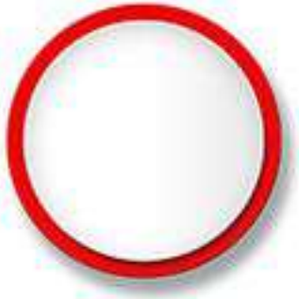
RanchiMall

Distributed Exchange: An extension of Local Bitcoins

Technology



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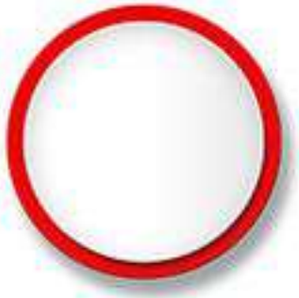
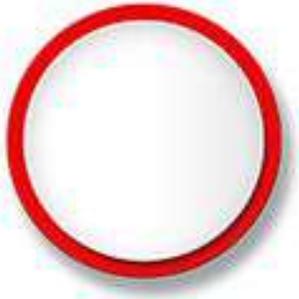
When we talk about Decentralized exchanges, there are two kinds of philosophies currently:

1. Fiat to Cryto Decentralized exchanges
2. Crypto to Crypto Decentralized exchanges



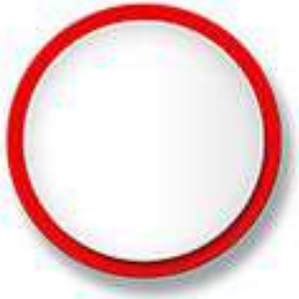
LocalBitcoins, Paxful and Bisq are examples of peer-to-peer Fiat to crypto exchanges.

They match Bitcoin holders and Fiat holders directly.



For instance Uniswap Smart contract is inter-Ethereum tokens based exchange. Anyone can automatically list an Ethereum based token, and trading can start almost instantly so long as enough supporters are available.

Crypto to crypto exchanges are very easy to execute compared to fiat-to-crypto exchanges, and we will focus on challenges in Fiat-to-Crypto exchange, and RanchiMall solution to those.

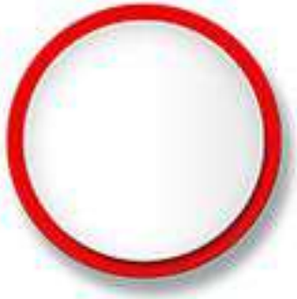


Fiat-to-Crypto exchanges match each pair of users individually. So every user has to trust the counter-party individually one at a time.

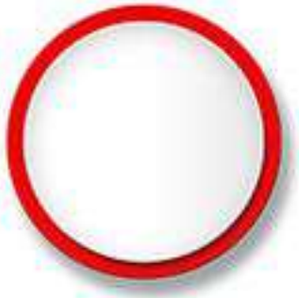
This puts such exchanges at a major disadvantage compared to centralized exchanges where the user needs to trust just the centralized exchange (not the users operating in exchange).

Also because of lack of centralization in decentralized fiat-to-crypto exchanges, a large trader may not get any counterparty to conduct the trade.

That's the reason the best prices buyer and sellers get on decentralized exchanges are often at discount to the prices available at centralized exchanges.

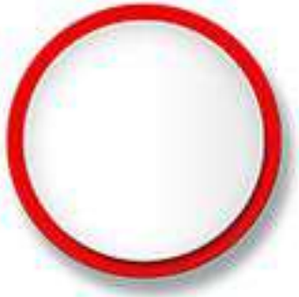


Unless the trusting other users as a single group, and large trade liquidity problem is solved, decentralized Fiat-to-Crypto exchanges will not emerge as a viable alternative to centralized exchanges.



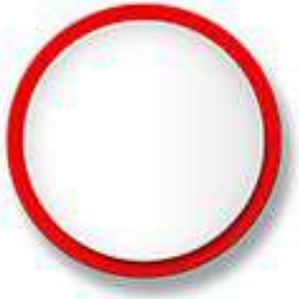
We can try a couple of new ideas to attack those problems.

The first idea is all participants should trust the rules written in a blockchain rather than trusting an individual on the other side of the trade.



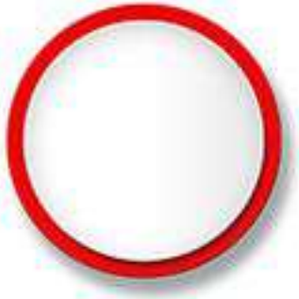
Another idea is standardization must be introduced in trading.

Buyers and sellers must trade in standard fiat amounts, so that they can come together around those limited price trading options.



In a peer-to-peer trading platform, a buyer should see all other sellers as a single entity rather than dealing with them individually.

We could say a buyer should buy from a cloud of sellers.
Similarly a seller should buy from a cloud of buyers.



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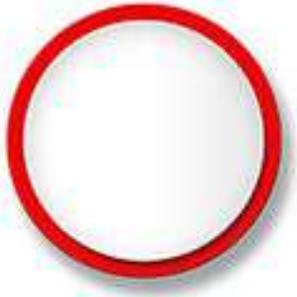
We need to get just not buyers and sellers of Crypto to see the system as a cloud, we got to do the same for people intending to deposit and withdraw cash.

A depositor should not be depositing cash to another peer, rather, he should be depositing to the cloud.
Similarly, a cash withdrawer should not be withdrawing cash from another peer, rather, he should be withdrawing from the cloud.



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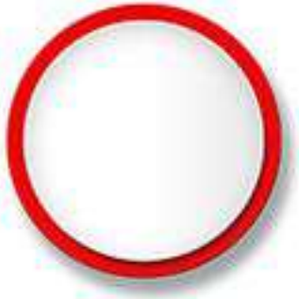
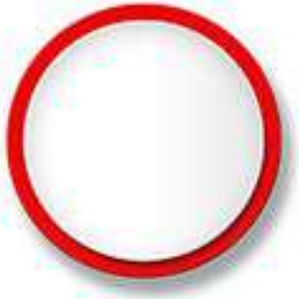
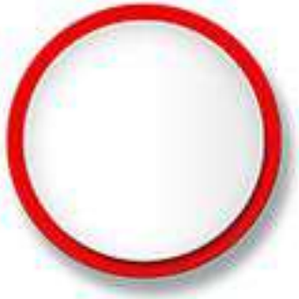
And finally, all of these needs to be done itgrough rules written in blockchain, without needing one entity to manage it, or needing one bank account to handle all transactions.



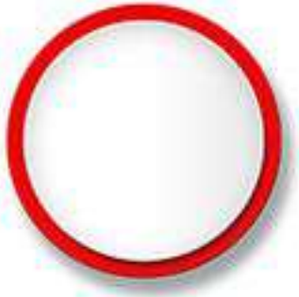
Need for a single bank account has been a weak point for centralized exchanges, as they are prone to arbitrary closures.



In simple words, the core problem for a practical decentralized exchange is how to eliminate need for a single bank account and eliminate need of a single team managing it while providing the trading and cash handling benefits of a centralized exchange.

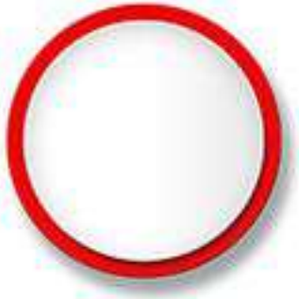


And on top, we would like the system achieve all of these objectives with participants just using their blockchain IDs to gain entry in the system.



It is very easy for any decentralized system to check valid transfer of Cryptos since the information is publicly available on blockchain.

The difficult part is the system to verify whether the cash transfer actually happened.

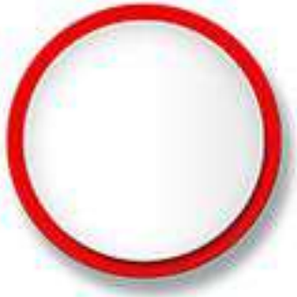


Some cash recipients could receive cash from the system, and claim they never received it.

Some cash senders could claim that they sent the cash to the system without actually sending it.

As a result of above two problems, it is not possible to transfer cash directly from one user to another user.

So we need to create an intermediate trust layer through which all cash depositors and cash withdrawers would interact.



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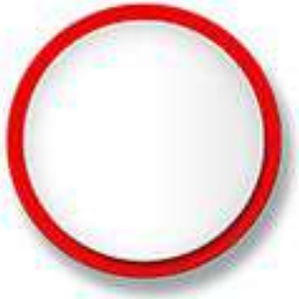
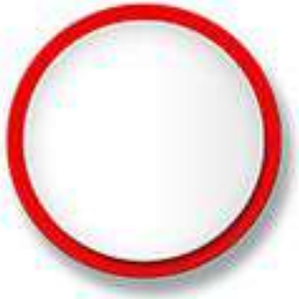


So we need to create an trustworthy cashier network with details of the transactions publicly available on the blockchain.

All cash depositors and cash withdrawers would interact with the cashier network with proof of transaction publicly available.



To summarize till now:

1. We need the Crypto traders to buy and sell not from each other individually, but through the cloud.

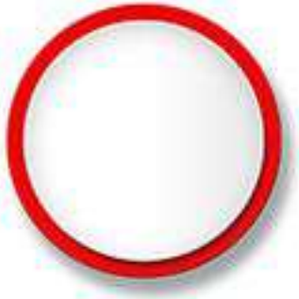
2. The amounts of trading should be standardized.

3. Every particpant should be able to access the system just from their blockchain ID.

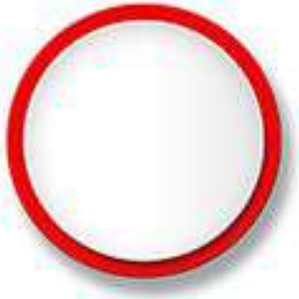
4. There should be no dependance on a single bank account or a single team.

5. An independent decentralized cashier network needs to be created that will guarantee proof of payments.

RanchiMall has built a solution called LocalBitcoinPlusPlus to address these issues in peer-to-peer Fiat to Crypto trading.



We are piloting the concept with FLO and Indian Rupee trading.

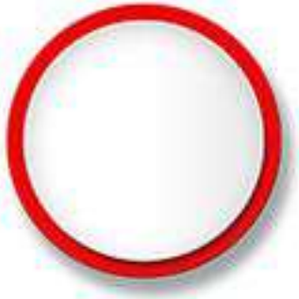


Every trader will log in the system using their FLO IDs.

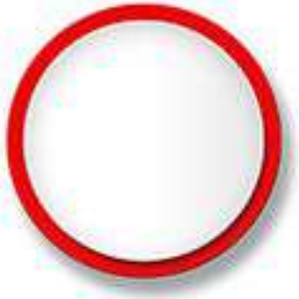
Then they start with depositing Indian Rupees.

The deposit is accepted by decentralized cashier network co-ordinated through FLO blockchain.

Some users can start wtih depositing FLO tokens.



And now the system matches Indian rupee depositors and FLO depositors who want to exchange.



The system gets the FLO price feeds directly through a FLO to INR data feed.

We then freeze the price for half an hour.

Users have to select standard Rupee amounts for trading.

Like there are standard amounts of Rs 5000, Rs 50000 and Rs 5 Lakhs.

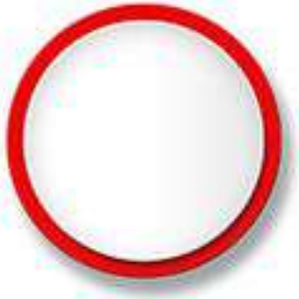
These standard trading amounts can be changed using FLO blockchain based commands.

Once the trade is done, users can withdraw their cash and crypto.

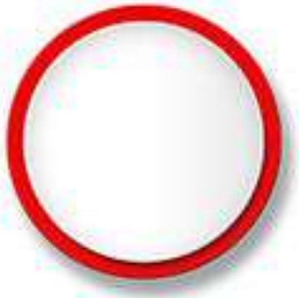
Cash is withdrawn through the decentralized cashier network.

Crypto is withdrawn directly through decentralized exchange software.

Since the exchange is decentralized,
all of them run a local HTML page.
We call these as nodes.



We also nominate some users running the same HTML page as supernode. There are extremely trusted entities that act as nodal points to facilitate user trades.



Which FLO IDs are allowed to be supernodes are instructed in the blockchain.

Every participant trusts the master address in FLO blockchain, and that provides the core trust in the system.

FLO blockchain master address also provides the list of FLO IDs that are permitted to be cashiers.

All supernodes will direct their users to one of these cashiers.

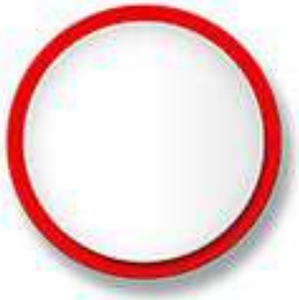
Supernodes are very critcal entities.
They act as crypto token holders & cash token holders.

They provide venue for buyers and sellers to converge.

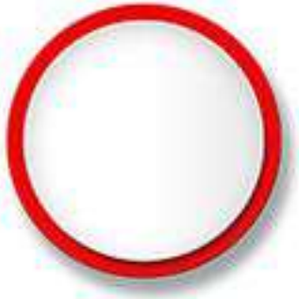
Supernodes displays the price feeds necessary for trading to occur.

Supernodes also act as backup for other supernodes in case they are not available.

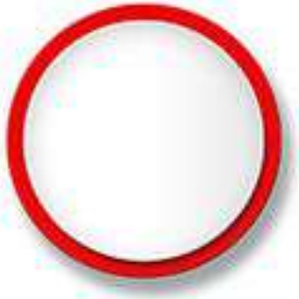
The entire system is driven just by a single HTML file that all users will run, and use that to create a peer-to-peer network.



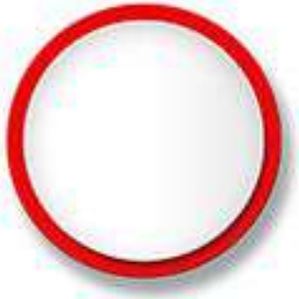
For Indian Rupee payment, the system accepts UPI as a payment mechanism as it is instantaneous.



To bring UPI payments into blockchain, the system uses blockchain based Rupee tokens.

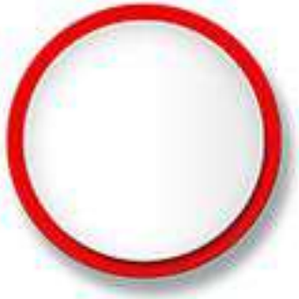


Rupee tokens provide proof of rupee transactions to the supernodes.



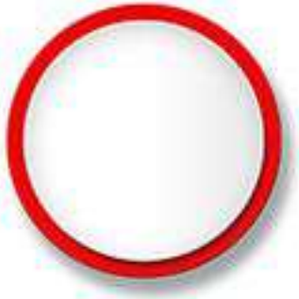
Rupee tokens is a means of communication between supernodes and cashiers.

Normal users will not be aware of rupee tokens, unless they want to dig through in blockchain and see what rupee transactions happened on their FLO IDs.



LocalBitcoinplusplus is the first instance where RanchiMall used blockchain based rules system to replace a centralized entity.

We have subsequently used this mechanism in lot of our decentralized offerings.



We also used distributed hash table based data clouds for the first time in LocalBitcoinplusplus. However this cloud was limited only for distributed exchange application.

Later we created an independent data cloud on the basis of the ideas originally developed in LocalBitcoinplusplus.

We are also created FLO ID based digital encryption and signature mechanism on LocalBitcoinplusplus. We use these mechanisms extensively in our products now.

LocalBitcoinpluplus was testing ground for many of original new FLO based technology components we evolved.

Thats why it will be a sentimental product for us.