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A REVIEW ON BLOCKCHAIN BASED CHARITIES

Anjali Ghutke[1], Snehal Shende[2], Vaibhav Ghugase[3],Samyak Meshram[4]

Department of Computer Science and Engineering,
JD College of Engineering and Management Nagpur - 441501, DBATU Autonomous,
Lonere, Maharashtra, India.
(Professor Rahul Bambodkar, Department of CSE, JDCOEM, Nagpur, 441501)

Abstract - *The charity organizations lack the transparency that's why donors distrust how donated money is spent. Blockchain technology is something we've been hearing about a lot these days. That gained popularity with Bitcoin, and soon seeped into mainstream business applications. This Blockchain-based system will make all the transaction processes Transparent to build trust between Donors and charitable foundations.*

***Key Words*: Blockchain, Charitable Foundations, Transparency, Tracking Donation.**

1. INTRODUCTION

The proposed system is an Ethereum-based blockchain project aimed at ensuring complete transparency in charity transactions along with other technologies to design a trusted framework which would enable charity donations to be as accountable, trustworthy, and transparent. The study examines the possibility of integrating blockchain technology into current organisations to facilitate the efficient transfer of charitable donations from donors to the actual indigent individuals utilising a reliable Ethereum-based Blockchain oriented platform. An objective of this Blockchain based charity management system is to Increase the transparency of charitable foundations by creating a common platform based on blockchain technology that will provide transparent, secure and trustful platform for charity donations by minimizing the frauds and middle-party interference between the transactions.

Figure 1: Blockchain and Trust

Charities are non-profitable organizations established worldwide to profit societies. Generous donors primarily fund them with no direct economic impact on the organizations. Eventually, small organizations like student unions also donate some money to charities for a specific purpose. Thus, charities have the responsibility to distribute the money to the beneficiaries. According to the research of the National Research University Higher School of Economics, 57% of people make donations. A donor has the right to demand a report on the expenditure of funds, 30 % of donors follow the path of their donations.

2. Blockchain Technology

As the basic technology of Bitcoin, blockchain is decentralized, non- tamper able, anonymous and traceable, that has great potential in transforming traditional industries. Blockchain provides the list of records, called as blocks in the form of hash values that are securely linked to each other using cryptography. Each block contains a cryptographic hash of the previous block, a timestamp, and transaction data it is generally represented as a Merkle tree, where data nodes are represented by leaves. The timestamp proves the transaction timing when data is inserted. The block contains information about the previous block and its original block, they form a chain, with each additional block reinforcing the ones before it. The proof of work is validating the transaction. All the transactions within the new block are then validated and therefore the new block is then added to the blockchain. Hence, blockchain is resistant to modification of their data because once recorded, the data in any given block cannot be altered retroactively without altering all subsequent blocks. The process of verifying the transactions in the block to be added, organizing these transactions in chronological order in the block, and announcing the newly mined block to the entire network doesn't take much energy and time.

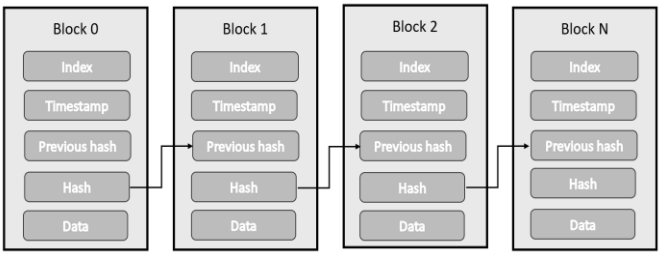

Figure 2: Functional Working of Blockchain

3. LITERATURE REVIEW

There are many charity fundraising systems projected to date to produce platforms for secure and transparent transactions in the charity sector. Here, we investigate the prevailing proposal for charity fundraising in several fields and identify the research gaps.

[1] Shweta Jain; Rahul Simha [2018] present a distributed ledger application for the world of citizen philanthropy and social entrepreneurship, with stakeholder incentives designed to increase social good through accountability, transparency, and flexibility.

[2] Irma Latif Atul Laily; Oman Kamrudin; Suci Fadhilah; Ade Azurat [2018] Transaction Systems are token based, and these include a new type of security-based hashing algorithm along with user-friendliness. Developers use ready-made tools - blockchain platforms and do not create a blockchain from scratch. Numerous platforms, including Ethereum, EOS, Waves, Tron, Hyperledger Fabric, Corda, Exonum, and others, can be used to develop blockchain-based projects. The creator of the Ethereum platform, Vitalik Buterin, first brought up Ethereum. It acts as a platform for the development of non-Bitcoin applications. Compared to the traditional Bitcoin design, Ethereum offers several advantages. It improves the Blockchain structure and adds smart contracts to the mix. A smart contract has executable code that seeks to put rules into practice under certain restrictions. There were three primary components to it.

[3] Hai-Ying YU; Pei-wu DONG; Tao MA Yang Qilin realized the core business system of charity fund management through LAMP (Linux, Apache, MySQL, PHP/Perl/Python)architecture, which integrated the administration of charity foundation data and the publication of charity information [2018] explains model theorizes trust as a function of the structural quality of information and the expertise of the information source. When creating a cryptocurrency wallet, a public address and a personal key are generated.

[4] Shang Gao, Daniel Macrinici, and Cristian Cartofeanu. [2018] Solidity is a high-level, object-oriented language that can be used to construct smart contracts. The behavior of accounts in the Ethereum state is controlled by programs referred to as smart contracts. Curly brackets speak a solid language. It is intended to target the Ethereum Virtual Machine and is influenced by C++, Python, and JavaScript (EVM). It has to do with the programmability of smart contracts, as well as the security, privacy, and scalability of blockchain.

[5] Aiste Rugeviciute and Afshin Mehrpouya [2019] It relies on reports and discussion papers produced by donor organizations and on case studies of two start-ups focused on introducing Blockchain into development aid management. It is a Study of the Barriers and Enablers for Blockchain's Adoption by Development Aid Organizations

[6] Abin Sojan, Akruty Bang, Amal Shaji, Er. Anna Ann Alexander, Feno Sony [2021] By minimizing body costs through automation, providing additional responsibility through traceable giving milestones, and permitting donors to see additional clearly wherever their fund's area unit going, blockchain might facilitate restore a number of the lost believability to charities that prove warrant the public's trust.

[7] Ashutosh Ashish Khanolkar, Ashish Rajendra Gokhale, Amrish Sanjay Tembe, and Vinayak A. Bharadi [2020] explore how the blockchain can be leveraged in the philanthropic sector, through charitable donation services via a web-based donor platform.

[8] Adalberto Rangone & Luca Busolli [2021] provides countless insights that can allow us to investigate the evolutionary trends and the quality of the flows of donations to non-profit entities over time and from numerous perspectives

4. CONCLUSION

We looked at how blockchain technology and philanthropy can be combined to build trust between contributors and users. The proposed method will increase process transparency overall. Where Government can see donations for the proposal. NGO users and retailer users can see donations received. This system helps resolve the trust issues, as people already know what they are paying for and the system will help to solve the problem. This system would facilitate an individual to contribute independently to society using their time and abilities apart from just money, and ultimately this will lead to an increase in hands towards society. A complete charity system based on blockchain in the future is the next step for us.

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