

EXPLORING ALTERNATIVE APPROACH FOR A SECURE AND SCALABLE BLOCKCHAIN

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Blockchain (e.g. Bitcoin and Ethereum) has drawn a lot of considerations, and has been widely deployed in the past five years. Rose in the onset of the global financial collapse, an anonymous programmer under the pseudonym Satoshi Nakamoto released a new protocol for “A Peer-to- Peer Electronic Cash System” using a cryptocurrency, namely Bitcoin. Currently, the world’s leading cryptocurrency (i.e. Bitcoin) faces growing competition from Ethereum.

The latter is an open-source and public blockchain that anyone can employ as a decentralized ledger. It was developed with the main purpose of creating a more generalized blockchain platform, enabling to straightforwardly build applications that benefit from the decentralization and security properties of blockchains. The Ethereum blockchain has its own cryptocurrency called Ether which is similar to Bitcoin.

One issue that keeps arising is the scalability of a particular blockchain, which has incited researchers to seek answers for some solutions. We seek to explore for an alternative approach to address the scalability issues of blockchain which may give different aspects of security that the technology has to offer, as well as giving some insights of the underlying Ethereum/Bitcoin network.