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Experimental Investigation of Energy Consumption for Cryptocurrency Mining

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Bitcoin was introduced in 2008 by an anonymous person or group of individuals called 'Satoshi Nakamoto' to work as the public ledger of transactions, forming a chain of blocks, hence "blockchain". The first and the most popular applied usage of blockchain technology is cryptocurrencies like Bitcoin, Litecoin, Monero, etc. For the generation of the new cryptocurrencies ("mining"), different computational resources are used: computer central processing units (CPU), graphics processing units (GPU), specific integrated circuits (ASIC). Hardware is used to solve a resource-intensive cryptographic hashing problem — "Proof of Work (PoW)". This mining process contributes to blockchain network security, however, it can be very greedy in electricity. In this study, we present an investigation of mining efficiency for various cryptocurrencies with different devices.