Contribution ID: **22**   Type: **Talk**

Investigating the Prospects of Blockchain Technology in an Electoral System

Thursday, 4 July 2024 09:55 (20 minutes)

Voting is part of our fundamental rights. It is crucial to have open and fair elections. As part of taking part in the election process, those voting need to have the utmost trust and confidence in the election processes and its outcome. When the underlying trust, confidence, and respect for the election is eroded by news of vote manipulation and disregard of processes by the officials overseeing the election, the voters are less interested in voting as they believe the elections are rigged and serves no purpose to participate in such an important exercise. The current voting systems which are often inundated by problems such as voter fraud, ballot tampering, and lack of transparency, necessitate a robust, secure, and transparent alternative. This research attempts to address some of the issues relating to having an unsecured voting system. The focus of the research is to investigate the prospects of implementing a blockchain based electoral system. Implementation of the blockchain technology, a decentralized ledger technology which is characterized by its immutability, transparency, and security, might address some of the security challenges with the current electoral systems. Furthermore, the study examines the principles of blockchain technology and evaluates its application in various stages of the electoral processes.

Primary author: Mr HUNGWE, Taurai (Department of Computer Science and Information Technology, Sefako Makgatho Health Sciences University, Ga-Rankuwa, Pretoria, South Africa)

Session Classification: Session