

## Legal framework for electronic signature

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### Abstract:

Our study of the legal framework of electronic signature aims to show the great importance and impact it has on transactions between persons, especially the conclusion of legal actions via the Internet, as well as its contribution to proving their identity and providing a reliable way to ensure their electronic documents, as it is a mechanism that secures all economic and commercial transactions between economic operators as well as citizens and one of the guarantees that provide the elements of trust and credit for them.

In addition, we have shown the effectiveness of electronic signature, especially after the Algerian legislator issued Law No. 15/04, in which he specified the general rules for electronic signature and certification, as it contributed to improving security, efficiency and many advantages, we will try to address them in this article in some detail.

At the end of our article, we will try to come up with a conclusion in which we show what we concluded from our study to culminate in some results with some suggestions and recommendations.

**Keywords:** Electronic signature, Electronic writing, Electronic proof, Legal protection, Legal authenticity

### Introduction

In the midst of the modern development in the field of electronic communications and the accompanying radical changes in the ways in which electronic transactions have become carried out, e-commerce has become an important role in contributing to facilitating, simplifying and securing commercial operations and ensuring their legal argument in a way that is not comparable to the traditional signature, as it depends on the elements of trust and credit in dealing on the one hand, and the speed of completion on the other hand, so we hear parallel terms such as paperless management, e-government, electronic documentation, electronic encryption, fingerprint Electronic and electronic signature.

International efforts have been concerted to develop legal rules regulating this type of transaction so that other States can guide them when they develop their legislation.

The electronic signature is one of the most important modern means used in concluding electronic contracts and a mechanism of proof because of its need to identify the parties dealing, and verify its validity and authority in proof as it is easy to forge until the data signed by the signatory is certified by the competent authorities to issue a certificate acknowledging its conformity and validity, and in this regard the subject of our study was "The Legal Framework for Electronic Signature" as an attempt to study some of the basic elements related to it, by clarifying the rules governing it. Then clarifying its most important elements, which are trust between dealers in e-commerce in general and electronic signature on electronic documents in particular, as well as the parties' expression

of their will to abide by what they agreed upon in order to identify them and thus remove the danger that results from the failure to meet in the contract council, and thus reassure their dealings on the basis of trust and safety.

**Objective of the research:**

Our study aims to clarify the legal foundations of electronic signature organized by comparative legislation in general and the Algerian legislator in particular after issuing Law No.: 15/04, dated on: 11 Rabi II 1436, corresponding to: 01/02/2015, specifying the general rules related to electronic signature and certification, Official Gazette No. 06, issued on: 10/02/2015, through which he tried to find keys and solutions to the legal problems raised by transactions through electronic media.

**The importance of research :**

The importance of the subject of our study includes the following:

- 1- Scientific importance, as the library gives a new addition, which necessitated us to research it within an analytical study of the texts of Algerian law and comparative law.
- 2- The practical importance, as the electronic signature is a modern encryption mechanism that allowed the creation of a secure digital identity, which has gained conclusive authority in proof, whether between contractors or third parties, as it can prove the obligation, as it contributes to preserving the rights of the parties and the stability of their legal positions as the pillar of judicial work.

**Research Objectives:**

Our study aims to analyze the basic elements of electronic signature in comparative law and Algerian law, through the following points:

- 1- Clarifying the rules and texts regulating electronic signature.
- 2- Clarify the role of these rules in speeding up transactions and gaining time and money in a short time.
- 3- Clarify the legal procedures stipulated in Law n° 15/04 and other laws and compare them with each other.

**The problem of research:**

Due to the great attention paid to the subject of electronic signature, and due to its conclusive authority in proof, it has been imposed to use it to conduct its transactions in the best way and promote a developed digital economy, which made us wonder what is the legal framework for electronic signature? What is the extent of its authenticity in proof.?

**Research methodology :**

We used the descriptive approach to show the basic concepts of electronic signature, its advantages, similarities and differences with the traditional signature, in addition to the analytical approach to analyze the legal texts related to it, in addition to the comparative approach, which is the most appropriate to address the subject and delve into it more in order to compare what was brought by the Algerian and comparative legislation, and to enrich our research, we decided to strengthen it with some jurisprudential opinions and jurisprudence.

## Research Plan:

We will try to answer the problem posed through the following plan: **The first topic: the basic concepts of electronic signature**

**The first requirement:** the definition of electronic signature and its conditions

**The second requirement:** the functions of the electronic signature and its image

**The third requirement:** the difference between an electronic signature and a manual signature

## **The second topic: the legal value of the electronic signature**

**The first requirement:** electronic signature applications in proof

**The second requirement:** transactions that accept electronic signature and their exceptions

**Requirement Third:** The position of legislation on the reliance of electronic signature

## **The first topic: the basic concepts of electronic signature**

With the increase in the volume of electronic transactions, it opened wide horizons for people to become easy to communicate between them through the Internet, and this development has touched all areas of life, especially the field of business, which needs confidence in dealing and speed in completion to provide opportunities and prospects for individuals; etc., which led to the creation of means that are in line with the electronic environment, the most important of which is the electronic signature.

It is the second element of the written evidence required by law for the paper, whether official or customary, at a time when writing on the paper document was the best and most common means of proving legal actions, electronic writing also has the same legal value according to what was stated in various legislations<sup>1</sup>.

This importance was not the result of non-existence, but rather the result of changing the practical reality in the ways and means of dealing, after using the traditional signature with its traditional content, it does not guarantee the place it deserves as long as there are electronic props that have invaded the world such as social media, such as faxes, telex, e-mail... Therefore, the efforts of legislation have intensified to search for an alternative to the traditional signature that can perform the same function on the one hand, and adapt to modern means on the other hand, so the electronic signature arose as a result of the tremendous and rapid technological development and major deals were concluded

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<sup>1</sup> Abdel Fattah Bayoumi Hegazy, *Electronic Signature in Comparative Legal Systems*, Dar Al-Fikr Al-Jamia, Alexandria, without year of publication, p. 15.

using the Internet. Accordingly, the widespread use of these modern technologies in the conclusion of electronic contracts has released many types of this type of signatures and legislation has given it the evidentiary and legal force to be legally reliable and become modern evidence.

However, despite the widespread use of this technology, the use of traditional signature has become an obstacle to economic development and to the resolution of legal problems related to electronic transactions.

Based on the aforementioned and the laws that regulated the modern concepts of electronic signature, we will try to divide this section into three demands; the first deals with the definition of electronic signature and its conditions, the second will address its functions and forms, and the third will differentiate between electronic signature and traditional signature.

### **The first requirement: the definition of electronic signature and its conditions**

In view of the importance of electronic signature, most of the legislation has singled it out with special rules as a modern means and has kept pace with technological development, due to the spread of electronic processing systems on transactions between departments and institutions as legal persons and between individuals as natural persons, so we will define the electronic signature according to what is stated in these texts, then indicate the necessary conditions on which it is based and it is valid and not forged or made any illegal change or modification, and then we show its functions.

#### **Subchapter I: Definition of Electronic Signature**

We will deal with the definition of electronic signature in language (first), then its legal definition (second), then jurisprudence (third)

First: Signature Language Signature in the language is to append something to it after completing it, it carries in its lines the purposes of the need and deletes curiosity, and the signature is what is signed in the book as it expresses the opinion of its owner<sup>1</sup>.

Second: Signing legally

The French legislator<sup>2</sup> has set the general provisions for electronic signature that show the identity of the signatory and guarantee his relationship with the incident attributed to him until proven otherwise.

As for the Egyptian legislator, it considered letters, numbers, symbols or signs, which have a unique character that allows identifying the person of the signature holder and distinguishing him from others<sup>3</sup>.

As for the Tunisian legislator, he dealt with the definition of electronic signature<sup>4</sup>, and therefore this law is consistent with the French Electronic Commerce Law. While the Algerian legislator is satisfied with relying on the electronic signature, provided that the identity of the person who issued it can be ascertained and that it is prepared and preserved in conditions that guarantee its safety<sup>5</sup>.

With the promulgation of Law N° 15/04 specifying the general rules for electronic signature and certification, it defined it in its second article as : "data in electronic form, attached to or logically linked to other electronic data, used as a means of authentication",

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<sup>1</sup> Zubairi bin Qwaider, Modern Evidence in Civil Matters, DNA Fingerprinting and Electronic Signature, A Comparative Study, Dar Al-Nahda Al-Arabiya, 2019, p. 84.

<sup>2</sup> Law No. 230 of 13/03/2000 on the general provisions of electronic signature.

<sup>3</sup> Article 1 of Law No. 15 on Egyptian Electronic Signature of 2004.

<sup>4</sup> Article 453 of Law No. 75 of 2000 on the Tunisian Civil Code.

<sup>5</sup> Article 327 of Ordinance No. 75-58 of 26/09/1975 on the Civil Code (Official Gazette No. 78 of 30/09/1975).

while the signatory stipulates that: "Any natural person who possesses the data of creating the electronic signature and acts for his own account or for the account of the natural or legal person he represents."

### **Second: Signature jurisprudence**

Despite the interest of writers and legislation to give a comprehensive definition of electronic signature, some jurists see it as a short unit of data that carries a mathematical relationship with the data in the content of the document, to emphasize others that it is data in electronic form that is connected or legally linked to other data and used as a means of authentication<sup>1</sup>.

We conclude from the above legislative and jurisprudential definitions mentioned above that they agreed that the electronic signature has a privacy that enables the identification of the personality of the signatory and distinguishes it from others, which is confirmed by the symbols, numbers or anything else that proves the identity of its owner.

#### **Subchapter II: Conditions of Electronic Signature**

According to what was stated in the previous definitions of the electronic signature, we can conclude the conditions that must be met in order to be a means of proof as follows:

#### **A- The signature must be associated with the person of the signatory :**

alone in order to distinguish the electronic signature from others in a way that cuts doubt, brings certainty closer and reveals any change to the data, it must be associated with the person of the signatory alone;

#### **B- That the site alone controls the electronic medium :**

An electronic medium means a program or electronic system of a computer that can respond to an act independently wholly or partially without the supervision of any natural person at the time of the act or response to it<sup>2</sup>.

The electronic broker has a role in creating an electronic signature to regulate the relations of the parties and verify their legal capacity, so it is considered a neutral third party for the parties to the contract, and it may take two forms, the first in which it plays a vital role by verifying the identity of the contracting parties, and ensures the confidentiality and validity of the information exchanged between them and retains evidence, while the second is based on granting the quality mark to the sites to give transparency and credibility<sup>3</sup>.

#### **C- The electronic signature is linked to the electronic document**

An electronic signature is closely related to an electronic document through the information and data it contains in a form that allows the discovery of any change or modification that occurs to it. The Algerian legislator, for his part, had the same reference with regard to the conditions of electronic signature by having the following requirements<sup>4</sup>.

- 1- To be linked to the site only. That enables the identification of the site.
- 2- It must be designed by a secure mechanism for creating an electronic signature.
- 3- Be created by means under the exclusive control of the site.
- 4- Be linked to its own data, so that subsequent changes to it can be detected.

#### **The second requirement: the functions and images of the electronic signature**

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<sup>1</sup> Ayed Rashid Ayed Al-Marri, *The Authenticity of Modern Technological Means in Proof of Commercial Contracts*, PhD Thesis, Cairo University, 1998, p. 91.

<sup>2</sup> Nadia Yas Al-Bayani, *Electronic Signature via the Internet and its Authenticity in Proof, A Comparative Study of Islamic Jurisprudence*, Dar Al-Bedaya Publishers and Distributors, First Edition, Amman, 2014, p. 191.

<sup>3</sup> Ibrahim Sayed Ahmed, *Electronic Commerce Law, Electronic Signature and Intellectual and Literary Property Law*, University House, Alexandria, 2008, p. 445.

<sup>4</sup> Article 07 of Law 15/04 laying down the general rules for electronic signature and certification.

Of the electronic signature and functions that give it importance that make it conclusive authority in evidence (first branch), which increases the importance of its various forms with the diversity of electronic commercial transactions.

### **Subchapter I: Electronic Signature Functions According**

To the definition of electronic signature, it became clear to us that it has three functions:

- a- Identifying the signatory and distinguishing it from the rest of the signatures.
- b- Indicating the will of the signatory that clarifies his satisfaction with what was stated in the editor.
- c- An electronic signature shall be the conclusive evidence of the presence of its holder.

As a result, the functions of the electronic signature are closely related to its conditions; they support the trust and security of the parties, in addition to the fact that its essential function is to secure the document against any forgery that affects it<sup>1</sup>.

### **Subchapter II: Images of Electronic Signature**

The electronic signature is done with the help of electronic media, foremost of which is the computer and the Internet, where it takes several different images, the most important of which are:

#### **A- Digital signature:**

The digital signature is the secret code of the person signing, as it is used with a program that connects to the computer, creating a digital function for an electronic message that is encrypted, so it turns from readable text to incomprehensible symbols; that is, it is based on digital encryption methods that rely on algorithms and mathematical calculation equations, so a specific key is used to encrypt the electronic message and then its receiver decrypts it with another key to obtain its data, and when it appears correctly, the signature is valid.

#### **B- Signature with electronic pen:**

This type of signature distinguishes the person signing the use of the electronic pen Pen-OP until he signs on the computer screen, so his signature is captured to verify its validity and compare it with the original signature, so it turns from a manual signature to an electronic signature using a scanner, and this program depends on measuring the signature in terms of size, shape, points, lines ... Etcetera. However, this type, despite its ease, is not widely used because it does not provide confidence as it is easy to use<sup>2</sup>.

#### **C- Biometric signature:**

This type of signature is based on subjective foundations, i.e. natural, physical and behavioral properties such as fingerprint by finger, eye retina, tone of voice, DNA, human hand, personal signature and others that cannot be forgotten; However, this signature is rarely used and can be forged such as the wearing of contact lenses, the placement of the signature on the disk of the computer, or the similarity of the shapes of the faces of twins..... Etcetera.

### **The third requirement : the difference between an electronic signature and a manual signature**

Based on the definitions that we have provided for the electronic signature and the conditions that must be met in order for it to be reliable and to perform its functions, and then the forms in which it is done through electronic media, we can compare it with the manual signature and we found that both are means of proving legal conduct, but they differ in some aspects;

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<sup>1</sup> Faisal Saeed Al-Gharib, Electronic Signature and its Authenticity in Proof, Arab Administrative Development Organization, Cairo, 2005, p. 223.

<sup>2</sup> Mounir Mohamed Al-Janbihi, Mamdouh Muhammad Al-Janbihi, Forgery of Electronic Signature, Dar Al-Fikr Al-Jamia, Alexandria, 2006, p. 45.

sometimes they differ in terms of the form of signature and the medium (branch I), and sometimes they differ in terms of restriction with security guarantees and signature functions (branch II).

### **Subchapter I: The difference of electronic and manual signatures in terms of their forms and the medium**

Comparative legislation took the form of the traditional signature either by signature, seal or fingerprint, but the electronic signature was allowed by some other legislations to be in several different forms, provided that the owner of the signature is distinguished and identified.

Therefore, the difference between these two types of signature is related to the freedom of the person to choose his traditional signature and its format, so he may rely on any formula that allows its use without the need for a license from others or registration, but the electronic signature requires modern technical procedures that allow him to identify the identity of the signatory to ensure the safety of the electronic document from any breach that affects him.

In addition, the manual signature is done by paper supports sourced from the physical medium such as paper, while the electronic signature is done by electronic supports sourced from the electronic medium, computers and the Internet in a partial or complete manner, which facilitated the work of electronic transactions by concluding electronic contracts in which documents are transferred via electronic media such as CDs, e-mail, flash ... Etcetera.

### **Subchapter II: Difference in electronic and manual signature in terms of restriction of security guarantees and signature functions**

We can distinguish between an electronic and manual signature, where restrictions are imposed on the person who signed manually, depending on the seal, fingerprint or any permitted means, while in an electronic signature, restrictions are imposed on the person signing by a reliable means to ensure any change or modification.

The manual signature identifies the signatory party and distinguishes it from the rest of the persons and thus determines its eligibility, while the electronic signature adheres to the content of the electronic document and secures it against any forgery or subsequent modification of the new signature.

Through the above, we note that despite the link between the two signatures and their security, they do not differ from each other in their composition, elements or conditions, but the difference between them remains in the environment and the media from which they originate, if the electronic signature is radically different from the traditional signature in terms of form, but their functions are the same, and the electronic signature has powers that certify it with an electronic certification certificate recognized inside and outside the country.

### **The second topic: the legal value of the electronic signature**

Contracts concluded via the Internet result in the issuance of electronic documents documented by an electronic signature whose function is to secure these digitally embodied documents with its content through the degree of progress in the technology of their exchange, which shows the existence of an alternative commensurate with the electronic environment to acquire these documents evidentiary power, taking into account the rules of international commercial custom related to electronic commerce, and for this document to acquire the legal force of proof; Editor<sup>1</sup>.

Accordingly, in order to show the legal value of the electronic signature, we will address the applications of electronic signature in evidence in the first requirement, then the transactions that accept dealing with electronic signature and their exceptions in the second requirement, and then the position of legislation on its reliance in the third requirement.

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<sup>1</sup> Tamin Souhaila, Formality in Electronic Commerce Contracts, Master's Thesis in Law, International Business Law, Mouloud Mammeri University, Tizi Ouzou, 2011, p. 78.

The first requirement: electronic signature applications One of the most important results of e-commerce is the websites of banks where they provide banking services to their customers, represented in a set of modern mechanisms and means that the customer can use to pay for the service provided to him, such as electronic money and credit cards.

Accordingly, we will discuss in detail these applications by studying the electronic check and electronic money (first branch), then credit card, debit card and loyalty card (second branch).

**Subchapter I: Electronic Cheque and Electronic Money** An electronic cheque takes the face of a tripartite drafter, which includes an order issued by a person called the drawer to the bank and called the drawee; he undertakes to pay a sum of money to a third person called the beneficiary, on a specific date and is written and appended with a protected electronic signature to acquire the definitive legal force of proof<sup>1</sup>.

The first appearance of ordinary money was at the initiative of the dutch company cash digi, one of its most important founders chaum david, where he proposed the development of a system of electronic money in the form of numbers containing an amount that the drawer signs, and the bearer has its financial value without knowing his person.

Paper checks are converted into digital checks by relying on the idea of an electronic medium until the electronic payment process is completed; the data contained in the paper check is also the same as in the electronic check, but it differs in the use of the means by which it is written<sup>2</sup>.

While electronic money takes another face contrary to the electronic check, it is an alternative to regular money, as it represents a financial deposit for it and is described as a means of payment for financial companies, so it was given the value stored on an electronic medium.

Among the international companies that issue this money is Mondex Company, Digi Cash and Cyber Cash, where its money is represented in credit cards that the customer uses in the purchase process and payment of the amount using the Internet, of course.

**Subchapter II: Credit Card, Debit Card and Loyalty Card**

We will touch on the credit card (first), then the debit card (second), then the loyalty card (third).

### **First: Credit Card**

Credit card is defined as :

« La carte en plastique de format standardisé sur laquelle figurent principalement le nom et le symbole commerciale de l'émetteur et les noms, prénoms adresse et signature de son titulaire. La carte de crédit est d'abord un instrument d'identification de celui-ci instrument principalement destiné s'intégrer dans un mécanisme assurant un paiement. »<sup>3</sup>

The credit card contributes to the payment process in the future, as the term plastic money was called as one of the oldest electronic signature applications, limited to dealing with the gas station or buying from the store, but with the tremendous technological development, major institutions initiated its widespread publication, such as the Citizens Club Foundation, as the first to issue a credit card aimed at harnessing the requirements of travel and tourism without carrying money, and in 1951 Franklin National Bank issued its own credit card In addition to many companies that have initiated it. Its use in shops as a

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<sup>1</sup> Rachida Boubacar, Electronic Signature in Algerian Legislation (A Comparative Study), Journal of the Research Professor for Legal and Political Studies, Vol. 01, No. 02, dated 01/12/2016, p. 75.

<sup>2</sup> Zahra Naji, The Algerian Legislative Experience in Regulating Civil and Commercial Electronic Transactions, Intervention of the First Maghreb Scientific Conference on Informatics and Law, held from 28 to 29 October 2009, Academy of Graduate Studies, Tripoli, p. 16.

<sup>3</sup> Ben Amour Amina, Electronic Cards for Payment, Loan and Debit, Master's Thesis in Private Law, Business Law, University of Constantine Monturi, Faculty of Law, 2005, p. 12.

magnet for customers contributed to its development to spread quickly in order to facilitate trade and obtain profits in a short time<sup>1</sup>.

### **Second: Debit card**

The debit card is used to withdraw cash by ATM, where the card is passed through a special slot in this device, so the person who draws is asked to specify the amount to be withdrawn and then enter the card password, then press the keys of the device until the information is verified, and the withdrawal process takes place provided that there is sufficient balance with the bank as well as the customer, and then the card is returned to its owner, but this card is not measured due to lack of facilities Credit to the drawer (customer).

### **Second : Loyalty Card**

The fulfillment card is called the deferred payment card or the monthly payment card, and it is a card through which the customer can pay for the services obtained from the shops that he dealt with under an agreement between them, where the card issuer undertakes to finance the price of the service from the card holder's account to the seller's account .

The loyalty card differs from the credit card in that the latter provides its owner with credit even though the customer does not have a balance in the bank.

### **Third Requirement : Electronic Transactions Accepted in Evidence and Excluded**

Some legislations have given the authority to use transactions and adopted them to deal with electronic signatures (Section I), while others of the legislation have excluded special transactions and removed them from the framework of dealing with electronic signature (Section II).

#### **Subchapter I: Electronic Transactions Accepted in Evidence**

Some Arab legislations have adopted the idea of accepting electronic transactions in evidence, including the Egyptian law<sup>2</sup>, Bahrain<sup>3</sup>, and limiting them to electronic records and signatures.

As for the Jordanian law, it was more extensive than its Egyptian and Bahraini predecessors, mentioning these transactions for example, but not limited to, and expanding their scope so that its provisions now apply to electronic transactions, records, signatures, any electronic message, and electronic transactions adopted by any government department or local or partial official institution<sup>4</sup>.

Some other legal systems have adopted the application of this law to any data used for commercial purposes only<sup>5</sup>.

As for the Algerian legislator, he did not specify the scope of electronic dealing, which brought us back to the rule of *pacta sunt servanda* and did not oblige people to resort to electronic means in the implementation of their transactions, but left it to their choice because the origin is freedom of contract, and proof is based on the agreement of the parties, except for some actions that require special procedures such as the actions contained on the property, and therefore electronic transactions are acceptable provided that they meet the legal conditions.

#### **Subchapter II: Transactions that do not accept dealing with**

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<sup>1</sup> Abdel Hamid Tharwat, *Electronic Signature, What it is, its risks, how to confront them and the extent of its authenticity in proof*, New University House, Alexandria, 2007, p. 57.

<sup>2</sup> Article 14 of the Egyptian Law on Electronic Signature.

<sup>3</sup> The first paragraph of Article 02 of the Bahrain Electronic Commerce Law.

<sup>4</sup> Article 04 of Law No. 85 of 2001 on Jordanian Electronic Transactions.

<sup>5</sup> Article 01 of the UNCITRAL Model Law on Electronic Signatures, United Nations publications, General Assembly, United Nations Commission on International Trade Law, 33rd session, New York, date: 05/04/2000. As well as the third paragraph of Article 09, paragraph 3 of the Malaysian E-Commerce Act of 2006.

### **electronic signature**

Each rule has an exception, as we have seen transactions that accept dealing with electronic signature as a basic rule, we will see its exception represented in transactions that do not accept dealing with electronic signature because some actions require special formalities due to their specificity compared to other transactions, which are transactions related to personal status (first), title deeds of immovable property (second) and negotiable bonds (third) .

#### **First: Transactions related to personal status**

Transactions related to personal status are private compared to physical conditions, especially with the use of the Internet, people have become acquainted for the purpose of marriage remotely, so they must be subject to the rules of personal status of all legal systems, as the UAE legislator in article 27 says: "Marriage shall be officially documented and the marriage contract shall be documented by the authorized persons, and the Minister of Justice, Islamic Affairs and Endowments shall issue their own regulations".

We note that the UAE legislator prohibits marriage, divorce and wills transactions from dealing with them electronically due to their privacy because they require the presence of the parties in the first place, and they need a documentary document as well as the seriousness of their effects, especially the preservation of the rights of the spouses.

As for the Algerian legislator, it is obligatory for the marriage contract to be concluded before the notary or before a legally qualified official, taking into account the provisions of articles 09 and 09 bis of the Personal Status Code<sup>1</sup>.

#### **Second : Transactions related to real estate or real estate rights**

Real estate money is immovable property *les immeubles* and is defined as physical objects that have a fixed location such as land<sup>2</sup>, mines, buildings and plants inherent in the ground as long as they are attached to it.

#### **Third : Negotiable bonds Negotiable**

bonds are considered one of the transactions that are prohibited to deal with electronically, including shares, as they enjoy privacy due to their nature, so their trading requires the use of traditional methods.

### **The third requirement : the position of legislation on the legal value of electronic signature**

We will address the position of legislation on the legal value of electronic signature, including Arab legislation (Section I), comparative legislation (Section II).

#### **Section I : The position of comparative legislation on the legal value of electronic signature**

Some comparative legislations have tended to present their position on the legal value of electronic signatures, including the Model UNCITRAL (first), the European Union (second), and French legislation (third).

#### **First : UNCITRAL's typical position**

Article 07 of the UNCITRAL Model Law provides that: "The law requires the signature of a person, which satisfies that requirement for a data message, if a method is used to identify that person and to demonstrate his or her consent to the information contained in the data message, and that method is reliable to the extent appropriate for the purpose for which the data message was created or communicated."

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<sup>1</sup> Articles 18 and 19 of Law No. 84-11 of June 9, 1984, containing the Algerian Family Code, amended and supplemented by Ordinance No. 05-02 of 27/02/2005, September 2011.

<sup>2</sup> Bassam Atef Al-Muhtar, *Convergent Terms in Civil Law, Explanation and Comparison*, Beirut, 2006, p. 42

**Through the said text, we note that UNCITRAL has made a great effort to recognize an electronic signature, requiring the signature of the person who made his statements to be verified and used to invoke them, especially when it comes to .electronic business transactions**

### **Second : The position of the European Union**

Article 02 of the European Directive on Electronic Signatures of 1999 stipulates : "The signature must be linked to the signatory alone, the identity of the signatory shall be allowed, it shall be linked to the data, and it shall have been found in such a way that the signatory can keep it under his control."

It is noticeable from the text that the European Union requires the legal conditions required in an electronic signature in order for it to be legally valid and acquire conclusive authority in proof.

In 2001, he issued a directive on electronic signature, which differentiated between simple and advanced electronic signatures, with the aim of providing security and giving them importance for the recognition of their authority judicially by imposing the following conditions :

- The existence of a strong link between the signature and the signatory, leading to the identification of the identity of the signatory.
- Creating a signer signature by means that is controlled causes the recipient of the message to discover any modification to it.

### **Third : The position of the French legislation**

In 1989, the French legislator recognized credit cards as a basic application of electronic signature, through the CREDCAS case, where it recognized that the use of a card with a memory card from the holder with the use of a secret code number is equivalent to an electronic signature<sup>1</sup>.

In 2000, Law No. 230 of 13/03/2000 was promulgated, the electronic signature witnessed a remarkable development, as the French legislator sought to establish parity between writing and electronic and traditional signatures, and set conditions for this equality, stating in the first paragraph of Article 1316: "Writing in electronic form shall be considered as evidence, as is writing on a paper support, provided that it is necessarily possible to identify the person from whom it was issued, and that it is prepared and kept in circumstances of a nature Guarantee its safety." The third paragraph states: "Writing on an electronic support shall have the same strength of proof as writing on paper, the second principle is the functional equality between the electronic editor and signature and between the editor and the traditional signature".

Accordingly, the French legislator has stipulated the existence of symbols, numbers or signs that allow their identification, thus giving the electronic signature the definitive authority in proof that can only be challenged by forgery<sup>2</sup>.

### **Section II: The position of Arab legislation on the legal value of electronic signature**

Most of the Arab legislation belongs to the regions of the Arab Gulf States and has adopted the UNCITRAL Model Law on Electronic Commerce, most of which belong to the regions of the Arab Gulf States, where they are classified into three groups:

- The first group includes the following countries: UAE, Kuwait and Bahrain, and has been classified among the countries of rapid development.

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<sup>1</sup> ABBAS YOUSSEF JABBAR, les contrats consulés par voie électroniques, étude compare, université Montpellier, école doctorat. 2012, p 150.

<sup>2</sup> P.TRUDEL, G.LEFERVBRE et S.PARISIEN, la prévue et la signature dans l'échange de documents informatisés au Québec, les publications du Québec, 1993, p 80.

- The second group includes the following countries: Egypt, Jordan, Lebanon and Saudi Arabia, and it was classified among the emerging countries.
- Group C: Morocco, Oman and Syria has been classified among the developing countries.

We will try to address the position of Egyptian legislation on the legal value of electronic signature (first), then Tunisian legislation (second) and Algerian legislation (third).

#### **First: The position of the Egyptian legislation**

Article 18 of Law No. 15 of 2004 on electronic signature stipulates that: "The electronic signature, electronic writing and electronic documents shall enjoy authority in proof if the following conditions are met: the signature's link to the signatory, the control of the signatory alone, and the possibility of detecting any modification or alteration of the electronic document or electronic signature data."

Based on the aforementioned text, we note that the Egyptian legislator has not overlooked the availability of the legal conditions for electronic signature, and therefore Egypt is one of the countries that have singled it out with a special independent law and used it to acquire conclusive authority in proof.

#### **Second: The position of Tunisian legislation**

The Tunisian legislator mentioned the general provisions for the protection of electronic signatures and their authenticity in Part I, while Chapter Two dealt with the authenticity of the electronic document and signature from chapters IV to Chapter VII.

The electronic contract and signature shall be granted the same authority provided that it is completed, and the technical system shall be controlled by a decision of the Minister in charge of telecommunications, where this law has set the general rules governing exchanges and electronic commerce, and shall be subject to the legislation and arrangement in force, and electronic contracts shall be subject to the system of written contracts in terms of expression of will and its legal effect, validity and enforceability in a manner that does not conflict with the provisions of this law.<sup>1</sup>

Third : The position of Algerian legislation Article 08 of Law No. 15/04 setting out the general rules for electronic signature and certification stipulates that : "The electronic signature described alone shall be considered identical to a written signature, whether the person is natural or juridical."

Article 09 of the same law also stipulates that: "Notwithstanding the provisions of Article 08 above, an electronic signature cannot be stripped of its legal effectiveness or rejected as evidence before the judiciary because: its electronic form, or it relies on a described electronic certification certificate, or it was not created by a secure mechanism for creating an electronic signature ".

Based on the two aforementioned texts, we note that the Algerian legislator did not neglect to deal with the electronic signature and give it legal authority in proof, despite its delay in organizing its own rules compared to the other, as it equated it with the written signature, and stressed that the electronic signature cannot be stripped of its legal effectiveness or rejected as evidence before the judiciary, because of its electronic form, or that it does not rely on a described electronic certification certificate, or that it was not created by a secure mechanism for creating the electronic signature<sup>2</sup>.

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<sup>1</sup> Tunisian Code of Electronic Commerce and Commerce, Tunisian Official Gazette No. 24 of August 9, 2000.

<sup>2</sup> Boualem Bouzidi, On Electronic Signature, Al-Badr Magazine, Volume 04, Issue 05, Date: 15/05/2012, p. 109.

Accordingly, most legislations agree on the idea of equality between traditional and electronic signatures, and the issue of proof coupled with the availability of the necessary conditions.

**Conclusion:**

What we can say is that the electronic signature is a modern guide that has developed due to scientific proposals in the technological field; we have tried to clarify the legal texts regulating it by highlighting the basic concepts of it, the purpose of its study and the method used for that.

Work to maintain electronic transactions by maintaining the confidentiality and validity of information to issue a certified certificate that gives a kind of confidence and security to persons contracting through the Internet.

We also indicated that the use of electronic documents using the electronic signature mechanism required international and national efforts, and in order to reach the achievement of sustainable development goals, because of their relationship to modern technology, Algerian legislation and legislator tended more than a decade ago to amend the rules of evidence in electronic form, and recently issued the law specifying the general rules for electronic signature and certification, to consolidate their general principles and activities in order to create an atmosphere of trust and safety among customers and circulate them.

What allowed the study of our topic, we have drawn its conclusions, and we decided to make some proposals as follows:

**First: Results**

- E-commerce includes the most important elements of trust between customers, speed of transactions and credit.
- Most legislations have taken electronic signature as evidence.
- An electronic signature does not differ from a traditional signature in its terms or conditions.
- The difference between an electronic and traditional signature lies in the environment from which they originate, and their form. The similarity between an electronic signature and a traditional signature lies in their interdependence and performance of the same functions.
- Electronic signature Sayer Customer need to buy time An electronic signature can establish trust and security through recognized authentication authorities.
- One of the most important forms of electronic signature is digital signature as it is more secure because of its reliance on encryption.
- Legislation equates the electronic signature with the traditional signature to acquire legal authority and binding force, provided that it is linked to the signatory and the availability of its conditions ensures its permanence and indication of the will of its owner, because electronic documents remain ineffective if they are signed by a manual signature.
- Working with electronic signature has become an imperative necessity, especially in light of dealing with electronic contracts.
- Due to the development of the use of modern technologies, some transactions have become outside the scope of dealing with electronic signature according to their advantages that distinguish them from other transactions and therefore require special procedures or their nature.
- One of the most important obstacles encountered in electronic transactions is the absolute insecurity of the electronic signature, and thus the lack of safety of electronic documents from forgery or illegal modification.

- Although Algeria has recently established legal rules for electronic signature in Law N° 15/04 setting out the rules governing electronic signature and certification, they remain insufficient and necessitate responding to the reasons for work.

**Second: Suggestions**

- Take the necessary measures to keep pace with modern developments and work in electronic transactions.
- Data protection, protection and auditing must be provided by seeking to create a mechanism to protect it by the electronic certification body, as well as protect it from disclosure or breach. Participate in conferences and courses that clarify electronic transactions, to identify the mechanisms for creating an electronic signature.
- Adding specialized standards in electronic signature in order to clarify more for students who are about to study private law, as well as increasing awareness and legal culture among dealing persons.
- Linking the field of dialogue and discussion between lawyers, judges, merchants and investigators... etc., to implement the electronic dealing system. Creating courts of jurisdiction to settle existing disputes in electronic transactions.
- The need to criminalize the forgery of the electronic signature and impose strict penalties for its close relationship with the electronic editor, which is not challenged except by forgery.
- Work on the development of an integrated system concerned with e-commerce in general, and the establishment of a body related to electronic signature by embodying the economic and governmental electronic certification authority.

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