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The Block Chain Dream – Technology alone can never be the answer

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Block-chain technology is at the receiving end of lots of attention and consequently, lots of investment. No conference is complete without at least once mentioning block chain. And so it was recently at the 2016 Munich Cyber Security Conference, where block chain was mentioned in a panel discussion. The Economist too made the case for block chain and titles the edition from October 31st, 2015 “The trust machine”. The main article describes how block chain-based land registries in places like Guatemala and Greece might be able to solve the problems of land ownership. The reader gets the idea that this technology is apparently the panacea for all human corruption. The general block chain fanfare, the mentioning of it at the Munich Cyber Security conference, and the article in the Economist made me ask a question which I think should have been asked a long time ago. The question is “Can block chain technology guarantee data correctness and do away with governance?”

My understanding is that once a transaction is entered and confirmed in the block chain, it becomes immutable and that the immutability of the data can be checked all the way back to the beginning of the block chain. This is great and deals with the issue of someone falsifying at a later date a record in a block chain based ledger. But this does not address the issue of how can we trust that the data has been entered correctly into the block chain in the first place. Say you have a land registry and someone comes to you and says, “This is my piece of land. Here are the GPS coordinates and look, this is the deed I have which I want to be

transcribed into the immutable block chain”. Can we trust the land registry to enter the data correctly? If it isn’t entered correctly, whose responsibility is that to review and correct? And how do we vouch for the correctness of the data in the first place?

The 2024Sight view is that data has to be correct at the time of entry into the block chain and that this correctness cannot be validated by inspecting what is in the block chain already. To maximize the chance of data correctness it is absolutely necessary to provide independent governance, supported by process and procedure, to manage data validation, entry, review and correction. At the Munich Cyber Security Conference 2024Sight presented this view to the panellists. A lively discussion ensued. The outcome was that the panellists generally agreed with the 2024Sight view.

At present all block chain is providing is the ability to check that the data hasn’t been compromised while in the block chain. It delivers no guarantee that the data itself was correct at the time of entry. And that is the hard problem to solve for applications like land registries and money transfers. The overinflated expectation of data correctness in the block chain without governance is therefore just a dream.

Looking back in IT history we find a similar happening and quite recently at that. Lack of governance, process and procedure with respect to the appointment and review of the performance of root and intermediate certificate authorities has undermined the trust that may be put into X509 certificates. Certificates too were the panacea for all ills once. It proved not to be so. Over-reliance on technology alone is the root cause of this issue.

Without surrounding processes block chain technology will be history repeating itself.