Bitcoin mining: Converting Electrical energy into the US Dollar

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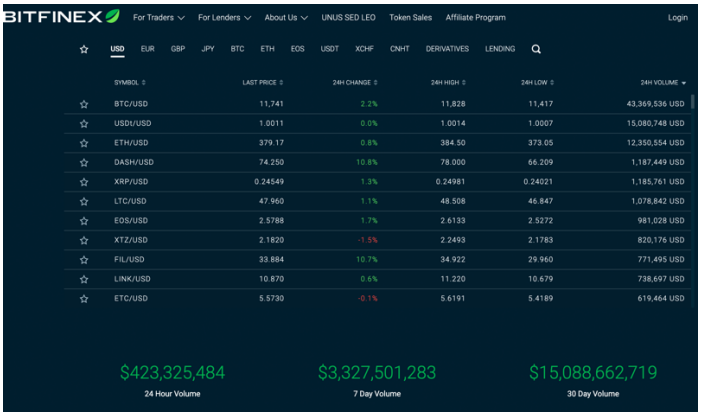
A pure conversion of CPU time and electricity into FIAT currency is what the bitcoin mining operation involves. According to some estimates, processing a bitcoin transaction consumes 5000 times more electricity than a VISA transaction (Fairley, 2017). Bitcoin mining involves using GPU processors (Nodes) to solve a cryptographic puzzle. In turn, the Nodes are rewarded an amount of bitcoin. Figure 1 presents an example of a GPU processor.

Credit: Bitmain.com
Figure 1: Bitmain Antminer S19

The bitcoin block chain was using about 700 Mega Watts of electricity a few years ago and was expected to reach 14 Giga Watts in 2020 (Fairley, 2017).

Bitcoin is an innovative monetary and payment system (Weber, 2015). Bitcoin uses a lot of electrical energy because it needs to verify a lot of transactions on the bitcoin block chain . Every ten minutes new bitcoins are released and nodes use their computing power to take the opportunity in obtaining new bitcoins (Nakamoto, 2009).
Providing electrical energy to the bitcoin network means that a node will be paid in bitcoin.
Hence, here lies the opportunity that nodes can use and get rewarded bitcoin. Once rewarded, the bitcoin can be sold on an exchange like bitfinex or coinbase.



Credit: Bitfinex.com
Figure 2: Bitfinex exchange

Once the bitcoins have been mined, they can be easily converted into the US dollar, a transaction that happens in a few seconds. In figure 2, it can be seen that $43M is a 24hr volume for bitcoin at one exchange. The cryptocurrency market is very liquid and it can be seen from figure 2 that $15 Billion worth if cryptocurrency was exchanged in a period of 30 days.
The advantage of bitcoin is that there is no central authority and hence no permissions are required to partake in mining the bitcoin (Nakamoto, 2009).

A bitcoin farm is a number of nodes taking part in bitcoin mining. Setting up a farm requires two major things. Electricity and a stable internet connection. With a 2 MW electrical supply, claims have been made that $70,000 can be made per day with 1800 machines. With the current price of Bitcoin at over $11,000. This figure could be higher.

There is a bitcoin mining profitability calculator, one can use to calculate the profit. The website is www.cryptocompare.com/mining/calculator

Zambia is well positioned to this opportunity because it has the electrical energy and the US dollar could be beneficial to the country. The largest bitcoin mining farm claimed to have made $2.5Billion in 2018 (CINDX, 2018).

References

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