



Electronic Signature in Iranian Law

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Abstract: Signed is an important part of the character and credibility of the legal, commercial and artistic entities and to validate the most important international documents it is necessary to make a greeting card. The most important provisions of the assignment document signed and reflect the acceptance of contents and the contents of the document by following it with the consent of the parties that have signed. So Common documents including Official or private, commercial or non-commercial, Contracts or unilateral obligation, and even a friendly letters, there is sign. One of these signatures is electronic signatures. Electronic signature means an electronic data that is attached to a data message and helps identify the signer and expressed his satisfaction about the contents and the contents of the message. Digital signature is a type of electronic signature that uses encryption technology used to generate the signature and the high level of security than other types of electronic signature is. In this study, electronic signatures and rules related to it. The study is an analysis of the content of documents and laws. Results showed that although the laws and regulations in this area, but the lack of necessary infrastructure, it would not happen.

Key Words: electronic signature, Identify, document, encryption technology

Introduction

One of the factors that causes to be credited contracts or other documents is the correct attributing it to the signer which has been done by stamp or sign and it's a valid reason for checking the correct attributing to signer. Also in electronic contracts, the documents and data and should signed by the signer to express their accuracy to him. However, for credit and correct attributing to electronic contracting documents, it's necessary to define an electronic sign and to replace the handwritten signatures. Probative value of contract documents which issued in an electronic form require to determinate the scientific aspects and necessary elements. In this essay has been tried by examining the concept and history of electronic sign, refer to some legal aspects of it in Iranian legal system.

The definition and history of electronic sign

“sign is writing name, last name (or both of them) or drawing a special mark which show the identity of mark owner, under the papers and normal documents or formal which include transaction or obligation or agreement or witness and like that or it should be registered on obligation papers or transaction (blank endorsement)”. Civil Code doesn't present any definition of signature. Article 1301 of Civil Code provides that: “the signature on a writing or document is a reason against the signer”. However, the important effect of signature is to undertake to all aspects of a document or contract which has been signed”. Generally, the writing attributed to people is attributable if it would be signed. Signature is a sign of confirmation notifications contained and acceptance obligations arising from it. Before that, the writing should take into account as a plan which is the subject of study and contrive and not taken a final decision about it. However, every document which is signed will credit and we can attribute it to a person and bound him up to its content. The first time, United States Bar Association, in 1992, about legal subjects of signature in electronic contracts began and prepared the draft and Digital Signature Guidelines which was about how to sign in electronic contracts and its infrastructures in 1995. In that year, it passed the first law about digital signature which was about creating certainty and credit the electronic contracts and technologies about

Cryptography and Authentication and Certification Authorities (CA) electronic signature. In 1996, it formulated UNCITRAL Model Law on Electronic commerce which was about electronic signature. In 1997, International chamber of commerce (ICC) ventured to issue the General Usage for International Digitally Ensured commerce. European Union in 1999, passed the Electronic Signatures Directive and finally, the workgroup of UNCITRAL about electronic commerce, passed the UNCITRAL Model Law on Electronic Signatures to be used as a standard criterion and lead for national legislations. Most of countries, between 1996-2001, with using the existing international rules and the proposed guidelines about electronic signature have legislated in this context. And now we can tell that electronic signature is accepted by all legal systems. In Iranian electronic commerce code (passed in 1382), the discussion about electronic signature and its conditions is taken into consideration which will be discussed in next sections.

1-3- definition of electronic signature

UNCITRAL Model Law on Electronic signature (passed in 2001), defines the electronic signature: “electronic signature is data in electronic form that attached to other data message or logically attached it and is as a device for identification of the signer of data message and verifying information in it”. Iranian electronic commerce code has a definition about electronic signature that says: “electronic signature is every kind of attached mark or logically attached to data messages which is used to identify the signer of data message”.

As it's clear from these definitions, electronic signature refers to any confirmation which has created electronically and may be a mark, password, word, number, a typed name, a digital image, a handwritten signature, or any electronic sign of identification which adopted by signer or his deputy and attached to a contract or any other document. In simple terms, electronic signature is a data which attached other data and specifies the relation between signer and attached data. Admittedly, electronic signature like handwritten signature has legal effects on signer authentication and his commitment to its content.

Kinds of electronic signature

In terms of legal significance of this subject and attributable documents signed by electronic signature, these signatures are divided into two groups. Simple electronic signature and advanced electronic signature. In this section, we will examine the kinds of electronic signatures and the importance of their legal role in each of them:

1-2-simple electronic signature

The main difference that exists in simple electronic and advanced signature, is public keys in the process of signs. In simple electronic signatures, there's no process as encryption. Electronic signature in its usual kind is a very simple way of entering texts or special shapes into the electronic devices. Each person can produce and use simple electronic signature without relying on third party presence and use it in electronic documents. Of course, in accordance with article 1287 of civil code in this subject, we can't tell certainly that these documents which produced in this way, are formal and valid documents.

To grant legal value to documents by signatures, it requires specific conditions that one of them is presence a third party to control them which acts as a notary public. In commercial documents that have specific importance and assigned the majority of courts cases, the existence of a simple electronic signature is not attributable. But anyway, technology is searching new ways to decrease the complexity and formality of advanced signatures and creates simple signatures with legality. Today, for this reason, the combination of methods is used. This means that signature or the method of creating signature is a combination with other technology. As these combined methods have their own special defects, they're not a trustworthy way in managing commercial documents.

2-2-Advance electronic signature and its conditions

In article 2 of UNCITRAL Model Law, an advanced electronic Signatures is a sign that:

- 1- To be unique to the signer.
- 2- To disclose the identification of the signer.
- 3- To be produced under the monopoly control of the signer.
- 4- To be attached to document that each changes in document data be disclosed.

The Iranian electronic commercial law in article 12, states the sure electronic signature with the above definitions. Regarding to Iranian law, it announced the documents under managing sure electronic signature are in order of official documents, so we can say that the legislator's opinion is with advanced signature. Of course, in both cases, we can't say that advanced signature is defined, but the legislator mentioned the conditions of advanced signature. Maybe we can say that it's because of changing technology.

To clarify the conditions of Iranian law, we will examine the triple concepts in explanation of sure electronic signature:

1-Signed exclusivity for the signer

In the first view, it seems that the purpose of this paragraph is the unity of the type of signed to a particular person, it means that there's no second party with that special signature. Though it's obvious, but it seems that this opinion is excluded by emphasizing this condition in the second paragraph for the identity of signer. So, we can say that the purpose of this paragraph is the exclusivity of signature for the signer. It means that no person can't use the signature only the signer who the signature is for him. However, this condition doesn't prevent the signer to give his signing key to his lawyer or legal representative and they will sign to represent him because in commercial world, people sign commercial documents by themselves or their representatives and we can't say that it is characteristic that in cyberspace can't be used.

2-Exclusive production and key signatures

Responsibilities in this paragraph refer to the reference production of key signature and the owner of the signature. It means that producer of key signature must not produce the same key in any situations.

On the other hand, the device of producing signature should be maintainable and frequent usable. Today, this device is reachable by people as a private key. It's enough that the private key be saved in a hard disc or electronic data processing device. According to German electronic signatures law, exclusive key concludes just in case of saving it in a certain media.

3-The ability to detect changes in data

Today, there's a common asymmetric encryption method in electronic signature that as a result of affixing signatures to documents, it is created a high security factor in the exchange of data. So that if any changes in the data to be exchanged on track, it will become clear immediately after receiving it.

Referring to above-mentioned, can we say that electronic signatures have legal conditions? In response, it must be said that these signatures are remarkable achievement in its kind which it will confuse out the commercial exchanges but, they're not decisive for claims arising from exchanges documents. For achieving a special kind of signature which includes all legal capabilities and give legal merit to electronic documents, it's necessary to step beyond expressing the conditions of signature and document.

3- Different ways of electronic signature

Since the emergence of electronic signature technology, different methods about electronic signing regarding to increase security factor have been done which are referred:

Passwords: One of the simplest and common methods to create safety and reliability is using a unique password or personal Information Number (PIN) at the bottom of document which attached secretly.

Bitmap Signature: This kind of signature is a scanned handwritten signature which at first the person signs it on a paper and then scans it and he can attach it to any file as an electronic signature.

Light Pen: Light pen technology is that the person signs with this pen and it will emerge on monitor.

Biometric Signature: This kind of signature is based on individual features and biometric identifiers mean that behavioral characteristics (how to do handwritten signature) and physiological characteristics (like finger print).

Digital signature: digital signature is the most advanced and most used type of electronic signatures and there are other forms of alternative due to high security and most of legislators- specially the legislator of Iranian electronic commercial law- has accepted this method of signature. Digital signature is based on cryptography and it uses two kinds of algorithms namely public key and private key.

4-Probative value of electronic signature

If the electronic signature wants to be usable in the claim or defense like handwritten signature, it must meet a series of conditions of handwritten signature like: uniqueness, power of identification and the impossibility of forgery by others. Of course, providing the conditions for electronic signature, related to technical issues and if this type of signature is performed in compliance with the principles of electronic science and engineering, they have probative value like handwritten signatures and in this aspect there is no difference with them. In these cases, it seems that in our country there's no ground to valid these signatures and they can be easily misused, forgery and unable to determine identity. However, for ensuring and increasing the security factor of electronic signatures, suitable grounds should be created to refuse abuse.

Electronic signature is a data and as it said the data messages have probative value. But generally, we should say that probative value of data messages determined according to these certain factors including the appropriateness of the safety procedures employed. However, if the data message constituent signatures

have all technical conditions, their legal validity and position in evidence are the same as the position of handwritten signatures and it can be as for the claim or defense in court.

In Iranian electronic commercial law, the signature which has all technical conditions is named as secure electronic signature. According to article 2 of this law, a secure electronic signature is a signature which has all conditions of article 10. The conditions of article 10 of Iranian Commercial Law for signature and the electronic record is that:

a- be unique to the signer.

b- to show the identity of the signer of data message.

c- to sign exclusively by or under will be issued.

d- to attach to a message which any change in the data message can be recognizable and detectable.

According to article 15 of Iranian commercial law, the signatures with above qualifications can't be denied and only can be brought up a forgery claim. However, attaching an electronic signature to a data message, puts them in official documents. According to what was said, there's no difference in terms of legal effects between electronic signature and other kinds of handwritten signatures. But also by providing the necessary technical infrastructures, we can say that such signature is less prone to counterfeiting.

Conclusion

Spreading electronic trade requires guaranteeing reliability and security by legal systems. One of the most important devices to validate the electronic transactions, is acceptance of electronic signature and providing its technical requirements. It divided into two kinds of simple and advanced. Electronic signature is a kind of data which attached to other data and determines the relations between signer and the attached data. At the moment, electronic signature is one of the legal actions like handwritten signature which is accepted legally by legal systems in the world (like Iran) and established its position in electronic trade and evidence. There's no difference between electronic signature and other kinds of handwritten signatures in terms of legal aspects. It means that if an electronic has all technical conditions and it be guaranteed by all computer science, so it will have the credit and position of handwritten signature in evidence and it can be used as a reason in claims or defense. Because of not emerging such a ground in our country, these signatures, don't have high security and so less used.

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