IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.301
Volume 3, Issue 9, May 2023

Decentralised Voting System Using Blockchain

Prof. Pawar Rahul[1], Ms. Avhad Suvarna[2], Ms. Parale Bhakti[3] ,
Mr. Ganjave Rushikesh[4], Mr. Nerkar Nikhil[5]
Department of Information Technology [1,2,3,4,5]
Amrutvahini College of Engineering, Sangamner, Maharashtra, India

Abstract: *Voting is a fundamental right in any democracy granting citizens the power to choose future leaders. It allows individuals to express their opinions and make their voices heard in their community. This empowers the people to have a say in decisions that impact their lives and the future of their country. Without the right to vote, citizens would have no control over who represents them or what policies are implemented. Thus, voting is an essential aspect of democracy, providing citizens with a vital tool to impact the future of their country and shape their society. Online voting systems provide a tool to raise awareness about the importance of citizenship. These software platforms offer a secure way to conduct voting and elections, making the process more accessible and convenient. This can encourage more people to participate in the democratic process, which is essential for a functioning society. By using online voting systems, citizens can realize the power they have to affect change and make a difference in their communities. Overall, online voting systems have the potential to strengthen democracy by promoting civic engagement and increasing participation. Digital platforms provide a convenient and secure way to cast your vote without using paper or gathering in person. These platforms ensure the integrity of your vote by preventing voters from casting multiple ballots. This technology simplifies voting processes, eliminates the need for in-person voting and is an effective way to democratise voting. Through digital platforms, people can exercise their right to vote conveniently, and from anywhere, while contributing to a more efficient and secure electoral process. Electronic voting, or e-voting, offers advantages over traditional paper-based systems. E-voting is efficient, reduces errors, and increases voter participation by enabling voting from anywhere with an internet connection. Blockchain is an advanced and decentralised technology with robust cryptographic foundations that has the potential to enhance several industries. Its distributed nature addresses issues related to data security and privacy, making it a reliable solution for secure and transparent transactions. With its capability of creating tamper-proof and immutable records, blockchain can be instrumental in improving several fields such as supply chain management, healthcare, banking and finance, and more. The technology is still in its nascent stage but holds great promise for creating a trust-less and decentralised ecosystem. Blockchain technology could provide a secure and efficient solution for e-voting. Our proposed system would prevent fraud and simplify the voting process through the use of lockchain.*

Keywords: e-Voting, Block chain, Decentralised, Authentication, Security

REFERENCES

[1]. B. Shahzad and J. Crowcroft, “Trustworthy electronic voting using ad-justedblockchain technology,” IEEE Access, vol. 7, pp. 24477–24488, 2019, doi: 10.1109/ACCESS.2019.2895670.
[2]. F. P. Hj´almarsson, G. K. Hrei`oarsson, M. Hamdaqa, and G. Hj´almt´ysson, “Blockchain-based EVoting system,” in Proc. IEEE 11th Int. Conf. Cloud Comput. (CLOUD), Jul. 2018, pp. 983–986.
[3]. D. Chaum, A. Essex, R. Carback, J. Clark, S. Popoveniuc, A. Sherman, and P. Vora, “E-voting 40 scantegrity: End-to-end voterverifiable optical-scan voting,” IEEE Secur. Privacy, vol. 6, no. 3, pp. 40–46, May 2008. Accessed: Feb. 14, 2021. [Online]. Available: https://www.computer.org/security/
[4]. T. Dimitriou, “Efficient, coercion-free and universally verifiable blockchain-based voting,” Comput. Netw., vol. 174, Jun. 2020, Art. no. 107234, doi:10.1016/j.comnet.2020.107234.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.301
Volume 3, Issue 9, May 2023

[5]. S. S. Hossain, S. A. Arani, M. T. Rahman, T. Bhuiyan, D. Alam, and M. Zaman, "E-voting system using blockchain technology," in Proc. 2nd Int. Conf. Blockchain Technol. Appl., Dec. 2019, pp. 113–117, doi: 10.1145/3376044.3376062

[6]. A. Barnes, C. Brake, and T. Perry. Digital Voting with the use of Blockchain Technology Team Plymouth Pioneers-Plymouth University. Ac-cessed: Feb. 14, 2022. [Online].

[7]. S. Shah, Q. Kanchwala, and H. Mi. (2016). Block Chain Voting System.Economist. [Online].Available: https://www.economist.com/ sites/default/files/northeastern.pdf

[8]. D. Chaum, A. Essex, R.Carback, J. Clark, S. Popoveniuc, A. Sherman, and P. Vora, "E-voting 40 scantegrity: End-to-end voter verifiable optical-scan voting," IEEE Secur. Privacy, vol. 6, no. 3, pp. 40–46, May 2008.Accessed: Feb. 14, 2021

[9]. M. Pawlak, A. Poniszewska-Mara´nda, and N. Kryvinska, "Towards the intelligent agents for blockchain e-voting system"