BSEVOTING: A Conceptual Framework to Develop Electronic Voting System using Sidechain(Conference Paper)

- Alvi, S.T.,
- Islam, L.,
- Rashme, T.Y.,
- Uddin, M.N.
- View Correspondence (jump link)
- [a]Jagannath University, Dept Of Computer Science And Engineering, Dhaka, Bangladesh
- [b]Dept Of Computer Science And Engineering, Daffodil International University, Dhaka, Bangladesh
- [c]Dept Of Computer Science And Engineering, Uttara University, Dhaka, Bangladesh

Abstract

In a democratic society, a citizen's ability to vote is regarded as one of the most significant legal rights he or she may exercise. For e-voting methods, blockchain presents new possibilities to properly meet transparency, integrity, anonymity and many other security properties. As the need for blockchains keeps rising, demand for bigger, more scalable, more adaptable, and more cost-effective multipurpose chain is also high. Conventional blockchains are incapable of meeting all of these demands. To solve the problems (mostly performance) associated with main blockchains, sidechain technology has recently evolved as a separate chain connected to the main chain that runs in parallel with transactions. Our proposed method is designed to operate on a public blockchain, but we separate the storage of voting information of each candidate using a sidechain to offer a cost-effective blockchain-based voting mechanism by ensuring the security properties such as anonymity, integrity, privacy, security, fairness, receipt freeness and so many. In future, we will broadly discuss and implement this voting system.

Author keywords

BlockchainDecentralizationEthereumSidechainSmart ContractsVoting

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