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Topic : BLOCKCHAIN TECHNOLOGY & BLOCKCHAIN ENABLED E-VOTING

Reference Paper/Papers:

1. Blockchain: Future of Financial and Cyber Security, Sachchidanand Singh IBM Software Lab Pune, India - 411 057 Email: sach.success@gmail.com, Nirmala Sing, Tech Mahindra, Pune, India Email: nirmala.online@gmail.com

2. Blockchain-Enabled E-Voting, Nir Kshetri, University of North Carolina at Greensboro. nbkshetr@uncg.edu and Jeffrey Voas, co-founder of Cigital, IEEE Fellow. j.voas@ieee.org.

ABSTRACT

Blockchain is a decentralized ledger used to securely exchange digital currency, perform deals and transactions. Each member of the network has access to the latest copy of encrypted ledger so that they can validate a new transaction. Blockchain ledger is a collection of all Bitcoin transactions executed in the past. Basically, it's a distributed database which maintains a continuously growing tamper proof data structure blocks which holds batches of individual transactions.

Blockchain-enabled e-voting (BEV) could reduce voter fraud and increase voter access. Eligible voters cast a ballot anonymously using a computer or smartphone. BEV uses an encrypted key and tamper-proof personal IDs. This article highlights some BEV implementations and the approach's potential benefits and challenges. The idea in blockchain-enabled e-voting (BEV) is simple. To use a digital-currency analogy, BEV issues each voter a "wallet" containing a user credential. Each voter gets a single "coin" representing one opportunity to vote. Casting a vote transfers the voter's coin to a candidate's wallet. A voter can spend his or her coin only once. However, voters can change their vote before a preset deadline. Here, we argue that blockchains might address two of the most prevalent concerns in voting today: voter access and voter fraud.