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Blockchain can be the best technology for reducing cyber risks in Financial Services Industry

Soma HariPrasad[1]

Abstract

Blockchain is a decentralized ledger where each member has access to the latest copy of encrypted ledger which consist of deals and transactions taken place with the help of digital currencies for validating. Basically ,it's a distributed database that is tamper proof which holds batches of individual transactions. Each completed block has different features like Chronology, linearity, time stamp and information links to the previous blocks.The present research identifies different cyber security applications that are used by architects viz.,cryptography,Personal Identification Information, and web applications in implantationof block chain technology with the help of peerreview literature in managing the cyber risks anddrive the future of financial services industry by using IOT,Machine Learning andArtificial Intelligence etc.,

Keywords: BlockChain,Encryption,Digital Currency,Cyber risks and threats,Internet.

Author Affiliation: [1]Department of Management Sciences, HolyMother P.G.College,Hyderabad.

Corresponding Author:Soma. HariPrasad.Department of Management Sciences, HolyMother P.G.College,Hyderabad.

Email: somas@gmail.com

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1.INTRODUCTION

'SATOSHINAKAMOTO'in 2008 is Believed to be the one who had invented blockchain technology to serve as the public transaction ledgerof the cryptocurrency called 'Bitcoin'. The identity of 'SATOSHINAKAMOTO' is unknown.The invention of the blockchain for bit coin the first Crypto Currency to resolve the double-spending problem without the need of a central server or anycentralauthority.[1]

The bitcoin design has inspired other applications, and block chains that are read able by the public are widely used by the cryptocurrencies.Private block chain shave been useful in bringing up smart contracts that are proposed for business use.[2]

Blockchain technology is immutable in nature as the transactions that are recorded andverified by the peer-to-peer network nodes will be permanent in natureand are irreversible or uneditable.as it requires consensus of the majority network which is next to impossible.Although block chain records are not unalterable,block chainsmay be considered secure by design and exemplify a distributed computing system with high By zantinefault tolerance. Decentralized consensus has been there fore claimed with a blockchain.

Originally blockchain is generally represented by Merkle Tree as the list of records,called Blocks contains cryptographic hash of the previous bock, a time stamp, transaction data thatare linked to each other using Cryptography.[3]

2.Review of Literature:-

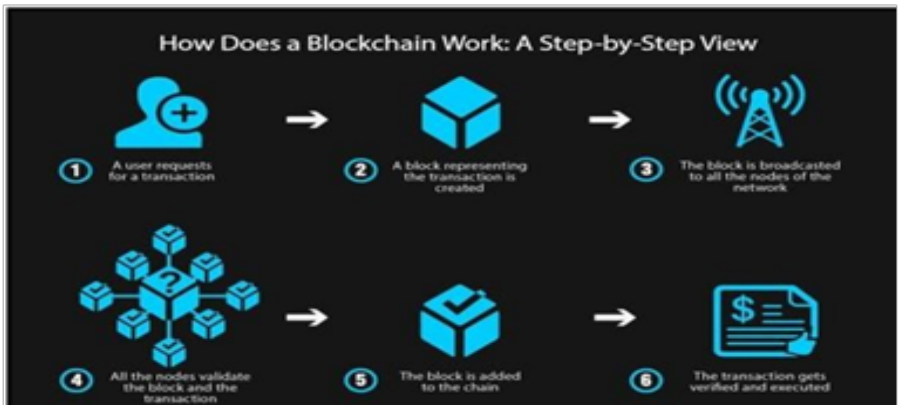
- According to A.Dorri, S.S.Kanhere,R.Jurdak,P.Gauravaram:-Bitcoin blockchain-based proposal for securing smarthome IoT devices on a localblockchain.Assessment of network overheads when utilizing blockchain.
- Accordingto-I.D.Alvarenga:-Network security - due to increasing lyutilized visualized machines, software-defined networks and the use of containers for application deployment, blockchain allows for authentication critical data to best oredinade centralized and robustmanner.
- According to-G.Zyskind and A.S.Pentland:-Data between users and applications can be secured and remain untampered by being stored and passed through a blockchain.Trusted nodes are rewarded by their level of calculated trust assigned by the network rather than proof-of-work.
- According to-D.Fu,F.Liri:-Private user data—including end user settingsfor wearable Bluetooth devices and the protection of personal identifiable information being exchanged with other parties.[4]

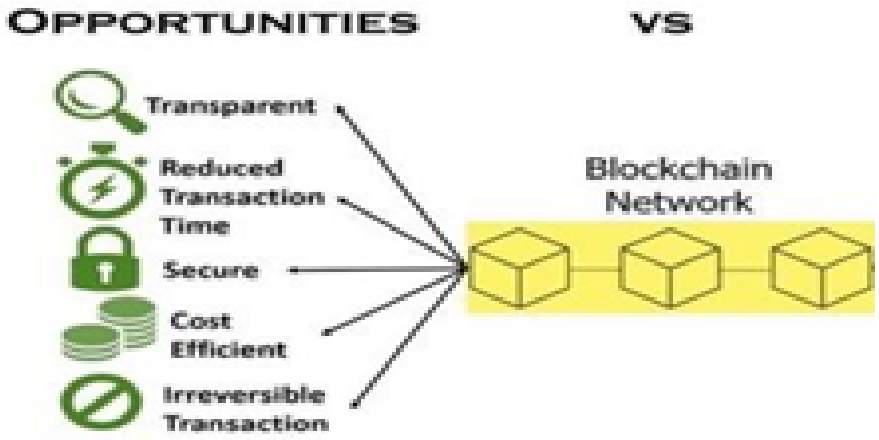
3.Objectives of the study:-

- To analyze the functioning of Blockchain Technology.
- To study and estimate the scope andopportunity of blockchain in reducing cyber risks and frauds infinancial Industry.
- To study the different advantages of using blockchain and other associated Internet of things.(IoT)

4.Scope of the study:-

- Blockchain, the future of financial and cyber security.
- Blockchain through its distribution architecture will increase there saliency of the overall network and protects from failure's being exposed to.
- Blockchain provides its participants with enhanced transparency, multi-layer security at both the networkand individual levels.





5.Research Design:-

This is a descriptive data collected from secondary sources of web which are mainly related to the Blockchain technology, cryptography, and cyber security for finance. This case mainly related to the objective of finding the roles of blockchain technology. This research deals with the future of cyber security of finance in the hands of blockchain technology.

Scope and opportunity of blockchain in reducing cyber risks\frauds in financial Industry.Blockchain helps in enhancing the efficiency in accounting industry by reducing the costs of maintaining,peer-to-per reconciling ledgers,and providing absolute certainty over the ownership and history of transactions in assets.

And the common answer to all theseis,Blockchain,which has the toughest firewall built to retain the information from being hacked.There are also many more unknown cyber-attacks for which blockchain has an answer to secure the information.

It's extremely difficult to change or remove once a block of data is recorded on the blockchain ledger,.When someone wants to manage them,then participants in the network who have similar copies of the existing blockchain will run algorithms to evaluate and verify the proposed transaction'.

6.Functioning of Blockchain Technology

1.Payment processing and money transfers:-

The transaction time by and large between two different countries involves huge transaction costs like for exbrokerage,bankers commission and liquidity risk etc., which increases the time and cost of the transactions.But with the advent of Blockchain the transaction time has come down to few minutes from few days and the transaction costs has come drastically to 690 times through blockchain.

2.Monitor supply chains:-

By removing paper-based trails, businesses through blockchain should be able to pinpo in tin efficiencies within their supply chains quickly, Further, blockchain would allow businesses, and as well as consumers, to locate items in real time and view how productst raveled from their place of origin to their tailer.

3.Real estate, land, and auto title transfers:-

Taking out paper out of the equation is primary goal of Blockchain as paper trails are often a source of confusion. In blockchain buying or selling land,a house, or a car, can store titles on its network,allowing for a transparent view of this transfer, by providing a crystal-clear picture of legal ownership.

4.Immutable data backup:-

Blockchain might also be the perfect way to back up data. Using blockchain in cloud data centers or for any kind of data makes the mimmutable.

5.Tax regulation and compliance:

Blockchain will be enhance the tax regulation and compliances asit becomes hard for the companies to evade taxes as the sales and purchases transactions are authorized through smart contracts.

6.Weapons tracking: -

One of hall enging tasks for even the most developed nations is gun control and weapons accountability. Blockchain could create a transparent and immutable

registry network that allows lawen forcement and the government track weapon ownership.

7.Equity trading:

Blockchain could replace the current equity trading mechanism as an whole which is at present t+ 2 day waiting time to minutes or seconds so that the investors and traders can optimally use their funds for further deploying them in more efficient manner.

The most common 10 cyber attacks areas follows:-

1. Denial-of-service(DoS) and distributed denial-of-service (DDoS) attacks
2. Man-in-the-middle(MitM)attack
3. Phishing and spear phishing attacks
4. Drive-by attack
5. Password attack
6. SQL injection attack
7. Cross-sites cripting(XSS) attack
8. Eaves dropping attack
9. Birth day attack
10. Malware attack

8.Findings:-

- The usage of public and private key in first phase and digital signatures in second phase are enhancing the security measures in block chain technology.
- Blockchain allows to reach a consensus between different participants through solving critical puzzles by performing different mathematical calculations.
- A block is created only after containing information such as digital signature, time stamp,and the receiver's public key.
- The block is broadcasted through the network and the validation begins.
- In order to process the transaction, the Miners all over the network start solving the mathematical puzzle, this requires the miners to invest in their computing power.
- Miner receives rewards in the form of bitcoins after solving puzzle.It is referred to as proof-of-work.
- Once the majority of nodes gets consensus inthe network and agree to a common solution,the block is time stamped and added to the existing blockchain through the one who solved the puzzle.
- After the new block is added to the chain, the existing copies of block chain are updated for all the nodes on the network.
- A hash belongs to a specific block which a unique mathematical code which is difficult to tamper..

9.Suggestions:-

Although blockchain has numerous advantages, it also has a few draw backs on which the programmers should work on like, Interoperability,Unalterable transaction,etc.

- Awareness on this blockcha in technology is
- merely low in public. So it should be built inpositive way such that people accept it.
- Blockchain is the toughest software to crack as it as many firewalls but not impossible. It should be much resistant and unhackable to crack the core information.

10.Conclusion:-

Takes the form of a chain of blocks which functions as a distributed ledger.Blockchain is now the widely used software in most of the kinds of public and in private sectors as well.Hence, it's demand in the fields of finance has also drastically raised up to the pinnacle. Since every individual's desire to have their financial information confidential, they would like to keep it up their transactions using Blockchain.

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References:-

1. Prabha Kiran, S. Vasantha, Review article- Exploring the impact of online reviews on purchase intentions of customer, (2015).
2. American International Journal of Research in Humanities, Arts and Social Sciences, 15 (2000) 211-214.
3. Ali Yayli, Murat Bayram, eWOM: The effects of online consumer reviews on purchasing decision of electronic goods, (2011).
4. Prabha Kiran, S. Vasantha, Review article- Exploring the impact of online reviews on purchase intentions of customer, (2015).