

Legal Study on Conflicts of Blockchain Technology and EU GDPR

Jung-Chin Kuo*

Abstract

Blockchain technology has the potential to revolutionize many industries, but some features of this hottest technology arise questions under EU General Data Protection Regulation (GDPR). Two most innovative aspects of blockchain, immutability of data and decentralization of control, have caused conflict with provisions of the GDPR. This article found that the complexities of compliance with GDPR will increase significantly when the transaction information contains personal data, but whether encrypted data and public key should be treated as personal data is controversial. Related studies show that encryption and hash functions do not automatically turn personal data into anonymous, encrypted data and public key are regarded as pseudonymized data and may considered as personal data when they combined with other necessary information. Secondly, the decentralized nature of blockchain technology presents challenges in identifying the relevant controllers. The accurate classification of participants as data controllers, joint controllers or data processors under the GDPR, is crucial as different implications arise depending on the said classification. To date, who should assume as the role of a controller or a processor within the blockchain system is still uncertain. Finally, under the GDPR, data subjects are granted a number of rights which appear to be in tension with blockchain's immutable characteristics. Because blocks are linked through hashes, if someone decided to execute his or her right to erasure, it would be a huge challenge and nearly

* Doctor of Philosophy in Law, National Taipei University; Industry Consultant in Market Intelligence & Consulting Institute (MIC) of the Institute for Information Industry (III); Adjunct Assistant Professor of School of Law, Soochow University.
E-mail: ronkuotw@gmail.com

impossible to execute. The article will also compare those disputes with Personal Data Protection Law and related administrative interpretations in Taiwan, through this concrete examination, this article will clarify merits and demerits of the present domestic regulation and puts forward suggestions toward future legal adjustment. While challenges for blockchain technology compliance with the GDPR are quite clear, solutions are not obvious. Ultimately, the passage of time will reveal how the use of blockchain technology and the application of the GDPR relative to that technology will evolve.

Keywords: blockchain, General Data Protection Regulation, personal data, hashing, immutability, node, data controller, erasure, destruction