



Electronic Contracts and Means of Proof

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Abstract:

The developments taking place in the world and the widespread use of the intranet and modern technologies have made people depend on them in all aspects of life, including commercial transactions, which need speed, accuracy and credit in their conduct. Lawyers and specialists, as electronic contracts are often done through the Internet and websites, which is a matter that needs legal controls governing it, with the aim of protecting the parties to this contract as well as the consumer in addition to establishing confidence and reassurance among dealers in this field. In addition to its role in attracting and encouraging economic investment.

Keywords: Electronic Contract, Proof, Electronic Commerce, Affirmative.

Introduction:

This era is witnessing an unprecedented information revolution in technology, accompanied by significant and rapid advancements in the digital communication network. It has brought people closer, shortened distances, and eliminated geographical boundaries between countries. This phenomenon has cast its shadow on all aspects of life, expanding from its initial military and academic purposes in the United States in 1969 to civilian and economic applications. It has opened up wide opportunities for various types of contracts, giving rise to a new form of trade known as electronic commerce or "the commerce of the present and future." This transformation occurred in 1993 when goods and services became available in an intangible manner, as remote contracting parties negotiate and exchange information and other data swiftly in a virtual contract session.

Dealing through the internet raises numerous questions about this medium that does not adhere to many traditional assumptions, such as the authority of ownership,

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geographical boundaries, and writing on paper. It has become necessary to explore means of processing and regulating it within its framework, especially regarding methods of proving its validity and providing it with legal authenticity. This challenge has emerged before legal systems, with remote contracting via the internet and the legality of electronic transactions, such as expressing intent and verifying it through the exchange of data messages, compliance systems, and evidence.

The daily occurrence of violations and crimes in the e-commerce environment has led to an increase in disputes arising from these transactions. This necessitates the search for the applicable law and the competent court to address these disputes, as well as assessing the compatibility of existing legal texts with the issues and challenges posed by modern means of communication. This requires a comprehensive study of all legislation, without exception, to ensure the absence of conflicting provisions.

One of the most important legal issues that requires study and research is the problem of proving electronic contracts, given their significance in the event of legal disputes concerning these electronic contracts. Therefore, the focus of our research revolves around the issue of electronic contracts and the means of proving them. To study this topic, it was necessary to address the following problem: How can electronic contracts be proven. **Are traditional known methods sufficient for that purpose? What are the most important innovative means of proving electronic contracts?**

This research is divided into two sections:

1- Theoretical framework of electronic contracts.

2-Means of proving electronic contracts.

First tropic: The Conceptual Framework of Electronic Contracts.

Electronic contracts have witnessed a widespread revolution in terms of their prevalence and usage, experiencing significant growth in international and domestic business transactions. This is due to their ease and speed, which has made them a requirement in many commercial dealings, with major global companies imposing the use of electronic contracts on every new party engaging in business with them

Given the importance and prevalence of these electronic contracts and their differences from traditional known contracts, it was necessary to explore their concept and distinguish them from other contracts



First Part: The Concept of Electronic Contracts.

To establish a comprehensive definition of an electronic contract, it is necessary to discuss its distinguishing features compared to other contracts. Therefore, we will address its definition in the first subsection and its distinctive characteristics in the second subsection.

Branch One: Definition of an Electronic Contract.

In general, a contract is a source of obligations. It represents an agreement, whether it involves a commitment to perform an action or refrain from doing so. For example, a tenant pays rent to the landlord, and the reason for this payment is the lease contract concluded between the two parties. A contract is the agreement between two wills to create a legal obligation that binds them or one of them. Some jurists differentiate between agreement and contract, stating that an agreement is the concurrence of two or more wills to create or transfer an obligation. Thus, every contract is an agreement, but not every agreement is a contract. If an agreement modifies or terminates an obligation, it is not considered a contract.¹

Many legal scholars agree that an electronic contract is the binding acceptance expressed by one of the contracting parties and the acceptance of the other, with their agreement having a provable effect on the subject matter, imposing obligations on each party as required by the other. This is precisely what the Jordanian legislator addressed in the definition of an electronic contract through Article 87 of the Jordanian Civil Law, which is one of the most comprehensive Arab laws concerning electronic contracts.

Referring to the Algerian legislator and the Algerian Civil Law, we find that it only touches upon these contracts through Law No. 18-05 dated 24 Sha'ban 1439 AH, corresponding to May 10, 2018, which deals with electronic commerce. It defines an electronic contract as **"any agreement or convention aimed at the sale of goods or the provision of a service, previously drafted by one of the parties."**²

The agreement with the acknowledgement of the other party in such a way that the latter cannot make any substantial changes to it is derived from Article 2 of Law No. 04-02-dated5 Jumada al-Ula 1425 corresponding to 23 June 2004, which determines the rules applicable to commercial practices. It is concluded remotely,

¹ Abdul-Mun'imFaraj As-Siddah, "Sources of Obligations : A Study in Lebanese Law and Egyptian Law", Dar Al-Nahda Al-Arabiyya, Cairo, 1971, p. 35.

²Naji Al-Zahraa, Intervention entitled "The Algerian Legislative Experience in Regulating Civil and Commercial Electronic Transactions," at the Academy of Higher Studies "Tripoli," First Maghreb Scientific Conference on Informatics and Law, Libya, held from October 28 to 29, 2009, p. 06.



without the physical and simultaneous presence of its parties, exclusively relying on electronic communication technology.¹

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"In general, a contract is the meeting of two or more wills to create a specific legal effect, and the contract is the law between the parties involved. This is known in Anglo-American legal systems. It is worth noting that a contract, in terms of its formation, can be consensual, formal, or real, and in terms of its effect, it can be binding on both parties or binding on one party. It can be a contract of opposition or a contract of donation. In terms of its nature, it can be instantaneous, continuous, or for a limited duration. The electronic contract, in reality, does not deviate from this familiar structure, composition, or types. It is subject, like other contracts, to the general theory of contract³.

"It can be said that an electronic contract is an agreement in which there is a meeting of offer and acceptance on an open international network for remote communication. This means of communication can be auditory and visual, thanks to the interaction between the offering party and the accepting party. It is evident from this that the electronic contract belongs to the category of contracts that are legally referred to as distance contracts.

¹ Law No. 18-05 dated 24 Sha'ban 1439 corresponding to May 10, 2018, concerning electronic commerce, Official Gazette, Issue No. 28, issued on May 16, 2018.

² Law No. 18-05 dated 24 Sha'ban 1439 corresponding to May 10, 2018, concerning electronic commerce, Official Gazette, Issue No. 28, issued on May 16, 2018.

³ Abdul Rahman Abdullah, "Jurisprudential Rulings on Electronic Transactions," Beirut, Dar Al-Warraq, 1st edition, 2004, p. 125.



As previously mentioned, the Jordanian legislator was among the first in the Arab world to address this contract and define it. The Jordanian Commercial Transactions Law No. 85 of 2001 defines it in Article 2 as **"The agreement that is concluded by electronic means, either wholly or partly"**¹

"Indeed, we can find a definition of the electronic contract in Article 11 of the first chapter of the Iraqi Electronic Signature and Electronic Transactions Law No. 78 of 2012. It defines the electronic contract as: 'The binding of an offer made by one of the contracting parties with the acceptance of the other party in a manner that proves its effect on the subject matter, and which is concluded by electronic means'.....!"²

At the international level, when it comes to the electronic contract, the most important and well-known law is the United Nations Commission on International Trade Law (UNCITRAL) Model Law on Electronic Commerce. However, this law does not explicitly provide a specific definition for the electronic contract. Nevertheless, in Article 11, paragraph 1, « **it states: Information shall not be denied legal effect, validity or enforceability solely on the grounds that it is in the form of a data message, or that it is not contained in its original form, or that it is not authenticated in the usual manner, or that it is not received by the addressee, or that an automated message system is used to generate, send, receive, or store the data message, if the requirements set forth in this Law are satisfied....** »³

Based on the information provided, we can define an electronic contract as « **a contract in which the parties reach an agreement through an international communication network using electronic data interchange, with the intention of creating contractual obligations.**' This definition reflects the best harmony and consistency with the nature of electronic contracts. However, the definition of an electronic contract is not complete without identifying its key characteristics, which we will discuss in the following section⁴...".

¹ The Jordanian Electronic Transactions Law, No. 85 of 2001, published in the Official Gazette of Jordan, Issue No. 4524 for the year 2001.

² The Iraqi Electronic Signature and Electronic Transactions Law No. 78 of 2012, published in the Official Gazette of Iraq, Issue No. 5723 for the year 2012.

³ Khaled Mamdouh Ibrahim, "Electronic Contract Conclusion: A Comparative Study," 1st edition, Alexandria, Dar Al-Fikr Al-Jami'i, 2006. Pages 53 and 54.

⁴ : <http://www.En-droit.com>



Brancetwo : Characteristics of the Electronic Contract:

Through the previously mentioned definitions of the electronic contract, several characteristics distinguish it from other traditional contracts due to the unique nature of electronic transactions : These characteristics include:¹

1. Electronic: The electronic contract is formed and executed through electronic means of communication, such as email, websites, or mobile applications. This facilitates and expedites the process of communication and contracting between parties.
2. Non-physical: The electronic contract is conducted without the need for exchanging traditional physical documents, reducing the hassle and costs associated with paper-based documents.
3. Flexibility: The electronic contract allows for more flexibility in contract execution, as parties can contract and execute transactions at any time and from anywhere, increasing the speed and efficiency of business operations.
4. Electronic record: The details of the contract and its execution are documented in an electronic record, providing easy access to information and evidence related to the contract and contributing to transparency and protection of parties' rights.
5. Digital signature: The electronic contract utilizes digital signatures, which ensure the credibility and security of the contract and protect it from forgery or unauthorized modification.
6. Global: The electronic contract enables contracting between parties located in different parts of the world, expanding the scope of business transactions and providing access to broader global opportunities.²

The second Part: Validity of the electronic contract

Satisfying the parties involved in a contract is generally considered an essential and necessary condition for its formation. The electronic contract, as a contract that encompasses all the necessary conditions, does not deviate from this principle. Consent, being a fundamental element of a contract, requires the presence and validity of both parties' intentions. The condition of presence is fulfilled through the parties'

¹ Mohamed Hassan Qasim, "Remote Retirement," New University Publishing House, Alexandria, 2005, p. 19.

² Ahmad Khaled Al-Ajlouni, "Online Contracting," Dar Al-Thaqafah and Dar Al-Amal Al-Dawliyyah, Amman, Jordan, 2002, p. 41.



will, which includes offer and acceptance. As for the validity of consent, it can only be achieved if the parties' intentions are genuine and free from defects. We will further elaborate on this by discussing the concept of offer first and acceptance second.

Branch one : Offer in the Electronic Contract

The offer is considered the most important and initial step in the formation of all contracts, including the electronic contract. It is a fundamental condition and pillar in the formation of contracts, and the breach of it results in the invalidity of the contract.

01-The definition of the offer: It has been defined by Islamic jurisprudence as a complete and definitive offer to contract according to the specified legal terms, directed by one person to a specific person or persons, individually or collectively. It has also been defined as any remote communication that includes all the necessary elements to enable the recipient to immediately accept the contract, excluding mere announcements.

Referring to Arab laws, the Tunisian legislator defined it in Presidential Decree No. 714/2001, specifying the means of communication, including, but not limited to, unaddressed and addressed publications, standard letters, newspapers with purchase requests, catalogs, telephones, television, and the internet. Additionally, many jurists believe that electronic offer does not alter the essence of offer simply because it occurs electronically. An electronic statement does not affect its essence, which is the intended meaning and purpose, according to the traditional theories that define obligations and contractual regulations¹.

Like all contracts, electronic offer requires it to be definitive, specific, and irrevocable. This means that the offeror's intention is directed towards concluding the contract as soon as the statement is associated with it. If the offeror retains a condition stating that they are not bound by what they offered in the event of acceptance, this is not considered *Ijāb* but rather an invitation to contract. *Ijāb* may be invalidated for certain reasons, such as being conditional and the condition not being fulfilled, the expiration of the specified period (for binding offer without being associated with acceptance, or if the person to whom it was directed rejects it. Refusing electronic offer can occur when the addressee voluntarily and deliberately shuts down the computer or chooses to switch to a different website other than the offeror's site, or sends an electronic message indicating rejection in the case of contracting via email².

¹ Abdul Razzaq Ahmed Al-Sanhouri, "Al-Wasit Fi Sharh Al-Qanoon Al-Madani," Part One, Sources of Obligation, Dar Ihya' Al-Turath, Beirut, Lebanon, 1993 edition, p. 152.

² Nazih Mohammed Al-Mahdi, "Sources of Obligation," Dar Al-Nahda Al-Arabia, Cairo, 2001, p. 69.



Electronic offer can be a specific offer directed to specific individuals, often made through email or messaging programs. It can also be a general offer directed to unspecified individuals, which occurs in the case of contracting through commercial websites on the Internet. In this case, the personal identity of the recipient is not significant to the offeror. Therefore, anyone can accept the offer, and the contract is formed at that point. The effect of this offer ends for other individuals

02-Positive Effect: The electronic positive effect does not become effective as soon as it is issued by the sender, but rather by being presented on the internet to the public, sent via email, or other electronic means of expressing intention containing the necessary essential elements for the contract. This gives rise to a right for the recipient of the electronic positive effect to accept it. However, this right only arises from the moment the sender becomes aware of it, and there is no obligation solely based on the issuance of the positive effect by the sender unless it is communicated to the recipient. It has been observed that the sender of the electronic positive effect, similar to the traditional positive effect, can revoke it by withdrawing it from the internet, provided that they announce their intention to revoke the positive effect. This nullifies its legal effect. However, there is an exception to this rule when the positive effect is accompanied by a specified acceptance deadline. Moreover, revocation has no legal effect unless the sender is aware of it, and the burden of proving awareness lies on the sender. In traditional positive effect, the default rule is that it is not binding before it reaches the intended recipient or after it reaches them, and the recipient can modify their acceptance as long as it is not accompanied by acceptance. The positive effect becomes binding if a deadline for acceptance is specified, obligating the sender to maintain their positive effect until this deadline expires. However, some argue that if, according to general principles, the positive effect is not binding in itself unless it is coupled with an explicit or implicit deadline, in electronic positive effect, it is necessary to deviate from general principles by precisely defining the time period for the validity of the positive effect and informing the recipient of this time period¹

03-Distinguishing Electronic Offer from Invitation to Negotiate: It is known that the pre-contractual stage of electronic contracting involves various forms of expressing intention, including some that could be considered an invitation to negotiate and others that could be considered a definite offer that binds the parties upon acceptance. Both the invitation to negotiate and the offer express the intent to contract, but it is important to differentiate between them because the invitation to negotiate indicates that the matter is still in the stage of negotiating the contract, and therefore the parties are not obligated to conclude the contract. On the other hand, the offer indicates that

¹ Mohammed Ibrahim Abu Al-Hijja, "Electronic Commerce Contracts," 1st edition, published by Dar Al-Thaqafah for Publishing and Distribution, Amman, 2005, page 97.



the negotiation stage has been surpassed and the parties are entering the stage of contract formation.

Distinguishing between advertisements on the internet to determine whether they constitute a legal offer or just an invitation to negotiate and contract can be challenging. If an advertisement is considered an offer and is accepted as such, an electronic contract is formed. However, if it is considered a mere invitation to negotiate, the contract is not concluded. This raises the question of the criteria for distinguishing between an electronic offer and negotiation.

Some legal scholars argue that the functional difference between an offer and an invitation to negotiate lies in the purpose they serve. The purpose of an invitation to negotiate is simply to express the advertiser's desire to enter into a contract and to discover potential interested parties. On the other hand, an offer aims to formulate a specific project that can be transformed into a complete contract upon acceptance. If the expression from one party to another is merely an invitation to negotiate and lacks the essential elements of an offer, then the response to this invitation does not constitute acceptance that concludes the contract but rather acceptance to negotiate.

Others argue that the difference lies in the presence of a definite intention to contract. To consider an offer as an electronic offer, it is necessary for the offer to go beyond the scope of an invitation to negotiate and demonstrate a definite intention to enter into a contract. In the framework of the offer, the default position is to consider any expression aimed at contracting as an invitation to negotiate unless it is proven to be an offer. An offer is distinguished by its specific characteristic, which is the expression of a definite desire and a firm intention to contract.¹

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Branch two: Acceptance in Electronic Contracts

Acceptance is the second party's expression of intent in a contract, directed to the offeror. It must include a definite and unequivocal intention to enter into the contract, meaning it should be issued conclusively and without conditions. Since electronic contracts are primarily consumer contracts, electronic acceptance is usually non-final, and therefore the contract is not binding on the consumer. This indicates the need to examine the issue of the right to revoke acceptance in electronic contracts. Acceptance

¹ Abdul Razzaq Ahmed Al-Sanhouri, "Sources of Obligation," previously cited reference, p. 159.



should correspond to the offer, meaning they should match in essential and fundamental matters, while they may differ in minor details.

Firstly: Characteristics of Electronic Acceptance:

Acceptance is defined as "an expression of the other party who received the offer, directed towards the offeror, to inform them of their agreement to the offer." This means responding with consent to the offeror's proposal. When added to the offer, it forms the contract. Electronic acceptance does not deviate from the essence of this definition, except that it is conducted through electronic means via the internet.

It is a form of remote acceptance and therefore not subject to the same rules and regulations that govern traditional acceptance.

While it may have some peculiarities due to its electronic nature, if acceptance is in accordance with the offer and does not include any reservations or conditions, it must precisely match the offer. It is not permissible to add or subtract from it, except if it is considered a rejection that implies a new offer. Electronic acceptance is not required to be in a specific form or a particular setting. It can be issued through electronic means or through traditional methods of acceptance, unless the offeror has stipulated a specific form for acceptance¹

Secondly: Methods of expressing electronic acceptance:

Electronic acceptance can be expressed in several ways, including writing a statement of agreement or using an electronic signature via email. It can also be expressed orally through chat rooms or by downloading and installing a program, product, or goods online onto the recipient's computer. Another method of electronic acceptance is a single click on the acceptance mark, which is usually represented by the phrase "Agree." However, for the affirmative to be valid, it is required that the click be made twice on the designated acceptance icon on the screen.

In this case, a single click does not have any effect on the formation of the contract, and the acceptance becomes ineffective. The affirmer often resorts to this method to ensure the recipient's consent to the contract.

By clicking twice, it is clear that the affirmative is deliberate, and it prevents the recipient from claiming that the first click was accidental or a mistake.

Therefore, the double click serves as evidence of the recipient's consent to conclude the contract. The affirmative party may take some subsequent steps to

¹Ibrahim Al-Desouki Abu Lail, "Legal Aspects of Online Transactions," 1st edition, Kuwait University Library, Kuwait, 2003, p. 94.



confirm the acceptance, such as answering questions directed to the recipient, such as specifying their place of residence to which the product should be sent, or providing certain personal data displayed on the computer screen, such as credit card number and type. It is evident that the purpose of these subsequent steps is to confirm the acceptance and make it more effective by giving the recipient an opportunity to reflect, consider, and ensure their willingness to accept and conclude the contract.

If the general principle is that acceptance can be explicit or implicit, it is conceivable that this also applies to electronic acceptance, where acceptance can be explicitly expressed through various electronic means. It can also be implicit, such as when the party to whom the affirmative is addressed executes the contract proposed by the affirmative, for example, by providing the affirmer with a secret credit card number without explicitly stating their acceptance. However, the prevailing opinion is that the expression of electronic acceptance can only be explicit

. Electronic acceptance is carried out through electronic devices and automated programs. These devices cannot deduce or infer the intentions of the contracting parties. According to this view, it is not appropriate to argue that the expression of electronic acceptance can be a customary sign or a position that leaves no doubt about its meaning in the circumstances, or silence coupled with circumstances that strongly indicate acceptance¹

Thirdly: Electronic Contract Formation:

A contract, whether electronic or traditional, is generally formed at the moment when acceptance is communicated. Either this communication can be real-time, known as contracting between present parties, or it can be delayed, known as contracting between absentees.

Determining the time and place of contract formation can be challenging, especially in contracting between absentees, due to the time gap between the issuance of acceptance and the offeror's knowledge in most cases.

Since electronic contracts fall within the category of distance contracts (contracts concluded remotely) and are formed without the physical presence of the parties in one contract meeting, determining the time and place of electronic contract formation becomes one of the most important legal issues in electronic contracting.

Contracting between parties is achieved through the agreement of wills in one assembly. When the offeror and offeree are physically present in the same location,

¹ Abdul Razzaq Al-Sanhouri, "Al-Wasit Fi Sharh Al-Qanoon Al-Madani," Theory of Contracts, previously cited reference, p. 280.



they are considered to be in one assembly, and the contract is formed between them. To establish the existence of a contract between parties, the concept of "Majlis al-'Aqd" (contractual assembly) is used. Majlis al-'Aqd is a legal term referring to the "gathering of contracting parties in the same place and time, allowing direct communication between them without any distracting matters." Therefore, Majlis al-'Aqd is concluded when one or both parties physically leave the place, and in Islamic jurisprudence, Majlis al-'Aqd is based on the unity of place and time. Thus, both the offer and acceptance must occur in the same place and during the same session.¹

Conversely, contracting between absentees typically occurred through correspondence using methods such as mail, telegrams, or private messengers. However, with the advancement of various aspects of life, the diversification and exchange of interests, and the widespread use of advanced communication methods, it has become easier to establish contracts between individuals, whether at the national or international level. This includes contracting between individuals from different countries or regions, and in these cases, the contract is described as a contract between absentees because the contracting parties are not physically gathered in one assembly in one place².

In the case of electronic contracts, the developments in contemporary life, particularly communication technology, have made the process of communication and contracting between individuals worldwide much easier, without requiring the physical presence of the parties in one assembly. Moreover, the law does not mandate the actual presence of the parties in one place at the moment of offer and acceptance, as they can be exchanged through modern and instantaneous communication means such as phone, telex, fax, or computer devices. This makes it extremely challenging to align with the view that emphasizes the unity of place as a requirement for contracting. Therefore, the time criterion remains the primary basis for distinguishing between contracting between present parties and contracting between absentees, especially considering the advancements in modern communication³.

Second Topic: Methods of Electronic Contract Proof

Due to the reliance of electronic transactions primarily on communication means and computer devices, countries have been keen on establishing legal regulations for

¹ Abdul Razzaq Al-Sanhouri, "Al-Wasit Fi Sharh Al-Qanoon Al-Madani," Theory of Contracts, previously cited reference, p. 86.

² Mohamed HossamLotfy, "The Legal Framework of Electronic Commerce: A Study of Rules of Evidence," 1st Edition, Dar Al-Nahda Al-Arabia, Cairo, 2009, p. 179.

³ Abdul Razzaq Al-Sanhouri, same previous reference, p. 280...



such transactions. The United Nations Commission on International Trade Law (UNCITRAL) adopted a model law called the UNCITRAL Model Law on Electronic Commerce in 1996. It recommended that countries consider when developing national legislation regulating the use of electronic alternatives to paper-based communications and information storage. Since contracts formed through the information network rely on the exchange of electronic data on non-paper bases within or outside communication devices and are signed by the sender of the electronic message using an electronic signature, we will divide this topic into two parts: we will discuss electronic documents in the first part, and we will dedicate the second part to electronic signatures.

The First Part :Electronic Documents

Originally, there is no linguistic restriction to the word "editor" that confines its meaning to a specific type of medium, whether paper or otherwise. The essence of an editor, linguistically speaking, encompasses anything relied upon and depended upon. Previously, proof was solely confined to paper documents, but now data and documents are electronic recordings. Thus, the concept of an editor no longer solely adheres to its prevailing legal sense but also extends to electronic editors. This necessitates a shift in the legal professional's understanding of the editor from its traditional concept, and it's noted that this change is not only legal but also psychological in nature primarily. If writing is the primary means of legal stability, there is nothing preventing writing from being edited on modern communication media, especially the Internet, even if it is not in its traditional form. When writing takes on an electronic character.¹

Electronic Writing or Electronic Editors, and this is what we will discuss by dividing this request into two branches : In the first, we will address the definition of electronic editors, and in the second, we will focus on their most important conditions.²

First branch : Definition of Electronic Editor

The data message exchanged by the parties to a transaction is relied upon as proof of the legally binding actions conducted electronically. Therefore, we will define the electronic editor based on the provisions of the UNCITRAL Model Law on Electronic Commerce, Arab Laws on Electronic Transactions, and the opinions of jurisprudence,

¹Mamdouh Mohamed Al-Janbahi, "Proof of Electronic Contracts," Dar Al-Fikr Al-Jamee, Alexandria, 2004, p. 83.

² Mohammad Fawaz Al-Mutalaa, "Concise Guide to Electronic Commerce Contracts," 1st Edition, Dar Al-Nahda Al-Arabia, Cairo, 2006, p. 2005.



in order to identify the conditions that must be met by this type of editor. Article 1 of the UNCITRAL Model Law on Electronic Commerce defines a data message as "information generated, sent, received, or stored by electronic, optical, or similar means, including, but not limited to, electronic data interchange, electronic mail, telegram, telex, or telecopy."¹

The electronic editor is also defined as "what is written on a specific medium, whether it is paper or any other electronic means." Through the definition of electronic data messages, it is further defined as "electronic information sent or received by electronic means, regardless of the method of extraction in the receiving location." It can also refer to the data and information exchanged through electronic means, whether it is through the Internet, hard drives, computer screens, or any other electronic medium. This broad definition allows the electronic editor to encompass not only the Internet but also other electronic means **such as messages sent via fax, telex, or any future technological means.**²

Second Branch: Conditions of Electronic Documents

The electronic editor in order for it to have the desired legal validity must meet several conditions. These conditions are as follows:

First: Writing: Writing on the electronic editor takes the form of algorithmic equations executed through the input and output of data via a computer screen or any other electronic medium. This ensures that the writing is in a tangible and permanent form.

Second: Intention: The electronic editor must reflect the intention of the parties involved. It should accurately represent their consent, agreements, or any other legally relevant information. This can be achieved through electronic signatures or other means of authentication.

Third: Integrity: The electronic editor should maintain the integrity of the information contained within it. It should be protected against unauthorized alterations or tampering. Measures such as encryption and digital signatures can be employed to ensure data integrity.

¹ Mohammed Saeed Rashidi, "The Validity of Modern Means of Communication in Evidence," Dar Al-Nahda Al-Arabia, Cairo, 2006, p. 205.

² Hassan Abdul Basit Al-Jamii, "Proof of Legal Transactions Conducted via the Internet," Dar Al-Nahda Al-Arabia, Cairo, 2000, p. 21.



Fourth: Accessibility: The electronic editor should be accessible and retrievable by the parties involved. It should be stored in a manner that allows for easy retrieval and reference when needed.

Fifth: Auditability: The electronic editor should be capable of being audited or examined for evidence purposes. This means that there should be a reliable audit trail or record of the creation, transmission, and storage of the electronic editor.

By meeting these conditions, the electronic editor can obtain the necessary legal validity and serve as a reliable medium for conducting electronic transactions.¹

The second Part: Electronic Signature

To confer legal validity and enforceability, an electronic contract must be signed, just as a traditional contract is signed through signatures, fingerprints, or seals. In the case of electronic contracts, they are signed using electronic signatures. **What is meant by an electronic signature?**

Branch One: Definition of Electronic Signature

Firstly: Definition of Electronic Signature:

The electronic signature has been defined in various ways depending on the perspective. It has been defined based on the messages it carries, the function it performs, or the practical applications it serves. It is considered the secret code or symbol entered into a computer system through input messages to execute specific transactions according to agreed-upon procedures between the parties involved and within the boundaries agreed upon by the legal entities.

Alternatively, it is seen as a set of technical procedures that identify the person initiating these actions and accept the content of the transaction associated with the signature. In 1996, the United Nations Commission on International Trade Law defined it as "a set of numbers representing a signature on a specific message. This signature is verified through computational procedures associated with a digital key specific to the sender, and by pressing these numbers unique to the network user, the electronic signature is created." Article 2 of the Jordanian law defines it as "data represented by letters, numbers, symbols, signs, or other means electronically, digitally, optically, or any similar medium, forming informational messages or attached to them, or associated with them, with a characteristic allowing identification of the person who signed it, distinguishing it from others, for the purpose of approving

¹ Mohammad Fawaz Al-Mutalaa, previously cited reference, p. 173.



its content." Meanwhile, the UAE legislator defines it as "a signature consisting of letters, numbers, symbols, sound, or an electronic form processing system, attached or logically associated with an electronic message, endorsed with the intention of authenticating or endorsing the message¹".

Secondly: Forms of Electronic Signature:

Just as traditional signatures can be executed through handwriting, stamps, or fingerprints, electronic signatures also come in various forms. They can be made with an electronic pen, electronic fingerprint, or digitally. These forms vary in terms of reliability, assurance, and the level of security provided, depending on the procedures for issuance, security measures, and technologies used. Let's examine each form:

1-Electronic Pen Signature: This type of signature involves transferring the handwritten signature using a scanner and storing it in a computer. The image of the signature is then transferred to the document where the signature is required to provide necessary authenticity. This method offers flexibility and ease of use as it simplifies the conversion of traditional signatures into electronic form through information processing systems. However, using this type of signature can lead to several issues. One major concern is proving the connection between the electronic signature and the electronic document. The recipient can retain a copy of the signature image received electronically and later claim that the person who provided the image is the actual signer. This method lacks the necessary security measures required for electronic signatures, making it vulnerable to manipulation and fraud.

2- Electronic Fingerprint: An electronic fingerprint is a digital representation derived from mathematical algorithms. These algorithms apply mathematical calculations to a message to generate a fingerprint that represents the entire file or message, known as the hash value or digital fingerprint of the message. The electronic fingerprint consists of data with a fixed length. This fingerprint can distinguish the original message and accurately identify it, differentiating it from any forged message. If any changes are made to the message, the fingerprint will change entirely, making it impossible to derive the same electronic fingerprint from two different messages.

Electronic fingerprints come in several types. They can be fingerprints based on sound, fingerprints based on fingerprints, or fingerprints based on iris patterns. Each type offers unique characteristics and applications in electronic signature verification and authentication.

¹ Hassan Abdul Basit Al-Jamii, "Proof of Legal Transactions Conducted via the Internet," Dar Al-Nahda Al-Arabia, Cairo, 2000, p. 36.



3-Digital Signature: A digital signature is produced using encryption techniques. It is a numerical value designed for a data message in a way that makes it possible, using a known mathematical procedure associated with the encryption key of the message creator, to determine that this numerical value was obtained using that key. This form of electronic signature is used to precisely and uniquely identify the parties to the contract. It ensures that neither party nor any other person can tamper with the content, form, or substance of the electronic document associated with it. Digital signatures provide a high level of security and integrity to electronic transactions, making them a reliable method for ensuring authenticity and non-repudiation in digital communications¹.

Second Branch: The Validity of Electronic Signatures in Evidence

If manual signature was once considered the best method for signing, it is no longer suitable for modern digital transactions. The emergence of electronic signatures has provided an alternative, especially in transactions where physical signatures are not feasible. Legal scholars have made significant efforts to expand the concept of signatures to include electronic ones. Signatures, as not defined by laws, serve as a means to express one's will, hence not necessarily in handwritten form. If signatures are considered evidence through writing, legal validity of electronic signatures requires meeting certain criteria similar to those required for written evidence, in addition to conditions specific to the electronic signature itself.

The legal validity of an electronic signature must fulfill conditions of documentation to authenticate its source, ensure its integrity, and attribute it to the signatory. Technological advancements have enabled electronic documents to meet the necessary requirements for legal evidence, including readability, continuity, immutability, and non-repudiation. Legislations worldwide emphasize certain conditions to enhance the credibility of electronic signatures, focusing on its exclusivity to the signer, its practical control by the signer, and its verifiability in relation to associated data.²

Overall, legislations mandate specific conditions to bolster the credibility of electronic signatures, ensuring they are exclusive to the signatory, under the signatory's effective control, and verifiable in connection with associated data³.

¹ Mohammad Fawaz Al-Mutalaa, previously cited reference, p. 173.

² Ibrahim Al-Desouki Abu Lail, "Electronic Contracting (A Comparative Study)," Dar Al-Fikr Al-Arabi, Amman, 2005, p. 57.

³ Bashar Mahmoud Dudin, "The Legal Framework of Contracts Concluded via the Internet," Dar Al-Fikr Al-Arabi, Amman, 2006, p. 250.



Conclusion:

Through our exploration of the concept of electronic contracts, it becomes evident that electronic contracts, like traditional ones, maintain their specificity despite being conducted remotely this is achieved through the utilization of electronic intermediaries such as the internet, where positive affirmation and acceptance can be expressed via email or online chat between contract parties. The predominant nature of electronic contracts involves their execution without the physical presence of both parties in a single location, unlike conventional contracts. Electronic contracting can occur between parties who are absent either temporally or spatially.

We have also delved into the matter of proving electronic contracts, which includes writing electronic contracts, electronic records, defining them, the necessary conditions for their validity, and their legal validity.

From our discussion, we have arrived at several key conclusions:

1. Clarification of the legal nature of electronic contracts, unambiguously establishing them as contracts executed remotely, predominantly characterized by consumer and commercial transactions.
2. Expression of intent is not limited to writing but can also include indication, verbal expression, or direct verbal communication.
3. There exists a specific definition for electronic acceptance and acknowledgment in legislation concerning electronic transactions, although jurisprudence has contributed to defining them.
4. We have examined the definition of electronic signatures and concluded that legislation governing electronic transactions, whether through electronic commerce laws or specific electronic signature laws, addresses their definition by stipulating the necessary conditions for their validity.
5. The validity of a signature depends on the level of security provided by the communication technology employed by the contracting parties.

Based on the foregoing, we recommend the following:

1. Revisiting the definition of electronic writing and electronic signatures and clearly delineating the necessary conditions for each, granting electronic writing and electronic signatures legal validity in various judicial contexts.
2. Specifying the conditions for electronic signatures that must be met for reliance in legal proof.



By addressing these recommendations, legal frameworks can adapt more effectively to the realities of electronic commerce and provide clearer guidelines for electronic contracting and signature authentication.

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