LEGAL LOCK JOURNAL

2583-0384

VOLUME 4 || ISSUE 4

2025

BLOCK CHAIN IN LEGAL FIELD

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Abstract

The research paper delves into a detailed explanation of blockchain technology including its uses, history, working and types. It focuses on the use of blockchain technology in the legal field and its implementation and benefits by legal firms. The paper also analyses the laws and regulations based on this new technology and what laws different countries have on this subject matter, pointing out the loopholes in the laws and an urgent need for strong and comprehensive legislation on blockchain technology. The research is based on secondary data collection with data picked up from publications, surveys, government reports and current trends. The paper finds out the extensive use of blockchain in the modern world making life and work easier and secure which is used by both the government and private sector. A serious gap in legislation causes concern in cases of privacy breach, fraudulent practice, dispute resolution or damages recovery which can be resolved through sound regulations.

Introduction

In 2014, a couple chose to record their marriage on a bitcoin blockchain rather than the government registry and the transaction was named as – "*for better or worse, till death do us apart because this blockchain is forever*". As much as crazy this sounds the recent rise of blockchain technology has led to its diversification in various fields. Blockchain works as a distributed ledger where you can register transactions or data between two or more parties, which can only be accessed by such parties eliminating any centralized authority. This might be difficult to understand, let us understand it in an easy way for example a teacher in a school records the marks of all the students in class in a notebook by writing name of students and their marks respectively, assume the notebook to be a blockchain and each student's name is a block and marks further entered are transactions, these blocks are related to each other and no one can tamper with the entries as only the teacher will have access and marks can not be altered or

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changed. This is the basic working of blockchain technology which has now been applied in the number of fields, including health, education, marketing, business, law etc.

After the landmark judgment of **KS Puttuswamy** in 2017[3], the Supreme Court declared the right to privacy as a fundamental right, which pressured the legislature to bring a comprehensive rule safeguarding individuals' data. The Digital Personal Data Protection Act was enacted in August 2023 to protect the privacy of individuals with respect to their personal data collected by intermediaries. Since the day the act received the President's assent, it has only sparked debates against it; oppositions have lashed the bill, stating it violates the right to privacy instead of protecting. The DPDP Act, 2023 claims to protect the data principals, who are the individuals who provide their personal data, against the data fiduciaries, which are the party collecting personal data for various purposes. The act also provides power to the central government to access and manipulate the personal information of data principal for the sake of sovereignty, integrity and public order; however, specific instances are not mentioned in the act.

In the case of **Jemma Marie Green Vs. Fairfax Media Publications Pty Ltd and Ors.** [4]It was being discussed that Blockchains operate as a decentralized distributed database which maintains a continuously growing list of records called blocks. Blockchains are software that assemble bundles of data, store the data in blocks, and link (chain) the blocks together sequentially using cryptography and time stamps. Each block is chained back to the previous block by containing a hash (unique identifier) of the representation of the previous block. The blocks of data are stored on nodes which are devices such as computers or laptops of the participants in the blockchain network.

Blockchains are different from regular files or databases, in which information can be edited and deleted at will. Once data is added to the chain, some cryptography ensures that it cannot be changed or removed except by the consensus of the participants in the blockchain network. This makes blockchain trustworthy in the sense that it does not depend on, and cannot be amended, by a trusted third party.

[3] Justice K.S. Puttaswamy (Retd.) v. Union of India, (2017) 10 SCC 1 (India).
[4] Jemma Marie Green v. Fairfax Media Publications Pty Ltd, [2017] WASC 123 (Austl.).

Blockchain Technology

Blockchain technology is also known as Distributed Ledger Technology (DLT). Blockchain was first introduced in 2008 and then it was implemented as the infrastructure of Bitcoin in 2009. Blockchain is a distributed ledger which records all the transactions regarding all the participating parties. Blockchain is a chronological chain of blocks, where each block stores a complete list of transactions. The blockchain technology cannot be hacked because of its decentralized nature, cryptographic security and consensus mechanisms, which makes it very difficult for the hackers to hack.

What is a block in a blockchain[5]

A block in a blockchain is a digital safe, where data is stored forever. The data which is stored in a block that can neither be modified nor it can be deleted, data becomes immutable. In a blockchain each block contains a cryptographic hash i.e. a mathematical function that converts any input data into a fixed string of characters that uniquely represents that data. Each block contains a cryptographic hash of the data of the previous block.

History of the Blockchain[6][7]

1991: Stuart Haber and W. Scott Stornetta were the two Scientific Researchers who found the blockchain technology. Both of the scientists wanted time stamping the digital documents through Computational practical solution, this was done to prevent data from getting tempered or mis dated.

1992: Merkle Trees had formed more efficient legal corporation and with additional features. By the year 1992, Blockchain technology become more efficient for storing several documents in a

[5]Ministry of Electronics & Information Technology, Blockchain Cryptographic Security, Hashing and Digital Signature (May 2023), https://egovstandards.gov.in/sites/default/files/2023-05/Blockchain%20Cryptographic%20Security%2C%20Hashing%20and%20Digital%20Signature.pdf

[6]GeeksforGeeks, History of Blockchain (Aug. 29, 2024), https://www.geeksforgeeks.org/software-engineering/history-of-blockchain/

[7] Alexander S. Gillis, A Timeline and History of Blockchain Technology, TechTarget (Jan. 10, 2024), https://www.techtarget.com/whatis/feature/A-timeline-and-history-of-blockchain-technology#:~:text=Stefan%20Konst%20introduced%20the%20concept,basis%20for%20today's%20blockchain%20models

single block. Due to the contribution of Merkle Trees Blockchain technology could be used as a secured chain of Blocks for storing multiple data records in a sequence. But this technology was stopped in the year 2004 as Patent came into existence.

2000: A theory of Cryptographic secured chains was being published by the author named Stefan Konst in the year 2000. In his theory it was mentioned that entries in the chain could be traced back from Genesis Block to prove validity.

2004: By the year 2004, "Reusable Proof of Work" was introduced by Hal Finney who was the cryptographic activist.

2008: "A Peer to Peer Electronic Cash System", is the white paper that was of Satoshi Nakamoto. In his paper he conceived the concept of "Distributed Blockchain". He also transformed the concept of Merkle Trees. The system that was made by Satoshi Nakamoto became so useful that it became the Backbone of the Blockchain.

2009: That in the year of 2009, James Howells, was an IT worker in United Kingdom started mining of bitcoin. Santoshi Nakamoto also released Bitcoin white paper in 2009.

2014: 2014 was the remarkable year in the History of the blockchain technology. In this year there was upgradation in blockchain technology that blockchain technology was being separated from the currency.

2015: A network called Ethereum Frontier was launched. By this network it enabled the developers to write the smart contracts and plus dApps that could develop the live network. By this year 2015, Hyper ledger link was launched by the Linux Foundation.

2016: Before the year 2016 Blockchain was used as two different words but by the year 2016 blockchain became a single word by Santoshi Nakamoto's research paper.

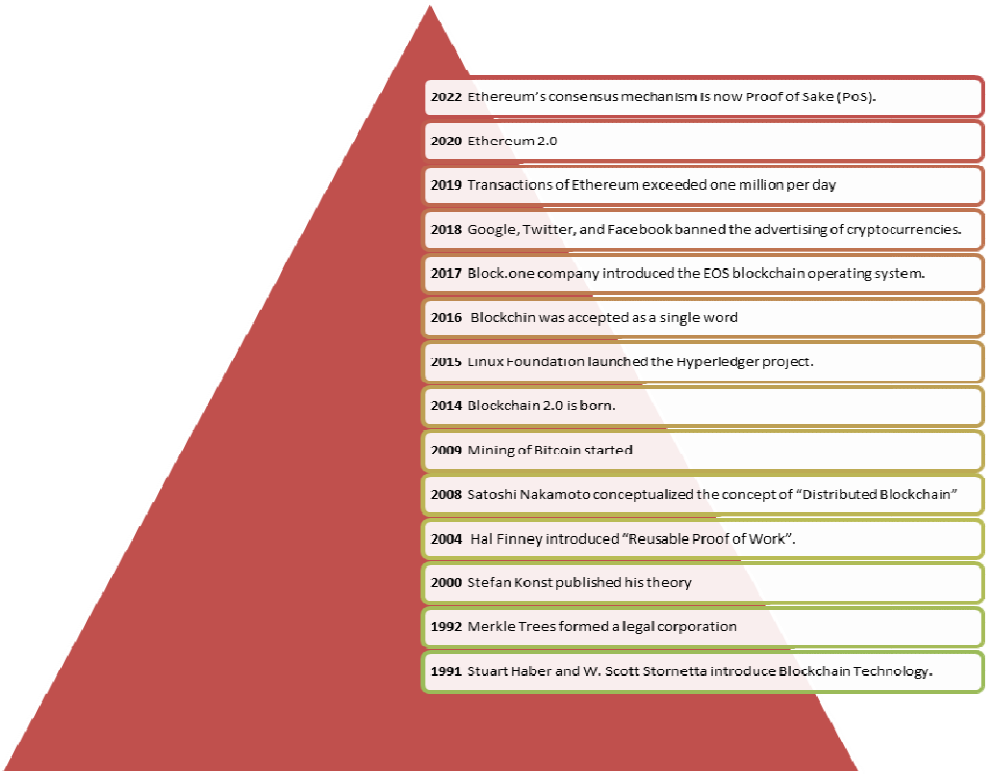
2017: Japan introduced Bitcoin as a legal currency in the year of 2017. The Entrepreneurial Operating System (EOS) blockchain operating system was introduced by the company name Block.one Company.

2018: The market value of the Bitcoin continued to drop. At the end of the year of 2018 the bitcoin value reached to $3,800.

2019: By the year of 2019, Ethereum network transactions exceeded one million per day.

2020: In the year 2020, traditional cryptocurrencies were less in demand in market than stable coins. In the same year i.e. 2020, Beacon Chain was launched by Ethereum in the preparation of Ethereum 2.0.

2022: By the year 2022, Ethereum Merge. Ethereum's consensus mechanism is now Proof of Sake (PoS).



How does a blockchain work[8]

[8]Ministry of Electronics & Information Technology, Blockchain Cryptographic Security, Hashing and Digital Signature (May 2023), https://egovstandards.gov.in/sites/default/files/2023-05/Blockchain%20Cryptographic%20Security%2C%20Hashing%20and%20Digital%20Signature.pdf

- In a blockchain, blocks can be recognized by their block number and the block header hash. The data which is stored in a block can be recognized through the computerized algorithm known as hash function.
- A blockchain does not only lock the data that is to be seen by its participants but it also makesthedata immutable i.e. it cannot be deleted or altered.
- Once the data is entered in the blockchain it can never be changed.

Distributed Ledger Technology in blockchain[9]

- All the transactions that take place between the two parties on the blockchain network are recorded in a file called ledger.
- The Distributed Ledger technology keeps on growing
- There are mainly three types of ledgers which are used in the blockchain that are: -

Centralized Ledgers

- Centralized ledger is also known as general ledger
- In centralized ledger there is only one party that is centralized party which holds the ledger and other parties are dependent on it.
- It records all the transactions relating to the assets of the company, liabilities, revenue, expenses and owner's equity.
- Central party also has power over the data.

Decentralized Ledgers

- In this type of ledger every party holds the ledger unlike in the case of centralized ledgers.
- Any party in the blockchain who alters the data or over the data is accountable for its action.

[9]Ministry of Electronics & Information Technology, Blockchain Cryptographic Security, Hashing and Digital Signature (May 2023), https://egovstandards.gov.in/sites/default/files/2023-05/Blockchain%20Cryptographic%20Security%2C%20Hashing%20and%20Digital%20Signature.pdf

Distributed Ledgers

- Each computer or device that runs the blockchain's protocol software and connects to its network and participates in validating the transactions and maintains ledger is known as node.
- Each node generates a record of each item and creates a consensus on its veracity.

Types of Blockchain[10]

Currently there are four types blockchains that are:-

Public blockchain –

A public blockchain is the distributed ledger system in which neither permission is required to participate in the network nor does it validate the transactions from a central authority and is non-restrictive in nature. A User who is part of the public blockchain can access current and past records, can also verify the transactions or do proof- of- work for an incoming block and do mining.

Private blockchain

A private blockchain is only operative in a closed network, it is a permission or restrictive blockchain. Mainly Organizations or enterprises use private blockchain technology where only selected members are participants of the blockchain network. The organization has the power to do authorizations, permission, accessibility, and security of the blockchain. So, both public and private blockchain are similar but the only differentiating point is that the private blockchain has a small and restrictive network.

[10]Gov't of India, Blockchain Strategy & Applications, Blockchain.gov.in,https://blockchain.gov.in/Home/BlockChain?blockchain=type (last visited Sept. 12, 2025).

Consortium Blockchain

A Consortium Blockchain is a semi- decentralized of nature where more than one organization manages a blockchain. In this type of blockchain more than one organization can act as a node and organizations exchange information or do mining.

Hybrid Blockchain

Hybrid blockchain combines both private and public blockchain. It uses the features of both private as well as public blockchain that can have both permission based and non- permission based systems. The data can only be controlled by the members who are part of the blockchain. Only selected data can be allowed to the public and rest data be kept as confidential in private blockchain. Hybrid blockchain is flexible in nature as users can join both private as well as multiple public blockchains. The transactions that happen in the private blockchain are verified within that network.

Blockchain technology in the legal field –[11][12]

Blockchain technology has been gaining credibility for its use in the legal field, as law is considered a noble profession with true and credible information as its basis, making blockchain a useful tool in the field. Blockchain will act as a secure ledger protecting sensitive data of parties and clients as the information is stored in ledger-like blocks, keeping it safe. Law firms deal with storing large amounts of information relating to different parties, which needs to be classified under various heads. Blockchain technology can help in facilitating the storage of data.

[11] *Blockchain in Law: Real World Blockchain Use Cases*, ConsenSys, https://consensys.io/blockchain-use-cases/law
[12] Sergio Esteve De Miguel, *Blockchain in the Legal Industry: Use Cases and New Legal Jobs*, Bigle Legal Blog (Nov. 2, 2023), https://blog.biglelegal.com/en/blockchain-in-legal-industry-use-cases-blockchain-jobs

Here are its following uses –

Intellectual property[13] –

Blockchain can help in storing information relating to intellectual property, whether they are registered or not. such information can be publicly seen, and it cannot be deleted or altered once it is stored. This eliminates any risk of manipulation with the information as blockchain is immutable, making it safer than traditional methods of storing sensitive data.

Smart contracts –

Execution of smart contracts has been one of the top utilizations of blockchain technologies, smart contract comes into existence when two or more parties decides to enter into a contract through electronic means eliminating the need for physical meeting, the terms and conditions as decided by the parties are stored using blockchain which again prevents any chances of altercation. Smart contracts are gaining popularity because of the convenience it provide to the party by saving time and money. But on the downside, if any party has violated or not fulfilled the terms and conditions of the contract, the other party cannot seek redress because of a lack of laws on this subject.

How Does Smart Contracts Work[14]

The first step to do smart contracts is to do coding, that is the contract has to be written in the programming language. The parties who want to do smart contracts then they have to be very precise what they want to do in the contract. These codes don't have human languages.

After the coding is done by the parties then the next step in the smart contracts is transaction. Among all the participants the transaction is distributed to all the participants, who validates the transaction in the real time.

[13]Bernard Marr, *Practical Examples of How Blockchains Will Be Used in Legal Firms*, Bernard Marr (July 2, 2021), https://bernardmarr.com/practical-examples-of-how-blockchains-will-be-used-in-legal-firms/

[14]Chetna Bhardwaj, *What Are Smart Contracts and Are They Legal in India?*, India Briefing News (June 21, 2022), https://www.india-briefing.com/news/what-are-smart-contracts-and-are-they-legal-in-india-25343.html

The third step that is the final step in making of the smart contract is execution. The parties who validate the transactions are the networks of computers that execute the actions by verifying them. After the above transaction gets completed then it can neither be reversed nor it can be changed

Parties to the smart contracts can add their own terms and conditions that is the participants of the smart contract must have to determine that how the transactions and their data has to be represented on the blockchain, agree on 'if, when…then' rules govern those transactions and explores the possible exceptions and defines a framework that is used to resolve the disputes.

Registration –

Registration of immovable property can be a tedious task as the traditional way of registration requires waiting in line for signatures, submitting documents, and payment of fees, which consumes tremendous time. Apart from registration being a time-consuming process it also involves paperwork, which is often at the peril of being misplaced or fraudulently used. Blockchain holds the potential of replacing the traditional method of registration of property with its secure technology. Property registration can be done through storing information in blocks, which makes it secure, as once information has been entered, it cannot be changed or altered; this will reduce the risk of fraud in matters of property. In addition, it will be convenient for the parties as it will save time and energy.

Storing evidence and the client's information –

Law firms and advocates deal with clients and their matters in court, both parties are required to maintain case files, which contain sensitive information or evidence to prove their case. Such sensitive information needs to be securely stored so that the opposite party do not tamper with it. Blockchain technology can play very crucial role in storing evidence and other sensitive data and keeping it safe and secure.

Court records –

Usually, the clerks in courts are overburdened with the work of storing records of proceedings and legal documents submitted by parties, case files, exhibits, evidence, records or judgments and orders and many more. Blockchain can systematically store this huge data easily and securely, thus saving the time and energy of court officers. Such information stored using blockchain can be easily accessed by the courts and the parties.

According to PWC, a UK-based survey of 2019, 79% firms have expected the positive impact of AI in the legal field, but implementation cost is the factor that is holding the smaller firms back. The survey has predicted blockchain and smart contracts to be widely introduced by law firms and offer such services to the clients. Along with the positive impacts of AI, the survey has also listed threats faced by law firms, which include cyber fishing, data threats, ransomware and supply chain compromise. In the top 10 firms' data and information leakage and malware infection are among the most common incidents faced.

A start-up named Chain Link has developed a technology to make smart contracts more attractive by relying on multiple sources of data. Chain-link uses a decentralized blockchain oracle network, it has become an important tool in web3 applications. Another firm named Bernstein[15] allows you to store your creative ideas and innovations, such as IP, trademarks, copyrights, and unregistered designs in order to prove their existence. The firm uses blockchain technology, which allows you to manage IP assets by creating a digital trail of records of the innovation and creation process. All the records stays completely private and secure because of the unique cryptographic layer, even Bernstein doesn't know about the data. The World Intellectual Property Organization (WIPO) has in its "*Blockchain Technology and IP Ecosystem – A White Paper, 2022"* recognized Bernstein as a valuable firm in the field of providing services using blockchain technology.

[15]*Bernstein: Blockchain for Intellectual Property*, Bernstein.io, https://www.bernstein.io

Legal Framework[16]

No matter how lucrative blockchain sounds, there are few problems that need urgent attention to utilize the technology at its full potential. The lack of legal frameworks both nationally and internationally makes dispute settlement and redressal difficult for the aggrieved party. Uncertainty of jurisdiction makes it difficult for the legislatures to draft laws and regulatory frameworks on this subject. To date there has not been a single international treaty on blockchain or cryptocurrency, though these matters has been addressed in forums like Financial Action Task Force (FATF) and G20 & Financial Stability Board. The number of Western countries that have recognized bitcoin and made transactions using cryptocurrency as a legal tender, but there is still a lack of comprehensive laws.

Countries and their stance on Cryptocurrency[17] –

European Union –

The MICA regulations 2023 – markets in crypto assets and stable coins are the only comprehensive rules and legal framework on crypto assets formulated by the EU. The rules address cryptocurrencies, trading platforms and stablecoins and apply to users, trading platforms and custodians. The main aim of the regulation is to offer transparency, protect consumers from fraud and create financial stability. The rules are on based on FATF guidelines for preventing money laundering and terrorist financing through digital assets. The regulations can be a blueprint for other nations to adopt the framework to formulate their own national laws.

USA –

America has not clearly defined its stand on the subject, but the states are free to make their own rules and regulations. The Securities and Exchange Commission recognizes cryptocurrency as securities and the commission aims to protect investors. According to the Commodity Future Trading Commission (CFTC), cryptocurrency is a commodity like gold, silver, fuel or any other

[16]Apurva Agarwal, *Blockchain Technology: Legal Framework & Its Application*, LinkedIn (Mar. __, ____), https://www.linkedin.com/pulse/blockchain-technology-legal-framework-its-application-apurva-agarwal/

[17]David Schepp, *Cryptocurrency Regulation: A Guide to U.S. & Global Policies*, Britannica Money (Aug. 21, 2025), https://www.britannica.com/money/cryptocurrency-regulation

precious item in the market. The Internal Revenue Services (IRC) considers cryptocurrencies as property which are subject to taxes as any other property.

UK –

There are no concrete laws on blockchain or cryptocurrencies but recently in 2024 the British government has recognized cryptocurrency as non-fungible tokens (NFT), which are similar to property, this will protect the owner and aid in recovery of stolen digital assets. The government has notified to levy taxes on digital assets.

Canada –

The Canada Revenue Agency (CRA) has recognised cryptocurrencies as commodities for the purpose of levying taxes. The government has recognised the digital currency for the purpose of buying and selling.

India -

In India the cryptocurrency is taxed but the Indian government so far have not recognized cryptocurrency as a legal tender following which in 2018 RBI has passed a direction banning the conversion of cryptocurrency into fiat currency. Such direction was later declared as unconstitutional by the Supreme Court in the case IMAI v. RBI, the honourable court was of the opinion that the ban by RBI violates the right to trade under Article 19 1(g) of the Constitution. The Supreme Court also gave guidelines to deal with digital currency and assets and recognised RBI as the only competent authority to make rules on cryptocurrency, though the RBI has not acted upon the direction given by the Supreme Court. The Indian government in the year 2022 budget recognised cryptocurrency by identifying them as Virtual Digital Assets (VDAs) and specific taxation frameworks were also implemented for these special assets.

In India, as per section 115BBH of Income Tax Act 1961, if you have earned profit from the trading, selling, or spending of cryptocurrency, then you have to pay a 30% tax. As per section 194S of Income Tax Act, in a financial year if there is a sale of cryptocurrency of more than rupees fifty thousand or rupees ten thousand in certain cases, then 1% TDS will be applicable.

Blockchain as a tool for governance [18][19]–

The leveraging of the blockchain technology is not only limited to private sector however the government is also showing keen interest in the privileges of the technology. The most recent example is the inauguration of Centre of Excellence for Blockchain Technology by the National Informatics Centre (NIC) under the Ministry of Electronics & Information Technology. The centre is a significant approach by the government of India providing a platform using blockchain technology for research & innovation and supporting centre-state level government projects. The government aims at promoting public and private sector collaboration for capacity building, on the other hand, maintaining complete transparency of transactions between citizens and the government.

The Centre of Excellence for Blockchain Technology provides various product,s including –

Certificate Chain (CC) –

This aims to modernize the traditional method of issuance and verification of certificates. Generally, this process is time-consuming as it relies on human validation and cross-checking certificates at a bulk rate does take a lot of time, people tend to submit false or fake documents to avail the benefits of government schemes and services. The certificate chain solves all these problems by authenticating the certificates digitally, which will cost effective and save's time of government officials making sure that the benefits are only provided to eligible citizens.

Document Chain (DC) –

This provides a unified platform for storing confidential documents like caste certificates, income certificates, ration card, driver's license, educational certificates or any other documents required for validation. Currently, in Karnataka, it has been used for admission purposes into higher education colleges. Blockchain technology makes the platform safe and secure; therefore the chances of fraudulent activities is reduced.

[18]Centre of Excellence in Blockchain Technology, Government of India, *Centre of Excellence for Blockchain Technology*, https://blockchain.gov.in/
[19]District Legal Cell, Karnataka, *DLC Karnataka*, https://dlc.kar.nic.in/DLCindex.aspx

Judiciary Chain (JC) –

This product as provided by the centre, aims to carter the workload of the judiciary that is traditionally being done manually. The judiciary chain claims to solve the perils of data theft, manual delays, evidence security, document storage by using the blockchain technology. The day-to-day work including passbook entries keeping the judicial records, FIR, Charge Sheets, Challans, Summons, Bail Order and many more can be effectively stored digitally using the platform.

Logistic Chain (LC) –

The logistic chain has been currently in use by Aushada which is the online supply chain management system for medicine in Karnataka. The drug distribution process involves various stages recording transactions by the suppliers, manufacturer, warehouse owners etc. The platform ensures quality of the drug with complete description of the origin, manufacturing process and other necessary details. The consumer centric approach maintains complete transparency at each stage of the manufacturing and delivery process.

Property Chain (PC) –

The platform regulates the management of property related documents providing a ledger for storage of such documents. This facilitates the activities like transfer of property, registration, mortgage, gift and many more, providing safe storage reducing the risk of tampering.

So far, this initiative has 10 states and central organisations with 20 departments on board utilizing and working with the Centre of Excellence in Block Chain Technology with more than 9 crore documents already registered with the platform. This centre aims to give a new dynamic to the traditional system of governance making the implementation of government policies and schemes more effective and transparent. The problem which was earlier faced by the authorities was that the benefits of the scheme were not able to reach the targeted population as the involvement of middlemen used to corrupt the process. The current platform cuts the middleman and maintains checks and balances, reducing the chances of fraudulent people availing benefits.

The government's next step should be spreading awareness about the use of the platform and ways in which it can make people's day-to-day work easy.

The growing role of blockchain technology in India[2021]

On 4th September 2024, the government of India has taken many initiatives for the growth of blockchain technology in India. The Ministry of Electronics and Information Technology (MeitY) has launched the Vishvasya- Blockchain Technology Stack to offer blockchain service to the geographically distributed ledger infrastructure to support various permissioned blockchain based applications. MeitY has also announced the NBF lite that is Lightweight blockchain platform and Praamaanik, an innovative blockchain that is used for verifying the origin of mobile app and national blockchain portal.

The government has initiated National Blockchain Framework (NBF) for encouraging research and application development; facilitating state of art, transparent, secure and trusted digital service delivery to citizens. Currently NBF supports two permissioned blockchain platforms and is extensible. The technology stack hosted on geographically distributed infrastructure at NIC Data centers that is in Pune, Hyderabad, Bhubaneswar.

NBF Lite is a blockchain sandbox platform, developed for start-ups for prototyping of applications, carrying out research and capacity building. These technologies are developed by C-DAC, NIC, IDRBT Hyderabad, IIT Hyderabad, IIIT Hyderabad and SETS Chennai under the MeitY support.

In 2018, FutureSkills prime was introduced in India. FutureSkills prime is a digital skilling joint initiative by the Ministry of Electronics and Informative Technology (MeitY), NASSCOM and IT industry. This platform will provide the candidates who are interested with multiple options with skill learning. Through this platform learners can also learn about adoption of blockchain

[20]Centre of Excellence in Blockchain Technology, *Disclaimer*, Blockchain.gov.in, https://blockchain.gov.in/Home/QuickLinks?QuickLinks=Disclaimer

[21] Securities & Exchange Board of India, Operational Guidelines for Security and Covenant Monitoring Using Distributed Ledger Technology (DLT) (Mar. 29, 2022), https://www.sebi.gov.in/legal/circulars/mar-2022/operational-guidelines-for-security-and-covenant-monitoring-using-distributed-ledger-technology-dlt-_57331.html

technology across various sectors and earn badges for digital fluency and earn certificates from courses aligned to the government approved curriculum.

SEBI has also taken steps towards Distributed Ledger Technology, On the date of 29th March, 2022, SEBI had issued a circular amendingits earlier circular which was dated 13th August, 2021, regarding a platform for 'Security and Covenant Monitoring System' ('system') hostedby Depositories shall bedeveloped.Thesystem shall be used for recording and monitoring of the security created and monitoring of covenants of non-convertiblesecurities. The system shall inter aliacapture the process of creation ofsecurity(viz. due diligence, charge creation etc.), continuous monitoringof covenants by Debenture Trustees (as applicable), credit rating of the non-convertiblesecurities by the Credit Rating Agencies (CRAs) etc.

The growing role of blockchain technology in World

On 22nd May 2022, World economic forum's global blockchain council developed the "Presidio Principles: Foundational Values for a Decentralized Future" to preserve and protect the rights of the users. The rights of the users are grouped into four main parts that are: Transparency and Accessibility- the right to information about the system, Privacy and security- the right to data protection, Agency and Interoperability- the right for individuals to own and manage their data, and Governance and Accountability- the right for users of the system to understand the available resource.

On 18th March 2019, IBM's blockchain world wire model was officially introduced. IBM introduced a pilot project of world wire in 2017. It is designed to accelerate the foreign exchange, cross border payments and remittances. IBM's blockchain is the first blockchain network to merge payment messaging, clearing and settlement on a single unified network while allowing its participants to choose from the variety of digital assets for the settlement.

Global Blockchain Business Council (GBBC) was founded in 2017 in Davos, Switzerland. It is a trusted non- profit association for the blockchain, digital assets, and emerging technology community. It is the further adoption of blockchain and emerging technologies by global changemakers and global leaders to gear these transformative tools for more secure and functional societies.

Conclusion

The future potential and ability of blockchain technology cannot be doubted because of its vast uses in the current technological era. Despite the promising results, there are certain fields which are yet to show their full confidence in this growing technology, one of the reasons could be lack of rules and regulation on the said subject. Just as a normal human behavior thrives on surety and safety similarly blockchain technology will not be embraced by private players and government until it is seen as a safe haven prompting receptiveness towards its adoption. In order to create such an environment, it is necessary to frame clear laws and regulations on the subject matter, this will help in building confidence. The legislatures are not expected to be competent enough to frame laws on the subject but they can involve professionals possessing specialized knowledge in the field of blockchain.

In the case of **Amitabha Dasgupta Vs. United Bank of India and Ors[22].** Supreme court said in its judgment that Banks may consider utilizing appropriate technologies, such as blockchain technology which is meant for creating digital ledger for this purpose.

Suggestion

Blockchain in legal field is a promising future which is penetrating in almost all sectors atspeedy rate. Despite of the lack of laws at this stage the technology might be suffering, and the problem can only be solved by a comprehensive framework of rules. The problem of enforceability of smart contracts formed on blockchain platform can be resolved if the parties entering into the contract add dispute clause in their contract. Parties can opt for Alternative Dispute Resolution, Mediation or Conciliation which involves a third party as a mediator who tries to negotiate the terms of parties. Such dispute resolution helps in maintaining confidentiality in sensitive matters where parties don't want to go through extensive court procedure. Smart contracts can be considered as a valid contract if it fulfils all the criteria under section 10 of Indian Contract Act, 1872, which includes criteria like competency of parties, offer, acceptance, valid consideration, lawful object etc. The scope of blockchain is widened as it can be counted as an electronic record which are admissible as evidence under the Indian Evidence Act 1872, after verification of its

[22]Amitabha Dasgupta v. United Bank of India, (2021) 15 SCC 38, 45 (India).

authenticity. Indian legislatures should take inspiration from the European law GDPR which deals with data security while formulation their own laws on blockchain.