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Block Chain Technology and Its Future Scope

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Abstract: Block chain is one of the emerging technologies currently in the industry and the market. It is because of its decentralized and auditable properties. The major usage of this technology is to protect the data breach by its high-layered protective environment and its endless system. In this paper, we have discussed about the current applications of this technology, how securely it works, and its current market growth.

Keywords: Block Chain Technology, Block Chain Business Model, Disintegration Digital Currency.

1. INTRODUCTION

A Blockchain is basically a distributed system of records of all digital transactions that is being made. Every digital transactions is being monitored and verified by the participants in the system. Once the transaction data is recorded and verified it can never been erased. To explain with a simple example, it is very easy to steal a money purse if it is kept isolated. But it would be very difficult to steal a purse if kept in a public marketplace where hundreds of people are roaming.

Short History of Block Chain

1991 – For the first time Stuart Haber and W Scott Stornetta described the chain of blocks which is secured cryptographically.
2000 - The theory of this cryptographic chain of blocks and the implementation ideas was proposed by Stefan Konst.
2008 – A group of people working under the pseudonym Satoshi Nakamoto released a paper on the working of blockchain.
2014 – The potential of blockchain in the financial and non-financial backgrounds was Cleary found and Blockchain 2.0 was born.

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The distributed system of the blockchain technology is the main advantage. Especially, this technology has been created to serve as the public transaction ledger to the cryptocurrency bitcoin. Bitcoin is known for its controversy since it helps to create a multi-billion dollar market without the control of government. To make it clear, we shall look at the short introduction of cryptocurrency Bitcoin.

After posting their whitepaper in 2008 Nakamoto created bitcoin. It is a form of cash which can be sent peer-to-peer without any involvement of central bank and transaction ledger, like how the physical cash is operated.

As this bitcoin proposal solved many problems in the field it became one of the successful versions at that time. This bitcoin runs on an engine called as blockchain which is designed by Nakamoto group.

Blockchain and Smart Cyptography

Internet commerce basically works on the concept of online financial transactions occurring with the help of trusted third party. The duty of this third party is to mediate or monitor the transactions that is occurring between any two parties. But many fraudulent activities are occurring in these online transactions. So to avoid this blockchain technology was introduced

Blockchain works same as the concept of cryptocurrency. So if we understand how cryptocurrency works then grasping the concept of blockchain would be much easier. Bitcoin uses the proof of cryptography by replacing the trusted third party provider who mediate the transactions. Every transaction is done after verifying the digital signature of the sender. During each transaction the details is sent to the "public key" of the sender which is signed digitally by the receiver's "private key". Before spending the money, the holder of the cryptocurrency need to prove the ownership of the private key. The person at the receiving end verifies the transaction by using the digital signature of the private key.

The main speciality of this bitcoin is that, every transaction is broadcast to all nodes of the network and the transaction details is recorded in the public ledger after the verification process. Before verifying nodes, two things needs to be checked:

1) Whether the spender owns the crptocurrency.
2) Whether spender has the proper balance in his/her account.

Blockchain Applications

The application of Blockchain technology is massive in these recent years. Apart from the finance sectors and safeguarding the digital transactions, this technology is being used in many areas such as Healthcare, Media & Entertainment and Transportation & Travel.

a. Healthcare And Life science

By storing an immutable, single version of truth, the organisation confirms health status of their customers and employees. Blockchain network helps to save the data integrity.

b. Media and Entertainment

In the huge market of transportation industry, every day around 140$ billion is tied up for payments. Before receiving the payment the company has to for 40 days for an average

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invoice. Around 20% of transportation's overall costs have been raised for processing and administration due to the high dependency on paper transactions. This problem is being solved by blockchain by enabling new platforms which allows easy coordination of documents on a distributed public ledger. This makes the paperwork processing highly unnecessary.

Blockchain's Growth

As per the survey, the global market size of blockchain is predicted to grow at a CAGR rate of around 69% between 2019 to 2025. And also 2021 stats of blockchain shows that, it will become a major stay across many industries.

By 2022, the amount spend on finding blockchain solutions may reach $11.7 billion. In 2024, the estimated revenue of global blockchain market is around $20 billion.

It is predicted that blockchain can reduce 30% of bank's cost of infrastructure. Financial companies can save up to $12 billion a year by preventing the fraudulent third party transactions using blockchain.

Around 55% of the healthcare sectors will adopt the blockchain technology for commercial deployment by 2025. It is also predicted that, blockchain based cryptos will enable the banking sector to generate up to $1 billion globally.

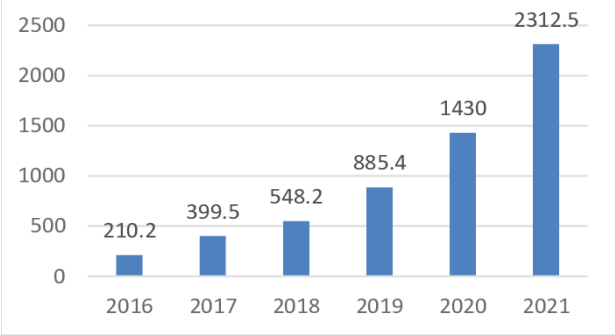

Fig 1. Market size of Blockchain technology

2. CONCLUSION

Considering the growth aspects of blockchain technology, we can conclude that this is going to become a million dollar industry within 10 years. And its application in multiple industries will help this technology to achieve a massive revenue growth in the future. More revenue will be saved in the financial industry and Internet commerce by the proper implementation of blockchain technology. This technology proves to be the best solution for the fraudulent acts, hacking threats and massive data breach happening across the online industries.

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