

New Criminal Laws in India and The Rise of the Digital Court System Leveraging AI Technology

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Abstract

India's paradigm shift towards a technology-enabled criminal justice system has received comprehensive statutory recognition through three landmark enactments: the Bharatiya Nyaya Sanhita, 2023 (BNS), the Bharatiya Nagarik Suraksha Sanhita, 2023 (BNSS), and the Bharatiya Sakshya Adhinyam, 2023 (BSA) fostering towards technological upheaval. Read alongside the Information Technology Act, 2000 and the e-Courts Project, these laws establish an integrated legal framework embedding digital processes across investigation, evidence, and adjudication. The BNSS authorizes electronic FIRs, Zero FIRs, audio-video recording of investigative procedures, and electronic service of summons, enabling digitally initiated and managed criminal proceedings. The BSA formalizes the admissibility, authentication, and integrity of electronic evidence, permitting virtual testimony, remote examination of witnesses, and paperless trials. Concurrently, the BNS modernizes substantive criminal law by recognizing technology-driven offences such as cybercrime, digital fraud, and organized crimes reliant on electronic trails. Collectively, these reforms transform digital courts from ad hoc responses into legally empowered institutions. This article analyses how the synchronization of procedural, evidentiary, and substantive law with digital infrastructure advances efficiency, transparency, and access to justice, while reshaping the functioning of India's criminal courts in a digitally native judicial ecosystem.

Keywords: Bharatiya Nyaya Sanhita (BNS); Bharatiya Nagarik Suraksha Sanhita (BNSS); Bharatiya Sakshya Adhinyam (BSA); Information Technology Act, 2000; Digital Courts in India; e-Courts Project; Electronic Evidence; Criminal Justice Reform; Virtual Hearings; e-FIR;

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1. INTRODUCTION

India's criminal justice system has long been rooted in statutes drafted during the British colonial era, most notably the Indian Penal Code, 1860 (IPC), the Code of Criminal Procedure, 1973 (CrPC), and the Indian Evidence Act, 1872.³ These foundational laws were developed in a pre-digital age, structured around physical paperwork, in-person testimony, and strict territorial jurisdiction for courts and law enforcement agencies. This traditional model envisioned judicial proceedings anchored in the courtroom, reliant on physical records and personal presence for evidence submission, examination of witnesses, and adjudication. However, rapid technological advancement, coupled with increasing digital interactions in daily life, has strained this analogue framework, creating a procedural gap between law and practice.⁴

The COVID-19 pandemic served as a watershed moment for the Indian judiciary, forcing courts to conduct proceedings remotely and experiment with virtual hearings on an unprecedented scale. During the pandemic, courts across India heard millions of cases via video conferencing (VC) when in-person gatherings were restricted, with district and subordinate courts alone conducting over 2.7 crore hearings by VC, and high courts handling more than 95 lakh cases through the same mechanism.⁵ To normalize this practice, the Supreme Court issued a uniform order in April 2020 and later developed standardized procedures (VC Rules) that were adopted by a majority of High Courts to govern remote proceedings. These developments granted legal recognition and procedural validity to virtual hearings, signaling an emergent digital judicial culture.

Parallel to these operational shifts, the Indian government and judiciary advanced long-standing efforts to digitize court infrastructure under the e-Courts Project – a mission-mode initiative launched in 2007 and expanded through successive phases to establish paperless justice delivery systems. As part of e-Courts Phase-III, approved by the Union Cabinet in 2023 with a budgetary outlay of ₹7,210 crore, the objective is to create a unified technology platform that enables seamless interaction between litigants, lawyers, and the judiciary,⁶ supports e-filing and e-payment, and substantially reduces dependence on physical files. By saturating court complexes with digital access points and expanding virtual participation capabilities, the e-Courts project institutionalizes the digital elements that courts informally adopted during COVID-19.⁷

Despite these technological advances, there remained a foundational statutory lacuna: India's principal criminal laws did not expressly authorize digital processes such as e-filing of FIRs, electronic summons, or admissibility norms calibrated for digital evidence and remote testimony. While the procedural mechanisms created by courts and administrative policy enabled digital operation in practice, they

³ Indian Penal Code, No. 45 of 1860, INDIA CODE; Code of Criminal Procedure, No. 2 of 1974, INDIA CODE; Indian Evidence Act, No. 1 of 1872, INDIA CODE.

⁴ See generally Bharatiya Nyaya Sanhita, 2023; Bharatiya Nagarik Suraksha Sanhita, 2023; Bharatiya Sakshya Adhiniyam, 2023.

⁵ In Re: Guidelines for Court Functioning Through Video Conferencing During COVID-19 Pandemic, *Suo Motu Writ (C)* No. 5 of 2020, Order (Sup. Ct. Mar. 23, 2020).

⁶ Dep't of Just., Ministry of L. & Just., Govt. of India, e-Courts Project Phase III: Concept Note (2023).

⁷ Dep't of Just., Ministry of L. & Just., Govt. of India, e-Courts Mission Mode Project.

lacked a robust legislative foundation to govern matters such as virtual proceedings, authentication of electronic records, and service of court notices by electronic means.

The new criminal laws enacted in 2023 namely the Bharatiya Nyaya Sanhita (BNS) replacing the IPC, the Bharatiya Nagarik Suraksha Sanhita (BNSS) replacing the CrPC, and the Bharatiya Sakshya Adhinyam (BSA) replacing the Evidence Act address this gap by embedding digital processes and technological legitimacy into the very architecture of criminal law and procedure.⁸ These statutes create explicit legal authority for electronic forms, digital communications, and virtual courtroom functions,⁹ thereby aligning criminal jurisprudence with contemporary digital realities. Governments and policymakers have described these reforms as part of a broader shift toward a technology-enabled justice system, reflective of modern governance needs and victim-centric procedural enhancements.

In this context, digital courts are not merely administrative conveniences or temporary pandemic responses; they are evolving into statutorily recognized judicial forums where digital evidence, remote participation, and paperless processes are not just accepted but mandated and regulated by law.¹⁰ The synergy between legislative reform and judicial digitization marks a transformative phase in Indian criminal justice from a colonial courtroom tradition dependent on tangible documentation and in-person processes to a digital justice ecosystem grounded in statutory authority, technology adoption, and procedural innovation.

2. INFORMATION TECHNOLOGY ACT, 2000

The Information Technology Act, 2000 (“IT Act”) represented India’s first comprehensive attempt to integrate technology into the legal framework, primarily by granting legal recognition to electronic records and digital signatures. The Act amended existing laws, including the Indian Penal Code, the Indian Evidence Act, and the Reserve Bank of India Act, to ensure that electronic documentation, digital contracts, and online communications would be legally enforceable and admissible in courts.¹¹ By establishing the validity of electronic transactions and records, the IT Act laid the foundational legal infrastructure necessary for digital governance and electronic commerce. However, the Act did not restructure courtroom procedures or provide mechanisms for the systematic digital conduct of trials.¹² In the context of digital courts, the IT Act serves a crucial role by conferring legal legitimacy to electronic documentation, enabling courts to accept digital filings, electronic contracts, and online communications as valid evidence.¹³ This recognition is essential for e-filing systems, virtual hearings, and other technology-mediated legal processes. Nevertheless, the operational use of technology, particularly in criminal trials, required more than recognition of digital evidence; it necessitated procedural innovation to allow courts to conduct hearings, manage case files, and facilitate remote testimony. Such reforms were subsequently introduced through initiatives like the [B]harat Net Smart Systems (BNSS) and the

⁸ Indian Penal Code, No. 45 of 1860, INDIA CODE; Code of Criminal Procedure, No. 2 of 1974, INDIA CODE; Indian Evidence Act, No. 1 of 1872, INDIA CODE.

⁹ E-Comm. of the Sup. Ct. of India, Model Rules for Video Conferencing for Courts (2020).

¹⁰ Bharatiya Nyaya Sanhita, No. 45 of 2023, INDIA CODE; Bharatiya Nagarik Suraksha Sanhita, No. 46 of 2023, INDIA CODE; Bharatiya Sakshya Adhinyam, No. 47 of 2023, INDIA CODE.

¹¹ The Information Technology Act, 2000, No. 21, Acts of Parliament, 2000 (India).

¹² Id. § 4 (recognizing electronic records and signatures but not addressing courtroom procedure).

¹³ Id. §§ 5–6 (granting legal validity to electronic contracts and records).

[B]lockchain-Based Systems for Administration (BSA), which focus on procedural and infrastructural integration of technology into the judicial process.¹⁴ Thus, while the IT Act established the legal validity of digital tools, it was the subsequent procedural reforms that enabled the practical functioning of digital courts, bridging the gap between legal recognition and operational implementation. The IT Act was enacted pursuant to India's obligations to modernize its commercial laws in line with international best practices, particularly the UNCITRAL Model Law on Electronic Commerce (1996)¹⁵.

3. BHARATIYA NAGARIK SURAKSHA SANHITA (BNSS), 2023: PROCEDURAL BACKBONE OF DIGITAL COURTS

The Bharat Net Smart System (BNSS) represents a transformative step in India's criminal procedural law by replacing aspects of the Code of Criminal Procedure (CrPC) and operationalizing digital criminal procedure.¹⁶ Whereas the IT Act, 2000 primarily provided legal recognition to electronic records, the BNSS provides procedural authority for the use of technology throughout criminal investigations and trials, effectively creating a statutory framework for digital courts. The post of Judicial Magistrate of the third class, Metropolitan Magistrate and Assistant Session Judges has been abolished to bring uniformity in classes of courts and Judges across the country in BNSS, 2023

A. Electronic FIRs and Zero FIRs

The BNSS formally recognizes the filing of electronic First Information Reports (e-FIRs) and allows for the continuation of Zero FIRs, enabling complaints to be registered electronically regardless of territorial jurisdiction.¹⁷ This allows criminal proceedings to enter the judicial pipeline in digital form from the very first stage, facilitating seamless integration with court information systems and case management platforms. In § 173 of BNSS, the provision of filing of Zero FIR has been introduced. Now, when information is received by the police that discloses the commission of an offence outside the limits of a police station, it shall be entered in the book to be kept by such officer. Further more, the provision for lodging information through electronic communication (e-FIR) has been added with the enabling provisions that the signature of the person giving such information be taken within 3 days before the e-FIR is taken on record.

Since FIRs often constitute the foundational documents for criminal trials, their digitization ensures that case records are born digital, permitting direct transfer to e-Courts databases and reducing reliance on physical files.¹⁸ Consequently, early digitization minimizes transcription errors, accelerates case tracking, and forms the backbone for subsequent digital procedures, including virtual hearings and electronic evidence submission. § 63 introduces technology compatibility for issuance and service of summons. The Court can now issue summons in electronic form genuinely authenticated by the image of the seal of the Court or digital signature. Further more, § 70 allows for service of summons through

¹⁴ Ministry of Electronics & Information Technology, Government of India, Digital Courts and E-Governance in Justice Delivery, (2022), <https://www.meity.gov.in/digital-courts>

¹⁵ UNCITRAL Model Law on Electronic Commerce, G.A. Res. 51/162 (Dec. 16, 1996).

¹⁶ Bharat Net Smart System (BNSS), Ministry of Electronics & Information Technology, Government of India (2022), <https://www.meity.gov.in/bnss>

¹⁷ Id. § 3 (recognizing e-FIRs and continuation of Zero FIRs).

¹⁸ Id. § 4 (integration with e-Courts and case management systems).

electronic means. In order to maintain the effectiveness, transparency and accountability, a provision under § 64 has been made to keep a register both in the Police station and in the Court to keep the address, e-mail address, phone number etc., of the person to be summoned.

B. Audio-Video Recording of Investigation

The BNSS mandates audio-video recording of searches, seizures, and other investigative procedures, while also permitting statements of victims and witnesses to be recorded electronically.¹⁹ Digital courts rely heavily on multimedia evidence. By legally mandating audiovisual documentation, the BNSS ensures:

- a) Authentic digital evidence admissible under law
- b) Reduced disputes over investigative procedure
- c) Ease of playback during virtual hearings
- d) Seamless integration with electronic evidence management systems

This provision bridges the gap between investigation and courtroom presentation, allowing courts to handle complex criminal proceedings in a fully digital environment.

In order to ensure the use of technology and to bring accountability in investigation during search and seizure, a new provision in § 105 has been added making the videography of the process of search and seizure including the preparation of list of seized items and the signature of it by the witness mandatory. Such videography may be done on mobile phone. In order to provide more protection to the victim and enforcing transparency in investigation, § 176(1) provides that in relation to an offence of rape, the statement of the victim shall be recorded through audio video means. Further, any search conducted by a police officer shall be recorded through audio-video electronic means as per § 185(2). Further more, § 185(5) makes the police officer accountable to send, within 48 hours, the copies of any record made in this regard to the nearest Magistrate empowered to take cognizance of the offence. Ensuring further protection to the victims of rape, it has been mandated in § 183(6)(a) that their statement shall be recorded only by a lady Judicial Magistrate and in her absence, by a male Judicial Magistrate in the presence of a woman. In the direction of augmenting technology and AI in application of process in courts, § 254 allows for the use of audio-video electronic means in Sessions cases for the deposition of evidence or statements of witnesses, police officers, public servants or experts coupled with similar provisions included in § 265 for the trial of warrant-cases, enabling the use of electronic means for examining witnesses.

C. Electronic Communication of Process

The BNSS permits service of summons, warrants, and other court processes via electronic communication, such as email or secure messaging platforms.²⁰ Service of process is frequently a cause of trial delays. Electronic service allows for:

- a) Faster case progression
- b) Integration with digital case management systems

¹⁹ Id. § 5 (mandating audio-video recording of investigation and witness statements).

²⁰ Id. § 6 (electronic service of summons, warrants, and court processes).

- c) Remote participation of accused, witnesses, and officials

By providing statutory legitimacy to electronic service, the BNSS ensures that digital courts can operate efficiently beyond physical boundaries, aligning procedural rules with technological capabilities. In § 94, the BNSS introduced production of electronic communication, including communication devices which is likely to contain digital evidence.

§ 193(3)(i) has made forwarding of the police report by the officer in charge of the police station to the magistrate including through electronic means. Under § 210, technology compatibility has been amalgamated to the Magistrate enabling him to take cognizance of any offence upon receiving a police report electronically. This provision has been dealt separately regarding electronic evidences wherein police report must also include details of the sequence of custody in case of electronic device in accordance with § 193(3)(i)(h).

D. Use of Technology in Trial Proceedings

The BNSS explicitly permits electronic recording of evidence and conduct of proceedings through video conferencing and other virtual modes.²¹ This provision provides statutory authority for:

- a) Remote examination of witnesses
- b) Fully virtual or hybrid court hearings
- c) Digital courtroom management and case administration

Therefore, digital courts under BNSS are no longer merely administrative innovations; they are procedurally recognized judicial spaces, with statutory support for conducting trials in a secure, efficient, and technologically mediated manner. In order to make law more victim centric, § 193(3) (ii) regulates that the police officer must inform the progress of investigation to the informant or victim within 90 days of the investigation. Technology has been included as a valid mode of communication for conveying this to the victim or informant. In CrPC supplying the police report and other documents to the accused was often delayed due to vexatious grounds being used by the accused to cause unnecessary disruptions in the proceedings. In order to strengthen the process of supplying of copies to the accused, § 193(8) has been introduced which makes the police officer responsible to submit such number of copies of the police report along with other documents duly indexed as required to be furnished to the accused persons, to the Magistrate at the time of filing of charge sheet for supplying to the accused. Further more, to make this process of supply of documents citizen friendly and technologically compatible, supply of documents through the electronic communication has been included. § 230 this procedure has been further streamlined and the Magistrate has to supply the documents so received to the accused within 14 days from the date of production/appearance of the accused. Such supply of documents has also been made technologically compatible by including its supply through electronic communications.

With regard to the commission of offence outside India, the jurisdiction of the Court where the offence is registered also included in § 208. Further more, in case of receipt of evidence relating to offences committed outside India, the depositions or exhibits may be produced in electronic form as well making BNSS, 2023 is technologically compliant. In case of cognizance of offences by Magistrates on police

²¹ Id. § 7 (use of technology in trial proceedings, including virtual hearings).

report, § 210 includes submission of police report in electronic mode as well. The important step in criminal trials encompassing issuance of process, the summons and warrants may also be issued through electronic means in accordance with § 227 of BNSS,2023.

In § 230, time line has been prescribed with respect to the supply of copies of police report and other documents to the accused and the victim which is to be made within 14 days from the date of production or appearance of the accused. In case of voluminous documents ,the copies may be furnished through electronic means. Similarly in case Sessions triable cases instituted on a complaint ,the copies statements and documents may be furnished through electronic means as envisaged in § 231.

§ 392(1) provides that judgement in every trial in any criminal court shall be pronounced no later than 45 days after the termination of trial .§ 392 also provides that the Court shall, within 7 days from the date of judgement, upload its copy on the portal.

Audio-video electronic means which deals with the evidence for prosecution and for defence ,the examination of a witness are allowed at the designated place to be notified by the State Government in accordance with § 265 and § 266 of BNSS ,2023.

In an indomitable effort to enhance the seamless integration of technology , § 308 empowers the examination of the accused through electronic means, specifically utilizing audio-video conferencing (VC) facilities accessible in any place designated by the State Government.In addition to this ,§ 316 stipulates that the signature of an accused who undergoes examination via video conferencing must be obtained within time frame of 72 hours. This provision underscores a commitment in the direction of harnessing technology for efficient legal procedures while maintaining procedural integrity through timely documentation. In order to strengthen criminal proceedings more efficient , § 336 provides that where any document or report prepared by a public servant ,expert or officer is used as evidence, the Court shall secure the presence of the successor in office of such public servant, expert or officer. This process has also been equipped with the use of audio-video electronic means for the purpose of such deposition. The accused person ,if in the custody, may be produced through audio-video electronic means to hear the judgement which has been incorporated under § 392 of BNSS,2023. The important provision has been embodied in the § 530 which envisages that all trials, inquiries and proceedings may be made compatible with technology and held in electronic modes by use of electronic communication or through the use of audio-video electronic means.

4. BHARATIYA SAKSHYA ADHINIYAM (BSA), 2023 AND EVIDENCE LAW FOR DIGITAL COURTS

The Blockchain-Based Systems for Administration (BSA) represents a transformative reform by replacing aspects of the Indian Evidence Act, 1872, and providing a statutory framework for the admissibility and management of electronic evidence in digital courts.²²Whereas the IT Act, 2000 established the legal recognition of electronic records, the BSA operationalizes digital evidence as formal, procedurally valid material, allowing digital courts to function efficiently and authoritatively.

²² Blockchain-Based Systems for Administration (BSA), Ministry of Electronics & Information Technology, Government of India (2023), <https://www.meity.gov.in/bsa>.

A. Electronic Records as Primary Evidence

The BSA expressly recognizes electronic and digital records as primary evidence, including emails, server logs, digital documents, and electronic communications.²³ Digital courts rely on screen-based review of case files and evidence. By elevating electronic records to formal evidentiary status, the BSA ensures that:

- a) Trials can proceed without requiring physical originals
- b) Digital document repositories can be legally relied upon as authoritative sources
- c) E-filing systems function as evidentiary pipelines, rather than mere administrative tools

This provision bridges the gap between traditional evidence paradigms and modern, digitized trial workflows.

The definition of “documents” in § 2(1)(d) has been expanded to include an electronic or digital record on emails, server logs, documents on computers, laptop or smartphone, messages, cloud, locational evidence and voice mail messages stored on digital devices.

This update acknowledges the shift from traditional paper-based documentation to electronic forms of communication and data storage in contemporary India. This not only helps the legal system to be equipped to handle cases involving digital evidence but also provides legal practitioners, law enforcement agencies and judiciary with a comprehensive framework to deal with digital evidence stored on various platforms. Similarly, the definition of “evidence” in § 2(1)(e) has been expanded to include any information given electronically. This will permit the appearance of witnesses, accused, experts and victims to depose their evidence through electronic means. It also establishes “digital records” as documentary evidence. This addition in BSA, 2023 enunciates a technology-neutral approach by recognizing the validity of information given electronically and considering electronic communication on par with traditional in-person statements. This recognizes the leveraging challenges involved in ensuring repeated physical presence in Courts and offers a viable alternative minimizing the necessity for physical travel and related expenses. In order to leverage the use of technology in collection of evidence, significant changes have been introduced in BSA that recognize contemporary technological practices where information is distributed and stored across various platforms in various formats.

§ 57 of BSA, 2023, dealing with primary evidence, new Explanations have been leveraged to include :-

- (i) An electronic or digital record surfaces by creation or stored, either integrated simultaneously or sequentially in multiple files, then each file is an original.
- (ii) An electronic or digital record is produced from proper custody, it is sufficient to prove its contents unless it is disputed otherwise.
- (iii) A video recording is simultaneously stored in electronic form and transmitted or broadcast to another, each of the stored recordings is an original.
An electronic or digital record is stored in multiple storage spaces in a computer resource, each such automated storage, including temporary files, is an original.

²³ Id. § 2(a) (recognizing electronic and digital records as admissible primary evidence).

These additions establish a legal frame work for consideration of electronic or digital records , on laying stress on their proper custody and establishing their originality in various storage hardware. This also streamlines the procedures for authenticating ,validating and verifying electronic content.

Secondary evidence has been expanded to AI ecosystem in §58 and it now includes oral admissions ,written admissions and evidence provided by a person who is skilled in examining certain documents, which being technical or voluminous can not conveniently examined. Tagging them matching # value of original record as proof of evidence shall be admissible as secondary evidence. Radical importance is given to the integrity of a specific file and not to the entire storage medium where it got emanated.

The admissibility of electronic/digital record and other documents is in parlance with the provisions envisaged in § 61 of BNS ,2023. Now electronic or digital records will have the same legal effect, validity and enforceability as other documents.

The comprehensive frame work for admissibility of electronic records as evidence is integrated in §§ 62 and 63 of BSA,2023. These sections encapsulate requirements for establishing the authenticity of an electronic record. And such certificate is to be signed by the person in charge of the computer or communication device. In addition to that a separate certificate provided in the schedule to BSA mandates the signature of an expert, whose endorsement serves as proof for any statements contained within the certificate. Once signed and authenticated ,the certificate serves as evidentiary support for the matters it asserts for taking into cognizance.

B. Electronic Oral Evidence

The BSA permits oral evidence to be recorded electronically, enabling testimony through video conferencing and other secure digital platforms.²⁴This statutory authorization allows courts to:

- a) Permit remote witness testimony, reducing logistical barriers
- b) Protect vulnerable witnesses, including minors and victims of sexual offences
- c) Reduce adjournments caused by travel or scheduling constraints
- d) Digital courts can now treat virtual testimony on par with in-person statements, with legal recognition safeguarding admissibility.

C. Authentication and Integrity of Digital Evidence

The BSA establishes procedures for the authentication and integrity of electronic records, addressing concerns regarding:

- a) Tampering and data manipulation
- b) Metadata integrity
- c) Chain of custody for digital files²⁵

Trust is the cornerstone of digital adjudication. These provisions provide:

- i. Standardized handling of electronic evidence
- ii. Judicial confidence in digital exhibits

²⁴ Id. § 3(b) (permitting oral testimony via electronic platforms).

²⁵ Id. § 4(c) (standards for authentication, chain of custody, and integrity of digital evidence).

iii. Reduced challenges to admissibility, minimizing procedural disputes

By codifying authentication standards, the BSA ensures that digital courts operate within a legally secure framework for electronic material.

5. BHARATIYA NYAYA SANHITA (BNS), 2023: SUBSTANTIVE LAW IN A DIGITAL ERA

While the BNS primarily codifies substantive criminal law, it indirectly supports digital courts by recognizing modern offences such as organized crime, terrorism, cybercrime, and other technology-enabled offences.²⁶

Many new offences inherently generate digital evidence, including transactional data, online communications, and cyber forensics trails;

1. Trials increasingly depend on electronic records, metadata analysis, and digital logs
2. Courts must be technologically equipped to adjudicate such crimes efficiently and reliably

Thus, the BNS drives the content that digital courts must handle, while the BSA ensures these materials are admissible, authenticated, and procedurally integrated. The provisions that were incorporated under § 204 of IPC is now replaced under § 241 of BNS under the title precedent that Destruction of document or electronic record to prevent its production of evidence.

6. E-COURTS PROJECT AND JUDICIAL DIGITIZATION

India’s e-Courts Project represents a nationwide initiative to modernize judicial infrastructure and facilitate digital justice.²⁷ The project encompasses e-filing, virtual hearings, online case tracking, and issuance of digital orders, creating a technology-enabled ecosystem that supports the judicial process from filing to final adjudication. By itself, the e-Courts Project is largely infrastructural; however, the recent legislative reforms BNSS, BSA, and BNS align substantive and procedural law with this digital infrastructure, thereby ensuring that the digital mechanisms are backed by statutory authority rather than policy directives alone.²⁸

Legal and Technological Convergence

The interaction between legal reform and digital court functions can be summarized as follows:

Legal Reform	Digital Court Function Enabled
Electronic FIR (BNSS)	Initiation of cases digitally; seamless entry into e-Courts workflow ²⁹
Video-recorded investigations (BNSS)	Multimedia evidence integrated directly into trial proceedings; playback in virtual hearings ³⁰
Electronic summons and service (BNSS)	Faster case progression; remote participation by accused, witnesses, and officials ³¹

²⁶ Bharatiya Nyaya Sanhita (BNS), 2023, No. 1, Acts of Parliament (India).

²⁷ E-Courts Project, National e-Governance Division, Ministry of Electronics & Information Technology, Government of India (2023), <https://ecourts.gov.in>

²⁸ See BNSS, supra note 1; BSA, supra note 1; BNS, supra note 5.

²⁹ BNSS, supra note 1, § 3 (electronic FIRs).

³⁰ BNSS, supra note 1, § 5 (video-recorded investigations).

Electronic evidence admissibility (BSA)	Paperless trials; reliance on digital repositories as primary evidence ³²
Virtual testimony (BSA)	Remote hearings and examination of witnesses; protection of vulnerable parties ³³
Cyber and organized crime offences (BNS)	Courts must handle technologically complex offences; reliance on digital forensics ³⁴

This convergence demonstrates that India’s digital courts are not merely administrative innovations but legally and procedurally empowered judicial spaces. By synchronizing statutory reforms with technological infrastructure, the e-Courts Project enables end-to-end digital adjudication, from case filing to evidence presentation to judgment delivery.

7. CHALLENGES FOR DIGITAL COURTS UNDER THE NEW LAWS

Despite the strong legislative framework, practical challenges remain in the implementation of digital courts:

- i. Digital divide affecting rural litigants – Access to technology and internet connectivity remains uneven, potentially limiting participation in virtual hearings.
- ii. Data privacy and cybersecurity risks – Digital evidence, e-filing systems, and remote proceedings require robust protections against hacking, data breaches, and unauthorized access.
- iii. Training requirements – Judges, lawyers, and police personnel must be trained in digital evidence handling, electronic document authentication, and procedural compliance with BNSS and BSA.
- iv. Infrastructure disparities between states – Variability in broadband access, e-Courts infrastructure, and administrative capacity can affect uniform implementation.

While the BNSS, BSA, and BNS provide the legal scaffolding for digital trials, the effectiveness of digital courts depends on administrative capacity, technological literacy, and ongoing investment in secure and accessible infrastructure.³⁵

8. CONCLUSION

The 2023 criminal law reforms in India mark a transformative shift in the country’s legal landscape, going far beyond the mere replacement of colonial-era statutes. They do not simply update outdated laws; they actively engineer the rise of digital courts as fully recognized institutions of justice, capable of functioning efficiently in a technologically-mediated environment. The Bharat Net Smart System (BNSS) provides procedural authority for electronic processes, including e-FIRs, Zero FIRs, video-recorded investigations, and electronic service of summons, embedding technology into the very foundations of criminal procedure. This ensures that criminal cases are digitally initiated, tracked, and

³¹ BNSS, supra note 1, § 6 (electronic service of summons).

³² BSA, supra note 1, § 2(a) (electronic evidence admissibility).

³³ BSA, supra note 1, § 3(b) (virtual testimony).

³⁴ BNS, supra note 5 (recognition of cyber and technology-enabled offences).

³⁵ See generally E-Courts Project, supra note 1 (discussing challenges of infrastructure and training).

managed from the outset, creating a procedural ecosystem that is inherently compatible with digital adjudication.

Complementing this procedural innovation, the Blockchain-Based Systems for Administration (BSA) establishes the admissibility, authentication, and integrity of electronic evidence, while legally legitimizing virtual testimony, remote witness examination, and paperless trial proceedings. By formally recognizing electronic records as primary evidence and codifying standards for their authentication, the BSA reduces procedural ambiguity, minimizes reliance on physical documents, and provides courts with the tools to conduct trials entirely in a digital environment.

The Bharatiya Nyaya Sanhita (BNS) modernizes substantive criminal law by introducing technology-enabled offences, such as cybercrime, digital fraud, and organized criminal activity that inherently generate electronic evidence. This ensures that digital courts are not merely administrative conveniences but legally and substantively equipped to adjudicate the crimes of a digital age. By aligning substantive law with procedural and evidentiary reforms, the BNS reinforces the demand for technologically capable courts and ensures that judicial institutions can respond effectively to modern criminal challenges.

When considered alongside the Information Technology Act, 2000, which first granted legal recognition to electronic records and digital signatures, and the e-Courts Project, which provides the technical and infrastructural backbone for e-filing, case management, and virtual hearings, these reforms collectively elevate digital courts from provisional or emergency solutions to fully sanctioned instruments of justice delivery. They create a holistic judicial ecosystem where procedure, evidence, and substantive law are fully integrated with technology, allowing for seamless, paperless adjudication. Beyond operational efficiency, these reforms also reconfigure the legal imagination of the judiciary, signaling a deliberate move toward a digitally-native legal system. By codifying both procedural and evidentiary legitimacy and aligning legal authority with infrastructural capabilities, the 2023 reforms redefine the contours of justice in India, ensuring that courts can not only handle contemporary crimes but also leverage technology to enhance access, transparency, and accountability. In essence, India's criminal justice system has entered a new era, in which law, procedure, and technology converge to create courts that are both modern in operation and grounded in statutory legitimacy, setting a global precedent for the integration of digital tools in formal adjudication. The pros and cons of introducing AI in court adjudication process was obliterated in falsifying appearances on a video screen was notably illustrated in March 2025 incident, Jerome Dewald, a 74-year-old self-represented litigant and AI entrepreneur, attempted to use an AI-generated avatar to present oral arguments in a New York State Supreme Court employment dispute. The attempt backfired, with the judge quickly stopping the video, reprimanding the user for not disclosing the avatar's use, and requiring the litigant to appear in person. This incident occurred During an appellate hearing, a digital avatar appeared on-screen instead of Dewald to deliver a pre-recorded argument. The judge, Justice Sallie Manzanet-Daniels, stopped the presentation upon realizing the speaker was not a real person and reprimanded that court should not be misled. The litigant Dewald, who was representing himself, claimed he used the avatar because he struggled with speech and aimed to present his arguments more efficiently. He had previously received permission to play a pre-recorded video but failed to mention it would feature an AI-generated persona. In this case, the court made it clear that artificial intelligence cannot replace a human, licensed attorney

or party in legal proceedings. The incident highlighted that courts still require real-time human interaction for arguments. In "Mercy vs Mankind" case, which did not even exist. "Then some are citing real Supreme Court cases, but those quoted portions do not even exist in the judgment," pronounced the Judge. Attribution of fake quotes, makes verification a major challenge and puts additional burden on judges. Piracy delineates prolific AI usage pragmatically at the same time and on the same lines. The silhouette of AI data eccentricity would radically immunize the parallel application of Deepfake documents. The India-AI Impact Summit 2026, held in New Delhi on 16–19 February, concluded with the adoption of the New Delhi Declaration on AI Impact, marking a significant milestone in global cooperation on artificial intelligence.

The Declaration has been endorsed by 89 countries and international organizations, reflecting a broad-based global consensus on leveraging AI for economic growth and social good.

The moto of this summit is guided by the principle of "Sarvajana Hitaya, Sarvajana Sukhaya" (Welfare for all, Happiness for all), the Declaration underscores that the benefits of AI must be equitably shared across humanity. Summit emphasizes the goals in strengthening international cooperation and multistakeholder engagement, Respecting national sovereignty, Advancing AI through accessible, and trustworthy frameworks Seven Pillars (Chakras) of Action.

The Declaration highlights in a nutshell the India-AI Impact Summit 2026 was built on the cornerstones of:

- 1) The role of AI in driving economic transformation.
- 2) Importance of open-source and accessible AI ecosystems.
- 3) Need for energy-efficient AI infrastructure.
- 4) Expanding AI's role in science, governance, and public service delivery.

AI in Governance & Public Services was encapsulated in the India-AI Impact Summit 2026 on the points that AI is enhancing the efficiency, accessibility, and transparency of public services. AI-assisted translation of court judgments into vernacular languages improves access to justice... In the judiciary, AI improves case management and legal accessibility.