

# NETHUI: BLOCKCHAIN AND PRIVACY

*Joy Liddicoat, 13 December 2017*

Blockchain is the new buss: it can solve all our problems, fix climate change, break currency monopolies and so much more: well that was according to some of the participants as NetHui 2017. Jevon Wright and I facilitated a fascinating discussion about this new technology at NetHui. The discussion revealed that, in fact, blockchain is just technology and, as with any technology, it's up to us to enable its many potential uses.

## ***BACKGROUND***

The UN described block as “a distributed database that is continuously updated and verified by its users. Each added block of data is ‘chained’ and becomes part of a growing list of records, under the surveillance of network members. This technology enables the transfer of assets and the recording of transactions through a secure database.”

Blockchains can operate as service for exchange that do not need a trusted broker. Unlike using a shop, bank or lawyer to buy, sell or exchange, in a blockchain you may have no idea who you are transacting with. Instead, your transaction is verified by the strength and accuracy of the chain.

Blockchains have all sorts of uses, the most well-known being so-called crypto-currencies, such as bitcoin, which are digital alternatives to offline currencies such as the New Zealand dollar. But blockchain technology has far more potential use than just cryptocurrencies, including tracking land ownership, supporting asset management, storing health information and enabling smart contracts (which can be concluded without lawyers).

Globally, the United Nations is exploring potential to use blockchain technology for distributing food aid e-vouchers to refugees, as a tool to help measure climate change and to simplify the system for payment of remittances (potentially saving millions of dollars in bank fees).

## ***PRIVACY IMPLICATIONS***

The debate about use of Internet related technologies for good or evil is not new and blockchain is no exception. Whether a specific blockchain is privacy enhancing depends on the privacy settings when chain is established. These may allow for complete anonymity or for pseudonymity.

Some say this technology is being used to strengthen privacy protections. For example, blockchain technology is already being used on decentralised micro-blogging sites, such as Namecoin and Steemit for proof of publications by way of hashtags and secure, anonymous publication for those who want or need it. Proof of publication can prevent censorship by ensuring changes cannot be made to original publications even if there are attempts to block or filter them.

Blockchains may allow users greater control over their personal information, including being able to track who has accessed your personal information by allowing a user to see what requests were made for data.

An interesting question from one NetHui participant was whether it might be possible for law enforcement agencies to track transactions on a chain. For example, Police tracking of wallet address transfers or movement of currencies and other public ledger history. If so, a request to law enforcement for personal information might now need to include a request for them to disclose any information which has been gained from blockchain transactions.

Blockchains may also change the current concept of an agency holding personal information and its obligations to give access to individuals. For example, in relation to health information, a person could hold their own personal blockchain and give health agencies permission to use it, bringing into question who holds the information and who has rights to correct, change or add information?

Concerns have been raised that anonymous blockchains will enable tax evasion, illegal activities and the financing of terrorism and organised crime. These concerns will raise challenges. For example, will existing law apply, as they have to other technologies, or will new, blockchain specific, regulatory responses be needed? For example, if information cannot be deleted, might new rules be needed for access when no longer needed?

NetHui participants did raise concerns that in New Zealand, experienced individuals may be taking advantage of the technical knowledge required to understand the topic and using it to enrich themselves at the expense of newcomers.

## ***WHERE TO FROM HERE?***

We want to encourage early adoption of new technologies based on informed choice and support exploring opportunities without fear that privacy will be a barrier. Blockchain currencies still face challenges, with NetHui participants unsure whether these will increase or decrease social and cultural digital inequalities and noting that there are still barriers to New Zealand banks dealing with customers who seek to use these currencies.

For now, we will keep a watching brief and encourage more research, shared learning about the potential for technology applications and a robust critique of prospects and challenges.