

## Bread and Donkey for Breakfast

How IT law false friends can confound lawmakers: an Italian tale about digital signatures

by

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False friends are a well known hazard. The same word can sometimes even be pronounced the same way in two different languages, but the meaning can be utterly different. Italian and Spanish, for instance, are very similar languages, and the word ‘burro’ is pronounced the same way in both, but actually means ‘butter’ in Italian, and ‘donkey’ in Spanish. An Italian tourist who is having breakfast in a Spanish hotel, the popular story goes, should not be surprised to be presented with some bread and a donkey, if he asks for bread and butter in his mother language.

False friends can also be a danger in the IT law world. The same words often have different meaning in IT law and in the general practice.

Consider the meaning of ‘copy’, for instance. A copy in the physical world is an object that can, generally, be recognised as such, something in itself different from the original. This is not at all true in the digital world. A file, whatever its content, is just a string of 0s and 1s, or of letters and numbers, if you want. If you ask Alice for Bob’s mobile telephone number, you will not expect Alice to answer that she cannot give it to you, because Bob kept his number for himself, and all she has is a accurate copy of that number. A copy of a number is the same number again. The same is true for digital files: they are numbers. The verb to copy can be employed in order to describe the process that allows a computer user to replicate on her USB device a file from the hard disk, but the output of such a process is not a copy in any sense of the word: it is, in fact, a perfect duplicate. There is no way to tell for certain which is the ‘original’.

This has significant legal implications. In some countries, such as Italy, there is no formal provision that prevents a person from executing digital cheques. The cheque is basically a text: any technician will tell you that it can be digitally signed very much like anything else. The lawyer will not find anything against it in the law, either. But still the answer is no: a cheque cannot be digitally signed. A digitally signed document is just a file, as any other file, and can be duplicated endless times. One cheque could be duplicated one hundred times and

cash in one hundred different banks, and nobody would be able to identify the original one. A digital signature is, therefore, an unsuitable tool whenever the legal properties of a document stem from its uniqueness.<sup>1</sup>

This is a field where neither the law nor IT can walk alone. A digital signature affixed to a cheque is technically feasible, and the law (at least in some countries) does not forbid it. What happens here is that *a legal feature of the cheque is incompatible with a technical feature of a digital signature*. The question is whether the proposition in italics belongs to IT or the law. The point is, the lawyer must understand the technology, because of the interaction of technology and law, as Albert de Lapradelle, a professor of International Law wrote at the end of *La guerre maritime et le droit des gens* on the changes in the law of naval warfare for the Conference on The Hague in 1907:

Ce ne sont pas les philosophes avec leurs théories, ni les juristes avec leurs formules, mais les ingénieurs avec leurs inventions qui font le droit et le progrès du droit.

It is not the philosophers and their theories, and lawyers with their formulas, but the engineers with their inventions which are the right and the progress of law.

The 'signature' is another dangerous false friend. Unless biometric technologies are in place (and the quality of the biometric technology may be the subject of a challenge), anybody who gains control of the token and the PIN can create signatures that are, in themselves, genuine digital signatures. A manuscript signature links a document to a person, while a digital signature does not: it links a document to a device. The missing link is provided by the law; it is the law (in some countries, and if some conditions are fulfilled) that determine whether the document is binding to a particular person. It is a virtual legal technique that holds somebody responsible for a statement even if it does not come, in any meaningful sense, from the same person. There is nothing inherently wrong in this. In most jurisdictions, for instance, companies are liable for the actions of their executives, even if they act against the resolutions of the board. This is a reasonable burden for business organisations, in the interest of providing for the speed of a transactions.

The burden would be deemed quite acceptable in the case digital signatures, if adequate use policies were in place and duly followed in everyday life. This means that each user would have to retain both the signature token, and secure the PIN without recording it. In this

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<sup>1</sup> The problem can be solved creating infrastructures that hold an authoritative copy of the document.

perspective, such a practice could somehow fill the existing gap between IT (that cannot guarantee that the signature comes from a given person) and the law (that assumes so). This is not about theoretical legal concepts, but about their acceptability in the context of a well-functioning and consistent legal environment.

The Italian case is rather special. Millions of smart cards have been issued, and basically every owner of a business (including small rural shops) has one. They are used for tedious bureaucratic chores that can only be performed with digital signatures. It is not surprising that the owners of the signature tokens are not thrilled by the burden. Most of the smart cards, that are usually blue in colour, are retained in piles in accountants' offices, each of them with a small yellow Post-It note with the PIN written on it (perhaps look-conscious Italians would go for more subtle and fashionable nuances, if they considered the smart cards really important). If on-line rumours<sup>2</sup> are to be taken at face value, most of the people do not even know that a smart card exists in their name.

Nevertheless, lawmakers go on assuming that documents signed with such smart cards are tantamount to documents signed with a manuscript signature. This is what the law provides, and a new significant implementation was introduced in 2008 that pushed things even further with Decreto-legge 25 giugno 2008, n. 112 Disposizioni urgenti per lo sviluppo economico, la semplificazione, la competitività, la stabilizzazione della finanza pubblica e la perequazione Tributaria (Decree June 25 2008, n. 112),<sup>3</sup> approved with Legge 6 agosto 2008, n. 133, Conversione in legge, con modificazioni, del decreto-legge 25 giugno 2008, n. 112, recante disposizioni urgenti per lo sviluppo economico, la semplificazione, la competitività, la stabilizzazione della finanza pubblica e la perequazione tributaria<sup>4</sup> (Law August 6 2008, n. 133, article 36, paragraph 1bis). The text of the law is full of technicalities that require a deep knowledge of some obscure details of the Italian legal system. The relevant part of article 36, paragraph 1bis reads as follows:

1-bis. L'atto di trasferimento di cui al secondo comma dell'articolo 2470 del codice civile può essere sottoscritto con firma digitale, nel rispetto della normativa anche regolamentare concernente la sottoscrizione dei documenti informatici, ed e'

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2 <http://punto-informatico.it/423980/PI/Lettere/chi-smart-card-ai-commercialisti.aspx>; <http://www.interlex.it/docdigit/faq/faq42.htm> - <http://www.interlex.it/docdigit/nonlosa.htm>.

3 Pubblicato nella Gazzetta Ufficiale n. 147 del 25 giugno 2008 - Suppl. Ordinario n.152/L.

4 Pubblicata nella Gazzetta Ufficiale n. 195 del 21 agosto 2008 - Suppl. Ordinario n. 196.

depositato, entro trenta giorni, presso l'ufficio del registro delle imprese nella cui circoscrizione e' stabilita la sede sociale, a cura di un intermediario abilitato ai sensi dell'articolo 31, comma 2-quater, della legge 24 novembre 2000, n. 340.

1-bis. The transfer deed mentioned by Article 2470 of the Civil Code can be signed with a digital signature, in accordance with the rules about the signature of electronic documents, and filed within thirty days, at the office Registration Court in whose area is established the head office of the company, through an authorized agent according to the provision of Article 31, paragraph 2-c, of the Law of 24 November 2000, n. 340.

Briefly put: since 1993,<sup>5</sup> every sale of a share in an Italian limited liability company (srl, società a responsabilità limitata) must be notarized. This requirement can appear to be far too formal, but it was part of an attempt to prevent the mafia and other criminal organisations buying into legitimate businesses. It is difficult to deny that such a strategic goal justifies much more than a few annoying bureaucratic steps. Moreover, the problem, as will be demonstrated later in this article, lies not the security level in itself, but in the equivalence (or, better, lack thereof) between two different procedures, both of them requiring the use of digital signatures.

In the traditional procedure, still in use, people must sign a deed before a Civil Law Notary,<sup>6</sup>

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5 Legge 12 agosto 1993, n. 310: Norme per la trasparenza nella cessione di partecipazioni e nella composizione della base sociale delle società di capitali, nonché nella cessione di esercizi commerciali e nei trasferimenti di proprietà dei suoli. (Pubblicata nella G.U. n. 195 del 20 agosto 1993) (Law 12 August 1993 number 310).

6 Civil Law Notaries (CLN) are to be found in countries that adopt the Latin Notarial system: about 90 countries that sum up about 55 per cent of the world's population. The Civil Law Notary is a lawyer that has already (albeit not always) been admitted to the bar; he or she is, at the same time, an officer of the state and a professional. The foremost task of the CNL is not the mere identification of the parties. He is also responsible, and liable, for an array of different issues related to the contract. For instance, in real estate transactions, if the seller was not the legitimate owner of the estate, the CLN will be required to refund the buyer. The same will occur if he fails to properly take care of the mortgages. The CLN must ensure that the results of the agreement are in accordance with the provisions of every applicable law, and explain to the parties the value, legal effects and consequences of the agreement. In most

usually drafted by the CLN himself; it is the notary's duty to prepare a digitally signed copy of the deed and send it to the Registro delle Imprese.<sup>7</sup> The data are introduced automatically into the register, as they are already presented in XML format and do not require any kind of manual editing. In the new procedure, the deed is digitally signed by the parties themselves, and sent to an accountant, who forwards it to the Registro delle Imprese. The data processing is the same, but there is a significant difference: in the new procedure, nobody knows for sure who really signs the deeds. The possibilities are almost endless: the employee you just dismissed signs; the employee that your accountant just dismissed signs too, and dead people might also sign.

In a country where Civil Law Notaries operate, there is an additional set of differences between a notarized document and a document that has not been notarized. The Civil Law Notary is a publicly appointed official who usually drafts the document, and is responsible to ascertain that the parties fully understood the document. Without a CLN, people may sign files they never read. People might sign files they did not understand. People may sign poorly drafted files. There is a lack of proper and impartial legal information. This is exactly what the Mr Giuseppe Limitone in the Vicenza Court considered in *Ordinanza del Giudice del Registro*, April 21st 2009, n. 6/09,<sup>8</sup> in which he refused the registration of a transfer that had

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countries, he is also required to collect taxes, and the CLN is personally responsible for paying the taxes if the job is not properly done. In some jurisdictions, a CLN is even liable upon failing to inform the parties about an available tax deduction. If a house does not match the building and zoning regulations, liability can sometimes arise. If a sum of money comes from a source that cannot be clearly identified, state agencies in charge of money laundering investigations are informed. These tasks are performed not only in the interest of the parties, but in the general public interest, as it keeps litigation at comparatively incredibly low levels in all the areas covered by the work of the CLN.

7 The Italian Companies' House; it records a wide array of events during the life of a company, including share transfers, that are not legally effective until registered.

8 The full text appeared in *Le Società* (Milan), 6/2009, p. 738, with an assenting comment by Vincenzo Salafia, former President of the *Corte d'Appello* of Milan, the most authoritative Italian court in the companies' house field. Every Italian Court (Tribunale) has a judge called the Giudice del Registro, who is in charge of the Registro delle Imprese. If any dispute arises about a registration, the Giudice del Registro decides; the decision can be overturned by a full

been executed in accordance with the new procedure. The details of the case are not available in the decision. However, it is certain that an application was made to delete the registration of the share transfer because it was not notarized. It appears the case was brought by the seller. This seems to be the case, because the judge is on record as responding to an argument presented by the resistant (only the company is allowed to make an application to have a registration deleted) by stating that anybody who as an interest in the matter can take action, and this would be enough. Nevertheless, he goes on to make it absolutely clear that the ‘preteso cedente’ (the purported seller) can take action.

The court began by pointing out that, if the legislature intended to make share transfers that are only digitally signed by the parties fit for registration, they fell short of their target. It was the view of the court that the new law, seen in the context of the Italian legal system, was a failure. The traditional procedure provides a check of the lawfulness of the contract and verification of the actual (not virtual) identity of the real signer, and this is vital in order to preserve the reliability of the register. The new procedure does not prescribe any of the safety features that have been in place for some time, but at the same time it does not explicitly states that they are not required: therefore the court held that the general rules apply, which means that no data can be entered in the register without the controlling mechanisms that have been in place for some time. In other words, as the old and the new procedure live side by side, it cannot be imagined that the law may want to leave people free to choose to be scrutinized or not.

The Vicenza court resolved the matter in a straightforward manner. The new law does not mention notarization, but this is a general requirement for any document presented for registration. This means that the new procedure requires the document be notarized. The court determined that the only possible applicaiton of the law would be the following:

- a) the parties digitally sign the deed;
- b) the digital signatures are executed before a notary;
- c) the notary certifies the digital signature;
- d) the document is sent to the accountant’s office;
- e) the notary relays it to the Registro delle Imprese.

The first, fourth and fifth steps are provided by the new law and are retained; however, the

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Tribunale.

court added steps two and three as requirements to enable a share transfer to be registered – the digital signature must be executed before a Civil Law Notary and officially certified.<sup>9</sup>

It is not known at the time of writing if this interpretation will be widely accepted by Italian courts, or whether Parliament will modify the legislation in the light of the decision by the Vicenza Court. The framework in which this case arose may be unique to the Italian legal system, but the underlying message is not. A digital signature cannot always be considered as equal to a manuscript signature, especially a notarized one. Whether the passing of Decreto-legge 25 giugno 2008, n. 112 indicated a deliberate change in the legal philosophy of the Italian state, or whether this was a mistake, it was big enough to make a judge sitting in the Vicenza Court of a small (albeit historical) Italian city stand up, and present the overwhelming majority of his country's Parliament with a breath of reality: that if a digital signature is to have any legal effect, it is necessary to demonstrate as false the proposition asserted by technicians that the private key of a digital signature, when used, proves it has been used the person whose key it is. This presumption can only carry any weight in law if a notary attests to the fact that the private key was used by the person whose key it was. If Parliament decides to change the law and overturn this decision, it will, in effect, be overturning the laws that were enacted to prevent criminal organizations from buying into legitimate business.

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<sup>9</sup> Digital signatures can be notarized in Italy since 1997: Decreto del Presidente della Repubblica 10 novembre 1997, n. 513 Regolamento contenente i criteri e le modalità per la formazione, l'archiviazione e la trasmissione di documenti con strumenti informatici e telematici a norma dell'articolo 15, comma 2, della legge 15 marzo 1997, n. 59 (G. U. 13 marzo 1998, serie generale, n. 60) (Presidential Decree 10 November 1997 number 513, article 16).