The Evolution of Case Management System (CMS) in Indian District Judiciary

Pranab Duara¹, Lakhya Jyoti Nath²

¹Research Scholar, Martin Luther Christian University, Shillong, Meghalaya
²Service Engineer, BMG Informatics Pvt. Ltd., Guwahati, Assam

Abstract
The rapid evolution of Information and Communication Technologies (ICTs) presents a dual scenario of opportunities and challenges in service delivery systems, especially in meeting the expectations of digitally literate citizens. As various sectors move towards online platforms for service provision, including food delivery, healthcare, and retail, a critical need arises to extend similar conveniences to the judicial domain. By embracing technology, we can enhance the accessibility and efficiency of legal services, benefiting individuals across diverse demographics and instilling hope for a more efficient and accessible judicial system.

In India, the judicial system, overseen predominantly by Judicial Service Officers, has undergone significant transitions, departing from historical practices involving Civil Service Officers. This paper makes a unique contribution to the discourse on modernising judicial processes by exploring the adoption of technology-driven solutions such as the Case Management System (CMS) in the District Judiciary of India. Through a comprehensive investigation into the dynamics of case management within Indian District Courts, with a specific emphasis on the utilisation and impact of CMS, this research aims to foster accessibility, transparency, and the consolidation of the rule of law. Additionally, the paper reviews global experiences, such as the implementation of e-court initiatives in various countries, including Malaysia and the United Kingdom, shedding light on the transformative potential of technology in enhancing judicial efficiency and service quality.

This study highlights the significance of efficient case management in ensuring timely justice delivery, resource optimisation, litigant satisfaction, transparency, and upholding the rule of law, but also provides practical insights into the evolution of Case Information System (CIS) in Indian district courts. From CIS 1.0 to the latest iteration, CIS 3.2, this research delves into the technological advancements and potential challenges and solutions associated with their implementation. Ultimately, this research advocates for a forward-looking approach to leveraging technology to create a more efficient, transparent, and accessible judicial framework in India and beyond.

Keywords: Indian Judiciary, District Courts, e-Courts, Case Management System

1. Introduction
The rapid advancement of Information and Communication Technologies (ICTs) presents opportunities and challenges for service delivery systems, particularly in meeting the evolving demands of technologically savvy citizens. As various services transition to online platforms, including food delivery, healthcare consultations, and retail, extending similar conveniences to the judicial sector is
imperative. By leveraging technology, we can enhance accessibility and efficiency in accessing legal services, benefiting individuals across age groups and demographics (Shaikh et al., 2021).

The efficient management of cases within the District Courts of India is a critical aspect of the judicial system, playing a pivotal role in ensuring the timely dispensation of justice. The contemporary case management landscape has witnessed a paradigm shift with the introduction of technology-driven solutions. One such transformative tool is the Case Management System (CMS), designed to streamline and optimise judicial processes (Rao et al., 2023).

This research delves into the intricate dynamics of case management within the District Courts of India, focusing on the use and impact of CMS. By exploring the nuances of CMS adoption, this research contributes to the ongoing discourse on modernising judicial processes, fostering accessibility and transparency, and fortifying the foundations of the rule of law.

2. Literature Review

Numerous nations have adopted the use of information technology within their judicial systems. They highlight transparency and efficiency as two favourable outcomes of integrating Information and Communication Technologies (ICT) in courts. This integration has broadened the avenues for accessing information and judicial rulings (Filho, 2009).

Across the globe, nations are adopting e-court initiatives. Malaysia is among these countries, having established a fully operational e-courts system incorporating a Videoconferencing System (VCS), Case Management System (CMS), Community and Advocate Portal System (CAPS), Court Recording and Transcription System (CRTS), and e-filing since 2011 (Hassan & Mokhtar, 2011).

The United Kingdom Government has updated its Court and Judiciary protocols to enhance the speed, cost efficiency, and service quality of the judicial process by harnessing the capabilities of Information and Communications Technologies (Raine, 2000).

Ahmed et al. (2021) investigate the implementation of an e-courts system in the Sulaimaniyah Appellate Court, Kurdistan Region of Iraq. The authors identify ten significant improvements through qualitative methods and a case study approach, including enhanced efficiency, transparency, and security.

Saman and Haider (2012) investigate the implementation of Electronic Records Management Systems (ERMS) in Malaysian courts, focusing on both the Civil and Shariah Court systems. The paper highlights the importance of records management for ensuring transparency, efficiency, and unbiased decisions in the judicial system. It also discusses the challenges and considerations in implementing ERMS and the specific projects undertaken in Malaysian courts.

Boscheinen-Duursma and Khanyk-Pospolitak (2019) conducted a comparative study of e-justice in Ukraine and Austria, aiming to identify commonalities and differences between the two countries' e-justice models. Their analysis focused on understanding the connection between civil proceedings and e-justice, offering insights into potential areas for mutual learning and improvement.

Sandoval-Almazan and Gil-Garcia (2018) delved into the state of e-justice in Mexico, assessing judicial websites to evaluate the overall openness and accessibility of the e-justice system. Their research aimed to identify areas for enhancement and proposed recommendations for improving the system's effectiveness and public access to justice.

Lupo and Bailey (2014) provided valuable insights into designing and implementing e-justice systems based on examples from the European Union and Canada. By analysing various e-justice initiatives, they
highlighted the critical role of technological solutions and process management principles in achieving positive outcomes in justice administration. Van den Hoogen (2008) explored the implications of transitioning to electronic trials, emphasising the importance of legislative changes to ensure fairness in the e-justice system. His analysis underscored the necessity of adapting legal frameworks to accommodate the shift towards electronic formats while upholding principles of justice. The Estonian government has publicly disclosed its intentions to create AI systems capable of managing minor claim procedures, thereby lightening the workload of human judges and optimising legal proceedings (Niieler, 2019).

Understanding the historical development and foundational principles of Indian District Courts provides essential context for evaluating the contemporary challenges and opportunities in managing cases, especially with the integration of technological solutions like Case Management Systems (CMS). The background of District Courts serves as the backdrop against which the dynamics of case management are explored and analysed in the subsequent sections of this research (Archibong et al., 2023).

3. Importance of Efficient Case Management
Efficient case management is a cornerstone of a well-functioning judicial system, which is pivotal in ensuring timely and fair resolution of legal matters. Several vital aspects underscore the importance of efficient case management in District Courts (Kaushik, 2016).

3.1 Timely Justice Delivery
Efficient case management is synonymous with expeditious justice delivery. Timely resolution of cases is essential to prevent undue delays and protracted legal battles. Swift case management not only addresses the needs of litigants but also contributes to the overall effectiveness of the judicial system (Singh et al., 2018).

3.2 Judicial Resource Optimisation
Effective case management allows for the optimal utilisation of judicial resources. Courts can allocate Judges, Staff, and infrastructure judiciously, preventing backlogs and enhancing the overall productivity of the legal system. This resource optimisation is particularly crucial in District Courts where the volume of cases can be substantial (Kerwin et al., 1980).

3.3 Litigant Satisfaction
A well-managed case ensures that litigants experience a streamlined and user-friendly legal process. Litigant satisfaction is directly linked to case management efficiency, as individuals seek resolution to their legal issues without unnecessary delays or complexities (E-Committee, Supreme Court of India, 2023).

3.4 Transparency and Accountability
Efficient case management fosters transparency and accountability within the judicial system. When cases progress smoothly, it reduces the likelihood of procedural irregularities and ensures that the legal process is transparent and accountable (Agarwal et al., 2014).

3.5 Rule of Law
At a broader level, efficient case management upholds the rule of law. It reinforces public trust in the legal system by demonstrating its capacity to resolve disputes fairly and promptly and by established legal principles (Ghorpade, 2021).
In conclusion, efficient case management is important beyond the operational efficiency of the courts, it is integral to upholding the fundamental tenets of justice and ensuring that the legal system serves its constituents effectively.

4. Significance of Case Management through Case Information System

The integration of Case Information System (CIS) for Case Management in District Courts marks a pivotal shift toward modernising and optimising judicial operations (Kumare et al., 2023). This integration streamlines the flow of case-related information, facilitating more efficient and productive judicial workflows. It reduces paperwork, promotes resource optimisation, and ensures timely access to comprehensive case details for Judges and Court Staff. This transition from traditional paper-based systems to electronic records enhances transparency, accountability, and the overall goal of timely justice delivery. Furthermore, the integration supports data-driven decision-making, empowering courts to analyse trends, monitor performance, and make informed policy decisions. Ultimately, this transformative step signifies a commitment to a more efficient, transparent, and technology-driven judicial framework (eCommittee, Supreme Court of India, 2018).

5. Evolution of Case Management System (CMS) in District Courts.

The evolution of the Case Management System (CMS) in District Courts has been marked by significant advancements, mainly through the transition from Case Information System version 1.0 (CIS 1.0) to the latest iteration, CIS 3.2. The initial introduction of CIS 1.0 represented a pivotal moment in modernising the District Judiciaries, providing a foundational framework for case information management. CIS 1.0, implemented across all the District Judiciaries, laid the groundwork for digital case information systems. The need for an upgraded and more sophisticated version became evident as technology advanced. Subsequently, CIS 2.0, 3.0, and 3.2 were introduced, representing a comprehensive enhancement of the earlier system. This new version introduced state-of-the-art features, improved functionalities, and addressed the evolving needs of the judicial system (eCommittee, Supreme Court of India, 2018).

5.1 CIS 1.0

The Case Information System (CIS 1.0) software is a giant move under the initiative of the eCommittee, Supreme Court of India, to make the Indian District Judiciaries more transparent and more digital-friendly. This Case Information System Software for District Judiciaries is created under the guidance of the e-Committee, Supreme Court of India, through the software team at the National Informatics Center (NIC), Pune. The whole idea of CIS, to put it in a nutshell, is that the litigant should be able to view the daily status of his case, the orders of the case, the hearing date of his case, the progress of the case on any particular date etc. on-line from any part of the world (eCommittee, Supreme Court of India, 2014).

5.2 CIS 2.0

After the milestones achieved with implementing CIS 1.0 in the evolution of Case Management System (CMS) in the District Courts, the eCommittee, Supreme Court of India, moved towards implementing CIS 2.0. The CIS 2.0 ensures 24/7 case details and court orders are available through a mobile app and web platform. Each case is assigned a unique CNR number, and a QR code can be generated for comprehensive case tracking under the eCourts initiative. The eCourts transaction substantially increased from two crores in 2014 to forty-two crores in 2017. The National Judicial Data Grid (NJDG)
now houses a vast repository with seven crore case details and four crore orders/judgments. The e-courts mobile app has garnered substantial installation, reaching up to more than one crores as of April 2024, according to Google Play Store data. Notably, the number of court orders accessed experienced a remarkable surge from only 64 in 2014 to an impressive 3.56 crores in 2017. The system further facilitates case status updates through SMS and automated email services via the e-courts platform, enhancing accessibility and efficiency in the judicial process (eCommittee, Supreme Court of India, 2018).

5.3 CIS 3.0 and 3.2
CIS 3.0 marks an enhanced iteration of its predecessor, CIS 2.0, incorporating technological advancements and additional functionalities while preserving the fundamental features of CIS 2.0. The progression from one version to another underscores the pivotal role of the Case Information System in the District Judiciary, ensuring continuous availability of case details to all stakeholders in the administration of justice on a 24x7 basis. With the introduction of CIS 3.2, the District Judiciary takes a significant step towards comprehensive digitalisation, paving the way for anticipated features such as e-filing, e-payments, and digitalised processes. This evolution aligns with the overarching objective of leveraging technology for a more efficient and streamlined judicial system (eCommittee, Supreme Court of India, 2018).

CIS 3.2 now comes with a brand new eCourts logo. With the increasing number of eCourts transactions and the increasing number of services flowing from eCourts, it has become necessary to have an authenticated identity logo, which has given rise to the new eCourts logo introduced in CIS 3.2. Some of the specific features of CIS 3.2 are the National Master, State Master, Local Master, Fetching Trial court data while Appeal filling, etc.

5.3.1 National Master:
National masters are standardised features that cannot be changed and will remain uniform throughout the Country. A national code is assigned for each feature to be followed under National Masters.

![Figure 1: National Master](image-url)
5.3.2 State Master:
This master has been created for States to add according to their needs. Hence, the state is authorised to add a master in CIS 3.2 under the State Masters.

![State Master](image)

**Figure 2: State Master**

5.3.3 Local Master:
This local master has been created for the use of the local Courts, where the Courts can add Judge Names, Judge Priorities, and local holidays when needed.

![Local Master](image)

**Figure 3: Local Master**

5.3.4 Periphery Master:
In CIS 3.2, one can add the periphery data like unit type, admin work, accounts, and registers, according to the needs of each High Court.
5.3.5 Fetching Trial court data while Appeal filling:
Retrieving trial Court data during the process of filing an appeal.

5.3.6 e-Filing module, Lok Adalat menu
Including the Lok Adalat menu reflects a commitment to alternative dispute resolution mechanisms. Lok Adalats, or people's Court, offer a forum for resolving disputes through conciliation and mediation, promoting speedy and cost-effective justice.
5.3.7 Query search – Case status, Advocate, Cause List, Search caveat, Pre-trial application.
Implementing a query search feature within the Case Management System (CMS) of Indian District Courts represents a significant enhancement in judicial transparency and accessibility. This feature allows users to search for various aspects related to case management, including case status, advocate information, cause lists, search caveats, and pre-trial applications.

---

**Figure 6: Lok Adalat menu**

**Figure 7: Query Search**
6. Challenges and Solutions

6.1 User-friendly Interface Design
Poorly designed user interfaces may lead to usability issues and resistance from users. User-friendly interfaces should be a priority to encourage widespread acceptance and effective utilisation.

6.2 Customisation for Local Needs
One-size-fits-all solutions may not cater to the specific requirements of different jurisdictions. The ability to customise CIS to meet local needs is vital for successful implementation. The Court Authorities should integrate an automatic summon generation and transmission feature into the Case Information System software used in the District Courts. Automatic report generation related to citizens' land and property will be an added advantage for all stakeholders.

6.3 Training Requirements
Some stakeholders may need more familiarity or comfort with technology to adopt CMS and CIS. Insufficient training programs for users can result in a lack of understanding of CMS and CIS functionalities. Adequate training is crucial to ensure that all stakeholders can effectively utilise the system for case management.

6.4 Data Security Concerns
CIS deals with sensitive legal information, and concerns about data security may arise. Implementing robust security measures is essential to address these concerns and ensure the confidentiality of case-related data.

6.5 Limited Digital Infrastructure
In regions with inadequate digital infrastructure, including internet connectivity, implementing CIS faces challenges. Addressing infrastructure gaps is essential for ensuring the system’s accessibility and functionality.

7. Discussion and Analysis
The findings presented in the paper underscore the transformative impact of technology-driven solutions, particularly Case Management System (CMS), on the Indian District Courts. Through a comprehensive exploration, it is evident that the adoption of CMS has significantly enhanced judicial efficiency, transparency, and accessibility. Challenges in implementation, such as technological barriers and resistance to change, have been addressed through stakeholder engagement and policy reforms. The user experience has been paramount, with efforts to improve usability and address user concerns. Legal and ethical considerations surrounding data privacy and algorithmic bias have been acknowledged, emphasising the importance of ongoing vigilance. Moving forward, there is immense potential for further advancements in CMS implementation, necessitating continued collaboration among stakeholders and a commitment to user-centred design principles to realise the benefits of technology in Indian District Courts fully.

8. Implications and Recommendations
The implication of the findings suggests several critical recommendations for policymakers, judicial administrators, and technology developers. Firstly, there is a pressing need for sustained investment in technology infrastructure and capacity building to ensure the effective adoption and utilisation of Case Management System (CMS) across the Indian District Courts. This includes providing adequate training and support to Judicial Staff and stakeholders to maximise the benefits of CMS. Additionally,
continuous monitoring and evaluation mechanisms should be implemented to assess the impact of CMS on judicial efficiency, transparency, and access to justice. Secondly, efforts should be made to address digital literacy gaps among legal practitioners and litigants, ensuring equitable access to technology-enabled legal services. Collaborative initiatives between government agencies, legal institutions, and civil society organisations can facilitate awareness campaigns and training programs to enhance digital skills among the legal community.

Moreover, there is a need for clear regulatory frameworks to govern the use of technology in the legal sector, including data protection and privacy laws, to mitigate risks associated with collecting and managing sensitive judicial data. Lastly, fostering a culture of innovation and collaboration within the Judiciary is essential to drive continuous improvement and adaptation of CMS to evolving legal needs and technological advancements. By embracing a forward-thinking approach and prioritising user-centric design principles, the Indian District Courts can realise the full potential of technology in enhancing judicial efficiency, transparency, and access to justice.

9. Future Trends and Innovations

In the near future of Court Systems, implementing a Case Information System (CIS) will witness a transformative integration of cutting-edge technologies to enhance case management. Blockchain technology can be adapted to fortify the security and transparency of case records, ensuring an incorruptible and securely accessed repository of information. Mobile applications can empower legal professionals with on-the-go access, streamlining communication and improving efficiency. The Court System should prioritise AI adaptability, leveraging Natural Language Processing (NLP) for insightful analysis of unstructured data sources and machine learning algorithms for informed decision support. Automation of routine tasks will free up valuable time for legal professionals, enabling them to concentrate on the nuanced aspects of their roles. To maintain the integrity of case records, robust cybersecurity measures and strict access controls should be implemented, ensuring only authorised personnel have secure access.

10. Conclusion:

Efficient case management is essential for upholding the rule of law, reinforcing public trust in the legal system, and ensuring fair and prompt resolution of disputes. Integrating Case Information System (CIS) for Case Management in the District Courts streamlines case-related information flow, reduces paperwork, and promotes resource optimisation. The importance of efficient case management is emphasised for ensuring litigant satisfaction, transparency, accountability, timely justice delivery, and judicial resource optimisation. It also highlights the significance of CMS and CIS in modernising and optimising judicial operations, ultimately contributing to a more efficient, transparent, and technology-driven judicial framework.

Implementing CIS is expected to integrate cutting-edge technologies such as blockchain, mobile applications, AI adaptability, and automation of routine tasks. This transformative integration aims to enhance case management, fortify the security and transparency of case records, and improve the efficiency of legal professionals. Challenges in implementing CMS and CIS include the need for user-friendly interface design, customisation for local needs, addressing limited digital infrastructure, training needs, data security concerns, and integration with legacy systems.
11. Acknowledgement
Acknowledgement is extended to the Systems Officer, Gauhati High Court, Guwahati, for providing valuable support, time, and feedback for this research paper.

12. References
17. E-committee Supreme Court of India, 2023 https://ecommitteesci.gov.in/publication/economic-case-management-tools-ecmt-for-advocates/
21. E-committee, Supreme Court of India, 2018 https://ecourts.gov.in/ecourts_home/static/manuals/Case%20Management%20through%20CIS%203.0.pdf