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Topic : Blockchain Enabled E-Voting

Reference Paper/Papers:

1. 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. In my project titled blockchain enabled E-voting, (BEV), blockchain technology in employed to make an E-voting system. 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.

Ethereum can be used to implement this blockchain. The smart contract for carrying out the entire voting procedures like casting, counting etc will be written using solidity. The consensus mechanism to be used is Proof-of-Work(PoW) and it needn't be written exclusively for this project as there is no special consensus required for verifying the transactions involved ie; voting.

The idea is to implement a web based front end and to use blockchain as the cryptographically secured back end, to carry out election process.