The Development of Self-Verifiable E-Voting System Using Blockchain Technology

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In democratic country, people express their intention by voting. But sometimes people have a doupt about the result of voting. We must have transparency and security in voting- system, so there must be no doubts. For protecting the security and transparency, many E-voting system was developed, but if admin’s authorities are hacked, it can be rigged easily. So we used the blockchain technology and RSA digital signature to solve this problem. Our system’s advantages are like this : First, we used a new recording way of blocks, Proof of Verify. The new recording way, proof of verify separates the right which is concentrated to admins and miners. So even when a malicious attack occurs, if the nodes of error aren't more than 50%, it helps the system operate normally Second, when the vote is started, to prevent fabrication, the code that certifies block is crosschecked in each 10 seconds. This function prevents error and hacks during votings. Lastly, after the vote ends you can check the result one more time. If there is an error in outcome you can report it to the national election commission immediately, and if there are many error reports, through an re-verification we can prevent fabrication. We hope that the world's democracy can be developed through this system.

Awards Won: