Design of an electronic voting system using A blockchain network

Carlos A. Ribon, Javier M. Leon, Oscar F. Corredor, Hermes E. Castellanos, Fredy A. Sanz, Paola Ariza-Colpas, Vanesa Landero, Carlos Collazos-Morales

Abstract

Design of a scalable electronic voting system, which, based on a generic model designed for this application called voting cell, guarantees the integrity of the information through the use of a private network Blockchain. For the validation of the system, the implementation of a cell was carried out, for which fifty voters and three voting options were enabled. The stored data was intentionally modified to corroborate the error correction method used by the block chain networks and thus ensure the integrity of the voting system results.

Keywords: Blockchain, Transaction, Hash, Database entity and atributes, Cryptographic algorithm