



Original Article

A Comparative and Doctrinal Study of Traditional and Electronic Contracts under Indian Law

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Abstract:

The expansion of e-commerce has altered the manner in which individuals, businesses and institutions in India enter into binding agreements. Contracts once negotiated face-to-face and recorded on paper are now routinely concluded through e-mail, mobile applications, click-wrap interfaces and electronic-signature platforms. This shift raises a recurring doctrinal question: does an electronically formed contract enjoy the same legal standing and practical enforceability as one formed through conventional means? This paper undertakes a comparative and doctrinal examination of traditional and electronic contracts in India, drawing on the Indian Contract Act, 1872, the Information Technology Act, 2000, the Bharatiya Sakshya Adhiniyam, 2023 and relevant case law. It argues that Indian law resolves the question of formation-stage validity through Section 10A of the Information Technology Act, but that this assurance is analytically distinct from, and insufficient without, the evidentiary framework created by Sections 61 to 63 of the Bharatiya Sakshya Adhiniyam, which governs whether an electronic contract can actually be proved in litigation. A review of recent doctrinal literature on the subject shows that formation-stage validity and evidentiary provability tend to be discussed in isolation from one another. This paper connects the two strands into a single framework and uses it to reassess judicial reasoning in Trimex International, Anvar P.V., Arjun Panditrao Khotkar and the adhesion-contract line of authority beginning with Central Inland Water Transport Corporation. The study concludes that the future reliability of electronic contracting in India depends less on further statutory recognition and more on the operational integrity of authentication, certification and consent mechanisms.

Keywords: *Traditional Contracts; Electronic Contracts; Section 10A, Information Technology Act; Bharatiya Sakshya Adhiniyam, 2023; Electronic Evidence; Click-Wrap Agreements; Contract Law, India.*

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Introduction:

A contract is one of the most widely used legal instruments through which individuals and businesses organise their relationships. From employment and banking to insurance, retail purchase, education and online commerce, contractual relationships underpin almost every transaction in modern economic life.

For most of India's legal history, contracts were associated with physical documents, handwritten signatures and direct communication between parties. A typical transaction involved negotiation, drafting of a written instrument, signature by the parties, and preservation of that instrument as proof of the bargain.

The growth of the internet has altered this sequence considerably. A consumer can now conclude a purchase by clicking "I Agree", an employee can accept service conditions through a portal, and commercial parties can finalise multi-crore transactions through an exchange of e-mails without ever meeting in person. This has given rise to what is generally described as the electronic contract, or e-contract.

The legal question this development raises is not simply whether technology has changed how contracts are made; it is whether the doctrinal architecture of Indian contract law continues to function coherently once the medium of formation, the mode of authentication and the manner of proof all move from paper to data.

Indian contract law rests primarily on the Indian Contract Act, 1872. Section 10 treats an agreement as a contract where it is made by free consent of parties competent to contract, for a lawful consideration and lawful object,

and is not expressly declared void. The Information Technology Act, 2000 later supplied the technological and legal scaffolding for electronic transactions, and Section 10A of that Act provides that a contract will not be denied enforceability merely because electronic means were used in its formation.

The emergence of e-contracts has therefore not displaced traditional contract law; it has overlaid a digital layer of formation and proof upon the same underlying doctrinal requirements. This paper examines that overlay by comparing traditional contracts and e-contracts across formation, consent, authentication, evidence and enforceability, and by tracing how the recently enacted Bharatiya Sakshya Adhiniyam, 2023 has reshaped the evidentiary half of that comparison.

Statement of the Problem:

The routine use of digital platforms has made e-contracts a standard feature of commercial and consumer transactions in India. Yet the shift from physical documentation to digital contracting introduces practical legal difficulties that statutory recognition alone does not resolve.

In a traditional contract, the parties usually retain a signed physical document that can be produced and examined as direct evidence of the bargain. In an electronic transaction, the agreement may instead exist only as an e-mail thread, a server-side log, a click-wrap acceptance record, or an electronically signed PDF stored on a third-party platform.

This difference generates a distinct set of questions that traditional contract doctrine was not designed to answer directly: How is the identity of the contracting party established



when there is no physical signature to compare? Does a single click on "I Agree" amount to informed contractual acceptance? What has to be shown before an electronic record will be accepted as proof in court? Which forum has jurisdiction when the platform, the server and the two parties are situated in different states or countries? And what happens to the parties' rights when an electronic record is later altered, deleted or otherwise compromised?

These questions illustrate a point that is central to this paper: legal recognition of e-contracts and their practical enforceability in litigation are not the same thing, and conflating the two produces an incomplete picture of how digital contracting actually functions in India.

Literature Review:

Scholarship on electronic contracting in India has grown rapidly alongside the underlying commercial practice, and it is useful to group this literature by the stage of the contractual life-cycle that each strand addresses.

1. Formation-Stage Literature: Validity of E-Contracts:

A substantial body of writing focuses on whether an e-contract satisfies the essential requirements of Section 10 of the Indian Contract Act once Section 10A of the Information Technology Act is read alongside it. George's thematic study of electronic contracts in the Indian context surveys validity, authentication and enforcement as connected but distinguishable concerns, and argues that Indian law has moved from mere non-discrimination against electronic form toward a more developed framework of authentication standards. Kumar's work on digital consent similarly treats consent as the point at which formation-stage doctrine is most under strain in

a digital environment, since standard-form and click-wrap structures compress negotiation into a single binary action. Chaudhary and Ram's comparative account of the validity of electronic contracts in the Indian landscape situates Indian practice against foreign models and concludes that Indian courts have generally been willing to treat electronic assent as functionally equivalent to signature, provided the underlying contractual elements are present.

2. Doctrinal Strain in a Nineteenth-Century Statute:

A second strand of literature is more critical of the fit between the Contract Act, 1872 and digital transacting. Mannan, Joya and Sultana argue that the Contract Act was not drafted with automated performance, cross-border formation or algorithmic agreement in mind, and that its offer-acceptance-consideration framework is placed under particular strain by smart contracts and similarly automated arrangements. Their analysis is useful for this paper because it treats Section 10A as a negatively worded provision: it prevents a contract from being invalidated solely because electronic means were used, but it does not itself supply an affirmative set of substantive rules for digital formation. That gap is filled, imperfectly, by judicial interpretation rather than statute.

3. Consent and Standard-Form Literature: Click-Wrap and Browse-Wrap:

A third and increasingly prominent strand addresses standard-form digital consent specifically. Rawat, Anand, Bharti, Kumar and Mehta's comparative analysis of click-wrap and browse-wrap agreements in India concludes that Indian courts have shown a general willingness to enforce affirmatively accepted click-wrap terms, while treating passively accepted



browse-wrap terms with considerably more suspicion, a distinction that parallels the approach taken in the United States in *Specht v. Netscape Communications Corp.* Their work also highlights that no click-wrap dispute has yet reached the Supreme Court of India directly, so the operative legal standard is inferred from the Court's older adhesion-contract jurisprudence rather than from a click-wrap-specific ruling.

4. Evidentiary-Stage Literature: Proof of Electronic Records:

A separate and largely independent body of commentary addresses the law of electronic evidence, focused on Section 65B of the erstwhile Indian Evidence Act, 1872 and its replacement, Section 63 of the Bharatiya Sakshya Adhiniyam, 2023. This literature, most of it produced in the wake of *Anvar P.V. v. P.K. Basheer* and *Arjun Panditrao Khotkar v. Kailash Kushanrao Gorantyal*, is concerned almost entirely with the certification requirements that make an electronic record admissible as secondary evidence, and rarely engages with contract-formation doctrine at all.

5. Synthesis:

Read together, this literature demonstrates that Indian legal scholarship has developed two largely separate conversations: one about whether an e-contract is validly formed, and another about whether an electronic record can be proved once a dispute reaches court. Very little of the literature surveyed above draws an explicit line between the two, even though a contract that is unquestionably valid under Section 10A may still fail in litigation if the party relying on it cannot satisfy the certification requirements of Section 63 of the Bharatiya Sakshya Adhiniyam. It is this

connection that the present paper seeks to make explicit.

Research Gap:

Three specific gaps emerge from the literature reviewed above and structure the analysis that follows.

First, existing work rarely traces a continuous doctrinal path from Section 10 of the Indian Contract Act, through Section 10A of the Information Technology Act, to Sections 61 through 63 of the Bharatiya Sakshya Adhiniyam. Formation and proof are treated by different authors, in different journals, using different vocabularies, even though a litigant experiences them as a single continuous problem.

Second, the Bharatiya Sakshya Adhiniyam came into force on 1 July 2024, after most of the click-wrap and consent-focused literature discussed above was written. That literature accordingly analyses consent and standard-form fairness against the backdrop of the old Section 65B certificate regime, without accounting for the two-part certificate and mandatory hash-value requirement that the BSA introduced in direct response to *Arjun Panditrao*. There is limited doctrinal writing that reads the adhesion-contract line of authority together with the post-BSA evidentiary standard.

Third, the literature on click-wrap enforceability tends to treat the absence of a Supreme Court ruling on click-wrap agreements as a minor gap to be filled by analogy, rather than as a structural feature of Indian digital-contract law that itself deserves scrutiny: enforceability standards for the most common form of e-contract in India rest on inference from older, non-digital precedent.



This paper addresses these gaps by (a) presenting the formation-to-proof pathway as a single doctrinal sequence, (b) situating that sequence within the post-1 July 2024 evidentiary regime, and (c) treating the reliance on adhesion-contract precedent for click-wrap disputes as a finding in its own right rather than an incidental observation.

Objectives of the Study:

1. To understand the concept and characteristics of traditional contracts and e-contracts.
2. To compare the formation and essential elements of traditional and electronic contracts.
3. To examine the legal validity of e-contracts under the Indian Contract Act, 1872 and the Information Technology Act, 2000.
4. To analyse the specific doctrinal relationship between Section 10A of the Information Technology Act and Sections 61 to 63 of the Bharatiya Sakshya Adhiniyam, 2023.
5. To examine the evidentiary status of electronic records after the transition from Section 65B of the Indian Evidence Act to Section 63 of the Bharatiya Sakshya Adhiniyam.
6. To analyse judicial developments relating to electronic contract formation, standard-form consent, and electronic evidence in India.
7. To identify the major legal and practical challenges associated with e-contracts.
8. To recommend measures for improving the reliability, transparency and enforceability of electronic contracts in India.

Research Questions:

1. What are the fundamental differences between traditional contracts and e-contracts in terms of formation and proof?
2. Are e-contracts legally equivalent to traditional contracts under Indian law, and if so, at what stage does that equivalence become uncertain?
3. How does the enforceability assurance in Section 10A of the Information Technology Act relate to the certification requirements in Section 63 of the Bharatiya Sakshya Adhiniyam?
4. How have Indian courts approached standard-form digital consent in the absence of a Supreme Court ruling specifically on click-wrap agreements?
5. What are the principal challenges affecting the practical enforceability of e-contracts in India?
6. What legal and technological measures could strengthen India's e-contracting environment?

Research Methodology:

This study adopts a qualitative, doctrinal and comparative methodology. It is based entirely on secondary data; no primary survey, interview or questionnaire has been used.

Sources of secondary data include Indian legislation and statutory provisions, government publications and the India Code, reported judgments of the Supreme Court of India and High Courts, academic research papers and law-journal articles, and legal commentary published by recognised legal research platforms.

The principal statutes examined are the Indian Contract Act, 1872; the Information Technology Act, 2000; the Bharatiya Sakshya



Adhiniyam, 2023; and, where relevant to data-related issues, the Digital Personal Data Protection Act, 2023. Because the Bharatiya Sakshya Adhiniyam took effect only on 1 July 2024, the study also draws on case law decided under the predecessor provision, Section 65B of the Indian Evidence Act, 1872, to the extent that this precedent continues to inform interpretation of the successor provision.

As a doctrinal and secondary-data study, the paper does not measure actual consumer comprehension of digital terms, litigation outcomes, or the frequency with which Section 63 certificates are successfully produced in practice; these limitations are addressed further in the discussion of future research.

Concept of Traditional Contracts:

A traditional contract generally refers to an agreement concluded through conventional means such as face-to-face negotiation, a written instrument and a physical signature. For example, if A agrees to sell a vehicle to B for a fixed price, the parties typically negotiate the terms, reduce the agreement to writing, and sign the document, which then becomes primary evidence of the bargain.

It is important, however, not to equate a traditional contract with a paper document as such. The essential requirement under Indian contract law is the existence of a legally enforceable agreement, not the physical form in which that agreement happens to be recorded. Oral contracts, for instance, have always been enforceable at Indian law provided the elements of Section 10 of the Indian Contract Act are satisfied; paper is simply the customary evidentiary vehicle, not a substantive requirement.

Section 10 sets out the core requirements of a valid contract: competent parties, free consent, lawful consideration, a lawful object, and the absence of any statutory provision declaring the particular agreement void.

Concept of Electronic Contracts:

An electronic contract is a contract formed, communicated, accepted or executed using electronic means. Common examples include agreements concluded by e-mail, online purchase agreements, click-wrap agreements, terms accepted through a website or mobile application, electronically signed employment contracts, and business-to-business contracts concluded entirely through digital channels.

A defining feature of the e-contract is that the parties may never meet physically, and in many consumer-facing transactions one party may not even be a natural person the counterparty ever directly communicates with, but rather an automated interface.

The governing legal principle is not that an electronic contract is a wholly separate species of contract; it is that the same elements of offer, acceptance, consideration and consent operate through an electronic communication channel rather than a physical one. The medium changes; the doctrinal test set out in Section 10 of the Indian Contract Act does not.

Comparative Analysis: Traditional Contracts and E-Contracts:

The table below sets out the principal points of divergence between traditional and electronic contracting across formation, authentication, evidentiary and practical dimensions.



Basis	Traditional Contract	Electronic Contract
Mode of formation	Physical or conventional communication (in person, by post, by telephone)	Electronic communication (e-mail, website, application or platform)
Document	Usually paper-based	Electronic or digital record
Signature	Handwritten signature	Electronic or digital signature, or other authentication mechanism
Presence of parties	Parties may meet physically	Parties may be geographically distant and never meet
Primary evidence	Physical documents and witness testimony	Electronic records, server logs, e-mails and digital signatures, subject to certification
Speed of formation	Relatively slower	Generally faster, often near-instantaneous
Geographical reach	More significant limitations	Comparatively limited, but raises jurisdictional questions
Storage	Physical storage, subject to loss or degradation	Digital storage, subject to alteration, deletion or cyber-intrusion
Principal risk	Forgery, loss or physical alteration of the document	Hacking, identity theft, unauthorised alteration or access
Consumer interaction	Greater practical opportunity for discussion and negotiation	Frequently standardised and automated, with limited negotiation
Jurisdiction	Generally easier to identify	May be complicated, particularly in cross-border transactions
Cost structure	Printing, postage and physical storage costs	Lower documentation and transaction costs, offset by cybersecurity costs

Legal Validity of E-Contracts: Reading

Section 10 with Section 10A:

Indian law does not treat electronic contracts as inherently inferior to traditional contracts, but the statutory mechanism by which this equivalence is achieved deserves closer attention than it is usually given.

Section 10 of the Indian Contract Act remains the substantive foundation of every contract in India, electronic or otherwise. An electronic agreement must still involve a lawful offer, an unequivocal acceptance, lawful consideration, competent parties, free consent, a lawful object and sufficient certainty of terms.

Nothing in the Information Technology Act, 2000 dispenses with any of these requirements.

Section 10A of the Information Technology Act operates alongside, not instead of, Section 10. It provides that where the proposal, acceptance or revocation of a contract is communicated in electronic form or by electronic record, the contract will not be treated as unenforceable solely on the ground that electronic means were used for that purpose. This is best understood as a negatively framed, facilitative provision: it removes a specific objection to enforceability (the mere fact of electronic formation) without itself creating any new substantive category of



contract or supplying any additional test of validity. A contract that fails to satisfy Section 10 for reasons unrelated to its electronic form, such as absence of consideration or incapacity of a party, receives no rescue from Section 10A.

It should also be noted that Section 10A does not apply universally. The Information Technology Act excludes certain categories of instruments from its scope, including negotiable instruments other than cheques, powers of attorney, trusts, wills and certain documents relating to the sale or conveyance of immovable property. For these categories, electronic execution does not automatically carry the same statutory assurance of enforceability, and parties dealing in such instruments must proceed with particular caution.

The combined effect of Section 10 and Section 10A is therefore best described as a two-part test: first, does the arrangement satisfy the ordinary requirements of a valid contract under the Contract Act; and second, is the arrangement one to which the Information Technology Act's non-discrimination principle applies at all. Only when both questions are answered affirmatively can an electronic contract be regarded as valid on the same footing as a traditional one.

Electronic Signatures and Authentication:

One of the most consequential differences between traditional and electronic contracts lies in the method of authentication. A handwritten signature traditionally serves several functions simultaneously: it identifies the signatory, signals an intention to be bound, and provides a durable, tamper-evident record of assent.

The Information Technology Act addresses this through the concept of the

electronic signature, which since the 2008 amendment to the Act is defined broadly enough to include both the older digital-signature technology (based on asymmetric cryptography and licensed certifying authorities) and newer, technology-neutral authentication mechanisms such as Aadhaar-based electronic signature services. Sections 3 and 3A of the Act set out the conditions under which an electronic signature will be treated as reliable, and Schedule II lists the authentication techniques recognised for this purpose.

The central legal difficulty is therefore not whether a signature-equivalent mechanism exists, but whether that mechanism can reliably answer four questions in the event of a dispute: who actually authenticated the record; did that person intend to be bound by it; has the record been altered since authentication; and can the record be reliably attributed to that specific individual rather than merely to a device or account. Where an electronic signature is backed by a licensed certifying authority and a verifiable audit trail, these questions are comparatively easy to answer. Where authentication rests on a bare click or an unverified e-mail address, they are considerably harder, and this is precisely where litigation over e-contracts tends to concentrate.

Electronic Evidence and the Bharatiya Sakshya Adhiniyam, 2023: Connecting Section 10A with Section 63:

The enforceability of an e-contract cannot be separated from the law of evidence. A contract may be entirely valid as a matter of substantive law and still fail in practice if the party relying on it cannot satisfactorily prove its existence, its terms, or its authenticity before a court. This is the point at which Section 10A of



the Information Technology Act and the evidentiary provisions of the Bharatiya Sakshya Adhiniyam, 2023 must be read together rather than in isolation.

1. What Section 10A Does and Does Not Guarantee:

Section 10A answers an objection that arises at the moment a contract is challenged on formation grounds: it prevents a court from holding that a contract is unenforceable merely because the offer, acceptance or revocation happened electronically. It says nothing at all about how the electronic record embodying that offer or acceptance is to be placed before the court as admissible evidence. Enforceability in the sense used by Section 10A is therefore a statement about substantive contract law, not a statement about the law of evidence.

2. The Evidentiary Framework Under the BSA:

The Bharatiya Sakshya Adhiniyam, 2023, which came into force on 1 July 2024 and replaced the Indian Evidence Act, 1872, supplies the evidentiary half of the equation. Section 61 of the BSA provides that an electronic or digital record is not to be denied admissibility merely on the ground that it is electronic, a principle that mirrors, at the evidentiary stage, the same non-discrimination logic that Section 10A applies at the formation stage. Critically, however, Section 61 is itself made subject to Section 63, which governs the proof of electronic records tendered as secondary evidence.

Section 63 is the direct successor to Section 65B of the former Indian Evidence Act, and it carries forward the requirement that a computer-generated record produced as secondary evidence must be accompanied by a certificate attesting to specified technical

conditions before it can be admitted. The Bharatiya Sakshya Adhiniyam strengthens this requirement in two respects that are directly traceable to judicial criticism of the old regime: it requires a two-part certificate, with one part completed by the person responsible for the device and a further part completed by an expert, in the form prescribed by the Schedule to the Act, and it additionally requires that the certificate record the hash value of the electronic record so that its integrity can be independently verified.

3. The Doctrinal Bridge: Formation-Stage Validity Is Not Evidentiary Proof:

Reading Sections 10A and 61 to 63 together yields a doctrinal point that is easy to overlook: an e-contract can be entirely valid under Section 10A, and yet the party seeking to enforce it may still lose the case if it cannot produce a compliant Section 63 certificate for the e-mail chain, click-wrap log or digitally signed document on which it relies. Section 10A removes a substantive objection to the contract's existence; Section 63 imposes a procedural precondition to proving that existence. A litigant who conflates the two risks assuming that statutory recognition of e-contracts automatically translates into courtroom success, when in fact a second, independent evidentiary hurdle must also be cleared.

This distinction is not merely theoretical. The Supreme Court's own case law on the predecessor provision demonstrates how easily this hurdle can be missed in practice, and it is to that case law that the paper now turns.



**Judicial Recognition of E-Contracts: A
Refined Case-Law Discussion:**

**1. Formation Through E-mail: Trimex
International FZE Ltd. v. Vedanta
Aluminium Ltd.**

In Trimex International FZE Ltd. v. Vedanta Aluminium Ltd., (2010) 3 SCC 1, a Dubai-based trading company offered by e-mail to supply bauxite to an Indian company, and the Indian company accepted the offer for five shipments by return e-mail the following day. A more detailed draft contract, containing an arbitration clause, was exchanged afterwards but never formally signed. When a dispute arose and the respondent denied that any concluded contract existed, the Supreme Court held that a binding contract had come into existence at the moment of unequivocal e-mail acceptance, because the parties' correspondence showed that they were genuinely of one mind on all essential commercial terms. The subsequent, unsigned draft agreement was treated as a formalisation of an already-concluded bargain rather than as a precondition to its existence.

Trimex is frequently cited, correctly, for the proposition that a contract concluded by e-mail is as binding as one concluded on paper. What is less often emphasised is that the case was decided entirely on the correspondence itself, which both parties accepted as authentic; the Court was never called upon to apply a certification requirement of the kind now found in Section 63 of the Bharatiya Sakshya Adhiniyam, because authenticity was not in dispute. Trimex therefore illustrates formation-stage enforceability under what is now Section 10A; it does not resolve, and was not required to resolve, the evidentiary question this paper treats as analytically distinct.

**2. Certification and Proof: Anvar P.V. and
Arjun Panditrao Khotkar:**

The evidentiary counterpart to Trimex is found in Anvar P.V. v. P.K. Basheer, (2014) 10 SCC 473. That case arose from an election petition in which compact discs containing campaign material were tendered as evidence without an accompanying certificate under Section 65B(4) of the then-applicable Indian Evidence Act. The Supreme Court held that Sections 65A and 65B together formed a complete and exclusive code governing the admissibility of electronic records, and that secondary electronic evidence tendered without the mandatory certificate was simply inadmissible, regardless of its apparent reliability. In doing so, the Court overruled the more permissive approach taken in the earlier Navjot Sandhu case.

A subsequent division-bench decision, Shafhi Mohammad v. State of Himachal Pradesh, (2018) 2 SCC 801, attempted to soften this position by suggesting that the certificate requirement could be relaxed where a party was not in possession of the device from which the record originated. This created several years of uncertainty until a three-judge bench resolved the conflict in Arjun Panditrao Khotkar v. Kailash Kushanrao Gorantyal, (2020) 7 SCC 1, which held that the Section 65B(4) certificate is a mandatory condition precedent to the admissibility of secondary electronic evidence, that the reasoning in Shafhi Mohammad was incorrect, and that a certificate is unnecessary only where the original electronic device itself is produced before the court as primary evidence.

The Bharatiya Sakshya Adhiniyam's redesign of the certificate under Section 63, discussed in the previous section, is best



understood as a legislative response to this line of cases: the two-signatory format and mandatory hash value are a direct attempt to make the certification process more rigorous and less easily disputed than it was under the single-signatory Section 65B(4) certificate that gave rise to litigation in *Anvar* and *Arjun Panditrao*.

3. Standard-Form Consent: The Adhesion-Contract Line of Authority:

A third line of authority becomes relevant once attention turns to click-wrap and similarly standardised digital agreements, where the concern is not authenticity of the record but genuineness of consent. No click-wrap dispute has yet reached the Supreme Court of India directly, a gap noted in recent scholarship on the subject. In the absence of a click-wrap-specific ruling, the operative Indian standard is drawn by analogy from the Court's older jurisprudence on standard-form and adhesion contracts.

In *Central Inland Water Transport Corporation Ltd. v. Brojo Nath Ganguly*, (1986) 3 SCC 156, the Supreme Court held that an unreasonable or oppressive term in a standard-form contract could be struck down as opposed to public policy under Section 23 of the Indian Contract Act, particularly where one party had no realistic choice but to accept the term as offered. This reasoning was extended in *LIC of India v. Consumer Education and Research Centre*, (1995) 5 SCC 482, where the Court held that a party offering a contract on a take-it-or-leave-it basis owes an obligation to frame its terms reasonably, especially where there is a marked inequality of bargaining power between the parties, and that courts may intervene to strike down unfair terms even where the formal elements of a valid contract are otherwise present.

Applied to the digital context, this reasoning suggests that a click on "I Agree" is capable of constituting valid acceptance for the purposes of Section 10 of the Contract Act and Section 10A of the Information Technology Act, but that the fairness of the underlying terms remains independently reviewable under the adhesion-contract doctrine, particularly for consumer-facing standard-form agreements where the user has no opportunity to negotiate. This is a doctrinally coherent extension of existing precedent, but it remains an extension by analogy rather than a rule stated in terms for the digital context, which is itself a notable gap in the current state of Indian law.

Types of E-Contracts:

1. Click-Wrap Agreements: A click-wrap agreement requires the user to take an affirmative step, typically clicking a button such as "I Agree", before the transaction can proceed. These agreements are common in software licensing, e-commerce checkout and digital-service sign-up flows. Their principal evidentiary advantage is that the affirmative click generates a relatively clear record of assent, which strengthens the party's position both on the Section 10 acceptance question and, where properly logged and certified, on the Section 63 admissibility question.

2. Browse-Wrap Agreements: In a browse-wrap arrangement, the terms are made available through a hyperlink, and continued use of the website or application is treated as constituting acceptance. Because there is no discrete, affirmative act of assent comparable to a click, browse-wrap agreements raise significantly greater concerns about actual notice and genuine consent, and Indian courts, by analogy with comparable reasoning in the United States



in *Specht v. Netscape Communications Corp.*, are likely to scrutinise such agreements more closely.

3. E-Mail Contracts: Commercial parties frequently negotiate and conclude contracts entirely through e-mail. A single e-mail chain may contain the offer, a counter-offer, the acceptance, agreed commercial terms and a final confirmation, and, as *Trimex* illustrates, such a chain can itself constitute the binding contract even before a formal document is signed.

4. Electronic Signature Contracts: Contracts may also be executed using dedicated electronic-signature platforms that generate a verifiable audit trail alongside the signed document. Where such a platform is used, both the authentication difficulty discussed in Section 12 and the certification difficulty discussed in Section 13 are considerably easier to overcome, because the platform itself is typically designed to produce Section 63-compliant records.

Major Challenges of E-Contracts in India:

1. Authentication and Identity: A recurring concern is whether the person who accepted an electronic contract was in fact the individual legally authorised to enter into it, particularly where authentication relies on nothing more than an e-mail address or a mobile OTP shared across a household or workplace.

2. Genuine Consent: Traditional contracting often allows for negotiation and clarification. Digital contracting, particularly in standard-form consumer agreements, frequently offers little practical opportunity for either. A user may click "I Agree" without reading several pages of terms, raising the adhesion-contract concerns discussed in Section 14.3.

3. Standard-Form Imbalance: Many e-contracts are offered strictly on a take-it-or-leave-it basis, leaving the consumer with no meaningful opportunity to negotiate individual terms, which can produce a structural imbalance of bargaining power of the kind addressed in *LIC of India v. Consumer Education and Research Centre*.

4. Cybersecurity: Electronic contracts depend entirely on the integrity of the underlying digital infrastructure. Cyberattacks, malware, phishing and unauthorised access can compromise contractual data at any point between formation and eventual proof.

5. Electronic Evidence: As discussed in Section 13, disputes commonly arise over the authenticity, custody, integrity and reliability of electronic records, and satisfying the two-part certification requirement under Section 63 of the *Bharatiya Sakshya Adhiniyam* is itself a non-trivial evidentiary burden, particularly for parties without access to a co-operative device custodian or a qualified expert.

6. Jurisdictional Problems: E-contracts routinely cross geographical boundaries. The consumer, the platform operator, the hosting server and the governing-law clause may each be connected to a different jurisdiction, complicating the determination of the appropriate forum and applicable law.

7. Data Privacy: Electronic contracting typically involves the collection and processing of personal data, an area now separately governed by the *Digital Personal Data Protection Act, 2023*, which imposes its own consent and processing obligations that interact with, but are distinct from, contract-formation consent.

8. Digital Divide: Not every prospective contracting party has equal access to



smartphones, reliable internet, digital literacy or electronic authentication facilities, and a wholesale shift to digital-only contracting risks disadvantaging those without such access.

Advantages of E-Contracts:

- Speed: contracts can be concluded within minutes rather than days.
- Cost reduction: printing, courier and physical storage costs are largely eliminated.
- Geographical flexibility: parties can contract without being physically present in the same location.
- Better record management: electronic documents can be stored, indexed, searched and retrieved efficiently.
- Business efficiency: automation reduces administrative overhead for high-volume transactions.

- Environmental benefit: reduced reliance on paper supports more sustainable business practice.

Limitations of Traditional Contracts:

Traditional contracts retain important advantages, particularly where personal negotiation and physical verification of identity are valuable. They nonetheless carry real limitations: physical storage requirements, the possibility of loss, damage or destruction of the sole original, slower communication and turnaround, printing and courier expense, geographical constraints on negotiation, administrative burden, and practical difficulty in retrieving older documents from archival storage.

Comparative Legal Position:

Basis	Comparative Legal Position
Legal foundation	The Indian Contract Act, 1872 applies to both forms of contracting; the Information Technology Act adds a specific, negatively framed assurance for electronic transactions.
Offer and acceptance	May be communicated conventionally or electronically, provided the Section 10 requirements are independently satisfied.
Authentication	Physical signature, as against electronic or digital signature and related authentication mechanisms under the IT Act.
Proof in litigation	Physical documents, as against electronic records governed by Sections 61 to 63 of the Bharatiya Sakshya Adhiniyam, 2023, subject to the certificate requirement.
Consent fairness review	Both forms remain subject to the adhesion-contract doctrine of Central Inland Water Transport Corporation and LIC of India, applied by analogy to click-wrap consent.
Enforceability assurance	An e-contract is not unenforceable merely because electronic means were used; this assurance operates independently of, and is not a substitute for, evidentiary certification.
Key practical risks	E-contracts introduce additional risk concentrated in cybersecurity, digital identity, certificate compliance and cross-border jurisdiction.



The central point emerging from this comparison is that the substantive principles governing contract formation in India remain consistent across both forms of contracting, while the method of formation, the mechanism of authentication and, most significantly, the process of proof diverge sharply between physical and electronic transactions.

Findings of the Study:

1. Indian law does not treat electronic contracts as inherently inferior to traditional contracts; the Indian Contract Act continues to supply the substantive foundation for both.
2. Section 10A of the Information Technology Act is a negatively framed, facilitative provision that removes one specific objection to enforceability; it does not itself constitute an affirmative code of digital contract formation, and does not extend to categories of instruments excluded from the Act's scope.
3. Formation-stage validity under Section 10A and evidentiary provability under Sections 61 to 63 of the Bharatiya Sakshya Adhiniyam are analytically distinct requirements that must both be satisfied; existing literature frequently treats them as though satisfying one implies the other.
4. The Bharatiya Sakshya Adhiniyam's two-part, hash-verified certificate under Section 63 is best understood as a direct legislative response to the certification disputes that arose under the predecessor Section 65B regime in *Anvar P.V. and Arjun Panditrao Khotkar*.
5. Indian courts have not yet decided a click-wrap dispute at the Supreme Court level; the operative standard for such agreements is inferred by analogy from the Court's pre-digital adhesion-contract jurisprudence.
6. Technological validity of an authentication mechanism does not automatically guarantee genuine, informed consent, particularly in standard-form consumer contracts.
7. E-contracts increase transactional efficiency but concentrate risk in cybersecurity, certification compliance and cross-border jurisdiction rather than eliminating risk altogether.

Suggestions and Recommendations:

- 1. Strengthen Authentication:** Businesses handling significant contractual value should adopt licensed electronic-signature platforms and multi-factor authentication rather than relying on unverified e-mail acceptance alone.
- 2. Improve Digital Consent Design:** Material contractual terms, particularly those limiting liability or fixing the dispute-resolution forum, should be presented conspicuously rather than buried within lengthy, scroll-heavy terms and conditions, in line with the fairness concerns identified in the adhesion-contract line of authority.
- 3. Maintain Section-63-Ready Audit Trails:** Businesses should proactively preserve time stamps, transaction logs, signature certificates, communication records and hash values in a form that can readily support a compliant two-part certificate under Section 63 of the Bharatiya Sakshya Adhiniyam, rather than attempting to reconstruct this evidence only once a dispute has already arisen.



4. Increase Consumer Awareness: Consumers should be better informed about the legal significance of click-wrap acceptance, privacy terms, refund and cancellation clauses, arbitration clauses, governing-law clauses and automatic-renewal provisions before they click to accept.

5. Strengthen Cybersecurity Practice: Organisations should implement appropriate technical and organisational safeguards for electronic contractual records, recognising that a security failure can compromise both the substantive contract and the evidentiary record needed to enforce it.

6. Develop Clearer Rules for Emerging Technologies: Artificial intelligence, smart contracts and automated contracting systems are likely to generate new questions of attribution, consent, liability and interpretation that neither the Contract Act, 1872 nor the Information Technology Act, 2000 was drafted to address, and targeted legislative or judicial clarification would be valuable.

7. Promote Alternative and Online Dispute Resolution: Online dispute resolution and institutional arbitration can provide faster and more accessible mechanisms for resolving disputes arising from digital transactions, particularly cross-border consumer disputes where conventional litigation is disproportionately costly.

8. Clarify the Click-Wrap Standard by Direct Judicial or Legislative Statement: Given the reliance on adhesion-contract analogy identified in this paper, a direct appellate ruling, or targeted legislative guidance under the Consumer Protection Act, 2019, addressing the specific fairness requirements for click-wrap and browse-wrap consent would reduce the

current dependence on inference from pre-digital precedent.

Conclusion and Research Implications:

The transition from traditional contracts to e-contracts in India represents more than a change of medium; it reflects a broader transformation in how individuals and businesses communicate, transact and create binding legal relationships. The comparative and doctrinal analysis in this paper shows that the substantive principles governing Indian contract law have remained largely stable through this transition: a contract does not become invalid merely because it is concluded electronically, and Section 10A of the Information Technology Act supplies a targeted statutory assurance to that effect.

The more significant finding of this paper, however, is that statutory recognition of formation-stage validity is only half of the enforceability picture. The Bharatiya Sakshya Adhiniyam, 2023 has reorganised the evidentiary half of that picture through Sections 61 to 63, replacing the single-signatory Section 65B certificate with a two-part, hash-verified certificate designed to close the gaps exposed in *Anvar P.V. and Arjun Panditrao Khotkar*. A party's ability to enforce an otherwise valid e-contract will, in practice, often turn on whether it can satisfy this evidentiary standard, not on whether Section 10A applies. Treating these as a single, undifferentiated question of "validity", as much existing commentary tends to do, understates the practical burden facing litigants and businesses alike.

This has several concrete implications. For legal practice, contract-drafting and compliance functions should treat evidentiary preservation as a design requirement built into



the contracting process itself, rather than as an afterthought to be addressed only once litigation is anticipated. For policy, the absence of a Supreme Court ruling directly addressing click-wrap consent leaves an important gap in an area of extremely high transaction volume, and either targeted legislative guidance or a clarifying judicial pronouncement would reduce current reliance on analogical reasoning from pre-digital adhesion-contract precedent. For legal scholarship, this paper suggests that future doctrinal work on e-contracts would benefit from treating formation and evidentiary proof as a connected sequence rather than as separate topics, since the practical reliability of digital contracting depends on both stages functioning correctly together.

Traditional contracts and e-contracts should therefore not be viewed as competing systems, but as different methods of creating and proving contractual relationships within a single, continuous legal framework. The appropriate direction for Indian law is neither a retreat to paper-based contracting nor an uncritical embrace of digital contracting without safeguards, but the continued development of a contracting environment in which formation, authentication and evidentiary proof are treated as equally essential, mutually reinforcing components of enforceability.

Scope for Future Research:

The present study is based exclusively on secondary data and therefore offers a doctrinal and analytical account of e-contracting rather than an empirical one. Future researchers could usefully undertake empirical studies involving consumers, litigators, corporate legal and compliance departments, e-commerce businesses, banking institutions, licensed

electronic-signature providers and judicial officers, to test how the doctrinal framework identified in this paper actually operates in practice.

Particularly promising avenues include empirical assessment of consumer comprehension of click-wrap and browse-wrap terms; a systematic study of how frequently Section 63 certificates are successfully produced and accepted in reported and unreported commercial litigation since 1 July 2024; the enforceability and characterisation of blockchain-based smart contracts under the Contract Act; the treatment of AI-generated or AI-negotiated contractual terms; the resolution of cross-border e-commerce disputes involving Indian consumers; and the practical uptake of online dispute resolution mechanisms for digital-contract disputes.

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