

Bitcoin: The Crypto Currency and the Dark Web

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Tim Berner –Lee one of the architect of the World Wide Web would have never envisioned the current digital status of the World Wide Web. It is widely accepted that the internet is suffused and is being used to manipulate the masses at large .The data collection, use of URL (Uniform Resource Locator), hyperlinks and hypertexts are contributing to global connectivity and information sharing platform. Apart from this it is giving way to number of irksome problems on the open web. One such alarming issue is the use of dark web. It is the virtual equivalent of the black market wherein illegal activities are being performed. The dark sites are very difficult to decipher. A dark web is accessible by means of special software allowing users and website operators to remain anonymous. The encryption technology is the backbone of secure communication and data transmission over the internet. Deplorably this technology is also paving way for multiple cybercrimes. Number of illegal activities is executed on the dark web. The entire transaction on the dark web is done through the use of crypto currency like Bitcoin and Monero. The buyers and the sellers on the internet give credit ratings to every buyer, who accordingly initiates the buying process. In the present article an attempt has been made to establish a connection between the dark web and the cryptocurrency like Bitcoin which is used for illegal activities on the internet. Another area of focus would be the emerging trends of using Bitcoin as a trade link on the internet. The future aspects of the use of bitcoin as a currency and its acceptance as a currency would also be touched upon.

The present day world is witnessing an era of digital transformation bringing in a radical shift in the Internet of Things (IOT). In this era of free-flowing data where the advanced technologies like artificial intelligence and virtual reality has brought a paradigm change in the technological world. It is widely accepted that the internet is inundated and is being used to manipulate the masses. The data collection, use of URL (Uniform Source Locator), hyperlinks and hypertexts are contributing to the global connectivity. A crucial area of grave concern is the dark web which is a part of the World Wide Web. It is that part of the internet that can only be accessed by means of special software. The dark web users and website operators remain anonymous or untraceable. Hence, they engage themselves in illegal activities

and deal with drugs and other ‘crime syndicates’. Criminals are using Bitcoins fir illegal activities from buying drugs, hiring hitmen and forging passports on the dark web.

The dark web is the encrypted network that exists between ‘Tor’ (software) servers and their clients. Similarly “Deep web” is distinct from “dark web”, the deep web is simply the content of databases and other web services “that cannot be indexed by conventional search engines” (<https://www.quora.com/>what is deep web>). Tor, formerly known as the onion router is an internet networking protocol which works to maintain anonymity of the data relayed across it. Tor as a software it conceals its user’s identity and their online activity from surveillance. As an onion router it encrypts and then randomly bounces communications through a distributed network of relays run by various volunteers around the world. For online transactions on the dark web the crypto currency like Bitcoins and Monero are used. The buyer and the sellers on the net give credit ratings to every buyer to enable them to deal further. In a survey conducted in 2016 it was found that almost 57% of live websites on the dark web hosted illicit material. As quoted in The Hindu , “It [dark web] is a market where both buyer and the vendor are rated , like Uber. This establishes trust, and authenticates the veracity of a potential transaction .” (The Hindu online)

I. BITCOIN

Bitcoin is the new era digital currency which uses encryption technique to regulate the generation of units of currency and verify the transfer of funds. It can be used for online transactions between individuals and operates independently of a central bank. It is the first decentralized digital currency, as the system works without a central bank or single administrator. The origin of bitcoins can be traced back to the year 2009 when Satoshi Nakamoto used it for the first time. Bitcoin is commonly known as “the virtual banking currency” of the internet. It is a crypto currency and a worldwide payment system. This digital currency can be traded for goods or services with vendors who accept bitcoins as payment .The p2p network monitors and verifies the transfer of bitcoins between users. Bitcoin has thus emerged as the intangible currency of this era. Crypto currency or

digital currency is a form of digital money created by mathematical computations using millions of computer users called miners. 'Crypto' comes from the word cryptography which refers to the security process used to protect transactions that send lines of code out for purchases.

II. BLOCKCHAIN: THE LEDGER REGISTER OF THE CRYPTOCURRENCY

Blockchain is a digitised, decentralised, public ledger for the crypto currency. The DLT Distributed Ledger Technology is the accounting method for the virtual money transaction. A node i.e. a computer connected to the network gets a copy of the blockchain, which is downloaded automatically. The transactions are chronologically added into this ledger register.

III. THE ENCRYPTION TECHNOLOGY

The encryption technology forms the backbone of secure communication and data transmission over the internet. Encryption refers to the process of converting information or data into a code, especially to prevent unauthorised access. The encryption technology is used for encoding a message or information in such a way that only authorised parties can access it and those who are not authorised cannot access it. Encryption technology is used to change the electric information or signals into a secret code (which =system of letters, numbers, or symbols) that people cannot understand or use on normal equipment. Encryption is the most effective way to achieve data security. In order to read an encrypted file, one must have access to a secret key or password that enables one to decrypt it. Unencrypted data is called plain text and the encrypted data is referred to as cipher text.

IV. THE VALUE AND FUTURE OF BITCOIN

The recognition of bitcoin as a currency is still to be established. The value of bitcoin has spiked 2,000 percent since January this year, and in December bitcoins were trading at around \$19,500, approximately Rs12.5Lakh apiece making it "the costliest currencies in the virtual world". (India Today). Its value can rise and plunge in matter of hours

The Reserve Bank of India and the Securities and Exchange Board of India will soon prepare a framework to safeguard susceptible investors and to keep a check on the fraudsters who try to manipulate the regulatory gap. Bitcoins are neither accepted as legal currencies nor are declared as illegal. Recently in a budget speech the Finance Minister Arun Jaitely explicitly made it clear that the crypto currencies such

as bitcoin are not legal forms of money in India and their use will soon be eliminated.

Crypto currencies pose a significant threat to the national currencies issued by respective governments like the rupee and the dollars. Keeping in view the volatility associated with bitcoin trading countries like South Korea and China are taking steps to restrain the use of the crypto currency. Every country exercises exclusive control over the issuance of the currency used by its people. Any other medium of exchange other than the government recognised national currency is unacceptable. Friedrich Hayek, an Austrian economist elaborated in "Denationalisation of Money"

"In the presence of alternative currencies, for instance, people may partially give up using national currencies issued by governments...Instead, they might opt out to use private crypto currencies that offer more stable or predictable purchasing power than, say, the rupee. It is thus little wonder that governments have banned or otherwise undermined bitcoin and private currency systems" (Hayek)

In order to seek legitimacy and a status of currency, bitcoin, the pseudo-currency has to gradually embrace transparency and stability through tax and regulatory compliance. Some believe that bitcoin is the future of currency, given that it is digital, unifying, and free of regulators. Subhransh Rai, co-founder and COO of EthxPay, a Delhi based Bitcoin exchange office, is of the view that "Income tax surveys are good for Bitcoin exchanges, and the government should start recognizing this business." He also adds that "if it is illegal the government has all the authority to ban this trade" (India Today, 15) The risk and the volatility involved in Bitcoin it will remain under government scrutiny.

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