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Cyber Legal Shield – A Multidimensional Framework for Digital Defense

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Abstract: *With the development of a digitalized world, the sophistication of cyber-attacks has increased tremendously. This paper will therefore focus on the creation of a Cyber Legal Shield, an idea which will go a long way in solving the problem at hand due to the fact that current laws do not have provisions that cater to sophisticated cyber-attacks. After conducting a literature review on the law against cyber-crimes in India such as the Information Technology Act of 2000 and Bharatiya Nyaya Sanhita of 2023, one will observe that there is a wide gap in terms of technological and legal know-how regarding how to tackle cyber-crimes. In order to achieve a safe and legal use of cyber evidence, one must adopt a holistic approach. A number of aspects should be taken into account for a successful holistic approach to include; authentication, data encryption, and reporting in case of any incidence.*

Keywords: *cyber-attacks*

I. INTRODUCTION

Despite the fact that technology has enabled communication around the world, it is imperative that there be measures in place to protect the user. The term 'Cyber Legal Shield' refers to such protective measures and lays down the rights and responsibilities of individuals involved in the communication process through the internet medium. Apart from using technology to protect users of the web, there should be other means of protection like legal processes to safeguard online transactions, ideas, and personal information as well. The role of the cyber legal shield is to offer the necessary protection to the rights of those engaged in any form of online activity. It also specifies the punishment for infringement of these rights.

The current models are inefficient in this respect since there are two ways of ensuring security, technology-based (firewall) and legal, but they operate independently hence the 'silo approach'. This simply implies that an organization is technologically

II. PROBLEM STATEMENT

Even with all the available security technologies, cybercrimes continue to increase at a rate higher than what can be regulated by current laws. Some of the problems include:

• Legal Inadequacy: It takes many years for legislative bodies to pass a law, while the technology threats can change within a week.

• Jurisdiction: Due to the borderless aspect of the internet, cross-jurisdiction is difficult due to differences in the law between nations.

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• Reporting Problem: Only 29% of affected users report their cases due to fear of damaging their brands or lack of trust in the legal system.
• Chain of Custody Problem: Available security technologies cannot produce adequate logs that satisfy the chain of custody requirement in courts.

III. LITERATURE REVIEW

3.1 The Evolution of Indian Cyber Law

At first, the offences that occurred via the Internet were regulated by the present IPC, which lacked sophistication enough to regulate these offences. Another landmark statute that has come into existence is the IT Act, 2000, which has laid down definitions for hacking and unauthorized access. However, the most recent statute to be introduced is the Bharatiya Nyaya Sanhita (BNS), 2023, wherein "electronic means" have been added to forgery and fraud.

3.2 Human Behavior and Awareness

Studies between 2024 and 2025 reveal that technical obstacles can be overcome through social engineering. Although 59% of individuals cite "basic awareness," this does not mean that they will adopt practices such as applying patches or using distinct passwords.

IV. TECHNICAL APPROACH FOR THE LEGAL SHIELD

The framework proposes that technical measures must serve a dual purpose: protection and "legal proofing."

Measure	Technical Implementation	Legal Value
Authentication	MFA, Biometrics, and Zero-Trust Architecture	Provides "Non-Repudiation"—legal proof of who performed an action.
Encryption	AES-256 for data at rest; TLS 1.3 for data in motion	Satisfies "Reasonable Security Practices" under Section 43A of the IT Act.
Monitoring	SIEM/SOAR with immutable logging	Creates a timestamped audit trail essential for forensic validity.
Forensics	Standardized imaging and hashing (MD5/SHA)	Ensures evidence is not "tampered" and is admissible under the BNS.

V. RESEARCH METHODOLOGY

This study utilized a mixed-methods approach:
Qualitative: Analysis of Scopus-indexed journals and the latest legal drafts (BNS 2023).
Quantitative: Online surveys across diverse demographics to measure the gap between technical usage and legal literacy.
Comparative: Interpreting current incident trends against available legal remedies to identify "protection voids".

VI. DATA ANALYSIS AND INTERPRETATIONS

The Awareness Gap: 59% of respondents possess surface-level knowledge but cannot identify their rights under the IT Act.
Legal Illiteracy: 22% of active internet users are unaware that digital harassment is a punishable offense.
The Silence Factor: The fact that 71% of victims do not report crimes suggests a systemic failure in the "Cyber Legal Shield" at the grassroots level.

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VII. GOVERNING LAWS IN INDIA (BROAD FRAMEWORK)

A. Bharatiya Nyaya Sanhita (BNS), 2023

The BNS expands the definition of "document" to include electronic records and specifically targets modern threats like cyberstalking and financial fraud (UPI/OTP scams).

B. Information Technology (IT) Act, 2000

This remains the primary legislation for addressing intermediary liability (social media platforms) and the protection of critical information infrastructure

VIII. CONCLUSION AND RECOMMENDATIONS

The **Cyber Legal Shield** is an essential framework for the modern digital era. To improve its effectiveness:

Mandatory Legal Literacy: Governments must move beyond "how to stay safe" to "how to seek legal recourse".

Standardization: Organizations should adopt NIST 2.0 or ISO 27001 to align technical outcomes with legal risk management.

Privacy by Design: Security must be engineered to satisfy legal evidentiary standards from the outset, ensuring that when a breach occurs, the evidence is "court-ready".

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BIOGRAPHY

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