

Government Fund Allocation and Tracking System over Blockchain

Bhagwati Galande¹, Kartik Dharashive², Amey Satpute³, Saurya Singh⁴, Harsh Sonwane⁵

Guide, Department of Information Technology¹

Students, Department of Information Technology^{2,3,4,5}

Smt. Kashibai Navale Engineering, Pune, Maharashtra, India

Abstract: *The state government working involves a large number of trans- actions activities towards various operations throughout the state. This includes new actions, initiatives, projects, granting contracts, farmer schemes, and so on. One of the most challenging factors that top governments face is low- level corruption which at times is hard to follow and denies the state progress. As a result of the current system, tracking is very problematic and this provides needy people with a service that is sometimes difficult to track, which deprives them. In this case, we use blockchain which enables cryptography and transaction security at every stage while maintaining transparency so that every transaction is backed up with proof of its authenticity. Hence, we present a framework that uses blockchain innovation and a fullproof fund transfer system. Blockchain contains growing list of records called blocks. Crypto- graphically hashed data, a timestamp, and recent transactions are included in each block.*

Keywords: Blockchain, Transactions, Security, Tracking, Transparency, Encryption

I. INTRODUCTION

1.1 Detailed Problem Definition

A framework that uses blockchain innovation and a full-proof Government fund transfer system. The proposed system is used to track the funds granted to the state government as they go through the government process. It uses blockchain technology to safeguard transactions at each level while retaining transparency in every transaction and sealing every transaction with proof as the money goes forward. The system secures data using hashes to keep a block of transactions in a chain. It permits a entire proof, cozy, and true financial distribution and tracking mechanism, which contributes to the formation of an incorruptible government. In our system, there are 3 modules i.e., Admin (Government), distributor and User.

1.2 Justification

We can see that the user requests the funds from the admin (Government) then the request gets sent to the Government for approval. After that, the government views the request and then can approve or reject the request. We can see that a block having the stated information is propagated into the network. The transaction is demonstrated through the network's nodes (people in real existence) Following this affirmation, the block is put on the blockchain together with a timestamp. After that, the transaction could be enforced. All transactions submitted in this manner will be noted and made publicly available to everyone

1.3 Need for the New System

- Making the work of government fund allocation with reporting documentation is more convenient. Due to the fact that the data on donations will be aggregated in one place, it will allow us to prepare reports automatically.
- By developing a blockchain-based system, charitable foundations can be-come more transparent.
- To keep transparency and protection at every level.
- If you want to create a government method this is incorruptible
- To provide an immutable environment for funds monitoring

II. LITERATURE SURVEY

[1] Paper name: Blockchain for government fund tracking using Hyperledger Author: Apoorva Mohite, Ajay Acharya Description: This paper gives a description about a prototype which was developed using Hyperledger Composer. It then discusses the future development of this prototype and finally, concludes with the applicability of Blockchain. Paper [2]: Government Scheme and Funds Tracker using Blockchain Author: Abhishek Katore, Sanskar Choubey Description: It is also referred to as the Digital ledger, same as the ledger maintained by financial institutions for keeping the track of records. In similar fashion blockchain is essentially digital ledger which is maintained in a decentralized and distributed environment. Paper [3]: Government fund distribution and Tracking system using blockchain Technology Author: Sahilsiddharthjambhulkar, vishakhprashanratnaparkh Description: In this paper we propose a system to track funds allocated to the government as they travel through the government process at each stage using Key pair generation algorithm, Metadata file decryption and Data verification algorithms. This system uses blockchain technology to maintain the transparency security at every stage as the funds move ahead. This system allows us to maintain the crystal clear record with all users who are connected in the chain to transaction the data on a need to know basis. The system makes use of encryption to secure transactional data using hash values to maintain a block of transactions in a chain manner, which is maintained verified by every node involved to verify the transaction and save the data in a transparent form within the government. The system allows for a full proof, secure and authentic fund allocation and fund tracking system help to form an incorruptible government procedure 5 Paper [4]: Government Fund's Allocation and Tracking System Using Blockchain Technology Author: Umair Ansari¹, Siddhant Patodia², Zainab Mirza Description: Blockchain technology is revolutionary. It will make life simpler and safer by changing the way personal information is stored and how transactions for goods and services are made. By keeping this in mind, we have proposed a solution in blockchain technology that helps us generate a record of all the transactions such that each transaction is saved as a connected block. We have used technologies such as hashing, graph DB, platforms, etc. that have helped us develop a systematic approach to track all the records while considering security as a priority. Paper [5]: Government Fund Allocation and Tracking System using Blockchain Author: Rishita Gawade, Aditi Kale, Snehal Mane and Ashutosh Koli Description: In this full-proof, secure government fund allocation and tracking system, the allotted funds are tracked at each level until it reaches the beneficiaries. This proposed framework is added to assist the authorities to lessen corruption and offer transparency in all transactions because of the functions of blockchain-like immutability, proof of work, and security. It offers the right governance and transparency. It will maintain track of all transactions made

III. METHODOLOGY

The proposed system is used to track the funds granted to the state government as they go through the government process. It uses blockchain technology to safeguard transactions at each level while retaining transparency in every transaction and sealing every transaction with proof as the money goes forward. The system secures data using hashes to keep a block of transactions in a chain. It enables a complete proof, secure, and authentic financial distribution and tracking mechanism, which contributes to the formation of an incorruptible government. In our system, there are 2 modules i.e., Admin (Government), distributor and User. Admin (Government) Module: Government provides the requested funds to the user. User Module: In this system, the user will request the funds according to their needs and also, they can check their transaction history and wallet balance as well. The user requests the funds from the admin (Government) then the request gets sent to the Government for approval. After that, the government views the request and then can approve or reject the request. The transaction is validated by the network's nodes (people in real life). Following this confirmation, the block is put on the blockchain along with a timestamp. After that, the transaction could be enforced. All transactions submitted in this manner will be noted and made publicly available to everyone.

IV. CONCLUSION

In this full-proof, secure government fund allocation and tracking system, the allotted funds are tracked at each level until it reaches the beneficiaries. This proposed framework is added to assist the authorities to lessen corruption and offer transparency in all transactions because of the functions of blockchain like immutability, proof of work, and security. It offers the right governance and transparency. It will maintain track of all transactions made. As blockchain

technology is used the transactions as soon as made cannot be changed and if there's any try of tempering, we can get to recognize approximately that easily. There might be no requirement for the outsider and the exchanges might be regulated all the extra sturdily and transparently. In addition to preventing human errors and delays, it will help eliminate human errors. This framework will make the general public authority framework activities appreciably extra stable and productive. We can nevertheless upload customary schemes from everywhere in the world for fundraising to take it to the subsequent stage for big price range required the humans in need.

REFERENCES

- [1]. M. Moser, R. Bohme noD. Breuker, "An investigation into fraudulent tools in the Bitcoin ecosystem," 2013 APWG at Crime Researchers Summit, SanFrancisco, CA, 2013, pages 1-14, doi: 10.1109 / CRS. 2013.6805780.
- [2]. Mohanta, Bhabendu Jena, Debasish and Panda, Soumyashree and Sob-hanayak, Srichandan. (2019). Blockchain Technology: A Survey on Applica-tions and Security Privacy Challenges. 8. 100107. 10.1016/j.iot.2019.100107.
- [3]. D. A. Wijaya, "Extending asset management system functionality in bit- coin platform," 2016 International Conference on Computer, Control, Infor- matics and its Applications (IC3INA), Tangerang, 2016, pp. 97-101, doi: 10.1109/IC3INA.2016.7863031.
- [4]. G. Hurlburt, "Could Blockchain Outlive Bitcoin ?," in IT Professional, vol.18, no. 2, pages 1216, Mar.-Apr. 2016, i-doi: 10.1109 / MITP.2016.21.
- [5]. Lei Xu, Nolan Shah, Lin Chen, Nour Diallo, Zhimin Gao, Yang Lu, and Weidong Shi. 2017. Enabling the Sharing Economy: Privacy Respecting Contract based on Public Blockchain. In Proceedings of the ACM Workshop on Blockchain, Cryptocurrencies and Contracts (BCC '17). Association for Computing Machinery, New York, NY, USA, 15–21. DOI:<https://doi.org/10.1145/3055518.30555>