THE POTENTIAL OF BLOCKCHAIN TECHNOLOGY TO CHANGE INTERNATIONAL MOBILE ROAMING BUSINESS MODEL

By

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

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The key objectives of this paper is to propose a design implementation of blockchain based on smart contract which have potential to change international mobile roaming (IMR) business model by eliminates third-party data clearing house (DCH). The analysis method used comparative analysis with the current situation of international mobile roaming business that commonly used by TOGAF Architecture Development Method (ADM). The purposed design of implementation has validated based the business value by using Total Cost of Ownership calculation. This paper applies the TOGAF approach in order to addressing architecture gap to evaluate by the enhancement capability that required from these three fundamental aspect which are Business, Technology and Information. With the blockchain smart contract solution able to eliminate the intermediaries Data Clearing House system, which impacted to the business model of international mobile roaming with no more intermediaries fee for call data record (CDR) processing and open up for online billing and settlement among parties. In conclusion the business value of blockchain solution implementation in the international mobile roaming has been measured that impacted cost reduction of operational platform is 19%. With this information and understanding the blockchain technology has significant benefit in the international mobile roaming business.

Keywords: Data Clearing House; International Mobile Roaming; Blockchain, TOGAF

DEDICATION

I would like to dedicate my thesis research to my God, My beloved Family, my country Indonesia, The company I honored PT. Telekomunikasi Indonesia International, and my coolest classmate Ricky,Q,Boaz

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