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Legal Transformations: Role of DLT's in Reforming Judiciary in India

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LEGAL TRANSFORMATION: ROLE OF DLTs IN REFORMING JUDICIARY IN INDIA

In recent years, the potential application of Distributed Ledger Technology (DLT) in judicial systems has garnered significant attention.

Home Minister Amit Shah recently said that Blockchain (a kind of DLT) can help in enhancing communication within the judicial setup and make document exchange process smoother and more secure especially in cases on cross border evidence management (Amit Shah, 2024). In the same conference, CJI DY Ch highlighted technology's role in enhancing the speed and accessibility of justice (Chandrachud, 2024). He laid stress on the fact that new age technologies should bring transformation not just automation in the judicial mechanisms.

While DLT offers promising opportunities for enhancing transparency, efficiency, and security in court-case management, its potential application needs to be measured in its ability to address diverse needs and applications of the actors engaged in the India's Judiciary.

This document examines the possibility of integrating DLTs in India's Judicial Systems and specifically court-case management. It delves into technological, regulatory and budgetary aspects of the same and brings about the points of contentions, lessons and reforms needed.

Strides in Reforming Court-Case Management

Court management is the process of handling legal matters in courts. It involves interactions with citizens, legal professionals, staff, and other judges. Although it is not a legal matter itself, court management has a significant impact on court procedures. It requires a range of skills, not all of which are legal in nature. (P R et al., 2020)

The evolution of court management in India reflects a concerted effort to address persistent challenges such as judicial delay, backlog, and administrative inefficiency within the legal system. Spanning several decades, this journey has seen various commissions, reports, and initiatives aimed at enhancing the quality, performance, and timeliness of justice delivery. (*Digital Courts Vision & Roadmap E-Courts Project Phase III*, 2022)

The inception of court management reforms in India can be traced back to the 14th Law Commission in 1958, which identified judicial delay as a pressing issue requiring attention. Emphasising the importance of allocating adequate time and attention to each case, the commission cautioned against mass production methods in case disposal. Subsequent reports by the 77th and 79th Law Commissions in 1978 and 1979 reiterated concerns regarding delay and loss of trust in the judiciary while also acknowledging the need for additional judicial resources and reforms. (P R et al., 2020)

In 2009, the 230th Law Commission Report shed light on the pervasive adjournment culture plaguing the judiciary and advocated for the effective utilisation of court hours by both lawyers and judges. This report underscored the significance of better case management to reduce delay and ensure timely justice delivery. Furthermore, the landmark decision in *Imtiyaz Ahmad v. State of Uttar Pradesh and Others* in 2012 reinforced the imperative of efficient court management in achieving the rule of law and enhancing access to justice. (P R et al., 2020)

The 245th Law Commission Report in 2014 marked a significant milestone in digitisation efforts by analysing court data from the lower and higher judiciary. Framing the discussion on delay based on empirical evidence, this report emphasised the need for defining terms like pendency and backlog to allocate additional judges effectively. Additionally, it proposed draft Case Flow Management (CFM) rules as a template for states to implement, although the adoption of these rules faced challenges due to a lack of synchronisation among states. (P R et al., 2020)

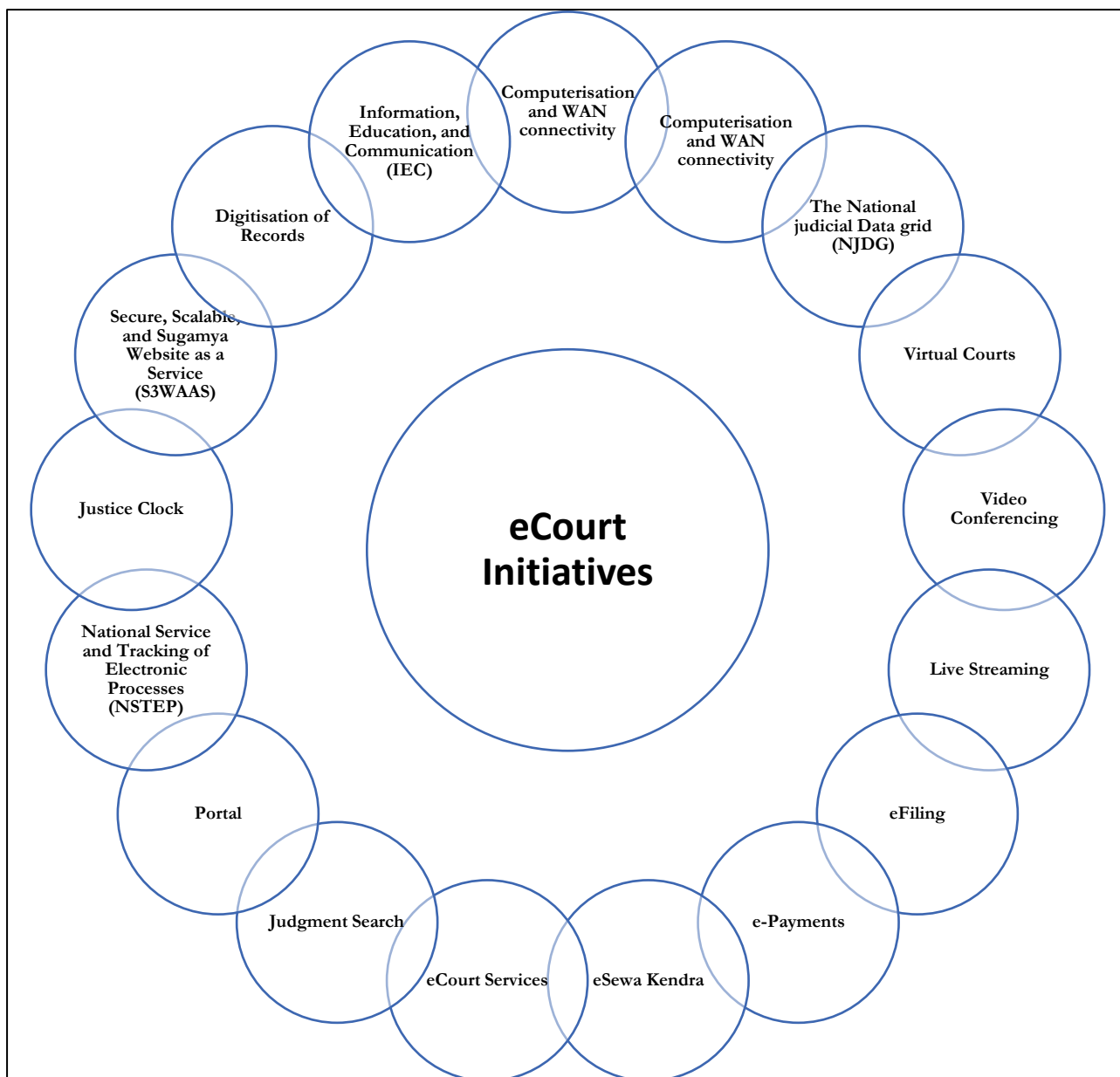
Moreover, the e-committee has developed the Case Information System (CIS) for both District Judiciary and High Courts, aiming to enhance transparency within the Indian Judiciary. This software allows litigants to access case details online, including orders, hearing dates, and case progress. CIS introduces features such as e-filing, e-payments, and e-processing aimed at streamlining court processes and enhancing efficiency.

The transition from CIS 2.0 to CIS 3.0 may raise concerns, but the core concept remains consistent. While CIS 3.0 retains basic functionalities from CIS 2.0, it also introduces new features, representing an evolution of the system. CIS 3.0 represents an improvised version with technological improvements and added functionalities while retaining key features inherited from CIS 2.0. Its rollout for the District Judiciary underscores its indispensable role in providing 24/7 access to case details for all stakeholders in the administration of justice.

Additionally, the World Bank has acknowledged the transparency of the eCourts project, leading to India's advancement in the World Bank's Doing Business ranking. Furthermore, according to the Electronic Transaction Analyzer of the Government of India's Ministry of Electronics & Information Technology, eCourts remains one of the top 5 service portals in terms of e-transactions, offering nearly 12 citizen services and surpassing even railway reservation transactions.

Despite strides in digitisation and court management, challenges persist, particularly in data collection and court administration. The availability of accurate and comprehensive data remains a hurdle, hindering informed decision-making and reform efforts. Moreover, the integration of court managers into the system has not yielded significant changes, reflecting broader challenges in implementing reforms effectively. (P R et al., 2020)

The e-Courts Project Phase III vision document states that at the base level, challenges arise from a significant network connectivity divide across states and districts, leading to disparities in accessing e-Courts systems. Factors such as inadequate data speed, volume, and infrastructure contribute to this divide, impacting the accessibility of technology-driven judicial services. It further adds that at the development level, the federal structure of the judiciary leads to diversity in administrative rules and practices among High Courts. Non-uniform case nomenclatures and customised processes pose challenges to developing a unified data system for nationwide analysis. Technology solutions must balance diversity with the need for standardisation. (*Digital Courts Vision & Roadmap E-Courts Project Phase III*, 2022)



These challenges impede the full harnessing of technology potential in the judiciary, leading to mindset barriers against technology solutions and services. Limited dissemination of information about e-Courts services contributes to low awareness among litigants and lawyers. Consequently, the development of e-Courts has not progressed as initially envisioned at its initiation in 2005. *(Phase-III | Department of Justice | India, n.d.)*

Digitisation of records

In November 2021, Supreme Court’s e-committee selected five high courts — Bombay, Delhi, Telangana, Madhya Pradesh, and Allahabad — to commence the digitisation of case documents or legacy records across all courts. This initiative, part of the top court’s phase III project, aims to adopt technology to create a reliable source of digital records and enable electronic data exchange between judicial entities for quicker case disposal, eliminating geographical boundaries in the judiciary. (P R et al., 2020)

The e-Courts project

The e-Courts Integrated Mission Mode Project, initiated in 2007, is a national e-Governance endeavour aimed at modernising District and Subordinate Courts across India. This project entails providing necessary hardware and software applications to facilitate e-services delivery, enabling judicial monitoring, and managing court operations. Its primary objective is to ensure universal computerisation of district and subordinate courts, enhance ICT enablement within the justice system, and deliver designated services to litigants, lawyers, and the judiciary. Conceptualised based on the 2005 "National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary," proposed by the Supreme Court of India's e-Committee, its vision is to ICT-enable the Indian Judiciary, transforming court operations. The e-Committee, established by the Government of India at the behest of the Chief Justice of India, advises on the formulation of a national policy for judicial computerisation and technological management. This Pan-India project, monitored and funded by the Department of Justice, Ministry of Law and Justice, Government of India, targets District Courts nationwide. Its goals include efficient, citizen-centric service delivery as outlined in the e-Court Project Litigant's Charter, implementation of decision support systems, process automation for transparency, and enhancing judicial productivity to ensure an accessible, cost-effective, predictable, reliable, and transparent justice delivery system. (*Digital Courts Vision & Roadmap E-Courts Project Phase III, 2022*)

The court issued a standard operating procedure to ensure uniformity in the digitisation process and address the lack of interoperability observed in prior initiatives by two of these courts. Additionally, the e-committee directed all high courts to make it compulsory for government departments to file their cases electronically starting January 1, 2022, emphasising the simultaneous implementation of digitisation and e-filing procedures. The scale of the project was significant, with nearly 3,100 crore documents estimated to be digitised over the next five years. However, the process faced challenges due to the lack of uniformity in digitisation approaches among different courts, prompting the formulation of a standard operating procedure. (P R et al., 2020)

The COVID-19 pandemic further underscored the urgency to enhance digital capabilities in the justice delivery system, leading to the adoption of information and communication technology tools for seamless dispensation of justice.

As part of the digitisation efforts, the Supreme Court ordered the digitisation of all records of criminal trials and civil suits at district courts to enhance efficiency, equity, and ease in the judicial process. The court emphasised the importance of accountability in the proper protection and regular updating of digitised records to ensure the smooth functioning of the judicial process. Looking ahead, Phase III of the e-courts project proposes ambitious initiatives such as a digital case registry, intelligent scheduling, and open digital proceedings, aiming for a more integrated and efficient justice delivery system. (*Digital Courts Vision & Roadmap E-Courts Project Phase III, 2022*)

Moving towards DLTs in the Indian judiciary

The eCommittee's Vision and Roadmap document for Phase 3 of the eCourts Project highlights the importance of blockchain (a kind of DLT) technology in achieving key objectives. It emphasises an ecosystem approach and the establishment of robust digital infrastructure to enable various services, particularly making documents machine-readable and ensuring their

security and integrity. The document suggests securing digital documents with blockchain to prevent tampering and calls for the development of SOPs to maintain consistency, accuracy, and quality of records. (*Digital Courts Vision & Roadmap E-Courts Project Phase III*, 2022)

In pursuance of that, the Supreme Court of India's eCommittee recently established a Sub Committee to devise a Standard Operating Procedure (SOP) for the digitisation of records, which has now been finalised and distributed to the High Courts for review. This SOP outlines plans to create dedicated Judicial Digital Repositories (JDRs) at both the High Court and district court levels to manage and preserve digital records. Similar repositories are proposed for the Supreme Court. (*Phase-III | Department of Justice | India*, n.d.)

Furthermore, the SOP recommends the implementation of a comprehensive Information Governance (IG) policy to manage the substantial volume of e-filing and digital record production. It includes technical specifications, open standard-based file formats, and guidelines for digitisation, as well as procedures for preparing Submission Information Packages (SIP) and transferring digitised records to JDRs. To ensure the long-term trustworthiness and reliability of these repositories, they must undergo auditing and certification according to ISO 16363 standards, ensuring the legal admissibility of digital records. (*Phase-III | Department of Justice | India*, n.d.)

Thus, while serious measures have been taken to digitise records, the idea of introducing blockchain in it has not found any such concrete efforts. Yet the discourse.

Pendency in High Courts <i>as of 02.02.2024</i>		
Sr No.	Name of High Court	Pendency
1	Allahabad High Court	1073671
2	Bombay High Court	723548
3	High Court of Rajasthan	668985
4	Madras High Court	541267
5	High Court of Madhya Pradesh	447073
6	High Court of Punjab and Haryana	440152
7	High Court of Karnataka	288473
8	High Court of Kerala	255383
9	High Court of Andhra Pradesh	248975
10	High Court for State of Telangana	247588
11	Patna High Court	197742
12	Calcutta High Court	194951
13	High Court of Gujarat	170325
14	Orissa High Court	146023
15	High Court of Delhi	123615
16	High Court of Himachal Pradesh	100556
17	High Court of Chhattisgarh	90723
18	High Court of Jharkhand	83612
19	Gauhati High Court	62754
20	High Court of Uttarakhand	50954
21	High Court of Jammu and Kashmir	44753
22	High Court of Manipur	4698
23	High Court of Tripura	1266
24	High Court of Meghalaya	1146

25	High Court of Sikkim	184
	Total	6208417
<i>Source: - Rajya Sabha Unstarred Question No. 757 Answered on 08/02/2024, National Judicial Data Grid (NJDG)</i>		

Modernising Legal Documentation: The Bharatiya Sakshya Bill

The Bharatiya Sakshya Bill, set to replace the Evidence Act, marks a significant overhaul in legal documentation and procedures, encompassing 170 sections, an increase from the previous 167. With 23 sections amended, 1 new section added, and 5 repealed, the law reflects a modernised approach to evidence management and judicial proceedings.

Notably, the revised law broadens the scope of documents to include electronic or digital records, encompassing various forms of communication such as e-mails, server logs, computers, smartphones, laptops, SMS, websites, locational evidence, e-mails, and messages on devices. This expansion acknowledges the digital era's influence on evidence gathering and adjudication.

A pivotal aspect of the legislation is the provision for comprehensive digitisation throughout the legal process, ranging from the lodging of an FIR to the compilation of case diaries, charge sheets, and judgments. By embracing digitisation, the law aims to streamline legal proceedings, enhance accessibility, and improve transparency.

Furthermore, the bill mandates the compulsory videography of search and seizure operations, ensuring accountability and safeguarding the rights of citizens. This measure prevents the wrongful implication of innocent individuals and enhances the integrity of the legal process. Notably, without recorded documentation of search and seizure activities, any subsequent charge sheet is deemed invalid, reinforcing the importance of transparency and accountability in law enforcement practices.

In a notable stride towards modernisation, the legislation introduces the concept of e-FIR, empowering designated police officers in every district and police station to promptly inform the families of arrested individuals about their detention, both online and in person. This digital notification mechanism enhances efficiency and ensures timely communication with concerned parties.

Additionally, the bill mandates the compulsory recording of victim statements in cases of sexual violence, furthering efforts to protect vulnerable individuals and enhance the credibility of legal proceedings. By requiring video recordings of victim statements in cases of sexual harassment, the legislation aims to provide a secure and supportive environment for survivors to testify, thereby strengthening the pursuit of justice.

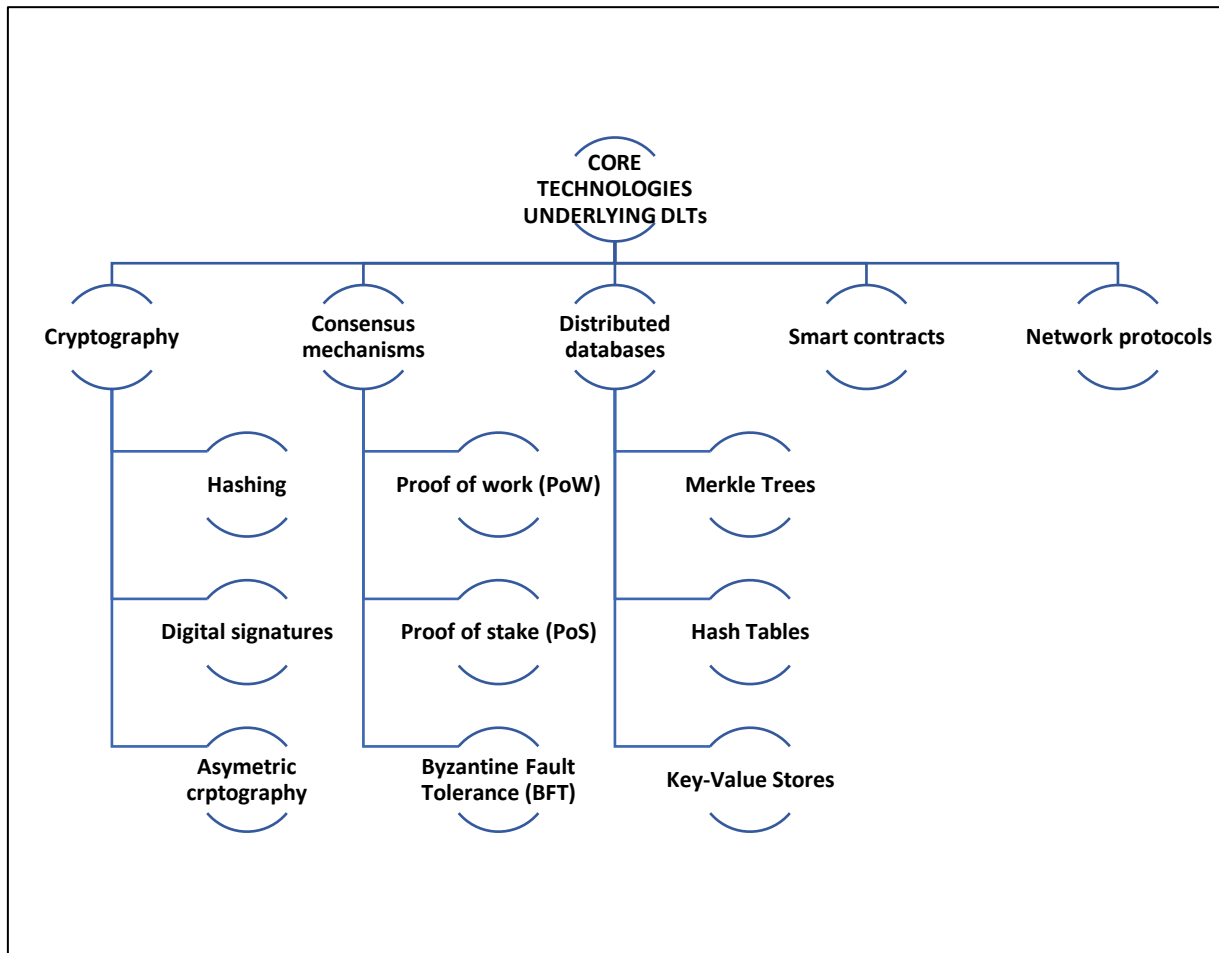
In light of these progressive reforms and the increasing reliance on digital documentation, there arises a critical need for robust safeguards and regulations to protect judicial data from tampering or manipulation.

Understanding DLTs

DLTs, or Distributed Ledger Technologies, are intricate systems made up of interconnected. A Distributed Ledger Technology (DLT) system operates as a network of independent entities, facilitating consensus on the ordering of validated transactions without the need for a central authority. These systems maintain persistent and tamper-evident electronic records by replicating data across multiple nodes and linking them with cryptographic hashes. (Rauchs et al., 2018)

The hierarchical structure of DLT systems comprises protocol, network, and data layers, each interacting to form a dynamic system. Roles and actors within these layers influence the degree of decentralisation. Various design choices within each component result in trade-offs that shape the system's properties, including security assumptions and trust relationships. DLT systems interact with external systems through gateways, connecting them to the broader ecosystem and enabling transactions with external entities. The system's design, architecture, and governance significantly impact its characteristics, emphasising the importance of discussions on settlement, transaction life cycles, and incentive mechanisms. (Rauchs et al., 2018)

Furthermore, clarity regarding the structure of shared data records, distinguishing between



transactions, logs, records, journals, and ledgers, is essential for understanding DLT systems comprehensively. (Rauchs et al., 2018)

Case of China

In recent years, China has emerged as a frontrunner in adopting blockchain technology within its legal system, driven by strong governmental support and a proactive approach to innovation. The timeline of blockchain developments within China's legal landscape reveals a concerted effort to leverage this technology to enhance judicial processes and improve transparency.

The acceleration of blockchain initiatives in China can be traced back to 2019, when President Xi Jinping declared blockchain a national priority, catalysing increased research, investment, and regulation in the field. This declaration set the stage for significant advancements in blockchain integration within various sectors, including the legal domain. Notably, in March of the same year, blockchain and digital currency were officially incorporated into the country's strategic plans, highlighting the government's commitment to embracing emerging technologies. (Taufik, 2022; Sharwood, 2022; Qin, 2022)

In line with China's broader digital transformation agenda outlined in the 14th five-year plan (covering 2021 to 2025), the Supreme People's Court of China issued directives urging the adoption of blockchain technology across the local judicial system. These directives set ambitious goals for building connections between courts nationwide by 2025, emphasising the potential of blockchain to facilitate the verification and sharing of judicial data, legal documents, and reports. (Taufik, 2022; Sharwood, 2022; Qin, 2022)

The Supreme Court's endorsement of blockchain technology underscores its belief in the transformative impact it can have on judicial efficiency and transparency. Specifically, blockchain is expected to streamline various judicial processes, including case filing, information query and verification, and communication between different judicial systems. Furthermore, proposals for cross-chain collaborations between courts, law enforcement agencies, and regulators aim to enhance cooperation and information sharing in legal matters. The judicial blockchain platform, initiated by the Supreme Court of China, already serves as a centralised repository for evidence collected from various local courts. Recent reports indicate that the platform has stored over 2.6 billion pieces of evidence, with ongoing efforts to expand its capabilities. (Taufik, 2022; Sharwood, 2022; Qin, 2022)

The implementation of blockchain technology in China's legal landscape has already yielded tangible results. Courts across various cities and provinces, including Guangzhou, Jilin, Shandong, Chengdu, Quanzhou, and Taiyuan, have embraced blockchain to preserve evidence and facilitate legal proceedings. Additionally, internet courts in Beijing, Guangzhou, and Hangzhou have leveraged blockchain to uphold the authenticity and validity of evidence presented in online litigation. The Hangzhou Internet Court, established in 2017 to handle internet-related cases, has spearheaded innovative initiatives such as the "Kunpeng" campaign, which syndicates execution results onto the blockchain. These efforts reflect a broader commitment to harnessing blockchain technology to enhance judicial transparency and efficiency. (Taufik, 2022; Sharwood, 2022; Qin, 2022)

FEASIBILITY OF INTEGRATING DLT IN JUDICIAL SYSTEMS OF INDIA

In recent years, the Indian judiciary has made significant strides in adopting technology to streamline court management processes. From the introduction of e-courts to the implementation of video conferencing systems, these advancements have aimed to enhance access to justice and improve efficiency within the legal system. However, despite these notable achievements, the potential introduction of Distributed Ledger Technology (DLT) poses a complex set of challenges and considerations that warrant careful assessment before implementation.

One of the primary reasons why the implementation of DLT may not be a viable solution in Indian court management is the existing technological landscape. **India has already invested heavily in various court management technologies, such as e-filing systems, case management software, and video conferencing platforms.**

As part of the National eGovernance Plan, the eCourts Mission Mode Project has been under implementation since 2007 for Information and Communication Technologies (ICT) development of the Indian Judiciary based on the “National Policy and Action Plan for Implementation of Information and Communication Technology in the Indian Judiciary”. eCourts project is being implemented in association with the eCommittee, the Supreme Court of India and the Department of Justice.

Phase I of the eCourts Mission Mode Project focused on the basics of computerisation, like setting up computer hardware, ensuring internet connectivity, and operationalising the e-Courts platform. Against the financial outlay of Rs.935 crore, the total expenditure incurred was Rs.639.41 crore for the implementation of this phase.

The following initiatives were undertaken in this phase:

- i. 4,249 District and Subordinate courts were computerised
- ii. LAN was installed at 13,683 courts; the hardware was provided in 13,436 courts, and software was installed in 13,672 courts.
- iii. Laptops were provided to 14,309 judicial officers, and change management exercises completed in all High Courts.
- iv. Over 14,000 Judicial Officers were trained in the use of UBUNTU-Linux Operating
- v. System.
- vi. More than 3900 court staff were trained in Case Information Systems (CIS) as System Administrators.
- vii. Video Conferencing facility was operationalised between 493 court complexes & 347 corresponding jails.

Phase II of the eCourts Mission Mode Project extended from 2015-2023, focused on ICT enablement of District & Subordinate Courts and various citizen-centric initiatives. Against the

financial outlay of Rs.1670 crores, the total expenditure incurred was Rs. 1668.43 crores for the implementation of this phase. Till Phase II, digital infrastructure has been provided to 18,735 courts.

The e-initiatives focusing on justice accessibility and availability for all undertaken by the Government under Phase II were as follows:

- The Wide Area Network (WAN) Project provided connectivity to 99.4% of total Court Complexes across India, with bandwidth speeds ranging from 10 Mbps to 100 Mbps.
- The National Judicial Data Grid (NJDG) served as an online platform under the eCourts Project, offering access to case status information and over 24.47 crore cases and 24.13 crore orders/judgments.
- Case Information Software (CIS) based on customised Free and Open-Source Software (FOSS) was implemented in District Courts (CIS National Core Version 3.2) and High Courts (CIS National Core Version 1.0).
- Seven platforms provided real-time case status, cause lists, and judgments to lawyers/litigants through SMS, Email, eCourts services Portal, Judicial Service centres (JSC), and Info Kiosks. Electronic Case Management Tools (ECMT) included a Mobile App for lawyers and a JustIS app for judges.
- India led in conducting court hearings via Video Conferencing, with 2.92 crore cases heard by District & Subordinate courts and High Courts and 4,82,941 hearings held by the Supreme Court.
- Live Streaming of court proceedings were initiated in several High Courts and the Supreme Court's Constitutional Bench, enabling media and interested persons to join.
- Twenty-five Virtual Courts in 20 States/UTs handled traffic challan cases, processing more than 4.11 crore cases and collecting online fines exceeding Rs. 478.69 crore.
- The e-filing system (version 3.0) facilitated electronic filing of legal papers, with 20 High Courts adopting model e-Filing rules and 21 High Courts implementing e-payments.
- 875 eSewa Kendras bridged the digital divide, providing assistance to lawyers and litigants for eCourts services, addressing challenges of illiteracy, saving time, and reducing costs.
- A new "Judgment Search" portal allowed free searches by various parameters, while LED Display Message Sign Boards called "Justice Clocks" were installed in 25 High Courts to raise public awareness about the Justice Sector.

As eCourts Phase-II came to a close, the Cabinet on 13.09.2023 approved eCourts Phase-III with a budgetary outlay of Rs.7,210 crore. Taking the gains of Phase-I and Phase-II to the next level, the e-Courts Phase-III aimed to usher in a regime of maximum ease of justice by moving towards digital, online, and paperless courts. The main objective of Phase III was to create a unified technology platform for the judiciary, which would provide a seamless and paperless interface between the courts, the litigants, and other stakeholders. The proposed timeframe for the eCourts Project Phase-III was four years, which started from 2023 onwards. The Phase III

of the project envisioned the facilitation of various new features, which were expected to be a game-changer for last-mile justice delivery.

The Ministry of Finance released Rs. 225 crores from the contingency fund for eCourts Phase III in October 2023. With the approval of eCommittee, the Department of Justice allocated Rs. 102.50 crore for BSNL and NIC, and Rs. 110.24 crore was sub-allocated to various High Courts for Scanning and Digitization, establishment of eSewa Kendras, procurement of Hardware, Solar Power backup, etc.

In such a scenario, the adoption of DLT would require substantial additional infrastructure and resource investments, which may not be feasible given the budgetary constraints of the Indian judiciary. **Building and maintaining a DLT-based system would necessitate significant financial resources, as well as specialised technical expertise for its development and operation.** Moreover, the integration of DLT into existing court management systems would be a complex and time-consuming process, potentially disrupting ongoing court operations and delaying justice delivery.

Another critical consideration is the scalability and interoperability of DLT within the Indian legal framework. While DLT offers several benefits, such as enhanced transparency, immutability, and security of data, its scalability remains a significant concern. The Indian judiciary handles a vast volume of cases and documents daily, and ensuring that DLT can efficiently manage and process such large-scale data is a formidable challenge. Additionally, interoperability with existing court management systems and other government databases would be essential for seamless integration and effective utilisation of DLT, which may present technical and regulatory hurdles.

A report by Supreme Court “The State of Judiciary” published in 2023 highlighted the problems related to the procurement of sufficient and updated hardware. According to the report, the Madhya Pradesh High Court faced obstacles in the delivery of network components and computer hardware articles on time due to a shortage of chips at the international level, which is adversely affecting the supply in Madhya Pradesh. The report also mentioned that one of the reasons for the arduous procuring of ICT hardware as prescribed e-Committee is time delay caused by a mismatch in the funds allocated for hardware as specified by the e-committee and changes in price of that specifies hardware. High courts occasionally request extra funds for higher-specification hardware, as lower-specification options with lower price margins, set by the e-Committee, may not be accessible in the market or on the GeM portal for procurement.

The aforementioned report further highlights that **the process of e-tendering and bidding on GeM portal itself faces challenges.** There has been recorded instances of lack of participation from bidders in the e-tenders, which has led a lack of competition in the bidding process, especially in rural areas where the bids are less lucrative for the bidders compared to urban areas. In fact, The Calcutta High Court had to cancel e-tenders for the procurement of different hardware and Local Area Network (LAN) items as a procurement agency of the state government could not initiate the process of e-tendering even after repeated reminders.

This scenario indicates there are technical issues related to the timely procurement of computer hardware in India’s courts and judicial systems. The delay in procurement is already causing

hardware to become outdated by the time it is acquired. **In future if similar conditions persist and, at the same time, concrete efforts are made to integrate DLTs with India's judiciary systems then it can lead to compatibility issues with newer DLT platforms or software updates, escalating the cost of investments in hardware upgrades.** Delayed procurement often results in rushed purchases or emergency acquisitions, which may incur higher costs due to limited options and availability. This can strain the budget allocated for integrating DLTs into the judicial system, leading to financial challenges and resource constraints.

The potential financial constraints associated with integrating DLTs into the judicial system are particularly concerning, especially considering the limited priority accorded to the judiciary by the Union Government in its budget allocation. According to a 2018 report by DAKSH and CBGA, **the judiciary receives an average of only 0.08% of the Union Budget.** The majority (92%) of funding for the judiciary across India is sourced from State Government expenditures, with the Centre contributing a relatively small share (8%). Moreover, the combined expenditure of all states on the judiciary accounts for just 0.61% of their total spending. Overall, **the total public expenditure on the judiciary amounts to less than 0.4% of the combined gross budgetary expenditure of both the Centre and the States.**

Moreover, the implementation of DLT in Indian court management raises important legal and regulatory questions regarding data privacy, security, and governance. Given the sensitive nature of legal proceedings and the confidentiality of court records, ensuring the protection of personal and sensitive information is paramount. **DLT's decentralised nature may pose challenges in maintaining data privacy and compliance with existing data protection laws.**

Furthermore, establishing clear regulatory frameworks and governance structures for DLT-based court management systems would be essential to address concerns related to accountability, liability, and dispute resolution. **Additionally, while the permanence of transactions may be a core strength of DLT, it can also be a weakness should an entity find that it needs to regularly correct errors in its ledger, as it would be unable to easily do so with DLT.**

Conclusion and Way Ahead

Reforming court-case management in India presents a multifaceted challenge, especially in the adoption of Distributed Ledger Technologies (DLTs) like blockchain. To ensure success and avoid potential pitfalls, it's crucial to delve into detailed best practices, lessons learned, and potential pitfalls:

Best Practices

Interoperability and Common Standards: Establishing interoperability and adhering to common standards among DLT systems is crucial for ensuring seamless integration and data exchange between different platforms. This interoperability facilitates compatibility and accessibility across various stakeholders involved in the judicial process. By adopting common standards, judicial systems can leverage the full potential of DLT to streamline operations and enhance collaboration.

Governance: Robust governance structures are paramount to oversee DLT initiatives effectively. These structures should ensure accountability, transparency, and compliance with regulatory requirements. Clear roles, responsibilities, and decision-making processes must be

defined to prevent conflicts and ensure the smooth operation of DLT-based systems. Effective governance frameworks provide the necessary oversight and guidance to navigate the complexities of implementing DLT in judicial systems.

Privacy and Security: Addressing privacy concerns and enhancing the security of DLT systems are essential considerations in the adoption process. Implementing robust encryption methods, access controls, and identity management mechanisms can safeguard sensitive information and mitigate cybersecurity risks. Compliance with data protection regulations is crucial to maintain user trust and confidence in DLT-based judicial systems. By prioritising privacy and security measures, judicial authorities can ensure the integrity and confidentiality of court records stored on DLT platforms.

Active Engagement: Active engagement from regulators and coordination at state and department levels are essential for the successful implementation of DLT in judicial systems. Regulators need to stay abreast of technological advancements and collaborate with stakeholders to develop appropriate regulatory frameworks. Continuous dialogue and feedback mechanisms enable timely adjustments and improvements to address emerging challenges and ensure alignment with regulatory requirements.

Legal Certainty: Achieving legal certainty surrounding the storage and retrieval of records through DLTs is paramount. Clear guidelines and regulations must be established to define the legal validity and enforceability of transactions conducted on DLT platforms. The clarity in legal frameworks enhances trust and confidence in the integrity of digital records, fostering greater acceptance and adoption of DLT in judicial systems.

Lessons Learned

Several lessons can be gleaned from previous implementations of DLT in various sectors to inform the adoption process in judicial systems. Regulatory adaptation is crucial to address evolving risks associated with DLT adoption, such as data privacy, cybersecurity, and consumer protection. Acknowledging the ongoing evolution of DLT technology is critical, and a cautious approach is necessary to understand its full implications and capabilities. Targeted implementation in low-volume, unregulated environments allows for testing and validation of DLTs' effectiveness, mitigating risks and ensuring gradual scalability and expansion.

Potential Pitfalls

Despite the potential benefits of DLT, several challenges and pitfalls must be considered during the implementation process. The scalability and resilience of DLT systems pose significant challenges, requiring robust solutions to handle large volumes of transactions and ensure system integrity. Legal and regulatory clarity is essential to provide confidence to stakeholders and promote widespread adoption. Legacy systems migration entails substantial costs and challenges, requiring careful planning and phased implementation to minimise disruptions. Governance and operational risk concerns must be addressed through a clear delineation of roles, transparent decision-making processes, and robust risk management practices.

Conclusion

The successful implementation of DLT in judicial systems requires a comprehensive approach that considers interoperability, governance, privacy, security, regulatory compliance, lessons learned from previous implementations, and potential pitfalls. By navigating these challenges effectively, judicial authorities can harness the transformative potential of DLT to enhance transparency, efficiency, and trust in court-case management processes, ultimately advancing the administration of justice in the digital age.

While DLT holds promise for transforming court-case management in India, comprehensive consideration of these factors is vital for successful implementation and realisation of its full potential. Diligent planning, active engagement, and regulatory adaptability are key to navigating the complexities and challenges associated with DLT adoption in the legal domain.

In conclusion, while the Indian judiciary has made significant progress in leveraging technology to improve court management, the implementation of DLT presents a complex set of challenges and considerations that cannot be overlooked. While DLT offers several potential benefits, including enhanced transparency, efficiency, and security, its adoption in Indian court management must be carefully evaluated in light of the existing technological, financial, legal, and regulatory landscape. Ultimately, a comprehensive assessment of the viability and feasibility of DLT implementation is essential to ensure that any technological interventions in the Indian judiciary are effective, efficient, and aligned with the overarching goal of delivering justice to all.

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