

Electronic signature: value in law and probative effectiveness in the Italian legal system

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The normative evolution of the electronic signature from Act no. 59 of 1997, *Bassanini Act*, to the Presidential Decree 7th April 2003, no. 137

Inspired by a great spirit of innovation, by 1997 the Italian Legislator had already sanctioned the validity and the importance of the electronic data processing document “to all intents and purposes in law”¹ in Sec. 15, second paragraph, of Act 59/1997. This legislative text became law after the passing of the relevant applicatory regulation, the Presidential Decree of 10th November 1997, n. 513 (which only provided for the “certain” digital signature). The sections of this law unequivocally sanctioned the legal equivalence of electronic data processing document to the paper document.

On this subject, attention must be drawn to the provision of Sec. 4:

Il documento informatico munito dei requisiti previsti dal presente regolamento soddisfa il requisito legale della forma scritta.

Electronic documents that are in accordance with the provisions set out in this regulation shall be regarded as meeting the legal requirement of the written form.

Of equal importance to Sec. 4 was the provision of Sec. 10, par. 2 according to which:

L'apposizione o l'associazione della firma digitale al documento informatico equivale alla sottoscrizione prevista per gli atti e documenti in forma scritta su supporto cartaceo.

Affixing a digital signature to an electronic document or associating one with it shall have the same effects as putting the required signature to acts or documents written on paper.²

In a short space of time, the set of reference rules has been completely modified as a result of several normative interventions. First, it is important to note the approval of the Electronic Signature Directive.³

In Italy the Presidential Decree of 10th November 1997, n. 513 (published in G.U. n. 60, dated 13th March 1998) was repealed by the Presidential Decree of 28th December 2000, n. 445 (published in G.U. n. 42, dated 20th February 2001)⁴. Although preceding the Electronic Signature Directive, this decree did not incorporate the Directive's most important innovations. The Presidential Decree n. 445-2000 was only modified in accordance with the European Legislation with the Decree of 23rd January 2002, n. 10 (published in G.U. n. 39, dated 15th February 2002).

¹ On the problems of the legal framing of the electronic document before Act 59/97: V.FRANCESCHELLI, *Computer, documento elettronico e prova civile*, in *Giur. it.* 1998, IV, 314; L. MONTESANO, *Sul documento informatico come rappresentazione meccanica nella prova civile*, in *Dir. Inf.* 1987, pp.25 e ss.; F. LUCIFERO, *Riproduzioni meccaniche, copie ed esperimenti*, in *Enc. Dir. Milano*, 1989, vol. XL, p.1082; E. G. F. RICCI, *Aspetti processuali della documentazione informatica*, in *Riv. Trim. dir. proc. civ.* 1994, pp. 865 ss.; M. ORLANDI, *La paternità delle scritture, sottoscrizione e forme equivalenti*, Milano, 1997, pp. 53 ss.

² For a commentary of the set of rules subsequent to 1997: L. ALBERTINI, *Sul documento informatico e sulla firma digitale (novità legislative)*, *Giust. civ.* 1998, pp. 279 e 280; G. PETRELLI, *Documento informatico, contratto in forma elettronica e atto notarile*, in *Notariato* 1997, p.575; F. DE SANCTIS, *Tipologia e diffusione del documento informatico. Progressi difficoltà di un suo inquadramento normativo*, in *Corriere giur.* 1998, pp. 343 ss.; F. DELFINI, *Forma e trasmissione del documento nel regolamento ex art. 15, c. 2, L. 59/1997*, in *I Contratti* 1997, pp. 630 e 631; A. GENTILI, *Documento informatico e tutela dell'affidamento*, in *Riv. Dir. Civ.* 1998, II, pp. 172 - 174; R. ZAGAMI, *La firma digitale tra soggetti privati nel regolamento concernente “atti, documenti e contratti in forma elettronica”*, in *Dir. inf.* 1997, p. 921; M. ORLANDI *L'imputazione dei testi informatici. Riv. notariato* 1998,I, 867.

³ Directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures (OJ 19.1.2000 L13/12).

⁴ The new text is mainly a re-collection and re-organization of previous Statutes and regulations and has not changed the definitions quoted above.

The principal innovations introduced in 2002 cover:

- a) the competence of the Department for Innovation and Technologies already established by the Chairmanship of The Council of The Ministers;
- b) the free exercise of a certification service;
- c) the distinction between "Certifying Authorities" and "accredited Certifying Authorities";
- d) the distinction between "electronic" certificates and "qualified" certificates;
- e) the responsibility of Certifying Authorities for the damages caused to a third party who placed reasonable trust in the accuracy of the certificate;
- f) the distinction between "electronic signature" and "advanced electronic signature", of which the digital signature constitutes one type;
- g) the formal effectiveness of the document signed with a digital signature;
- h) the formal effectiveness of the document signed with a "simple" electronic signature;
- i) authentication of "simple" electronic signatures⁵.

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The legislative framework outlined therein finally found its complete definition as a result of the passing of the Presidential Decree n. 137 of 2003, which brought into effect the Decree n. 10 of 2002. As always happens when great innovations are introduced in a legal system, several professionals in the field of law have heavily criticized the new discipline of the electronic data processing document⁶.

Such judgments, perhaps a little too hasty, are not supported by practical experience at this time, which is the only experience that is capable of highlighting the benefits and defects of a new set of reference regulations.

The definitions introduced by the Electronic Signature Directive and those adopted by the Italian Legislator

With the Decree of January 23rd, 2002 no. 10, which brought the Directive into effect, the Italian Legislator attempted to rectify the disparity between the Presidential Decree 513/97 and the Community legislation⁷. By means of this reform

and the introduction of two new concepts, that of the advanced electronic signature and the "simple" electronic signature, in addition to the pre-existing digital signature, the Italian Legislator has incorporated the definitions contained in the Directive.

The main problem encountered by the Italian Legislator consisted of bringing the Italian set of reference rules into line with the Directive, without giving up the original digital signature concept in Italian law, a concept in itself that is not included in the Directive. In order to understand how the provisions of the Directive have been integrated into Italian regulation, it is useful to analyse the definitions introduced by the Directive and compare them with the Decree 23rd January 2002, n. 10.

The Directive establishes the meaning of the different kinds of electronic signature, and their technical requirements, as set out in article 2:

'electronic signature' means data in electronic form which are attached to or logically associated with other electronic data and which serve as a method of authentication; 'advanced electronic signature' means an electronic signature which meets the following requirements:

- a) it is uniquely linked to the signatory;
- b) it is capable of identifying the signatory;
- c) it is created using means that the signatory can maintain under his sole control; and
- d) it is linked to the data to which it relates in such a manner that any subsequent modification of the data may be detected.

The Directive does not define the concept of the digital signature. Such a signature, in the words of the Italian Legislator, consists of a particular kind of qualified electronic signature that is the result of a computer-based process (validation) implementing an asymmetric cryptographic system consisting of a public and a private key, whereby the signatory asserts, by means of the private key, and the recipient verifies, by means of the public key, the origin and integrity of a single electronic document or a set of such documents.

Before the reform of the Italian law, the concept as provided in Presidential Decree of 10th November 1997, n. 513 was for the provision of a digital signature: the result of a computer-based

⁵ C. M. BIANCA, *La firma elettronica: si apre un nuovo capitolo*, in *Studium Juris* 2002,II, p. 1431.

⁶ M. CAMMARATA, *Sparita l'equivalenza fra firma autografa e firma digitale!* <http://www.interlex.it/docdigit/sparita.htm>.

⁷ For a commentary of the set of rules as modified by the 2002 reform: F. DELFINI *Il d.lg. n. 10 del 2002 di attuazione della direttiva 1999/93/Ce in tema di firme elettroniche (comm. a d.lg. 23 gennaio 2002 n. 10)*. *Contratti (I)* 2002,f. 9, 410; M. SAIA, M. VINCENTI, *Manuale del diritto di internet: (aggiornato con il D.P.R. 7/4/2003, n. 137, di riforma della disciplina della firma elettronica)*, Piacenza, 2003.

process (validation) implementing an asymmetric cryptographic system consisting of a public and a private key, whereby the signer asserts, by means of the private key, and the recipient verifies, by means of the public key, the origin and integrity of a single electronic document or a set of such documents. Therefore it is evident that the Italian Legislator attempted to retain the definition set out in 1997 by introducing the category of the digital signature as a *species* within the wider *genus* of the advanced electronic signature, even if it would have been preferable to abrogate the old discipline, the product of an outdated theory, and rethink the previous set of rules in the light of the Directive.

A further classification derives from the kind of certificate that accompanies the signature. It is indeed possible to associate an electronic certificate to an advanced electronic signature, conforming to the requisites of the Directive, Annex I, issued by Certifying Authorities, who in turn satisfy the requisites of Annex II of the Directive. In this case a qualified electronic signature is obtained.

Besides this distinction, depending on the kind of Certifying Authority, it is now possible to recognize three different signature typologies in Italy: the "simple" electronic signature, the advanced electronic signature and the digital signature. As mentioned above, the latter must be considered a particular *species* of the advanced electronic signature *genus*.

It is therefore also useful to underline the point that the digital signature is the only kind of qualified electronic signature that has, until now, really found to be of any use. Moreover, even if the definition in the Directive is certainly more astute and farsighted, it is true to say that, from 1997 to date, as yet no signature system has been proposed in alternative to, and offering the same security as, the system based on asymmetrical cryptography.

Therefore the Italian definition succeeded in hitting the heart of the matter much earlier than the Electronic Signature Directive, despite being bound to the pragmatic principle of the procedure of affixing a signature. On the contrary, the community definition, certainly the result of a more mature reflection on the phenomenon, and, even if theoretically guaranteeing a wider range of possible procedures for signature affixing, has not in reality yielded any great innovations.

The electronic document respectively signed with digital signature, advanced electronic signature and "simple" electronic signature: value in law and probative effectiveness

In an analysis of probative effectiveness of the electronic document⁸, it is necessary to start from the provision of Sec.5 of the Presidential Decree 10 November 1997 n. 513⁹. This Section distinguished two types of probative effectiveness: on the one hand, Paragraph 1 stated that:

Il documento informatico, sottoscritto con firma digitale ai sensi dell'articolo 10, ha efficacia di scrittura privata ai sensi dell'articolo 2702 del codice civile.

Electronic documents signed with a digital signature pursuant to Section 10 shall have the evidential weight of a private deed as set out in Section 2702¹⁰ (Private deed effectiveness) of the Civil Code;

on the other hand, Paragraph 2 stated that:

Il documento informatico munito dei requisiti previsti dal presente regolamento ha l'efficacia probatoria prevista dall'articolo 2712 del codice civile....

Electronic documents that are in accordance with the provisions set out in this regulation (not signed with digital signature) shall have the evidential weight provided for under Section 2712¹¹ (Mechanical reproduction) of the Civil Code¹²

⁸ The computer-based representation of legally relevant acts, facts or data.

⁹ On the probative effectiveness of the electronic document before the entrance in force of the Presidential Decree, 10th november 1997, n. 513: L. MONTESANO, Sul documento informatico come rappresentazione meccanica nella prova civile, in Dir. Inf. 1987, pp.25 e ss.; F. LUCIFERO, Riproduzioni meccaniche, copie ed esperimenti, in Enc. Dir. Milano, 1989, vol. XL, p.1082; G. F. RICCI, Aspetti processuali della documentazione informatica, in Riv. Trim. dir. proc. civ. 1994, pp. 865 ss.

¹⁰ Sec. 2702 of the Civil Code: "The private deed is full evidence, up to forgery action, of the provenance of the declarations from who has subscribed it, if the person to whom the document is produced recognize the subscription, or if it is legally considered as recognized".

¹¹ Sec. 2712 of the Civil Code: "The photographic or cinematographic reproductions, the phonographic registrations and, in generally, each other mechanical reproduction of facts or things are full evidence of the facts and things represented, if the person to whom they are produced does not repudiate their conformity with the same facts and things".

¹² The second part of the section is unimportant in order to analyze the probative effectiveness of the electronic document.

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The different probative effectiveness of the electronic document therefore depended on the presence of a digital signature, the only version of an electronic signature considered by the Italian Legislator¹³. This dichotomy between a signed document and an unsigned document disappeared as a consequence of the Presidential Decree 28 December 2000, n. 445, which gave legal probative effectiveness only to a digitally signed document.

Pursuant to Sec. 10 of the Presidential Decree 28 December 2000, n. 445 (previous to the 2002 reform), the digitally signed document was regarded as meeting the legal requirement of the written form and had the double probative effect, pursuant to Sec. 2702 (provenance of the declaration from the signatory), and to Sec. 2712 (representation of facts or things) of the Italian Civil Code.

According to authoritative doctrine, the double normative reference could be explained by referring to the content of the document. More precisely the doctrine observed that, wherever the electronic document consisted of a text, the digital signature, when affixed to the document, acts to meet the requirement of the legal form of declaration by the signatory pursuant to Sec. 2702 C.c., thus providing for the relative probative effectiveness of the document. In contrast, if the document represented sounds or images, the signature could not be considered as such a subscription but rather as a constitutive element of the documentary object thus making it able to represent facts or things with the probative effectiveness pursuant to Sec. 2712 c.c.¹⁴.

This set of rules, which excluded documents not

signed with a digital signature from the legal system of documentary evidence, has been completely modified as a consequence of the entrance in force of the Decree of 23rd January 2002 no. 10. In fact, Sec. 10, paragraph 1 of the Decree 445-2000, as modified, attributes to any "not declaratory" electronic document not signed with a signature the probative effectiveness pursuant to Sec. 2712 of the Civil Code, regarding facts and things represented¹⁵.

When the electronic document is instead signed with a "simple" electronic signature, besides satisfying the legal qualification of the written form, "it is freely valuable on the probative plan, considering its objective characteristics of quality and security". (Sec. 116 C.p.c.). The electronic document lastly constitutes, in accordance with Sec. 10, Paragraph 3, of Decree 445-2000,¹⁶ full evidence, up to forgery action, of the provenance of the declarations from the person that has subscribed it when completed with a digital signature or another kind of advanced electronic signature and the further requisites are satisfied.

In conclusion, the evidential value of the document is dependant upon the type of signature used, and it increases with the heightening degree of complexity and sophistication of the signatures used.

Forgery action: hypotheses of illegal use of the signature

The forgery action is a tool used in trial to deny the legal consequences of a document and in particular, the provenance of the declaration contained in the document and represented by the subscription¹⁷. In this action, therefore, neither

¹³ For a commentary of this set of rules in theory: V. FRANCESCHELLI, *Computer, documento elettronico e prova civile*, in *Giur. it.* 1998, IV, 314; and in jurisprudence: Cassazione civile, sez. lav., 6 settembre 2001, n. 11445: "The data processing documents without digital signature have to be brought back between the photographic or cinematography reproductions, the phonographic recordings and, generally, every other mechanical representation of facts and of things, whose probative effectiveness is disciplined by sec. 2712 c.c., with the consequence that, also for them, the disownment of their conformity to the represented facts does not have the same effects as the disownment of the private writing, expected from sec. 215, paragraph 2, c.p.c., because, while this last, in the absence of request for examination (verificazione) and of positive result of this, precludes the writing utilization, the first does not prevent that the judge can verify the conformity to the original also through other evidence means, included the presumptions; and also: Tribunale di Trapani, 31 maggio 2002: "At present of proceeding computerization the production of an electronic document is not technically impossible, but is unusual without doubt; a reproduction of the data processing document on paper support is usually produced in judgement, which - in the absence of electronic/digital signature - cannot be attributed probative effectiveness different from the one expected by sec. 2712 c.c. for the mechanical reproductions."; Giudice di pace Partanna, 12 novembre 2001: "Also to the agreements signed by telematics systems, to the senses of D.P.R. no. 513 of 1997, is applied the rule of sec. 1341 paragraph 2 c.c. according to which the oppressive clauses must be specifically approved in writing."

¹⁴ On this interpretation of the normative datum M. ORLANDI, *Il falso digitale*, Milano, 2003, p. 21.

¹⁵ "Il documento informatico ha l'efficacia probatoria prevista dall'articolo 2712 del codice civile, riguardo ai fatti ed alle cose rappresentate."

¹⁶ "Il documento informatico, quando e' sottoscritto con firma digitale o con un altro tipo di firma elettronica avanzata, e la firma e' basata su di un certificato qualificato ed e' generata mediante un dispositivo per la creazione di una firma sicura, fa inoltre piena prova, fino a querela di falso, della provenienza delle dichiarazioni da chi l'ha sottoscritto."

¹⁷ To better understand the forgery action in the Italian legal system: S. SATTI, *Commentario al codice di procedura civile, libro III, Processo di cognizione*, MILANO, 1966, pp. 195 e 196.; LIEBMAN, *Manuale di diritto processuale civile*, vol. II, IV ed., Milano, 1981; LIEBMAN, *L'oggetto del processo civile di falso*, in *Riv. Trim. dir. e proc. civ.*, 1957, p. 602 e ss.; ATTARDI, *L'interesse ad agire*, Padova, 1958,, p. 187 e ss.; DENTI, *Querela di falso*, in *Novissimo Dig. It.*, XIV, Torino, 1967, p. 664; CARNELUTTI, *Teoria del falso*, Padova, 1933, p. 10; P. CONSALES *L'abuso della firma digitale ed i rimedi esperibili. Dir. informatica* 2001.f. 6, 917.

verification of the content of the document nor the validity of the signature itself are required.

According to the “analytical theory of the declaration”¹⁸, and in order to understand whether the advanced electronic signature applies to the verification of the content or the validity of the signature, we have to clarify the distinction between “Entitlement of the subscription” and “provenance of the declaration”. On the basis of this theory, the declaration process must be divided in two different phases: one “expressive” and the other “emissive”. In the “expressive phase,” the subscriber assumes the paternity of the document and in the “emissive” phase, addresses the declaration contained in the document to others, as a projection of his will.

Pursuant to Sec. 2702 of the Civil Code, which takes both phases into consideration, the presumption arises upon which is based the equivalence between the subscription of the document and the will to externalize it, as usually happens in most cases. Situations may, however, occur in which the document is issued in a manner that differs or is contrary to the will of the subscriber. In such cases the judge will have to not only verify to whom the subscription belongs, but also whether it reflects the will of the signatory.

In light of this point, and in accordance with the jurisprudential principle of the “chargeable appearance”, the forgery action is the only remedy that can be considered in order to win the presumption upon which is based: that there is a correspondence between the person who appears to be the subscriber and the person from whom the declaration comes. The use of an advanced electronic signature by an unauthorized person does not always mean it will be the subject of a forgery action.

This action can certainly be carried out in all cases of forgery by fraudulent technical means or of unauthorized affixing of the signature. On the contrary, a forgery action cannot be carried out in cases in which the behaviour of the owner of the signature contributed to the subscription of the document by a third person. Ergo it will not be possible to put forward a forgery action against an electronic document, subscribed with advanced electronic signature, in the traditional hypotheses

of filling in of a document *contra pacta*. On the contrary, some doubt could arise in the hypothesis of filling in of a document *absque pactis*¹⁹.

A document is filled in *contra pacta* when a third party does not follow the instructions of the advanced electronic signature holder, but acts in breach of the task received from the holder of the signature. In this case the advanced electronic signature holder cannot put forward the forgery action. The reason for this is that the behaviour of the holder is the cause of the apparent authenticity of the signature.

The case is different for a document filled in *absque pactis*, when an unauthorized person finds or steals a signature device and uses it to subscribe one or more electronic documents. This situation is very different from the hypothesis in which a third person accidentally finds a signed blank sheet and proceeds to the abusive filling in of the same²⁰. In fact it is necessary to remember that the signature device requires an identification access code and it usually blocks after a limited number of unsuccessful attempts.

We cannot overlook the responsibility of the holder to guard the signature device carefully; the duty of the holder to guard the signature device is provided by the Sec. 28 of Decree 445-2000. Such a consideration would seem to exclude the possibility of carrying out the forgery action whenever the signature device has not been safeguarded with care, further reducing the possibility that a third party can obtain access to the signature.

This solution appears to be the most appropriate as regards protection of the third party according to the “chargeable appearance” principle. On the other hand, it does not seem correct, because the will of the advanced electronic signature holder is placed in a secondary position, even if he is a victim of an act operated against him. In this way the advanced electronic signature holder remains without means of direct, specific protection.

On the contrary it is not possible to sustain that the claiming of damages under the provisions of Sec. 2043 of the Civil Code, theoretically executable against the unauthorized user of the advanced electronic signature, is a proper remedy

¹⁸ To examine closely this theory: M. ORLANDI, *Il falso digitale*, Milano, 2003, p. 135 e ss.

¹⁹ The Supreme Court of Cassazione admits the possibility to carry-out the forgery action in the hypothesis in which a third person accidentally finds a signed blank sheet and proceeds to the abusive filling of it (*absque pactis*), Cass. 10 settembre 1998, n. 8960; on the contrary the same decision excludes it in the hypothesis of *contra pacta* filling of the document.

²⁰ To examine closely these arguments. C. M. BIANCA, *La firma elettronica: si apre un nuovo capitolo*, in *Studium Juris* 2002, II, p. 1431.

of the tort²¹. For these reasons it is more appropriate not to consider the negligent custody of the signature device as an obstacle to the possibility of carrying out the forgery action. As for the position concerning damages to the third party, once the forgery of the electronic document has been proved, the third party can claim damages under the provisions of Sec. 2043 of the Civil Code.

Therefore, the possibility of carrying out the forgery action against an abusively subscribed electronic document is a problem that involves not only the structure and representative capacity of the document but also the responsibility of the holder of the signature device. ■

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²¹ In this hypothesis the claim of damages ex 2043 c.c., theoretically executable, is very difficult regarding the burden of proof.