DESIGN OF A SECURE BLOCK CHAIN BASED PRIVACY PRESERVING ELECTRONIC VOTING SYSTEM

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ABSTRACT

Block chain is an emerging technology, which offering numerous opportunities to develop decentralized and distributed digital services by ensuring privacy and transparency. It has mainly concentrating on the legal and technical issues rather developing advanced digitized services. In this article, we make use of the smart contracts with Blockchain to design the secure electronic voting system. The aspect of privacy, authenticity, transparency and security is a threat and challenging in the traditional voting systems. In general, mostly elections is based on the centralized infrastructure consists of central entity that maintains over all the voting process. The major pitfalls in the existing E-voting infrastructure are with an entity that has full influence over the system, it is feasible to modify with databases of considerable opportunities. In addition, the paper based voting systems are assisted by Electronic Voting Machines (EVMs) have multiple vulnerabilities, which can be caused to election rigging, fraudulent intent of the third party entities and government. The decentralized public Blockchain technology might offers a scalable solution to current voting systems by providing trust based and fraud proof digital voting.

KEYWORDS: *Blockchain, Ethereum, Smart Contracts, E-Voting, Transparency.*