

# KYC USING BLOCKCHAIN

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#### Abstract

Our country follows a centralized banking system. Recently it started a Know Your Customer (KYC) process in which customer has to update his/her details. Other business and financial institution too use this process to keep information for validation and authentication of their users, employees etc. But the problem with this process is user has to do KYC every time whenever he goes to new institution for various purposes. Even in banks for different transactions he needs KYC. If he does transactions, it goes through various processes and mediators. To cut of this mediators and overhead of every time KYC we are proposing a system where user will do the one time KYC. Later user will be able to access this information anywhere anytime for different purposes at different places. Our system will be using world's leading technology Block-chain for this purpose which will give us distributed environment, transparency to the user, no third party interference thus increasing its security.

Keywords: KYC (Know Your Customer), Block-chain, Distributed Environment.

#### I. Introduction

The world is changing with ever growing technologies that is nearly making everything possible today. Nowadays people access everything they want in just few clicks. This is why we are making the access of user details easier and reusable by implementing Know Your Customer (KYC) by using world's leading technology Block-chain. This will replace the traditional centralized KYC in banking systems with distributed KYC which will be accessible in Financial, Business institutions and other such places for verification of user details and reduce the every time job of performing KYC. Block-chain is a technology where blocks are used to store records of details and these blocks are chained to each other. Bitcoin, Ethereum and other such projects are fruits of Block-chain. This technology gives assurance of security and transparency about the information as well as distributed environment used here will remove the problems due to centralized administration making it more easy and fast.

### **Objectives**

Design and development of blockchain based application in distributed environment.

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### Scope of the system

The user will be able to store his/her digital identity and use it anywhere whenever needed. This can be widely used for verification and authentication to prevent transaction frauds in future.

This system can be used in following scope/fields:

- [1] Smart Contracts: Digital rights, Wagers, Escrow.
- [2] Digital Currency: E-Commerce, Global Payments, Remittance, P to P Lending, Micro Finance.
- [3] Record Keeping: Healthcare, Title Record, Ownership, Intellectual Property, Voting.
- [4] Securities: Equity, Private Market.

### **DELIMITATION OF THE STUDY**

In a time in which people quickly change their jobs, locations, and business services, KYC processes have become a mandatory part of many banks, insurers, and other businesses operations. The current standard KYC process



satisfies functional requirements for the business and regulatory authorities, but becomes increasingly costly and complex as technology and regulations evolve.

There are number of limitations associated with the centralized KYC in banking such as Limited information capture, Lack of interoperability between banks' backend systems, etc.

The author R. Gandhi [1] said, during recent years, banking industry across the globe is closely observing the developments in one such disruptive innovation viz., the block-chain technology (BCT). BCT provides tamper-evident recording of the linked transaction history in a distributed network, and has the potential to disrupt the financial business applications. Sound theoretical underpinnings of BCT such as fault-tolerant distributed computing and consensus have been studied for the past two decades. The nature of BCT addresses risks and inefficiencies in multi-party systems, and that is where its benefits will be most widely received.

Chris Huls of Rabobank [2] proposed the use case that "KYC statements can be stored on the block chain." Once a bank has KYC'd a new customer they can then put that statement, including a summary of the KYC documents, on a block-chain which can then be used by other banks and other accredited organizations (such as insurers, car rental firms, loan providers etc.) without the need to ask the customer to start the KYC process all over again.

Jose Parra-Moyano and Omri Ross [3] proposed a system that ensures the core KYC to be done once only

by the first institution with which a customer intends to work, but its result can be used by as many financial institutions as required by the customer. This specific setting shows how, for a customer that works with k financial institutions, the exchange of documents and core KYC verification need only be undertaken once and not k times as now.

Konstantinos Christidis and Michael Devetsikiotis [4] have studied Block-chain and researched how with the help of Internet of Things it can transform the way of working of distributed applications. They also used in Banks, Corporate offices, Income Tax Authorities noticed an issue of transactional privacy to the expected value of the digitized assets traded on the network.

The Impact [5] and Potential of Block-chain on the Securities Transaction Lifecycle states the research that while the use of Block-chain to validate operational data in mutual distributed ledger technology can yield substantial reductions in both cost and risk, the concept of data sharing is itself far from new. In order to achieve the benefits, mutual distributed ledgers will require board level buy-in to a substantial commitment of time and resource, and active regulatory support for process reform, with relatively little short term payoff.

#### Findings

Earlier systems were manual and time consuming. Our proposed system is automated, less time and immutable.

## EDUCATIONAL IMPLICATIONS

In the current traditional system, we face many problems as laid down below such as,

- Traditional system is manual.
- Repetitive work.
- Document based work.

### **DESIGN OF THE STUDY**

Our module needs a private block-chain to deploy a smart contract which consist of set of rules for transactions.

Every module is written in different programming languages.

Solidity for Smart Contract.

Web 3 for frontend design.

Node JS is used for designing Block-chain.



All the modules are integrated to form a DAPP. The DAPP is then deployed on Blockchain which are later accessed by other institutions, banks, etc.

Every transactions run on gas which act as a fuel. More the transactions, more the fuel used.



We have successfully completed project documentation and also learned through existing system and literature review, our system KYC implemented in block-chain as centralized KYC has lot of problems. Block-chained KYC has become a blessing. Not just this much but it assures fast processing, security, no third party need and transparency making it more easy and useful to user. The combination of Block-chain and KYC is going to numerous benefits to humans and information system.

### References

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