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Patent Search

Invention Title	BLOCKCHAIN-BASED SECURE VOTING SYSTEM: DESIGN AND IMPLEMENTATION
Publication Number	21/2024
Publication Date	24/05/2024
Publication Type	INA
Application Number	202421035082
Application Filing Date	03/05/2024
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	COMMUNICATION
Classification (IPC)	H04L0009320000, H04L0009000000, G07C0013000000, H04L0009080000, G06F0021640000

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Abstract:

The blockchain-based secure voting system described herein presents a revolutionary approach to conducting elections, leveraging blockchain technology to ensure integrity, transparency, and security. Through cryptographic techniques and decentralized consensus mechanisms, the system guarantees anonymity for voters while providing verifiability and auditability for election authorities. With enhanced security measures and accessibility features, including multi-factor authentication, homomorphic encryption, and decentralized identity management, the system aims to address the shortcomings of traditional electoral systems while promoting inclusivity and trust in democratic processes. Overall, the blockchain-based secure voting system represents a significant advancement in electoral technology, offering a secure, transparent, and accessible platform for fair and reliable elections.

Complete Specification

Description: The present invention pertains to the field of electoral systems and voting technologies. Specifically, it relates to the design and implementation of a secure and transparent voting system using blockchain technology.

BACKGROUND OF THE INVENTION

The following description of related art is intended to provide background information pertaining to the field of the disclosure. This section may include certain aspects of the art that may be related to various features of the present disclosure. However, it should be appreciated that this section be used only to enhance the understanding of the reader with respect to the present disclosure, and not as admissions of prior art.

Traditional electoral systems often face challenges related to transparency, security, and trustworthiness. Paper-based voting methods are susceptible to various forms of fraud, such as ballot tampering and voter impersonation. Electronic voting systems, while offering convenience, have raised concerns about cybersecurity vulnerabilities and the potential for manipulation.

Blockchain technology, originally developed as the underlying technology for cryptocurrencies like Bitcoin, has emerged as a promising solution for addressing these challenges in the context of voting systems. Blockchain provides a decentralized and immutable ledger where transactions (in this case, votes) are recorded securely and transparently. Each transaction is cryptographically linked to the previous one, making it virtually impossible to alter or erase without consensus from the network participants.

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Page last updated on: 26/06/2019