Abstract

Digital evidence handling and preservation are one stage of digital forensic process. This part is very crucial because digital evidence is the basis of digital forensic process. The credibility of digital evidence must be maintained for law and court process. Process of preservation of digital evidence known as chain of custody (CoC). CoC is a document that used to ensure that digital evidence remains and does not change. Both during the investigation process until the completion of the forensic process. Electronic evidence documentation is different from digital evidence documentation. The different are character and the metadata. Some adjustments need to be accommodated on the system for digital evidence. Digital evidence is easy to change as well as its CoC document. It needs to be protected. A new technology is needed that can ensure integrity of digital evidence and CoC document like the blockchain. In this study, digital evidence management will be built on the CoC concept with blockchain technology. More precisely, this design combines the framework of the Digital Evidence Bag (DEC) with blockchain technology. This prototype is known as the Blockchain Digital Evidence Bag (B-DEC). B-DEC utilizes the data storage integrity to accommodate digital evidence
management that refers to DEC. In this case, the prototype will build on a smart contract based
on Ethereum. The development of the DEC framework also will be adjusted to accommodate
DEC applications in the blockchain.

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Index Terms

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Keywords

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