

# Private Crypto Token Exchange System

B.P.Deepak Kumar\*, P.Tushar\*\*, Praveen Kumar Sahu\*\*\*, Nishad Rajesh\*\*\*\*, Vishesh Kumar Jain\*\*\*\*\*

\*(Department of computer Science and Engineering,CMR Technical Campus Hyderabad,Telangana, India.

Email: [deepakkumar.cse@cmrtc.ac.in](mailto:deepakkumar.cse@cmrtc.ac.in).)

\*\* ,\*\*\*,\*\*\*\*,\*\*\*\*\* (Department of computer Science and Engineering,CMR Technical Campus Hyderabad,Telangana, India.

Email: [tusharpulakala@gmail.com](mailto:tusharpulakala@gmail.com), [praveen257000@gmail.com](mailto:praveen257000@gmail.com), [rajeshnishad1120@gmail.com](mailto:rajeshnishad1120@gmail.com), [visheshatwork@gmail.com](mailto:visheshatwork@gmail.com))

\*\*\*\*\*

## Abstract:

A private crypto token exchange system which can replace the fiat currency exchange inside any organizational premises. The private tokens are generated and maintained based on the fundamental guidelines of Blockchain technology. It helps in solving the problem of transparency in the existing system. We will create a private network and create a fixed number of crypto tokens to be circulated in this private network. A private crypto wallet built using Flutter is used for all the transactions. This wallet is connected to the private network and ensures the tokens are not valid outside the private network.

*Keywords* — Blockchain, crypto Token, Wallet,Secure Transaction,Transparency,Flutter.

\*\*\*\*\*

## I. INTRODUCTION

Traditional fiat currency exchange inside organization premises is not entirely secured and transactions are not monitored, due to this many unauthorized transactions happen. Fiat currency does not allow secure payments through online transactions. Whenever a third person tries to make a transaction at organization grounds his transaction history is not monitored, and the record of the transaction is not stored in the database. Because of this many problems arise. Fig.1 shows the basic idea of the traditional system.

To overcome the problems of the traditional system we are providing a solution which makes the transaction easy and secure for the users inside the organization and the organization can monitor the flow of tokens which makes this a transparent system.

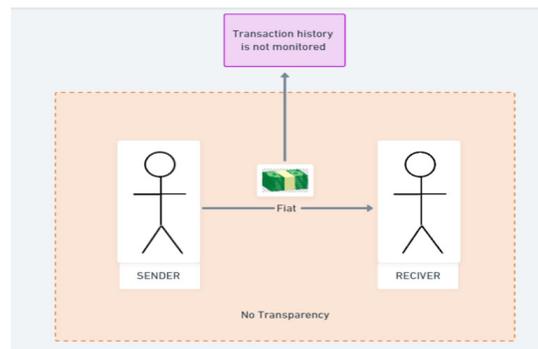


Fig.1 Traditional currency exchange system.

### 1.1 Disadvantages of traditional system

#### 1.1.1 No transparency in transactions

There is no transparency in the transactions which are taking place inside the organization. As a result the transactions are not fully auditable.

#### 1.1.2 Transaction history is not recorded

There is no record of the transactions maintained which are going on inside the organization, so it can be verified later.

1.1.2 Hyper inflation

Since the government can easily print new banknotes, the fiat currency likely suffers from inflation.

1.1.3 Government-bound value

Relying on government stability. The worst-case scenario is that the value of the fiat currency may completely collapse.

II. PROPOSED SYSTEM

To overcome the problems in the existing system we proposed a private crypto token exchange system. Through this the organization will be able to monitor all the transactions which are occurring in the organization. As this is based on the Blockchain technology it is very secure when compared to the existing ecosystem. Not only for the organization it is very easy for the users with easy to use Graphical User interface of the wallet.

In the proposed system we will have a Private network which will be managed by the corresponding organization, Crypto token which will be exchanged on the private network and a wallet which will be connected to the network and will be used to store the tokens.

2.1 System Architecture

In this system any transaction that happens will be done through the wallet of the user; it can be either to send a token or to receive a token on the network.

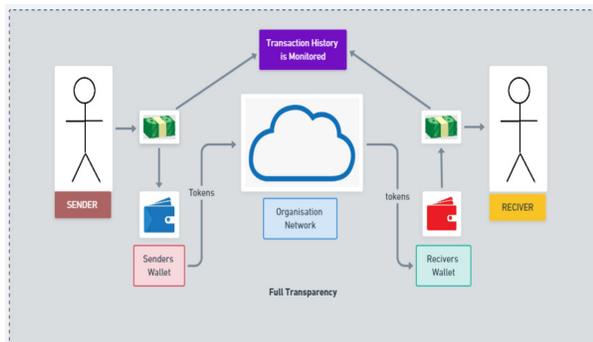


Fig.2 Architecture of the system

As shown in the Fig.2 all the associated users will have their separate wallets, which are connected to the network of the organization. To make a transaction on the network, first the sender will use his wallet application to initiate the transaction, then that transaction will be verified by the organization and then the receiver will get the token in his wallet.

All the transactions which are happening on the network can be viewed by the organization, which makes the transaction transparent. And the organization has the authority to decide who can be the part of the network and who has the access to view the transaction over the network.

III. SAMPLE OUTPUTS OF THE SYSTEM

Fig.3 shows the sample of the wallet UI which is a flutter based equity Application. It is an application for the users through which the users can send or receive the token. First the sender will initiate the transaction from his wallet and the organization will verify the transaction and after that the token will be credited to the receiver wallet.

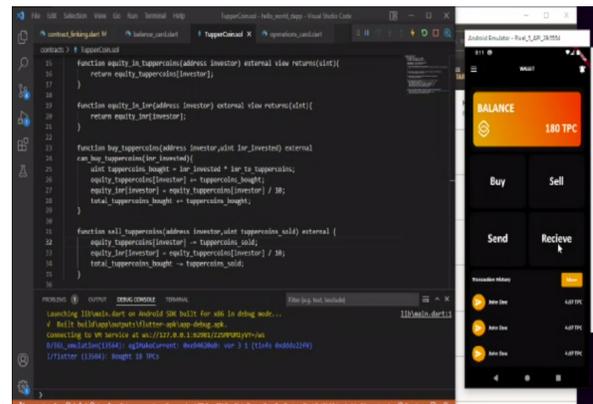


Fig.3 Wallet Interface

## V. REFERENCES

- [1] <https://ieeexplore.ieee.org/document/9127940>
- [2] <https://docs.soliditylang.org/en/v0.8.15/>
- [3] <https://merehead.com/blog/how-to-create-private-ethereum-blockchain/>

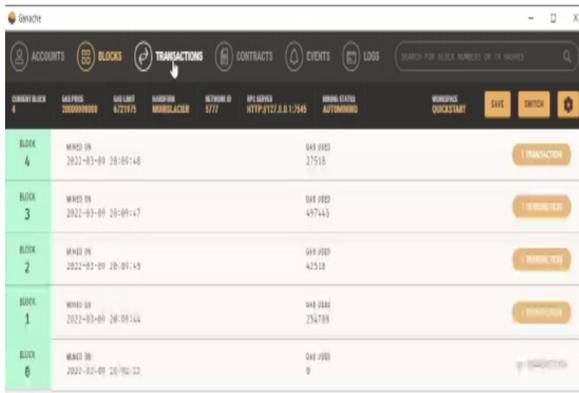


Fig.4 Sample transaction on the network

Fig.4 shows the sample transaction on the network and how the transaction of the users will be stored on the network.

## IV. CONCLUSIONS

This system can be implemented at organizational premises which will provide more security in transactions with much more transparency. Wallet makes this application more easy to use so the user will not find any difficulty in exchange of tokens over the network.