Chapter 6
Technologically Driven Legal Framework of Blockchain and Cryptocurrencies

Ahmed Ashoor
University of New England, Australia

Kamaljeet Sandhu
University of New England, Australia

ABSTRACT
Blockchain technology refers to a digital, immutable, distributed ledger that registers completed transactions in a well-ordered manner and near real time. Blockchain security creates a decentralized environment that bars any third-party organization from controlling the cryptographically validated transactions and data. Blockchain technology fosters business innovation by creating a peer-to-peer networking that prevents one central server from accessing as well as processing data belonging to all companies in the network. Cryptocurrency can be defined as a digital asset built to facilitate completed transactions using cryptography. It helps in providing protection to the completed transactions and controlling the creation of additional units of the currency. In the recent years, the application of blockchain technology has been associated with governance. Blockchain governance has been applied in different fields; for example, it can be used to create permanent laws that cannot be violated by any third party.

DOI: 10.4018/978-1-5225-9012-5.ch006
INTRODUCTION

In the contemporary society, the internet has created a virtual community where billions of people from across the globe interact; hence, it is an excellent platform for the business world. Generally, blockchain is the newly trending technology used for the purpose of verifying as well as storing of transaction records for online cryptocurrencies such as Bitcoin (Getso & Johari, 2017). According to Holotescu (2018), blockchain technology can be used in the creation of a decentralized environment that prohibits any third-party organization from controlling the cryptographically validated transactions and data. It records any transaction that has been completed in a ledger, to ensure that it can neither be changed nor invalidated. Similarly, Zheng, Xie, Dai, Chen, and Wang (2017) refer to blockchain as a public ledger where all transaction that has been completed are stored in a list of blocks.

A term that is closely associated with blockchain technology is the Cryptocurrency. It can be defined as a digital asset built to facilitate completed transactions using cryptography. It helps in providing protection to the completed transactions and controlling the creation of additional units of the currency (Okhuese, 2017). Cryptocurrency benefits significantly from the blockchain technology. For example, blockchain technology users utilize public and private keys to develop digital signatures as well as transactions within the cryptography in a secure way (Yaga, Robi, & Scarfone, 2018). Similarly, blockchain network which utilizes mining has the capacity of deciphering intricate puzzles when using cryptographic hash functions (Yaga et al., 2018). Therefore, cryptocurrency is strengthened by the blockchain technology due to its heavy utilization of cryptographic services.

The implementation of the blockchain technology allows the development of new models of economies and marketplaces, governance, identification, and more. Blockchain infrastructure can be used to adopt decentralized sharing economy business models as an alternative to the centralized business models by eliminating the intermediaries and substitute them with a peer-to-peer network, making it possible to carry out direct transactions between two parties (Tumasjan & Beutel, n.d). Additionally, blockchain economy can appear in a new form known as decentralized autonomous organization characterized by rules of governance specified in the blockchain. As a result, completed transactions would be enforced autonomously with strict adherence to rules defined by intricate contracts (Beck, Muller-Bloch, & King, 2018). The new
Epilogue: Retrospective and Prospective Reflections
www.igi-global.com/chapter/epilogue/111560?camid=4v1a

Performance Management in Software Engineering
www.igi-global.com/chapter/performance-management-software-engineering/54863?camid=4v1a