

ABSTRACT

Digital documents now have an important role in everyday life. This is because digital documents are easy to create, distribute and store without affecting their legal value. However, digital document storage is usually still implemented using conventional methods, namely by using a centralized database system that allows trust issues to arise due to the possibility of manipulation or interference from irresponsible parties. The long-term impact of this manipulation is the possibility of destruction and loss of original documents which can cause losses to various parties.

Therefore, we need a secure system that can prevent things like this from happening. Blockchain can be a way to solve this kind of problem. By using a blockchain-based system, the digital document management process can be carried out more transparently by only using the read and write method so that stored documents can still maintain their legal value.

The end of this research results in the form of a decentralized application for digital document processing. Based on the results of white box testing, it is found that the web interface and smart contracts can run 100% however, the continuity of transactions is strongly influenced by several variables such as the computational ability of Rinkeby Testnet and the number of transactions that are executed at the same time. Based on the results of the black box test, the average file upload speed was 40.61 KBps with the component specifications as written in this book. Furthermore, it was found that a modification of 1 bit in a file will be identified as a unique file even though the content presented has not changed.

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