

Unit 2: Relevance of Indian Evidence Act to Cyber Forensics

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SUBJECT CODE – PGDCL 104

DIGITAL RECORDS AND CYBER FORENSICS

BLOCK 4 – CYBER FORENSICS FROM LAW ENFORCEMENT PERSPECTIVE

UNIT 2 – RELEVANCE OF INDIAN EVIDENCE ACT TO CYBER FORENSICS

UNIT STRUCTURE

- 1.1 Learning Objectives
 - 1.2 Indian laws relevant to cyber forensics
 - 1.3 Introduction to Indian Evidence Act
 - 1.4 Amendments to Indian Evidence Act with respect to Electronic Evidence
 - 1.5 Evidentiary value of electronic records
 - 1.6 Let's sum up
 - 1.7 Further reading
 - 1.8 Check your progress: Possible answers
 - 1.9 Activity
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1.1 LEARNING OBJECTIVES

After going through this chapter, you should be able to understand:

- The different laws with respect to cyber forensics
- Relevance of Indian Evidence Act
- Amendments made in Indian Evidence Act for the recognition of digital evidence

1.2 INDIAN LAWS RELEVANT TO CYBER FORENSICS

Cyber forensics is becoming vast due to the use of technology in the commission of a crime. Technological advancements have brought convenience in many daily activities. Now a day's human is living in two interrelated worlds namely Real World and Cyber World. Any act of a human is likely to create multiple traces in both worlds and that's why cyber forensics is not only related to cybercrime but also very well utilised in traditional crime investigation. This resulted in the need of amendments in existing laws of the real world. IT Act 2000 is mainly enforced for legal recognition of electronic records in cyberspace.¹²⁶

1.3 INTRODUCTION TO INDIAN EVIDENCE ACT

The Indian Evidence Act, 1872 resulted in changes in the definition of evidence because of the IT Act 2000. These two acts are directly related to cyber forensics in India. Cyber forensics and related investigation procedures have also led to some amendments in IPC and CRPC. In many circumstances, IT Act is having an overriding effect over IPC and CRPC.¹²⁷

With the help of evidence, facts related to the incident are established at trial. Indian Evidence Act contains a set of rules and related issues governing the admissibility of evidence in the Indian Courts of Law. It has introduced a standard set of law applicable to all Indians. This act is divided into 3 parts and there are 11 chapters in total.

PART 1

Part 1 deals with relevancy of the facts. There are two chapters under this part: the first chapter is a preliminary chapter which introduces to the Evidence Act and the second chapter specifically deals with the relevancy of the facts.

PART 2

¹²⁶ Shrivastava, Gulshan & Sharma, Kavita & Khari, Manju & Zohora, Syeda. (2018) Role of Cyber Security and Cyber Forensics in India

¹²⁷ Ahmad, Farooq, Cyber Law in India (Law on Internet), Pioneer Books

Part 2 consists of chapters from 3 to 6. Chapter 3 deals with facts which need not be proved, chapter 4 deals with oral evidence, chapter 5 deals with documentary evidence and chapter 6 deals with circumstances when documentary evidence has been given preference over the oral evidence.

PART 3

The last part, that is part 3, consists of chapter 7 to chapter 11. Chapter 7 talks about the burden of proof. Chapter 8 talks about estoppels, chapter 9 talks about witnesses, chapter 10 talks about the examination of witnesses, and the last chapter which is chapter 11 talks about improper admission and rejection of evidence.

The Evidence Act provisions can be divided into 2 categories:

- Taking the evidence (By Port) - This means to take the evidence for the facts. The fact means the things which are said before the court in connection with the matter. These facts are given to the court either orally or documentary (also electronic documents).¹²⁸
- Evaluation – In evaluation court check whether the facts produce are capable to prove the evidence. Forensics plays a vital role in the evaluation phase.

1.4 AMENDMENTS TO INDIAN EVIDENCE ACT WITH RESPECT TO ELECTRONIC EVIDENCE
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Indian evidence Act is applicable to criminal and civil cases. The evidence produce in these cases may belong to Digital Records. Whenever any Digital Record is submitted as evidence in a court of law many sections of Indian Evidence Act comes into the picture.

Following are certain amendments made in the evidence act for the legal recognition of electronic records as evidence.

AMENDMENTS TO THE INDIAN EVIDENCE ACT, 1872 (See section 92) [1 OF 1872]

1. IN SECTION 3,-

¹²⁸ André Årnes, 'Cybercrime Law', Published Online: 23 MAY 2017, DOI: 10.1002/9781119262442.ch3, Available at: <<http://onlinelibrary.wiley.com/doi/10.1002/9781119262442.ch3/>>

(a) in the definition of "Evidence", for the words "all documents produced for the inspection of the Court", the word "all document including electronic records produced for the inspection of the Court" shall be substituted;

(b) after the definition of "India", the following shall be inserted, namely :- the expressions; "Certifying Authority", "digital signature", "Digital Signature Certificate", "electronic form", "electronic records". "Information", "secure electronic record", "secure digital signature" and "subscriber" shall have the meanings respectively assigned to them in the Information Technology Act, 2000.

2. IN SECTION 17,

For the words "oral or documentary", the words "oral or documentary or contained in electronic form" shall be substituted.

3. AFTER SECTION 22,

The following section shall be inserted, namely: - relevant. Oral admissions as to the contents of electronic records are not relevant unless the genuineness of the electronic record produced is in question."

4. IN SECTION 34,

For the words "*Entries in the books of account*", the words "*Entries in the books of account, including those maintained in an electronic form*" shall be substituted.

5. IN SECTION 35,

For the word "*record*" in both the places where it occurs, the words "*record or an electronic record*" shall be substituted.

6. FOR SECTION 39,

The following section shall be substituted, namely: - "39. What evidence to be given when statement forms part of a conversation, document, electronic record, book or series of letters or

papers.¹²⁹ When any statement of which evidence is given forms part of a longer statement, or of a conversation or part of an isolated document, or is contained in a document which forms part of a book, or is contained in part of electronic record or of a connected series of letters or papers, evidence shall be given of so much and no more of the statement, conversation, document, electronic record, book or series of letters or papers as the Court considers necessary in that particular case to the full understanding of the nature and effect of the statement, and of the circumstances under which it was made".¹³⁰

7. AFTER SECTION 47,

The following sections shall be inserted, namely: - "47A.Opinion as to digital signature where relevant. When the Court has to form an opinion as to the digital signature or any person, the opinion of the Certifying Authority which has issued the Digital Signature Certificate is a relevant fact."

8. IN SECTION 59,

For the words "*contents of documents*" the words "*contents of documents or electronic records*" shall be substituted.

9. AFTER SECTION 65,

The following sections shall be inserted, namely: - 65A.special provisions as to evidence relating to the electronic record. The contents of electronic records may be proved in accordance with the provisions of section 65B i.e., *Admissibility of electronic records*.¹³¹

(1) Notwithstanding anything contained in this Act, any information contained in an electronic record which is printed on a paper, stored, recorded or copied in optical or magnetic media produced by a computer (hereinafter referred to as the computer output) shall be deemed to be also a document, if the conditions mentioned in this section are satisfied in relation to the information and computer in question and shall be admissible in any proceedings, without further

¹²⁹ Caloyannides, Michael A, (2001), Computer Forensics and Privacy, Artech House <www.artechhouse.com>

¹³⁰ Casey, Eoghan (3rd Ed), Digital Evidence(Forensic Science, Computers & the Internet Computer Crime), Academic Press

¹³¹ Justice Singh, Yatindra (2nd Ed), Cyber Laws, Universal Law Publishing Co Pvt Ltd

proof or production of the original, as evidence of any contents of the original or of any fact stated therein or which direct evidence would be admissible.

(2) The conditions referred to in sub-section (1) in respect of a computer output shall be the following, namely:-

(a) the computer output containing the information was produced by the computer during the period over which the computer was used regularly to store or process information for the purposes of any activities regularly carried on over that period by the person having lawful control over the use of the computer;

(b) during the said period, information of the kind contained in the electronic record or of the kind from which the information so contained is derived was regularly fed into the computer in the ordinary course of the said activities;

(c) throughout the material part of the said period, the computer was operating properly or, if not, then in respect of any period in which it was not operating properly or was out of operation during that part of the period, was not such as to affect the electronic record or the accuracy of its contents; and

(d) the information contained in the electronic record reproduces or is derived from such information fed into the computer in the ordinary course of the said activities.

(3) Where over any period, the functions of storing or processing information for the purposes of any activities of any regularly carried on over that period as mentioned in clause (a) of sub-section (2) was regularly performed by a computer, whether-

(a) by a combination of computers operating over that period; or

(b) by different computers operating in succession over that period; or

(c) by different combinations of computers operating in succession over that period; or

(d) in any other manner involving the successive operation over that period, in whatever order, of one or more computers and one or more combinations of computers. all the computers used for

that purpose during that period shall be treated for the purposes of this section as constituting a single computer, and references in this section to a computer shall be construed accordingly.

(4) In any proceedings where it is desired to give a statement in evidence by virtue of this section, a certificate doing any of the following things, that is to say,-

(a) identifying the electronic record containing the statement and describing the manner in which it was produced;

(b) giving such particulars of any device involved in the production of that electronic record as may be appropriate for the purpose of showing that the electronic record was produced by a computer;

(c) dealing with any of the matters to which the conditions mentioned in subsection (2) relate, and purporting to be signed by a person occupying a responsible official position in relation to the operation of the relevant device or the management of the relevant activities (whichever is appropriate) shall be evidence of any matter stated in the certificate; and for the purpose of this sub-section it shall be sufficient for a matter to be stated to the best of the knowledge and belief of the person stating it.

(5) For the purposes of this section,-

(a) information shall be taken to be supplied to a computer if it is supplied

thereto in any appropriate form and whether it is so supplied directly or (with or without human intervention) by means of any appropriate equipment;

(b) whether in the course of activities carried on by any official, information is supplied with a view to it is being stored or processed for the purposes of those activities by a computer-operated otherwise than in the course of those activities, that information, if duly supplied to that computer, shall be taken to be supplied to it in the course of those activities;

(c) a computer output shall be taken to have been produced by a computer whether it was produced by it directly or (with or without human intervention) by means of any appropriate equipment.

Explanation.- For the purposes of this section, any reference to information being derived from other information shall be a reference to its being derived therefrom by calculation, comparison or any other process;

10. AFTER SECTION 67,

The following section shall be inserted, namely: - "67A. Proof as to digital signature. Except in the case of a secure digital signature, if the digital signature of any subscriber is alleged to have been affixed to an electronic record the fact that such digital signature is the digital signature of the subscriber must be proved;"

11. AFTER SECTION 73,

The following section shall be inserted, namely: - "73A. Proofs as to verification of the digital signature. In order to ascertain whether a digital signature is that of the person by whom it purports to have been affixed, the court may direct-

- (a) that person or the Controller or the Certifying Authority to produce the Digital Signature Certificate;
- (b) any other person to apply the public key listed in the Digital Signature Certificate and verify the digital signature purported to have been affixed by the person.

Explanation.- For the purpose of this section "Controller" means the Controller appointed under sub-section (1) of section 17 of the Information Technology Act, 2000.

12. AFTER SECTION 81,

The following section shall be inserted, namely:- "81A. Presumption as to Gazettes in electronic forms. The Court shall presume the genuineness of every electronic record purporting to be the Official Gazette, or purporting to be electronic record directed by any law to be kept by any person if such electronic record is kept substantially in the form required by law and is produced from proper custody."

13. AFTER SECTION 85,

The following sections shall be inserted, namely: - "85A. Presumption as to electronic agreements. The Court shall presume that every electronic record purporting to be an agreement containing the digital signature of the parties was so concluded by affixing the digital signature of the parties. 85B. Presumption as to electronic record and digital signatures.

(1) In any proceedings involving a secure electronic record, the Court shall presume unless the contrary is proved, that the secure electronic record has not been altered since the point of time to which the secure status relates.

(2) In any proceedings, involving secure digital signature, the Court shall presume unless the contrary is proved that

(a) the secure digital signature is affixed by the subscriber with the intention of signing or approving the electronic record;

(b) except in the case of a secure electronic record or a secure digital signature, nothing in the section shall create any presumption relating to the authenticity and integrity of the electronic record or any digital signature. 85C. Presumption as to Digital Signature Certificates. The Court shall presume, unless the contrary is proved, that the information listed in a Digital Signature Certificate is correct, except for information specified as subscriber information which has not been verified, if the certificate was accepted by the subscriber."

14. AFTER SECTION 88,

The following section shall be inserted, namely:- 88A. Presumption as to electronic messages. The Court may presume that an electronic message forwarded by the originator through an electronic mail server to the addressee to whom the message purports to be addressed corresponds with the message as fed into his computer for transmission, but the Court shall not make any presumption as to the person by whom such message was sent. Explanation.- For the purposes of this section, the expressions "*addressee*" and "*originator*" shall have the same meanings respectively assigned to them in clause (b) and (za) of sub-section (1) of section 2 of the Information Technology Act, 2000;

15. AFTER SECTION 90,

The following section shall be inserted, namely: - "90A. Presumption as to electronic records five-year-old. Where any electronic record, purporting or proved to be five years old, is produced from any custody which the Court in the particular case considers proper, the Court may presume that the digital signature which purports to be the digital signature of any particular was so affixed by him or any person authorised by him in this behalf."¹³²

Explanation.- Electronic records are said to be in proper custody if they are in the place in which, and under the care of the person with whom, they naturally be; but no custody is improper if it is proved to have had a legitimate origin, or the circumstances of the particular case are such as to render such an origin probable. This Explanation applies also to section 81A."

16. FOR SECTION 131,

The following section shall be substituted, namely: - "131. Production of documents or electronic records which another person, having possession, could refuse to produce. No one shall be compelled to produce documents in his possession or electronic records under his control, which any other person would be entitled to refuse to produce if they were in his possession or control unless such last-mentioned person consents to their production."

1.5 EVIDENTIARY VALUE OF ELECTRONIC RECORDS

The evidentiary value of an electronic record is directly proportional to its quality. The Indian Evidence Act, 1872 has widely dealt with the evidentiary value of the electronic records.¹³³ According to section 3 of the Act, "evidence" means and includes all documents including electronic records produced for the inspection of the court and such documents are called documentary evidence. Thus the section clarifies that documentary evidence can be in the form of electronic record and stands at par with the conventional form of documents.

The evidentiary value of electronic records is elaborated under sections 65A and 65B of the Evidence Act, 1872. These sections provide that if the four conditions listed are satisfied

¹³² Submitting an Email or Electronic Record <<https://lawgic.info/submitting-an-email-or-electronic-record-as-evidence-in-an-indian-court/>>

¹³³ Cyber Forensics & Electronic Evidences: Challenges
<<http://www.legalservicesindia.com/article/975/Cyber-Forensics-&-Electronic-Evidences:-Challenges-In-Enforcement-&-Their-Admissibility.html>>

any information contained in an electronic record which is printed on paper, stored, recorded or copied in an optical or magnetic media, produced by a computer is deemed to be a document and becomes admissible in proceedings without further proof or production of the original, as evidence of any contents of the original or any facts stated therein, which direct evidence would be admissible.

1.6 LET'S SUM UP

In this chapter, we have studied the relevance of Indian laws to cyber forensics along with the amendments that took place in the Indian Evidence Act with respect to Electronic evidence. Finally, we ended the discussion with the evidentiary value of electronic records.

1.7 FURTHER READING

- Rodriguez, Glen & Molina, Fernando. (2017). The preservation of digital evidence and its admissibility in the court. International Journal of Electronic Security and Digital Forensics. 9. 1. 10.1504/IJESDF.2017.10002624.
- Medcraveonline.com (2019), <http://medcraveonline.com/FRCIJ/FRCIJ-04-00109.pdf> (last visited Nov 26, 2019).
- <https://www.ncjrs.gov/pdffiles1/nij/211314.pdf>
- <https://www.ncjrs.gov/pdffiles1/nij/grants/248770.pdf>

1.8 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

1. How does evidence help in a case?

With the help of evidence, facts related to the incident are established at trial. Indian Evidence Act contains a set of rule and related issues governing the admissibility of evidence in the Indian Courts of Law.

2. What are the 2 divided categories of the provisions of Evidence Act?

The Evidence Act provisions can be divided into 2 categories:

- Taking the evidence (By Port) - This means to take the evidence for the facts. The fact means the things which are said before the court in connection with the matter. These facts are given to the court either orally or documentary (also electronic documents).
- Evaluation – In evaluation court check whether the facts produce are capable to prove the evidence. Forensics plays a vital role in the evaluation phase.

3. What does the evidentiary value of electronic records mean?

The evidentiary value of an electronic record is directly proportional to its quality. The Indian Evidence Act, 1872 has widely dealt with the evidentiary value of the electronic records. According to section 3 of the Act, “evidence” means and includes all documents including electronic records produced for the inspection of the court and such documents are called documentary evidence. Thus the section clarifies that documentary evidence can be in the form of electronic record and stands at par with the conventional form of documents.

1.9 ACTIVITY

Elucidate the amendments made in the Indian Evidence Act with respect to electronic evidence also briefly explain the admissibility of electronic records with relevant case laws? (1000 – 1500 words)