

Abstract

Blockchain is a new revolutionary technology that was essentially developed to eliminate centralized authority on the internet. Since its inception, it has expanded rapidly, and new decentralized applications and currencies have been developed. Its security makes transactions immutable and more trustworthy in an environment of anonymity which combine three main technologies. First concept of public key infrastructure and digital signatures for proofing the ownership of transactions within a public network. Second peer 2 peer for a direct connection between the participants without third party. Lastly consensus protocol in which making sure to reach an agreement among most of the participants in the network. However, it still has many vulnerabilities and issues that must be studied and addressed. One of the challenges of blockchain that brings a lot of security issues is the delay in the propagation among the blockchain network. In this thesis, a new method will be proposed to enhance the delay propagation and specifically to minimize transaction verification by using Different Digital Signature Cryptosystem.