

Impact of Technology on the Law of Evidence

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Abstract—The rapid advancement of digital technology has fundamentally transformed the traditional framework of the law of evidence. Contemporary legal systems increasingly rely on electronic records such as emails, social media communications, CCTV footage, and digital forensic data, thereby expanding the scope of admissible evidence beyond conventional oral and documentary forms. In India, legislative developments—particularly the Information Technology Act, 2000 and amendments to the Indian Evidence Act, 1872—have provided statutory recognition to electronic evidence, especially under Sections 65A and 65B.

However, the integration of technology into evidentiary processes presents complex challenges relating to admissibility, authenticity, integrity, and reliability. Strict procedural requirements, such as certification under Section 65B, have often resulted in the exclusion of otherwise relevant evidence. Additionally, issues such as cyber manipulation, lack of technical expertise among legal professionals, and inadequate forensic infrastructure further complicate judicial evaluation.

This article critically examines the evolution of the law of evidence in the digital era, analyzes the legal framework governing electronic evidence, and highlights the challenges faced by courts in adapting to technological advancements. It also explores comparative international practices and suggests reforms aimed at balancing technological innovation with fundamental principles of justice.

Index Terms—Electronic Evidence; Digital Technology; Admissibility; Section 65B; Indian Evidence Act; Cybercrime; Digital Forensics; Authenticity; Information Technology Act; Judicial Interpretation.

I. INTRODUCTION

A. Background of the Study

Technological advancements have significantly transformed the legal landscape, particularly the law of evidence. Traditionally, evidence law was designed to regulate oral testimony and physical documents. However, with the rise of digital communication, a

substantial portion of human interaction now occurs electronically, necessitating a re-evaluation of evidentiary principles.

B. Importance of Evidence Law

The law of evidence plays a crucial role in the administration of justice by determining the admissibility, relevance, and credibility of facts presented before courts. It ensures fairness, prevents arbitrariness, and upholds the rule of law.

C. Impact of Technological Advancements

The emergence of electronic evidence—including emails, text messages, CCTV footage, and social media data—has expanded the scope of evidence law while simultaneously introducing new complexities such as data manipulation and cybercrime.

II. EVOLUTION OF THE LAW OF EVIDENCE

A. Traditional Concepts of Evidence

Historically, evidence law relied on oral testimony, documentary proof, and material objects. These forms were tangible and relatively easier to authenticate.

B. Development in India

The enactment of the Indian Evidence Act, 1872 established a codified framework. However, technological advancements exposed its limitations, leading to amendments recognizing electronic evidence through the Information Technology Act, 2000.¹

III. ELECTRONIC EVIDENCE AND LEGAL FRAMEWORK

A. Meaning and Types of Electronic Evidence

Electronic evidence refers to any information stored or transmitted in digital form, including emails, call data records, CCTV footage, and digital transactions.

B. Statutory Framework

The legal recognition of electronic evidence in India is primarily governed by:

The Information Technology Act, 2000²

The Indian Evidence Act, 1872 (Sections 65A & 65B)³

These provisions establish procedural safeguards to ensure authenticity and reliability.

IV. ADMISSIBILITY AND CHALLENGES

A. Conditions for Admissibility

Electronic evidence must satisfy the requirements laid down under Section 65B, including certification and proof of proper functioning of the device.⁴

B. Issues of Authenticity and Reliability

Unlike traditional evidence, digital records are susceptible to tampering, duplication, and unauthorized access, making authentication challenging.

C. Cybercrime and Evidentiary Issues

Cybercrimes rely heavily on digital evidence, but issues such as jurisdiction, encryption, and lack of forensic expertise complicate prosecution.

V. JUDICIAL APPROACH

A. Landmark Judgments

The judiciary has played a crucial role in interpreting electronic evidence laws.

In *Anvar P.V. v. P.K. Basheer*, the Supreme Court emphasized strict compliance with Section 65B certification requirements.⁵

In *Arjun Panditrao Khotkar v. Kailash Kushanrao Gorantyal*, the Court reaffirmed the mandatory nature of such certification.⁶

B. Role of Courts

Courts have adapted to technological advancements by incorporating digital tools such as video conferencing and electronic filing while maintaining procedural safeguards.

VI. COMPARATIVE ANALYSIS

A. International Legal Frameworks

Countries such as the United States and the United Kingdom adopt a more flexible approach to electronic

evidence, focusing on reliability rather than strict procedural compliance.⁷

B. Best Practices

Best practices include:

- Technologically neutral laws
- Standardized forensic procedures
- Judicial training in digital evidence

VII. FINDINGS AND SUGGESTIONS

A. Key Findings

Electronic evidence has become indispensable in modern litigation.

Indian law recognizes such evidence but imposes strict procedural requirements.

Judicial interpretation plays a critical role in bridging legislative gaps.

B. Gaps in the Existing System

Procedural rigidity leads to exclusion of relevant evidence.

Lack of technical expertise among legal professionals. Inadequate forensic infrastructure.

C. Suggested Reforms

Simplification of admissibility procedures

Judicial training in digital forensics

Uniform guidelines for handling electronic evidence

Legal recognition of emerging technologies such as AI and blockchain

VIII. CONCLUSION

Technology has significantly reshaped the law of evidence by expanding its scope and introducing new evidentiary standards. While electronic evidence enhances efficiency and accuracy in judicial proceedings, it also raises concerns regarding authenticity, privacy, and procedural fairness.

The existing legal framework, though progressive, requires continuous reform to address emerging technological challenges. A balanced approach—combining legal innovation, judicial adaptability, and institutional capacity-building—is essential to ensure that the law of evidence remains effective in the digital age.

REFERENCES

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- [5] Fed. R. Evid. 901 (U.S.); see also Stephen Mason, *Electronic Evidence* (4th ed. 2017).