds to repay the depositors if they demand.

Interest rate risk: Since the profit of a bank fundamentally determined by the difference between the interest rate charged to borrowers and the interest rate paid to the depositors, changes in the market interest rates can pose a huge risk for a bank since an individual bank has to be in line with the market rates to be attractive.

Legal risk: In addition to the laws concerning fair and honest lending, banks are also compelled to play a role in monitoring potential illegal activities on the part of customers. The banking industry is heavily regulated to prevent illegal activities such as terrorism financing and money laundering and this can pose a significant risk to the banking system with today's complex transactions.

1.2 Decentralized systems

Blockchains represent a major part of decentralized systems today. A blockchain could be defined as a continuously growing digital ledger of records that is independent, decentralized, verifiable, and permanent coexisting in multiple computers and locations. Once a transaction is recorded in a blockchain, it cannot be altered retroactively without the alteration of all subsequent blocks and the collusion of the network.

The records in a blockchain are arranged in data batches referred to as blocks that follow a cryptographic validation method. Each block of data is designed to refer and identify the previous block by a hashing function, leading to an unbroken chain of blocks.

The first distributed blockchain was conceptualized by an individual who is pseudonymously identified as Satoshi Nakamoto in 2008. He published a whitepaper in 2008 called Bitcoin: A Peer to Peer Electronic Cash System[2]. In this paper, Satoshi argued that he had successfully solved the issue of double-spend for digital currency through a distributed digital database design consisting of cryptography and game theory. This was a quite significant innovation as it enabled one person to transact value directly with another person without the need of an

intermediary to coordinate and connect the two parties.

Nakamoto went on to implement this concept in 2009 giving birth to the world's first digital currency, Bitcoin, in which a dedicated blockchain serves as a public ledger of transactions operating without a central administrator or intermediary such as a bank.

Since then, numerous cryptocurrencies have emerged based on many different blockchain protocols. These cryptocurrencies are commonly called altcoins. At present, there are around 1400 cryptocurrencies in the market with a market capitalization over US$ 735 billion and these numbers continue to grow at a rapid pace. Cryptocurrencies are said to be the fastest growing asset class in the world[3].

Cryptocurrencies have paved the way to new methods of storing and transferring value and making transactions with no involvement of the traditional banking systems acting as intermediaries or facilitators. People no longer need to rely on the fiat currency or the banking system to execute transactions. For instance, one can directly send cryptocurrency to another without any central authority or obtain a loan in cryptocurrency on a P2P network.
Although it is unlikely, that blockchain ecosystems will replace traditional banking system altogether in the near future, they represent a significant threat to the traditional banking system. On the other hand, cryptocurrency space has its own problems to overcome before it can perfectly substitute if not complement, the banking system as discussed in the following chapter.

2.0 Problem statements

Quickx identifies the following problems with the existing blockchain ecosystems that can hinder the mass adoption of blockchain assets as a medium of exchange.

2.1 Time and speed

Blockchain transactions are recorded in the blockchain as blocks. Most blockchain protocols have a limit on the block size as well and it can take a certain amount of time to generate a block. For instance, Bitcoin blockchain takes an average of 10 minutes before a transaction receives a network confirmation while in Ethereum it can be 10 to 19 seconds.

On the other hand, this can place technical limits on the number of transactions that the blockchain can process per second. For instance, Ethereum can process 20 transactions per second while Bitcoin manages

just 07 transactions per second. Conversely, most traditional centralized systems are much faster than decentralized systems. For example, Paypal manages 193 transactions per second[4] and Visa can manage up to 56,000 transactions per second[5].

2.2 Transaction cost

One of the ideas behind the removal of intermediaries with the use of blockchain is the saving of corresponding transaction fees of the intermediary. Although the intermediaries are removed from a blockchain transaction, still there is a transaction cost involved in the process. This is because the nodes in a blockchain ecosystem offer computer-processing power to service the network and they need to be rewarded typically in cryptocurrency in exchange for their service. Although in most cases, blockchain transaction costs are lower than the banking system, still the costs can be a significant amount depending on the type of the blockchain and the urgency of the transaction. Transaction costs of two popular blockchains, Bitcoin and Ethereum are discussed below:

Bitcoin transaction costs
At present, every time a miner/node unlocks a Bitcoin block, the miner is rewarded with 12.5 Bitcoins for unlocking the block. Additionally, Bitcoin has a mining fee system to cope with high demand situations. When someone submits a transaction to the network, he has the option to set a transaction fee that goes to the successful miner who includes that transaction in a block. Miners obviously include the transactions with higher fees first resulting in faster transaction processing. In fiat currency terms, current Bitcoin fees per transaction range from USD 20 to USD 30[6].

Ethereum transaction costs
In the Ethereum blockchain, every transaction requires “Gas” that represents the computing power. When a person sends ETH to another, that person needs to pay a fee in Gas. However, the actual fee is settled in ETH. The gas price is dynamically set by the users and miners. Users are able to set the Gas price they would pay and the miners can set the minimum Gas price they would accept creating a dynamic market that makes the transaction fees dynamic. In fiat currency terms, current Ethereum fees per transaction range from USD 2 to USD 3[7].

2.3 Scalability

Almost all of the blockchain protocols be it Bitcoin, Ethereum, or Ripple, have one common limitation in scalability: each node on the blockchain need to process every transaction. This means each node on the blockchain should possess and maintain a copy of the entire ledger. Although the decentralization is a key blockchain concept that results in many benefits such as removal of intermediaries, permanence, security, and transparency, all these come at the expense of scalability.

Scalability in traditional database systems can be easily solved with more computing power by adding more physical server computers. However, in the case of a decentralized system where each node needs to process each transaction, theoretically, all the nodes would require to add more computing power in order to make the whole blockchain network to become faster. This scalability issue can become more severe when the blockchain expands because the need for processing power, storage, and bandwidth would also increase along with the blockchain growth and not all the fully participating nodes might be able to cope with the increased requirements.

2.4 Inter blockchain transaction capability

There are many public and private blockchains at present and new ones continue to emerge on a regular basis. Different blockchains have different protocols and there is hardly any way to communicate with each other at present. For instance, if someone (sender) owns crypto assets in Bitcoin blockchain and he wants to send it to someone else (receiver) on the Ethereum blockchain, the sender first needs to convert his Bitcoin crypto assets into Ethereum crypto assets through an exchange. Then the sender may need to transfer the Ethereum crypto assets to a wallet supporting it. Then only the sender could send the asset to the receiver. This process is often tedious, time-consuming and costly.

This inability of different blockchain protocols to communicate with each other has become a recurring problem as such interoperability could bring many benefits such as:

- Eliminating reliance on intermediaries to such as crypto exchanges
- Improving performance and scalability
- Bridging public and private blockchains
- Improved liquidity for handling transfers
- Faster processing of transactions

It is often said that connecting different blockchains would be key to mass adoption of blockchain ecosystems that is comparable to forming internet in the 1990s by connecting different intranets through TCP/IP protocol. Although there are several projects aimed at developing means of connecting different blockchains, still a reliable solution is not in sight and this remains one of the biggest problems.

3.0 Solution – Quickx Protocol

3.1 Introduction to Quickx Protocol

Quickx solves the above problems by building a decentralized platform that provides a solution to time, cost, and scalability by doing the transactions off the chain for same blockchain assets and having pooling Facilitators who are providing liquidity for cross chain transfer of Crypto Assets.

Quickx aims to change the status of cryptocurrency from a share-like object to real spendable currency that would be appealing to the masses. It provides an instant payment option for the users while opening up new untouched segments of business for the pooling facilitators. Pooling facilitators are discussed in detail in the coming chapters.

3.2 On-chain transactions vs. Off-chain transactions

At present, if someone wants to transfer cryptocurrency to another, he has to wait for sometime until the transaction is confirmed by the blockchain. This time can be minutes if not hours as discussed before. However, Quickx overcomes this problem by setting up a decentralized off-chain transaction network where cryptocurrencies can be instantly transmitted by one person to another.

In the case of a typical on-chain payment platform, a transaction would go through following steps:

1. One party (maker) adds an offer
2. Smart contract takes the relevant tokens to into escrow
3. The other party (taker) picks the offer
4. Maker sends requested tokens
5. Taker receives the offered tokens

The proposed Quickx platform’s off-chain solution will allow us to have:

- Thousands of transactions per second, with no needs of any confirmation;
- Very low commissions, which also allow micro-payments;
- Instant payments, as users do not have to wait for the miners to confirm;
- Swap cryptocurrencies instantly

Using Quickx Platform, it is possible to transact cryptocurrencies with next to zero fees and there is no need of any miner confirmation. It happens with the creation of external channels off the chain between

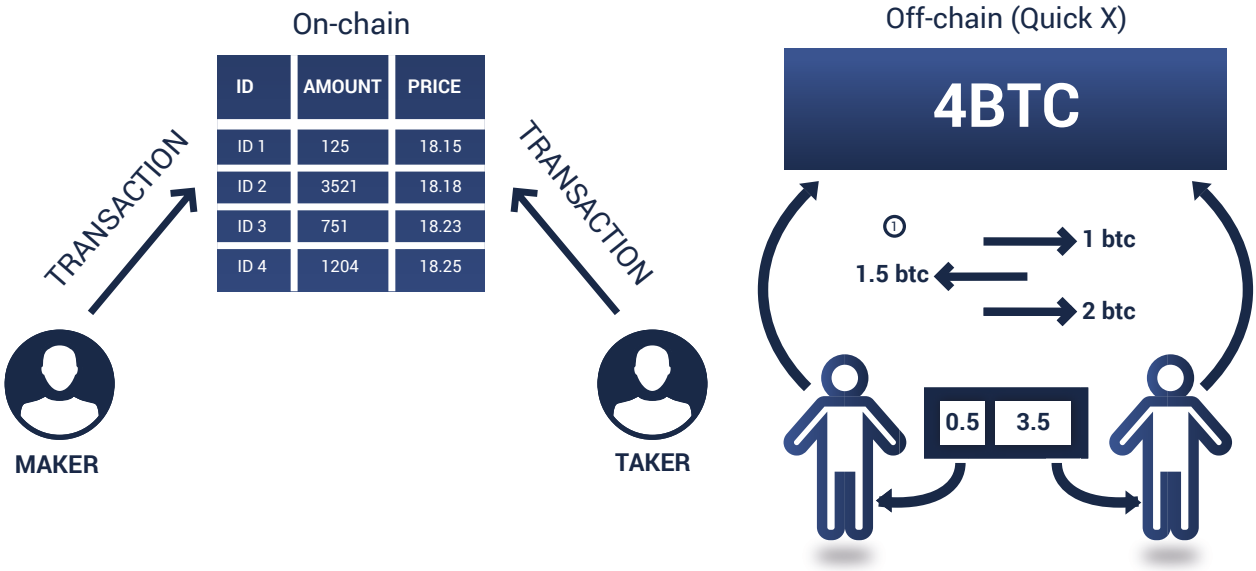
two people who want to exchange cryptocurrencies.

At the beginning, both users have to insert an amount to open that channel, subscribing that those two users have opened a common fund, which is managed off-chain. Everything that happens through this channel until it is closed, does not appear on the Blockchain and therefore, it need not be written in the blocks. It does not need the miner's confirmations, and users do not have not to pay the transaction fees.

Quickx transaction process is described with the following example involving two users, Alice and Bob:

1. Alice and Bob decide to open a channel by entering 2 BTC each to head into it.
2. Blockchain subscribes the opening of the channel containing 4 BTC and since at this moment, each exchange between Alice and Bob are off-chain.
3. Now, Alice wants to send Bob 1 BTC. Alice creates a transaction called commitment transaction, where Alice indicates on the transaction that she is sending 1 BTC to Bob, from the channel common fund, and then she has to sign it.
4. Now, Bob wants to send 1.5 BTC to Alice. Bob also creates a commitment transaction where he is sending 1.5 BTC to Alice from the channel common fund, and then he has to sign it too.
5. Now, Alice wants to send Bob 2 BTC. Alice creates a transaction called commitment transaction, where Alice indicates on the transaction that she is sending 2 BTC to Bob, from the channel common fund, and then she has to sign it.
6. When the channel between Alice and Bob is closed, Alice will have 0.5 BTC as balance and Bob will have 3.5 BTC as balance.

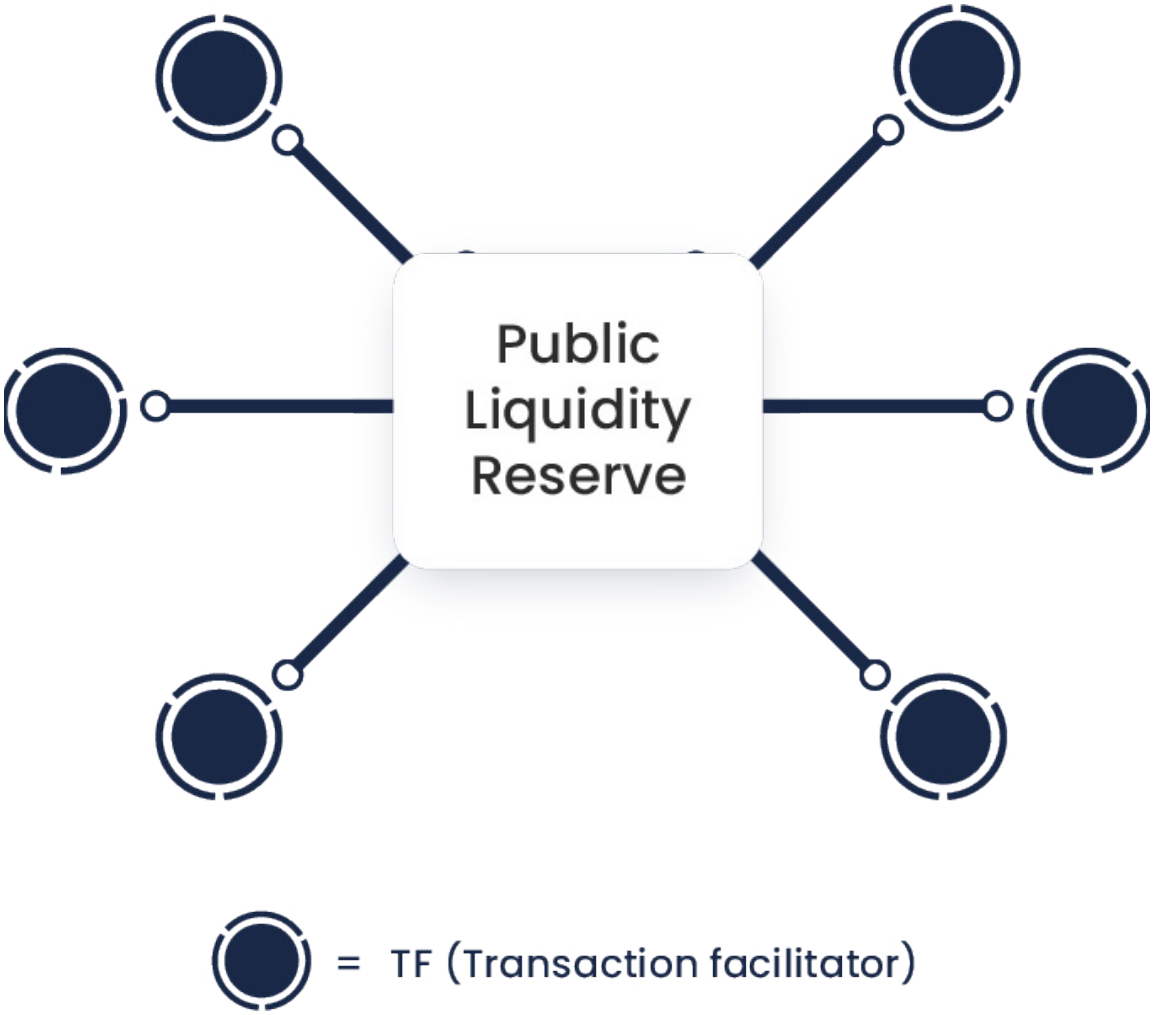
Above process is completed instantly just like a traditional electronic payment system. In addition, every operation has been done off-chain Therefore, the implementation of Quickx resolves scalability and cost problems that do not allow crypto assets to be the world currency and usable in human ecosystems.



Figure(3.2): On-chain payments and Quickx

3.3 Transaction facilitators

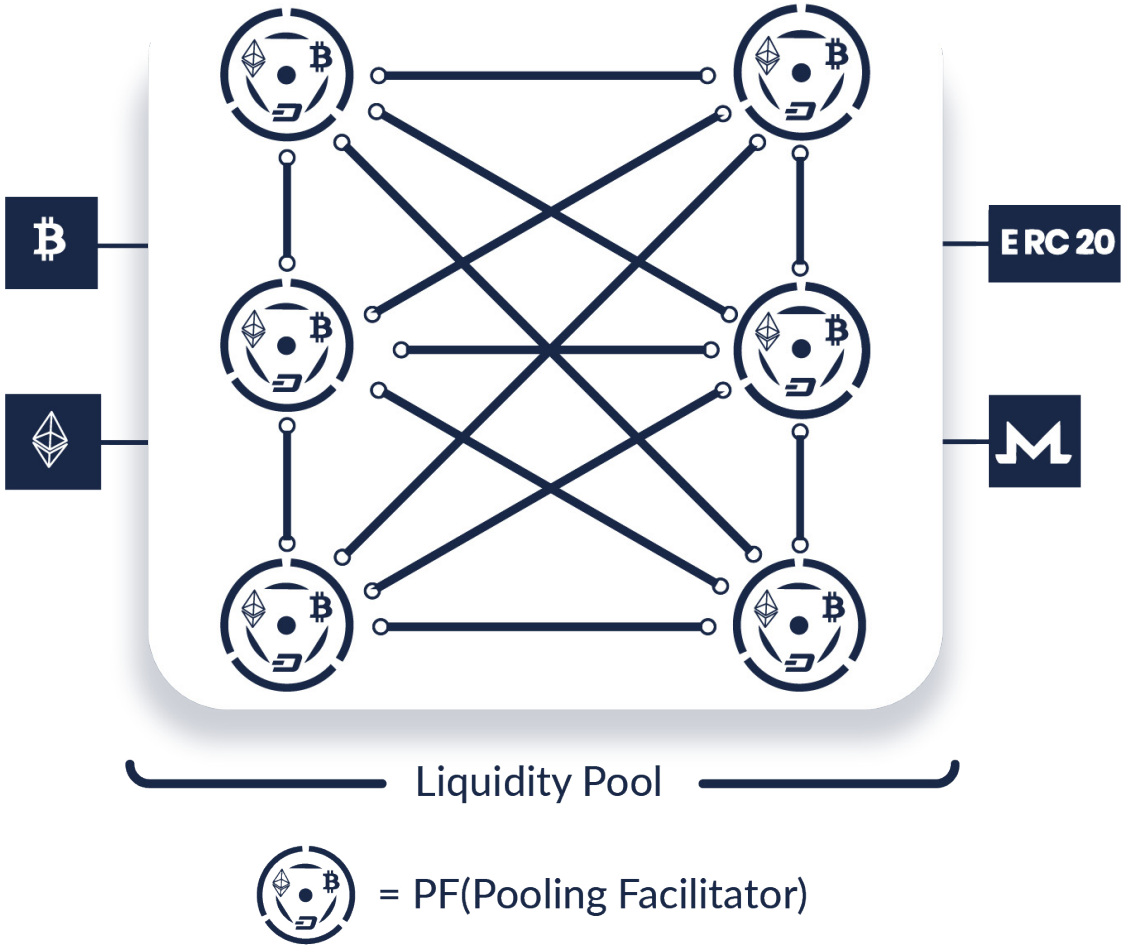
Transaction facilitators maintain the off chain order book and charge a next to zero fees for maintaining the records. They will approve the transactions such as a conversion from ETH to EOS or TRX to ETH The transactions are negotiated off the chain and after the trade is done, the on Chain settlement takes place. Anyone without the liquidity can become a Transaction facilitator and can earn transaction fees by maintaining the off chain order books.



Figure(3.3): Transaction facilitators

3.4 Inter-chain transactions with off-chain involvement

Quickx achieves the inter-chain transaction ability with the use of decentralized pooling facilitators who facilitates the transfer of blockchain assets among different blockchain protocols while providing the necessary liquidity on Quickx. They work off-chain and are not limited by the limitations of the blockchain such as speed, cost, and scalability.



Figure(3.4): How Quickx achieves instant inter-chain transactions

As shown in the above, pooling facilitators enable instant interconnection among different blockchain protocols such as Bitcoin, Ethereum, Monero, Dash, or any ERC20 token through Liquidity reserve.

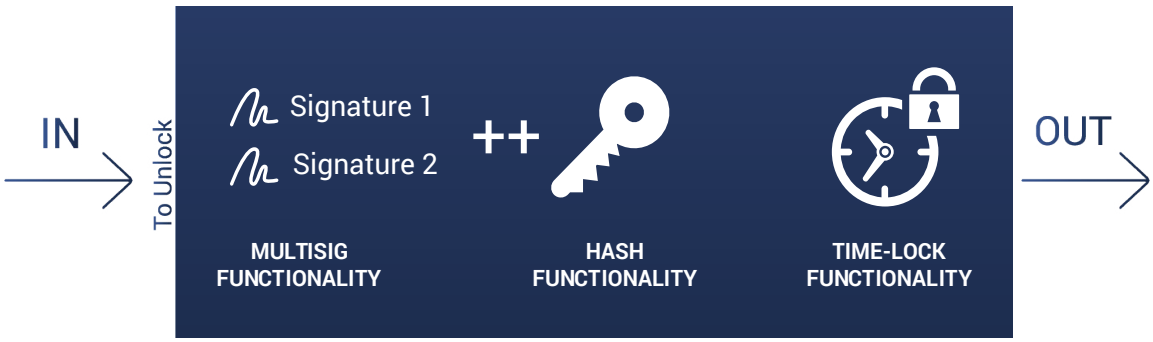
4.0 Technical requirements

HTLCs are the key requirement to be compatible with Quickx protocol:

4.1 HTLCs (Hashed Time Lock Contract

A bidirectional payment channel is limited to the secure transfer of funds only inside the channel. To overcome this limitation, Quickx uses a Hashed Time lock Contract (HTLC)[8], which enables Quickx to create secure transfers with the help of a network of different channels with multiple hops to the final destination. HTLC allows a global state among multiple nodes through hashes.

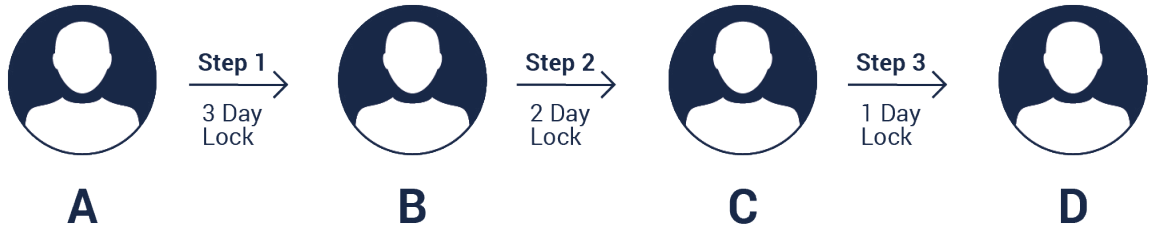
The global state is assured by time commitments and time-based unencumbering of resources through the disclosure of preimages. In this method, transactional "locking" happens globally through commitments. At any point in time, a single user is responsible for disclosing to the next user whether they have the knowledge of the preimage.
What is important here is that this construction does not require the trust of a custodial in one user's channel counterparty, nor any other user within the network.



Figure(4.1): Technical requirements

5.0 TRANSACTION FLOW

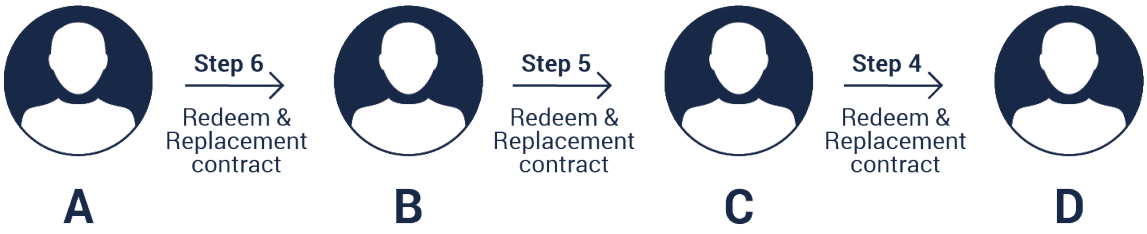
Transaction flow can be explained by the following example: A wants to send 10 BTC to D. A identifies a path to reach D that goes through two other users, B, and C.



Figure(5.0.1):How Quickx achieves instant inter-chain transactions

Then A counts the number of movements to reach D and makes use of that as the expiry time of the HTLC. In this case, A sets the HTLC with B to expire in 3 days. Accordingly, B sets an HTLC with C with an expiry period of 2 days, and finally C with D with an expiry period of 1 day.

When D requests payment from C, C requests the hash from D to be used with regard to the transaction. At this stage, D can provide C with the hash. C and D may consent to the immediate settlement. This process takes place backwards up to A and it happens off-chain with no interaction with any blockchain.



Figure(5.0.2):Settlement of HTLC, A's funds is sent to D

The user who discloses the correct hash unlocks the ability to obtain the funds. The objective of using reducing expiry periods is to ensure a user will not be responsible for paying the other user down the channel before the user receives the ability to obtain funds from the user above the channel. Where a user does not present the hash within the specified period, the HTLC is closed automatically.

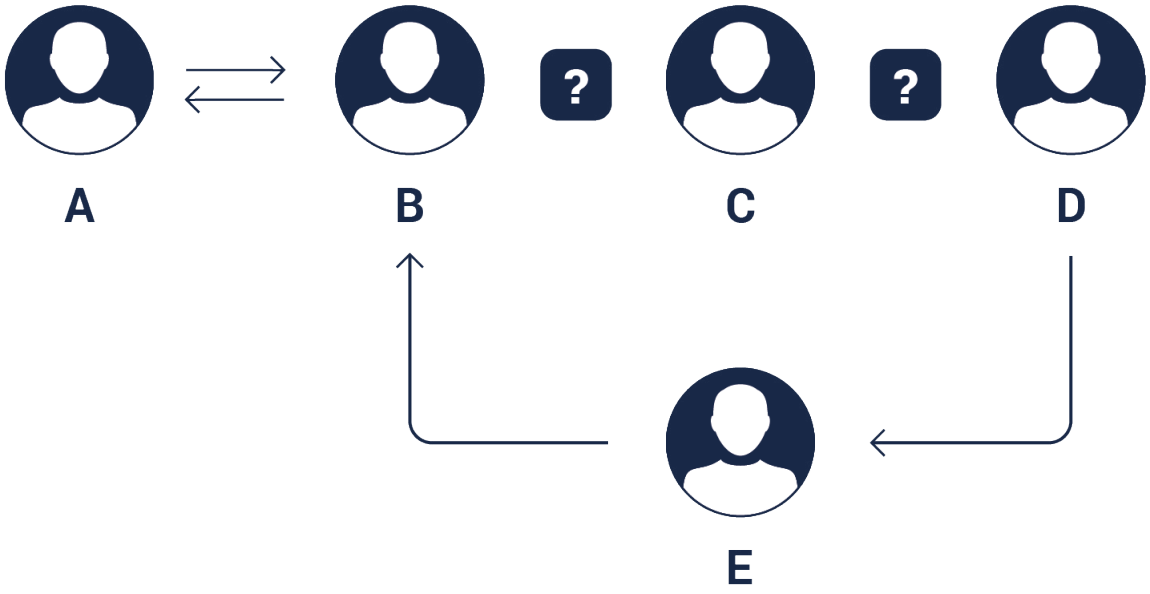
5.1 Handling Transaction Failures

It is possible that an intended crypto asset transfer does not ultimately get to its intended user. This could typically occur due to non-

responsive users or pooling facilitators within the channel in the case of cross-chain transactions. Explained below is how Quickx handles such exceptions.

Where a crypto asset does not get transferred to its intended ultimate user within the channel, the last receiving user should send an equal amount to the sender under the same hash netting out the disclosure of the hash for the sender.

In case one user along the channel is not reachable, then the user can opt to wait until the time expires. HTLC is closed as unsettled in this case.



Figure(5.1):Handling transaction failures

C is not reachable in the above case and alternatively, E is used to complete the transaction.

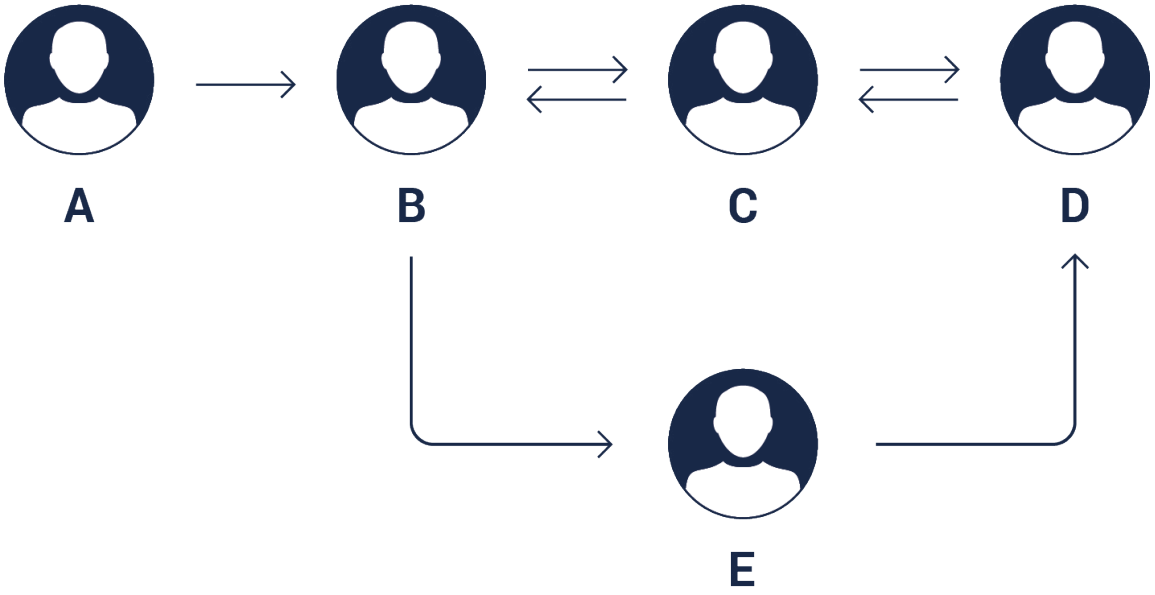
In case the hash was broadcast, A would be able to break-even. D, who controls the hash should not broadcast R because D may not receive funds from C, D should, therefore, let the contracts expire.

A and B also have the option to net out and close the contract early. Where the refund route is the same as the payment route, and there are no half- signed contracts that one party may use to steal funds, there is a possibility to outright cancellation of the transaction by replacing it with a new Commitment Transaction starting with the most recent node who participated in the HTLC.

5.2 Transaction rechanneling

A channel can be cleared at any time by making an alternate channel

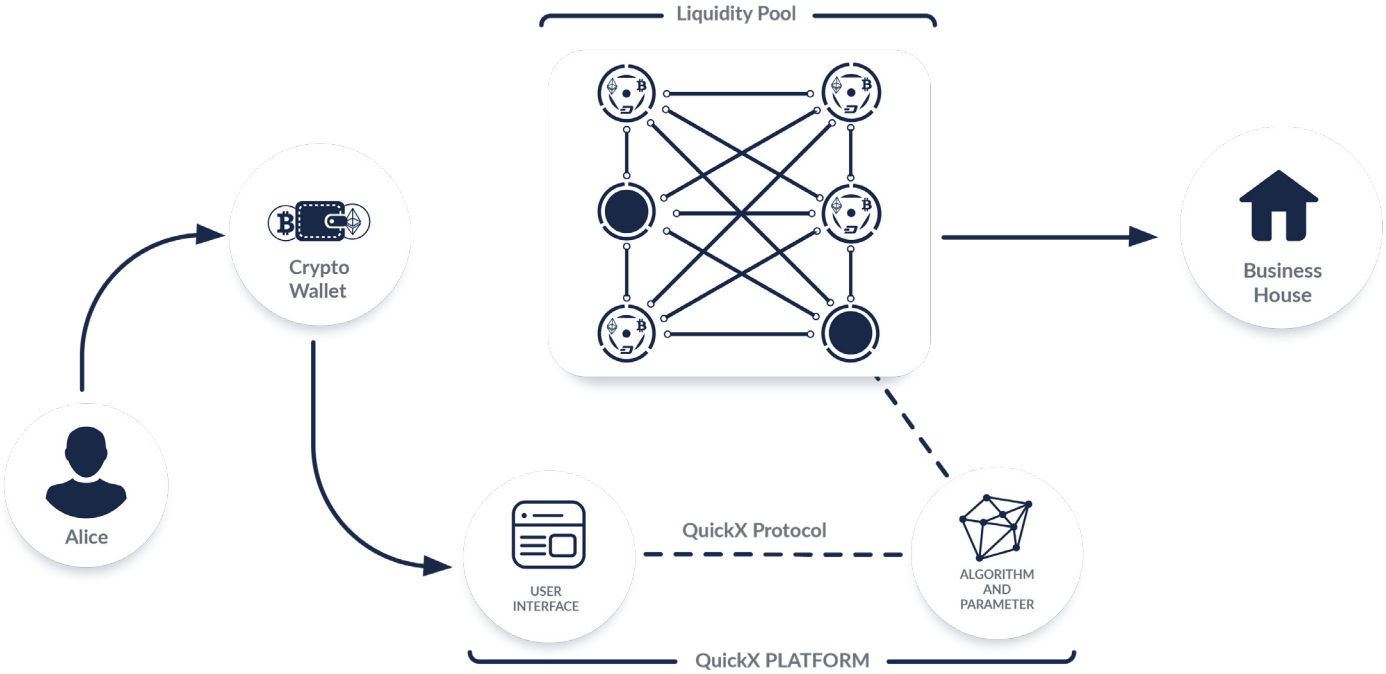
for the payment. It is also possible for users to specialize in high connectivity between users and offering to offload hash locks from other users for an agreed fee. These users will agree to payments that are net out to zero (plus fees) but are loaning cryptocurrency for a set period. It is likely that these entities with lower demand for channel resources would be end-users that are already connected to multiple well-connected users.



Figure(5.2):Transaction rechanneling

In the above case, the transaction is rechanneled through E although C is available.

6.0 Quickx Protocol explained



Figure(6.0):Hawkeye view of Quickx platform

In real-world applications, Quickx provides transfer of blockchain assets of different blockchain protocols between two parties instantly just like any other traditional electronic transfer mechanism. On the other hand, it will provide a decentralized and a cheaper method for people to buy goods and services using their cryptocurrencies.

In above diagram, a user, Alice, wants to pay Business House in cryptocurrency instead of fiat currency, whereas Business House accepts only fiat currency. Alice then uses the Quickx platform and sends cryptocurrency equivalent to the amount to be paid in fiat currency. Quickx using decentralized liquidity pool of Pooling Facilitators does the transfer in fiat currency to Business House by accepting cryptocurrency from Alice. This transfer is instant just like any other traditional online card payment.
Every time when a user makes a payment in cryptocurrency, Quickx platform gets a request with following:

1. Whom to transfer;
2. How much to transfer, and
3. In which currency

Quickx platform then makes a transfer through the decentralized liquidity pool of pooling facilitators that gives the next to zero exchange rate for the user. After processing is made businesses house gets its payments instantly.

6.1 Platform components

- User interaction area or API
- Best selection algorithm
- Liquidity pool

User interaction area or API

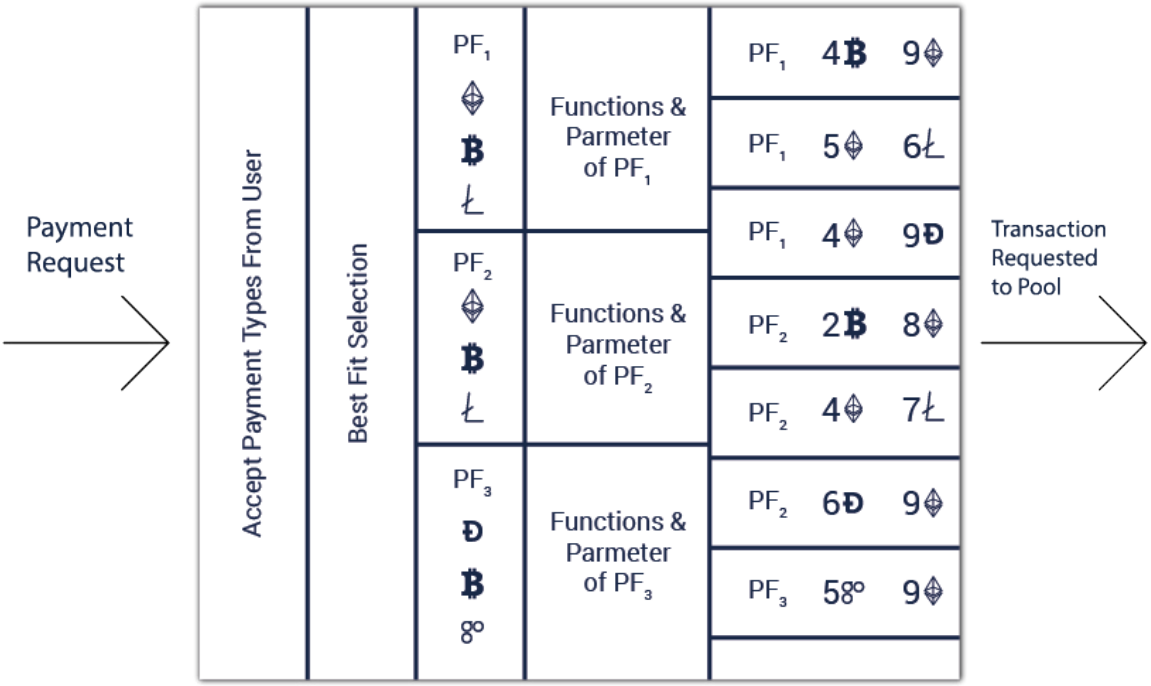
User interaction area provides links to all the Quickx functions including:

- User registration
- User verification
- Initiating new requests
- Verifying new requests
- Viewing past requests and outcomes

Once a new request is verified, a corresponding payment request is sent to the algorithm/protocol working in-between API and pooling facilitators.

Best selection algorithm

Best selection algorithm maintains the records of the transaction rate and other parameters that are necessary for transfer. Additionally, this algorithm keeps a record of every pooling facilitators in the decentralized liquidity pool and transaction costs being charged by every pooling facilitators in the decentralized liquidity pool. It works to best fit and automatically sends the transaction to the best pooling facilitator.



Figure(6.1):Best selection algorithm – how it works

Liquidity pool

Liquidity pool is the sum of all pooling facilitators, which facilitates cross crypto-currency transactions using QRP (quick routing protocol). They act in a decentralized manner as the facilitator between the sender and the receiver for faster and cheaper transaction. Key factor deciding the effectiveness of Quickx would be the quality of the liquidity pool. However, Quickx does not intend to make use of the traditional banks as pooling facilitators.

6.2 Pooling facilitators

Only Quickx does not infuse liquidity by itself but also makes use of a pool of decentralized liquidity providers referred to as pooling facilitators who function independently as part of the ecosystem.

A pooling facilitator in the liquidity pool can make transactions for users and can ask for a loan from any other pooling facilitator within the pool. Pooling facilitators have to provide two different functions to the algorithm. First one is called F1 and another one is F2. F1 function or set of parameters tells the algorithm the rate any pooling facilitator is ready to make a transaction for the user. F2 function or set of parameters notifies other pooling facilitators that a loan is available at a particular rate.

Figure(6.2):Pooling facilitator – F1 and F2 functions

In the above example, the pooling facilitator indicates that he is willing to make transactions with users at a fee of 0.1% of the value while he is ready to grant loans to other pooling facilitators at the rate of 0.08% of the value.

Pooling facilitators infuse the necessary liquidity or the loan funds into the ecosystem while facilitating the cross-chain instant fund transfers, which makes the backbone of the Quickx's interoperability. Quickx is open for anyone to become a pooling facilitator with a minimum amount of liquidity.

7.0 Advantage of Quickx protocol

- **Lower costs for users:** Least cost option is selected for users automatically. The transaction costs are expected to reduce over time when more and more pooling facilitators join Quickx. It is possible that the costs become almost zero.
- **Instant transactions:** Transactions are made instantly regardless of the amount and even if they are cross chain payments or within the same blockchain.
- **Multi cryptocurrency:** Users can hold any QRP compatible blockchain asset and can convert them to another cryptocurrency at any time.
- **Investment opportunity:** Quickx is a platform to invest into and earn by becoming a pooling facilitator. In addition, Large-scale investors can lend money to the analyst team and can earn a profit; cryptocurrency managers can work on behalf of other pooling facilitators and earn a profit. Pooling facilitators are paid for every transaction and operational costs are next to zero. Quickx is committed to providing equal opportunities to participants in the ecosystem.
- **Almost Zero operating costs:** Actual transaction costs are expected to become next to zero since transactions are not added onto the blockchain under normal circumstances.
- **A global market:** Quickx can expand globally without the need of any physical presence adding more and more users making it a large global market. This can open the door to new markets, which are not currently touched by traditional systems.

- **Potential for new services:** Similar to internet paving the way for many new business models, Quickx could also be used for innovations by visionary entrepreneurs that could bring unforeseen advantages to communities.
- **Trust & Security:** Pooling facilitators in a decentralized manner performs all transactions. On the other hand, the core infrastructure of the solution remains to be the blockchain and the users themselves hold private keys of the crypto assets.
- **Total control:** Users have the full control over their crypto assets.

8.0 Application examples

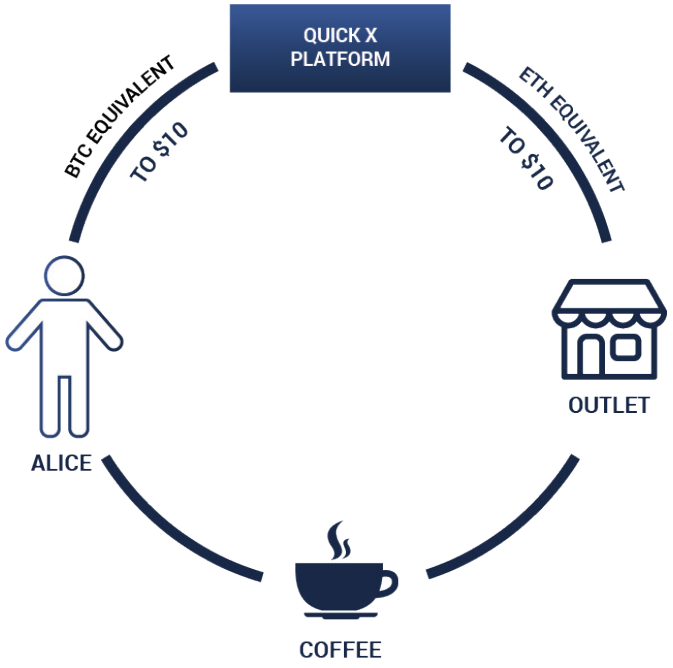
Application examples/use cases can be categorized as follows, which are discussed under each heading.

- User to business
- User to user
- Pooling facilitator to Pooling facilitator
- Business to business
- Platform as exchange

8.1 User to business

Users or consumers can make use of Quickx platform to make purchases from businesses. Given below is an example:

1. Alice wants to buy a coffee worth $10 from a coffee outlet.
2. Alice makes a request through Quickx.
3. Alice transferred BTC equivalent to $10 BTC through Quickx platform
4. Quickx in a decentralized manner through best selection Algorithm selects the pooling facilitator with the least transaction cost
5. Chosen pooling facilitator is notified of the transaction that it has to make.
6. Liquidity pool releases the payment to the outlet's wallet in the desired cryptocurrency (In the below-mentioned case Ethereum equivalent to $10 is transferred to the outlet)
7. Outlet is notified of payment received.
8. Coffee outlet releases the coffee worth of $10 to the Alice
9. All these happen instantly with no waiting time

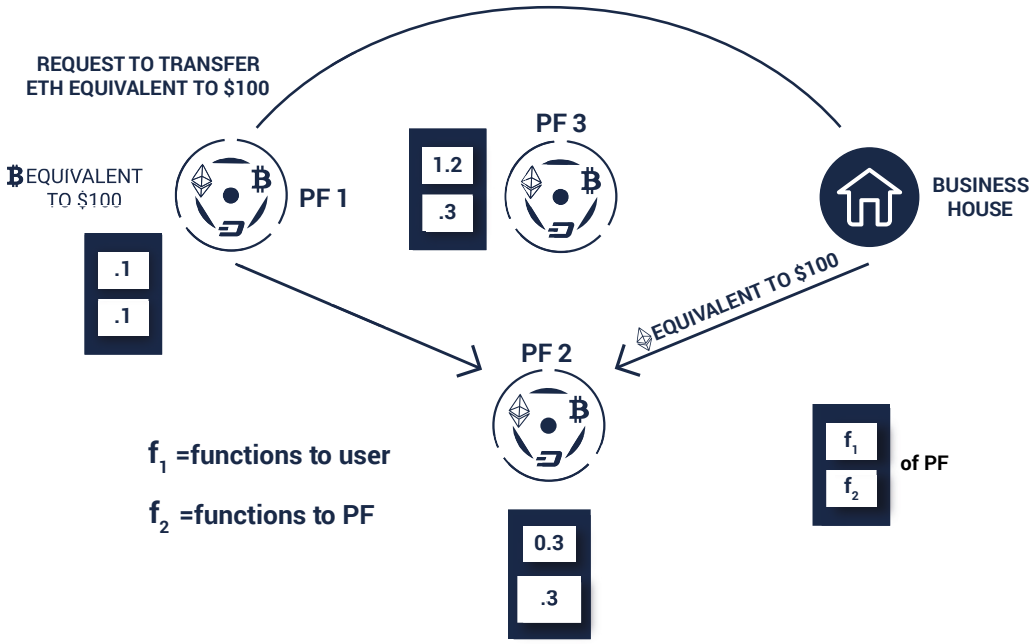


Figure(8.1):Transaction flow in the given use case

8.2 Pooling facilitator to pooling facilitator

Given below is a use case assuming one of the pooling facilitators being an analyst company running out of cryptocurrency and it still needs to trade.

The first pooling facilitator (PF1) raises a loan from the other pooling facilitator (PF2). A pooling facilitator (PF1) has the best f1 to give to a user for a transaction requiring ETH equivalent to $100 with BTC as input. However, PF1 does not have Ethereum to give to Business House. PF1 takes a loan of Ethereum equivalent to $100 from PF2, which has f2= .09%. Then it does the transaction of user at the defined f1 = 0.1%. Therefore, when a user requests to pay Ethereum to Business House, f1 (0.1%) is charged to user and f2 (0.09%) is the cost PF1 pays to PF2 (for this transaction f1 of PF1 and f2 of PF2 is called by the algorithm) thus PF1 making a profit of 0.01%. The transaction happens instantly with the decentralized liquidity pool and pooling facilitators are getting a benefit from it.



Figure(8.2): Transaction involving a loan from another pooling facilitator

8.3 User to user

Example use case: Assume Alice and Bob are two friends living in two different locations. Alice wants to send BTC equivalent of $100 to Bob. Bob has an Ethereum wallet and can receive only Ethereum. Alice sends a request through Quickx Platform to send BTC equivalent to $100 to Bob's wallet. Quickx through decentralized liquidity pool transfers Ethereum equivalent of $100 to Bob's wallet.

Figure(8.3): User to user transaction

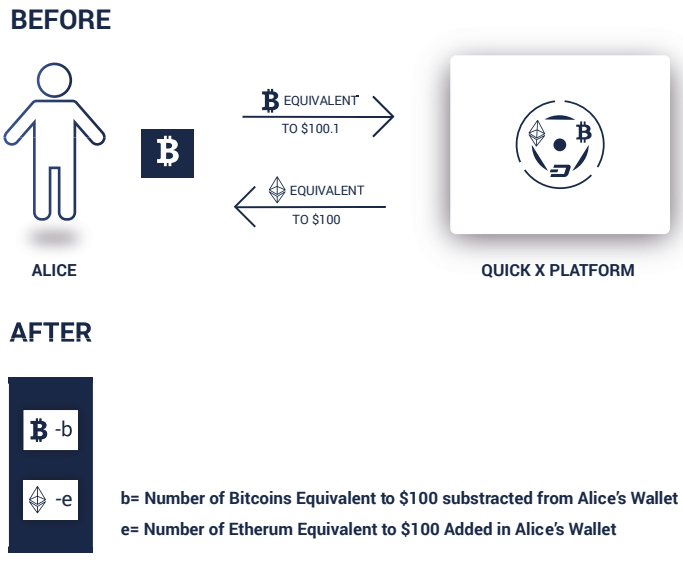
8.4 Business to business

Example use case: Business House A buys a product from Business House B for $100 and therefore Business House A is required to make a payment of $100 to Business House B for the product purchased. Business House A has BTC in its wallet while Business House B accepts payments in ETH (Ethereum). Business House A can easily send a request to add ETH equivalent of $100 to Business House B's wallet through Quickx platform. Quickx simply transfers ETH equivalent of $100 to Business House B's wallet and deducts BTC equivalent to $100 from Business house A's wallet. The cost involved in this case is much lower than the cost of traditional transfer methods such as bank wire.

Figure(8.4): Business to business transaction

8.5 Platform as an exchange

Example use case: Alice has some money in Bitcoin and she wants to convert it to ETH for some reason. Instead of going to different exchanges and comparing rates while fulfilling identity requirements for every exchange, Alice makes a request on Quickx to swap BTC to ETH in her wallet. Quickx takes BTC and adds ETH to Alice's wallet. It is similar to a regular payment but instead of payment being made to the business house Alice is paying to himself.



Figure(8.5): Platform as an exchange

9.0 Conclusion

Quickx connects the isolated blockchains and adds a means of communication among each other, a solution to a long felt need for the crypto world. On the other hand, Quickx makes the cryptocurrencies suitable for the masses in day-to-day transactions. With these features, Quickx is expected to go viral and disrupt the financial markets and the payment platforms just like how the means of communication were disrupted by the introduction of the internet.

10.0 Acknowledgements

Quickx takes this opportunity to thank the authors of the work referred to in this whitepaper and all other people who support our cause. Special thanks go to people behind Lightning Network[11] and the Raiden Network[12] whose research has provided useful insights for Quickx.

11.0 References

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