

**BRIEF OVERVIEW OF SELECTIVE LEGAL AND  
REGULATORY ISSUES IN ELECTRONIC COMMERCE**

**INTERNATIONAL SYMPOSIUM ON GOVERNMENT  
AND ELECTRONIC COMMERCE DEVELOPMENT**

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## **Brief Overview of Selective Legal and Regulatory Issues in Electronic Commerce**

The extent to which national and international law accepts that an electronic message can perform the same function as a paper document differs considerably. Most of the international conventions and national laws that were adopted more than twenty years ago, as a general rule did not anticipate the possible use of electronic means of communication<sup>1</sup>. This is largely because such means of communication did not exist when these international conventions and national laws were drafted and the necessary modifications to them have yet to be made. Furthermore, many national laws also introduce uncertainty regarding the legal validity of electronic-based transactions or are inconsistent in their treatment of the new technologies. Also, few Courts have had the opportunity to rule on the validity of electronic documents, messages or signatures.<sup>2</sup>

It has been recognized that the traditional requirements under certain national laws or international conventions for **“writing”**, **“document”** **“original”** and **“signature”** constitute the main legal impediments for the replacement of documents by electronic messages.<sup>3</sup>

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<sup>1</sup> This is very much the case for International Conventions dealing with transport issues such as the 1924 International Convention for the Unification of Certain Rules Relating to Bills of Lading (Hague Rules) and the 1968 Visby Protocol requires paper bills of lading. Concerning air transport, the 1929 Warsaw Convention, although it does not prevent a valid contract of carriage being effected by EDI (article 5 (2)), it clearly contemplates the issue of a paper document. Montreal Protocol n° 4 of 1975, expressly provides for an electronic air waybill (Article 5). However, it does not contemplate totally paperless trading, since it requires manuscript printed or stamped signatures (Article 6 (3)). As regard international Carriage of Goods by Road, the 1956 CMR Convention requires that a CMR Consignment note be made out in three originals. The Convention concerning International Carriage by Rail (COTIF/CIM), latest revised in 1980, authorizes the replacement of a paper consignment note by “an instrument suitable for automatic data transmission” (Article 8(4)(g)). Source: “Review of definitions of “writing”, “signature” and “document” employed in multilateral conventions and agreements relating to international trade”, Working Party on Facilitation of International Trade Procedures, fiftieth session. 20-21 September 1994, UN/ECE Document Trade/W.P.4/R. 1096 of 22 July 1994.

<sup>2</sup> See UN/ECE Recommendation N° 26, Document TRADE/WP.4/R. 1133/Rev. 1 of 23 June 1995.

<sup>3</sup> The Guide to Enactment of the UNCITRAL Model Law on Electronic Commerce, 1996: para. 2 notes that “the decision by UNCITRAL to formulate model legislation on electronic commerce was taken in response to the fact that in a number of countries the existing legislation governing communication and storage of information is inadequate or outdated because it does not contemplate the use of electronic commerce. In certain cases, existing legislation imposes or implies restrictions on

In order to assist States to overcome the above-mentioned impediments, the United Nations Commission on International Trade Law (UNCITRAL) adopted in June 1996 the UNCITRAL Model Law on Electronic Commerce<sup>4</sup> (hereinafter referred to as the Model Law). The main objective of the Model Law is to facilitate electronic trading by providing a set of internationally acceptable rules which can be used by States in enacting legislation to overcome legal obstacles and uncertainties which may exist in relation to the use of electronic means of communication in international trade.<sup>5</sup> The Model Law is accompanied by a “Guide to Enactment”, which intends to provide information as to the meaning of the provisions of the Model Law.<sup>6</sup> The Model Law adopts the “**functional equivalent approach**, which is based on an analysis of the purposes and functions of the traditional paper-based requirements with a view to determining how those purposes or functions could be fulfilled through electronic commerce techniques.<sup>7</sup> The Model Law does not attempt to define a computer-based equivalent to any kind of paper document. Instead it singles out basic functions of paper-based form requirements, with a view to providing criteria which, once they are met by data messages, enable such data messages to enjoy the same level of legal recognition as the corresponding paper document performing the same function”.<sup>8</sup>

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the use of modern means of communication, for example by prescribing the use of “written”, “signed” or “original” documents.

<sup>4</sup> The Model Law and the Guide are available at <http://www.uncitral.org>. According to the information provided by UNCITRAL, as of 17 January 2001, the following countries have adopt legislation based on the Model Law: Australia, Bermuda, Colombia, France, Hong Kong Special Administrative Region of China, Mexico, Ireland, Republic of Korea, Singapore, Slovenia, the Philippines, the States of Jersey (Crown Dependency of the United Kingdom of Great Britain and Northern Ireland) and, within the United States of America, Illinois. See <http://www.uncitral.org/en-index.htm>.

<sup>5</sup> *Electronic Commerce: Legal Considerations*, UNCTAD/SDTE/BFB/1, 15 May 1998. With regard to the objective of the Model Law, see the UNCITRAL Model Law on Electronic Commerce with Guide to Enactment, 1996, paras. 2-6; see as well Report of the Working Group on Electronic Data Interchange (EDI) on the work of its Twenty-Ninth session, New York, 27 February – 10 March 1995. UNCITRAL A/CH.9/407.

<sup>6</sup> See Guide to Enactment of the UNCITRAL Model Law on Electronic Commerce, 1996, para. 1, p. 15.

<sup>7</sup> *Ibid*, para. 16.

<sup>8</sup> *Ibid*, para. 18.

Although the Model Law offers national legislators a set of internationally acceptable rules that could be used to overcome some of the main obstacles when conducting legal transactions in cyberspace, it seems that at least in some jurisdictions, a problem might arise in order to overcome references to "writing", "signature" and "document"<sup>9</sup> in conventions and agreements relating to international trade. It is precisely for this reason that the Centre for the Facilitation of Procedures and Practices for Administration, Commerce and Transport (CEFACT) of the United Nations Economic Commission for Europe (ECE) recommended<sup>10</sup> to UNCITRAL to: "consider the actions necessary to ensure that references to "writing", "signature" and "document" in conventions and agreements relating to international trade allow for electronic equivalents". In a recent note<sup>11</sup> from 20 December 2000 entitled "Legal barriers to the development of electronic commerce in international instruments relating to international trade: ways of overcoming them", the UNCITRAL Secretariat included the advisory opinion of a law professor as to the "adaptation of the evidentiary provisions of international legal instruments relating to international trade to the specific requirements of electronic commerce". The note will be submitted to the thirty-eight session of the UNCITRAL Working Group on Electronic Commerce in March 2001 for further action.

In addition to the problems posed by paper-based requirements, there is also concern that lack of harmonization in the rules applicable to electronic commerce would also result in effective barriers to trade. Areas that have been identified as involving legal issues relevant to electronic commerce include data protection, taxation, customs duties, security and authentication, jurisdiction and applicable law, dispute resolution mechanisms, intellectual property rights, liability of Internet service providers, illegal and harmful content, computer crime, Internet governance (more specifically, domain names), electronic payment systems, and consumer protection<sup>12</sup>.

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<sup>9</sup> See survey conducted by ECE published on 22 July 1994 (TRDE/WP:4/R.1096) as revised on 25 February 1999 (TRADE/CEFACT/1999/CRP.2). Available at <http://www.unece.org/cefact/>.

<sup>10</sup> See Document TRADE/CEFACT/1999/CRP.7 of 26 February 1999. Available at <http://www.unece.org/cefact/>.

<sup>11</sup> See United Nations Document A/CN.9/WG.IV/WP.89. Available at <http://www.unece.org/cefact/>.

<sup>12</sup> "Legal Dimensions of Electronic Commerce", UNCTAD Report, TD/B/COM.3/EM.8/2 of 4 May 1999: para. 9.

We will hereafter focus on some of the most pressing e-commerce issues that have been identified as relevant for the development of e-commerce:

### **Electronic signatures**

The enforceability of e-commerce transactions is the most basic and fundamental issue to be addressed by e-commerce legislation. Moreover, it is the subject that has seen the most activity during the past year, generally in the form of electronic signature legislation<sup>13</sup>. Thus, it has been recognised in many instances that electronic signature legislation can provide the predictability required by businesses to engage in e-commerce transactions<sup>14</sup>. Governments wishing to promote e-commerce are urged to identify and remove legal barriers that hinder the recognition of electronic authentication<sup>15</sup>. In this regard, electronic signature legislation might accomplish two important goals: to remove barriers to e-commerce, and to enable and promote the desirable public policy goal of e-commerce by helping to establish the trust and the predictability needed by parties doing business online.<sup>16</sup>

There are at present three main functions attached to electronic signatures:

1. Data origin authentication: it can provide assurance that a message come from its purported sender;

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<sup>13</sup> For a survey on digital signature law, see <http://rechten.kub.nl/simone/ds-lawsu.htm> and <http://www.mcbridebakercoles.com/e-commerce/international.asp>

<sup>14</sup> Already since 1996 the Commission of the European Communities noted: *for e-commerce to develop, both consumers and businesses must be confident that their transaction will not be intercepted or modified, that the seller and the buyer are who they say they are, and that transaction mechanisms are available, legal, and secure. Building such trust and confidence is the prerequisite to win over businesses and consumers to e-commerce.* A European Initiative in Electronic Commerce, (COM (97) 157 final, Apr. 16, 1997). <http://www.spa.org/govmnt/govnews.htm>

<sup>15</sup> The Internet Law and Policy Forum proposed the following additional principles : respect of freedom of contract and parties' ability to set provisions by agreement; making laws governing electronic authentication consistent across jurisdictions; avoid discrimination and erection of non-tariff barriers; allow for use of current or future means of electronic authentication; promote market-driven standards. See <http://www.ilpf.org/digsig/intlprin.htm>

<sup>16</sup> See T. Smedinghoff and R. Hill Bro "Moving with Change: Electronic Signature Legislation as a Vehicle for Advancing E-Commerce", *The John Marshall Journal of Computer and Information Law*, Vol. XVII, No. 3, Spring 1999: 723.

2. Message integrity: it enables a recipient of a message to verify that a message has not been intentionally or accidentally altered during transmission;
3. Non-repudiation: the sender cannot deny that the message was sent.

At the moment, several methods are available to fulfil the above functions<sup>17</sup>. However, one type of electronic signature, the so-called digital signature technology based on public key cryptography, is today regarded as the most common and reliable technique. For digital signatures to achieve authenticity functions it is necessary to use a trusted third party -called certification authority (CA)- whom, given satisfactory evidence, is prepared to certify the identity and qualities of the parties.

A review of legislative and regulatory activity reveals three basic approaches to electronic signature legislation<sup>18</sup>:

1. Minimalist approach: the primary motivation is to remove existing legal obstacles to the recognition and enforceability of electronic signatures and records. Legislation is limited to defining the circumstances under which an electronic signature will fulfil existing legal requirement for tangible signatures. This kind of legislation does not address specific techniques and, therefore, intends to be technology-neutral. The minimalist approach focuses on verifying the intent of the signing party rather than on developing particularized forms and guidelines. The UNCITRAL Model Law on Electronic Commerce (see Article 7) and a number of common law countries (e.g. Canada, the United States<sup>19</sup>, the United Kingdom, Australia and New Zealand) have adopted such an approach.

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<sup>17</sup> See "Inventory of Approaches to Authentication and Certification in a Global Networked Society", OECD Report of October 1999, available at [http://www.oilis.oecd.org/oilis/1999doc.nsf/linkto/dsti-iccp-reg\(99\)13-final](http://www.oilis.oecd.org/oilis/1999doc.nsf/linkto/dsti-iccp-reg(99)13-final)

<sup>18</sup> *An Analysis of International and Digital Signature Implementation Initiatives*. A Study Prepared for the Internet Law and Policy Forum by Kuner C. and Baker S., September, 2000. [http://www.ilpf.org/digsig/analysis\\_IEDSII.htm](http://www.ilpf.org/digsig/analysis_IEDSII.htm); 8 and B.P. Aalberts & S. van der Hof, Digital Signature Blindness, *Analysis of Legislative Approaches Toward Electronic Authentication*, November 1999, <http://cwis.kub.nl/~frw/people/hof/ds-fr.htm>

<sup>19</sup> The United States Electronic Signatures in Global and National Commerce Act follows the minimalist approach. The law gives e-signatures the same legal validity as traditional paper signatures and explicitly forbids the denial of an electronic agreement simply because it is not in writing. To prevent conflicting state level approaches, the law further forbids any state statute or regulation that

2. Digital signature approach (prescriptive approach): it establish a legal framework for the operation of digital signatures (PKIs) -whether or not other forms of secure authentication are included or permitted. Legislation and regulations enacted under this approach share the following characteristics: adoption of asymmetric cryptography as the approved means of creating a digital signature; imposition of certain operational and financial requirements on certificate authorities (CAs); prescription of the duties of key holders; and definition of the circumstances under which reliance on an electronic signature is justified. The prescriptive approach has been adopted by a number of civil law countries (e.g. Italy, Germany, and Argentina).
3. A two-tier approach: it represents a synthesis of the two previous approaches. The laws enacted prescribe standards for the operation of PKIs and take a broad view of what constitutes a valid electronic signature for legal purposes. This approach achieves legal neutrality by granting minimum recognition to most authentication technologies, while at the same time it incorporates provisions for an authentication technology of choice. The two-tier approach has been followed among others by the European Union (1999 EU Directive on Electronic Signatures), the draft UNCITRAL Model Law on Electronic Signatures and the 1998 Singapore Electronic Transactions Act.

Some recent samples of regional (legislation) and international model law legislation on electronic signatures that might guide States wishing to enact legislation in this field are as follows<sup>20</sup>:

- EU Directive of December 1999 on a Community Framework for Electronic Signatures<sup>21</sup>: the aim of the Directive is to establish a harmonised Community-

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limits, modifies, or supersedes the Federal Act in a manner that would discriminate for or against a particular technology.

<sup>20</sup> A number of international organizations, such as the OECD and the ICC have as well been involved in electronic authentication issues. See <http://www.ocde.org/dsti/sti/it/secur/> and [http://www.iccwbo.org/home/menu\\_electronic\\_commerce.asp](http://www.iccwbo.org/home/menu_electronic_commerce.asp).

wide legal framework for electronic signatures and electronic certification services. This means in particular that electronic signatures cannot be denied legal effect just because they are in electronic format but are recognised in a similar manner as hand-written signatures relating to paper-based data. The Directive does not apply to closed systems, such as a corporate Intranet or banking network although electronic signatures used within closed systems benefit from legal recognition. In an effort to ensure that the Directive will not become soon obsolete a technology-neutral approach is adopted based on an open electronic signature concept that includes digital signatures based on public-key cryptography as well as other means of authenticating data<sup>22</sup>. In addition to providing a definition of electronic signature (art.2 (1)) the directive refers to the so-called "advanced electronic signature" that is designed to provide for a higher level of security<sup>23</sup>. Although Member States are barred from making the provisions of Certification Services subject to prior authorisation, they are entitled to set up voluntary accreditation schemes to provide consumers a higher degree of legal security as regards Certification Service Providers (CSP)<sup>24</sup>. Furthermore, Member States shall ensure the establishment of an appropriate system that allows for supervision of CSPs which are established in its territory and issue qualified certificates to the public<sup>25</sup>. The directive does not preclude the establishment of a private-sector-based supervision system or oblige CSPs to apply to be supervised under an accreditation scheme. The directive establishes common requirements for qualified certificates (annex 1), CSPs (annex 2) and secure signature-creation devices (annex 3). As regards liability, the CSP is liable for damage caused to any

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<sup>21</sup> The Directive was published on 19.1.2000 in the Official Journal of the European Communities. According to article 13, Member States should implement the same not later than the 19 July 2001. See for the full text of the Directive <http://europa.eu.int/ISPO/ecommerce/legal/digital.html>

<sup>22</sup> See Schlechter R. from the Directorate General XIII of the European Commission, *Electronic Signatures - The European Community Approach*, paper submitted at the UNCTAD Expert Meeting on Capacity Building in the Area of Electronic Commerce: Legal and Regulatory Dimensions, 14-16 July 1999, Geneva.

<sup>23</sup> See Article 2 (2).

<sup>24</sup> See Article 3 (1) and (2).

<sup>25</sup> See the Commission Decision of 6 November 2000 on the minimum criteria to be taken into account by Member States when designating national bodies responsible for the conformity assessments of secure signature-creation-devices. Official Journal of the European Communities L 289/42 of 16.11.2000. Available at [http://europa.eu.int/comm/trade/index\\_en.htm](http://europa.eu.int/comm/trade/index_en.htm).

entity or legal or natural person who reasonably relies on the certificate unless the CSP proves that he has not acted negligently. Under certain conditions, the CSP is entitled to set limits regarding the use of a certificate and the value of transactions for which the certificate is valid<sup>26</sup>. Article 7 of the directive addresses the international dimension of electronic commerce by ensuring that certificates issued in a third country are recognised as legally equivalent to certificates issued by a CSP established within the Community under certain precise conditions. Article 8 of the directive that refers to data protection provides for the application to CSPs and national bodies responsible for accreditation/supervision of Directive 95/46EC of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data. Furthermore, it is specifically provided that CSPs may collect personal data only directly from the data subject, or after the explicit consent of the data subject, and only insofar as it is necessary for the purposes of issuing and maintaining the certificate. The data may not be collected or processed for any other purposes without the explicit consent of the data subject.

- Draft UNCITRAL Model Law on Electronic Signatures: following the adoption in 1996 of the Model Law on Electronic Commerce and in particular of article 7 concerning "signatures"<sup>27</sup>, UNCITRAL requested the Working Group on Electronic Commerce to develop further rules on electronic signatures (the original mandate read "digital signatures and certification authorities"), to help provide more certainty by implementing the said provision. The Working Group began its work in February 1997 and finished at its thirty-seventh session in September 2000. The Draft Model Law on Electronic Signatures (hereinafter MLES)<sup>28</sup> together with the Draft Guide to Enactment<sup>29</sup> will be submitted to the

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<sup>26</sup> See Article 6.

<sup>27</sup> Article 7 provides that where the law requires a person to sign a document, that requirement is met if a method is used to identify the person and indicate his or her approval of the document, and if that method is as reliable as appropriate in the light of all the circumstances, including any relevant agreement.

<sup>28</sup> "The MLES was prepared on the assumption that it should be directly derived from Article 7 of the UNCITRAL Model Law on Electronic Commerce and should be considered as a way to provide detailed information as to the concept of a reliable "method use to identify" a person and "to indicate that person's approval" of the information contained in a data message." UNCITRAL document A7CN.9/WG.IV/WP.71, para. 49.

United Nations Commission on International Trade Law for review and adoption at its thirty-fourth session, to be held at Vienna from 25 June to 13 July, 2001. The MLES has three main parts: on criteria for reliable electronic signatures; on duties of the three potential functions involved in an electronic signature (signatory, certification service provider, and relying party); and on the recognition of foreign certificates and electronic signatures<sup>30</sup>. In addition, the Draft Guide to Enactment, much of which is drawn from the *travaux preparatoires* of the Model Law, is intended to assist States in considering which, if any, of the MLES provisions should be varied in order to be adapted to any particular national circumstances. Furthermore, a number of issues not included in the MLES are referred in the Guide so as to provide guidance to States enacting the Model Law<sup>31</sup>. The MLES applies only to commercial activities (Article 1) in a wide sense that includes the supply or exchange of goods or services, distribution agreements, agency, factoring, leasing, investment, financing, banking, insurance, carriage of goods... Article 6 constitutes one of the main provisions of the MLES, since it provides guidance in paragraph 3 as to the test of reliability of electronic signatures. The criteria is as follows<sup>32</sup> :

- (a) "the signature creation data are, within the context in which they are used linked to the signatory and to no other person;
- (b) the signature creation data were, at the time of signing, under the control of the signatory and of no other person;
- (c) any alteration to the electronic signature, made after the time of signing, is detectable; and

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<sup>29</sup> The Draft UNCITRAL Model Law on Electronic Signatures and the Draft Guide to Enactment, as well as the background documentation could be found at <http://www.uncitral.org/en-index.htm>.

<sup>30</sup> See Gregory J. "UNCITRAL Meeting on Electronic Signatures", October 2000, <http://rechten.kub.nl/simone/gregory.htm>

<sup>31</sup> See the preamble of the Draft Guide to Enactment of the UNCITRAL Model Law on Electronic Signatures (2001).

<sup>32</sup> The UNCITRAL criteria coincides with the requirements set out in the EU Directive for defining "advance electronic signature". See footnote 12.

- (d) where a purpose of the legal requirement for a signature is to provide assurance as to the integrity of the information to which it relates, any alteration made to that information after the time of signing is detectable".

Article 6 (4) underlines that there is no need to show all the above-mentioned criteria for a signature to be reliable but that the reliability could be established in any other way. Furthermore, and in accordance with article 7 any person, organ or authority, whether public or private, specified by the enacting State as competent, may determine which electronic signatures satisfy the provisions of article 6. Any such accreditation must be consistent with recognized international standards. Article 8 sets out what the signatory must do and article 9 describes the conduct of the certification service provider (CSP). Concerning the recognition of foreign certificates and electronic signatures article 12 establishes the general principle of legal equivalence between foreign and domestic signatures and certificates if the system in the state of origin offers a "substantially equivalent" level of reliability to that in the receiving state. Although the draft MLES does not constitute a comprehensive set of rules on the subject, its rules are consistent with international practices and it provides an important international model for countries wishing to enact legislation on electronic signatures.

### **Electronic contracting**

In addition to the UNCITRAL work the following activities merit to be highlighted. On a regional basis the European Union adopted a "Directive on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market" (Directive on electronic commerce)<sup>33</sup> that lay down a general framework to ensure the free movement of information society services in the EU. The Directive covers all information society services, B2B and B2C, as well as services provided free of charge to the recipient. The Directive establishes rules in areas including definition of where operators are established; transparency obligations for ISPs; transparency requirements for commercial communications; conclusion and validity of electronic contracts; liability of Internet intermediaries; and on-line dispute

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<sup>33</sup> Directive of 8 June 2000, Official Journal of the European Communities, 17.7.2000. The full text of the Directive is available at <http://europa.eu.int/ISPO/ecommerce/legal/legal.html#frame>.

settlement. Although the Directive does not apply to services supplied by service providers established in a third country (outside the EU), the solutions provided to some of these issues may serve as a model for countries wishing to regulate this area.

Other recent work of a related nature that focuses on contractual matters is the "Electronic Commerce Agreement" (hereinafter the E-Agreement) developed by the UN/CEFACT<sup>34</sup>. The E-Agreement is intended to serve the commercial requirements of B2B electronic commerce partners. It contains a basic set of provisions which can ensure that one or more electronic commercial transactions may be concluded by commercial partners within a sound legal framework. Though the E-Agreement could as well be used in the B2C relationship, it does not include provisions relating to consumer protection. Thus, businesses wishing to use the E-Agreement in the B2C sector must be aware of the need to comply with mandatory consumer protection laws. Furthermore, parties shall ensure compliance with other mandatory national and local laws such as tax regulations and data protection legislation.

In addition to the above-mentioned contractual solutions, the UN/CEFACT has recommended a Model Code of Conduct for Electronic Commerce as a means of facilitating e-commerce transactions. The Code of Conduct that is a self-regulatory instrument can work in parallel with other means of measures to facilitate electronic commerce, such as trustmark schemes. The Recommendation that request States, the promotion and development of self-regulation instruments for electronic business, includes as one valid example the "Model Code of Conduct for Electronic Commerce developed by the Electronic Commerce Platform of the Netherlands" that is incorporated as an annex to the Recommendation<sup>35</sup>.

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<sup>34</sup> See Recommendation No. 31 of March 2000, ECE/TRADE/257. The full text of the E-Agreement is available at <http://www.unece.org/cefact/>. See as well "The Model Interchange Agreement for the International Use of Electronic Data Interchange", adopted by the UN/ECE WP.4 in March 1995 as Recommendation No. 26.

<sup>35</sup> See Draft Recommendation on E-Commerce Self-Regulatory Instruments (Codes of Conduct), TRADE/CEFACT/2001/14 of 15 January 2001. Available at <http://www.unece.org/cefact/>.

## **The issue of negotiability in an electronic environment**

It is recognized that the issue of negotiability<sup>36</sup> constitutes the most challenging aspect of implementing EDI in international trade practice. This is due in no small measure to the attributes of the negotiable document: transferability, title bearing and tangibility.<sup>37</sup> The legal rules that govern negotiable documents (e.g. marine bills of lading) premise right in goods, such as ownership, on the physical possession of an original paper document.<sup>38</sup> The question then arises as to whether the traditional formalities of negotiable documents can be harmonized with the inexorable march of commercial practice towards electronic commerce. Two main questions arise concerning negotiable documents in an electronic environment. The first question is whether negotiability and other characteristics of documents of title can be accommodated in an electronic context. The second question is whether the issues of documents of title can be addressed within the framework of a contract or whether statutory law is needed.<sup>39</sup>

In a majority of countries, negotiability cannot be created by agreement of the parties. This is the case in a majority of common law countries where documents are negotiable either by virtue of statute<sup>40</sup> or by custom.<sup>41</sup> Furthermore, in a majority of

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<sup>36</sup> The principle attributes of negotiable instruments have been summarized as follows: “the paper must be freely assignable, the debt is “merged” into the paper evidencing the claim, transfer can only be made by physical delivery of the paper with evidence of the transferor’s intent to make the transfer, discharge of the debt can only be made by payment to the person holding the instrument, creditors can only assert their claims by getting legal possession of the paper and the situs of the debt is the physical location of the instrument. Gilmore G., *The Commercial Doctrine of Good Faith Purchase*, 63 *Yale Law Journal* (1954): 1063-1066.

<sup>37</sup> See Toh See Kiat, *Paperless International Trade: Law of Telematic Data Interchange*, Singapore, 1992: 115.

<sup>38</sup> Ritter J.B. & Gliniecki JY, *International Electronic Commerce and Administrative Law: The Need for Harmonized National Reforms*, 6 *Harvard Journal of Law & Technology*, 1993: 279.

<sup>39</sup> United Nations Commission on International Trade Law, Twenty-fourth session, Vienna, 10-28 June 1991, A/CN.9/350 of 15 May 1991, para. 104.

<sup>40</sup> See for example the various legislations on Bills of Lading or Carriage of Goods by Sea Act and International Conventions such as the Hague-Visby and Hamburg Rules.

countries, negotiability cannot be created by agreement of the parties. This is particularly the case in German law, where a system of so-called *Typenzwang- numerus clausus*, excludes from the status of negotiable transport document any document not enumerated in the relevant Commercial Code<sup>42</sup>, and, from the status of document of title any document not expressly recognized as such by statute<sup>43</sup>. Some continental law countries do however permit the parties to create “negotiable documents of title” by agreement through a so-called “open system of negotiable documents of title”. Thus, it seems that under Italian<sup>44</sup> and French Law, the commercial parties might by agreement create new documents of title as long as there are not “documents of title to money” to the bearer. This is contrary to the Common Law approach where only “transferability” can be created by the parties, not “negotiability”.

The difficulties encountered in replacing the legal characteristics of “negotiability” in an electronic environment had been equally underlined by the United Nations Economic Commission for Europe<sup>45</sup> that recommends that “any development in the use of a document from which the function of negotiability is removed will facilitate a change from paper data interchange to EDI”.<sup>46</sup> This is due to

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<sup>41</sup> The existing negotiable documents have been created in a long process, starting with the development of new business practice in relation to the functions of a type of document, followed by a period where doctrine and case law slowly assimilate the new business practice. Finally, a statute law defining the new negotiable document is adopted, and it is only at this time it can be said that the new document has achieved full status as a recognized negotiable document. MANDATE- Final Report of the Commission of the European Communities for the TEDIS Programme, 1.3 – 04.04.95, pp. 12-13. Thus, in English law the bill of lading obtained its symbolic quality from the custom found in *Lickbarrow v. Mason*, (1794) 5 Term Rep. 683, King’s Bench. By that custom bills of lading became “negotiable and transferable” by endorsement and delivery or transmission.

<sup>42</sup> 363, sec. 2 H.G.B.

<sup>43</sup> De Wit R., *Multimodal Transport: Carrier Liability and Documentation*, Lloyd’s of London Press, 1995: 318; Hueck/Canaris *Recht der Wertpapiere*, 12, Aufl, Munich 1976: 24 et seq.; Recalde Castells A., *El Conocimiento de Embarque y otros Documentos del Transporte*, Editorial Civitas, 1992: 346 – 348.

<sup>44</sup> See Art. 2004, Italian Civil Code 1942, Pellizi, *Principi di Diritto Cartolare*, Bologna 1970: 67; Martorano, *Libertà di Creazione dei Titoli di Credito e Autonomia Privata*, BBTC, 1978, I, p. 385 et seq.; Fiorentino, *Titoli di Credito*, Bologna – Roma 1974: 385 et seq.

<sup>45</sup> Measures to Facilitate Maritime Transport Documents Procedures, Recommendation No. 12/Rev. 1 adopted by the Working Party on Facilitation of International Trade Procedures, Geneva, July 1993, ECE/TRADE/190, para. 26.

<sup>46</sup> The willingness to promote the use of substitutes for traditional negotiable transport documents can be noted since the 1990 Revision of the Incoterms. The traditional reference to bills of lading has been

the fact that an electronic message cannot carry the legal characteristics of “negotiability” currently linked with physical possession of a paper document.

The Final Report<sup>47</sup> of the Commission of the European Communities aiming at establishing an electronic alternative to negotiable documents highlighted the fact that “electronic negotiability is not catered for under present law in the legal system of the Member States<sup>48</sup> studied in the report. Until the law is amended, it appears that parties wishing to carry out the functions of negotiability would have to enter into some type of contractual relationship.” It is furthermore recognized that<sup>49</sup> “any project wishing to create an electronic negotiable document will have to limit its ambitions to the creation of the *electronic equivalent* of a negotiable document. A contractual framework is needed to provide commercial certainty, and technical solutions are required to provide the requisite security features”.

In the context of carriage of goods - i.e. when replacing negotiable transport documents such as marine bills of lading - in order to achieve legal certainty by securing the “uniqueness” of the message to be relied upon by the carrier for delivering the goods, it seems that the most realistic option is to rely on some form of registry<sup>50</sup> or on another type of security device. While reliance in a registry is appealing, it should not be forgotten that the SeaDocs project launched in the early 1980’s by the Chase Manhattan Bank failed due, among other reasons, to the potential high cost of registry operation’s insurance and the unwillingness of commodity

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replaced by a reference to the “usual transport document”. Since 1990 Incoterms also advance the concept of an “equivalent electronic message” as a replacement for the traditional paper document. See Incoterms 1990 and Incoterms 2000, ICC Publications Nos. 460 and 560, Paris.

<sup>47</sup> See MANDATE Final Report for the TEDIS Programme, 1.3 – 04.04.95, p. 7.

<sup>48</sup> UK, France, Belgium, Germany and Sweden.

<sup>49</sup> See MANDATE Final Report, *op.cit.*: 13.

<sup>50</sup> As suggested by the MANDATE Report one way of guaranteeing uniqueness in an electronic environment is to make use of a Trusted Third Party (TTP). A TTP can be either unconditionally trusted (UTTP) or functionally trusted (FTTP). The difference is that an UTTP has access to the totality of the transaction for which the TTP service is used, and is trusted to verify all aspects of the transaction. See MANDATE Report, p. 5.

traders to record their transactions in a central registry subject to inspection by competitors and tax authorities.<sup>51</sup>

In principle, it seems that there are two possible solutions for parties wishing to enter into such a scheme: a “horizontal solution”, which would involve establishing a contract between the two interested parties each time a transaction is entered into, and the second, “vertical solution”, whereby each interested party makes a separate contract with a central entity prior to being able to trade with other parties<sup>52</sup>. The latter solution is the one that has been adopted by the Bolero Project<sup>53</sup>. In both cases, however, the contractual nature of the scheme constitute at the same time its weakness since due to the doctrine of privity of contract third parties who are not privy to the scheme will not be bound by its terms<sup>54</sup>.

George F. Chandler<sup>55</sup> adopts a simple and innovative approach in explaining how to achieve electronic negotiability. He suggests that the first thing to do is “dissect the process of negotiability into its necessary and fundamental elements, while stripping away the myths, misconceptions and superficialities”<sup>56</sup>. He underlines that as long as the focus is on the signed, original document, then the task is very

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<sup>51</sup> The basic idea under the SeaDocs system was to deposit bills of lading with a depositary that would hold them for whom it may concern and receive notifications electronically or otherwise of any transfers made. Thus, the traditional rules relating to bills of lading could still be applied and the availability of the bill of lading at destination ensured. See Chandler G. III, “Maritime Electronic Commerce for the Twenty-First-Century” paper presented at the Centenary of the Comité Maritime International, Antwerp, Belgium, 10 June 1997: 9 – 10 and Recommendation No. 12 of the UN/ECE “Measures to Facilitate Maritime Transport Document Procedures”, *op.cit.* paras. 27 – 28.

<sup>52</sup> See MANDATE Final Report, *op.cit.*: 14.

<sup>53</sup> For a detailed description of the Bolero Project see <http://www.boleroltd.com/>.

<sup>54</sup> The UNCTAD study on “Electronic Commerce: Legal Considerations”, *op.cit.* para. 36 in listing the limitations on the use of contractual solutions notes the following restrictions:

- i. obligations arising from mandatory legislation ;
- ii. rights and obligations of third parties that are not parties to the agreement;
- iii. communication in an open network where no prior contractual relationship exists

<sup>55</sup> Maritime Electronic Commerce for the Twenty-First-Century, *op.cit.*: 220.

<sup>56</sup> This view is as well followed by Ramberg J. that considers sufficient that the so called “negotiable document” embodies an undertaking on the part of the carrier to release the goods to the holder and only to the holder, regardless of the transport mode or the status of the issuer. See Schmitthoff C and Goode R., “International Carriage of Goods: some legal problems and possible solutions”. *The International Commercial Law* serie: 5-6.

difficult, but the substance of a negotiable document is not its signature or its original nature, but the process that inspires confidence in that piece of paper. He added that a bill of lading or any other document of title is an abstract representation of the material goods it describes just as paper money is the abstract representation of the monetary unit it describes. In both cases, the paper has no real value of its own, and its value exists only as long as there is confidence that it can be redeemed for the material promised. Chandler advances that the instrument –whether paper or EDI – is merely the medium for transfer. On that basis, any medium, including EDI, can be used if the parties agree and have confidence in it: “it is the information that it is important, not the paper”. He finally suggests that the more secure means of verification is with a trustworthy registry, either a centralized registry or a registry operated by the issuing party: “using a registry system, any negotiable document can be duplicated electronically, provided the movement of that document is broken down into its most elemental steps and replaced by appropriate EDI messages. Once it is recognized that the traditional functions of paper can be performed by the electronic transmission of information, then the ultimate business function, negotiability, can be undertaken as well”.<sup>57</sup>

### **Online Dispute Resolution (ODR) as a solution to cross-border e-commerce disputes**

A key element to building trust is ensuring users and consumers effective redress for disputes arising from transactions in the online environment. Awareness of the potential legal barriers arising from resorting to courts in disputes resulting from cross-border online interactions is widely shared: which law applies, which authority has jurisdiction over the dispute, which forum is competent to hear the dispute, is the decision enforceable? These are some of the questions that all too often arise and for which there is not yet a clear answer. Given that traditional dispute settlement mechanisms may not provide effective redress in e-commerce transactions,

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<sup>57</sup> *Ibid*: 15-16. Chandler concludes his remarks by saying: “the only limitation to EDI is a mental one. For those who can not bring themselves to abandon impressive looking pieces of paper for computer video screens or printouts, no argument can be put forward to justify negotiable transactions using EDI. For those who need or believe in EDI, they will come to realize that we put our faith not in the piece of paper, but in the process and that any process can be duplicated electronically. Thus, it is not a question of if it can be done, but when.”

there is a need to consider alternative dispute resolution mechanisms (ADR)<sup>58</sup> that would provide speedy, low cost redress for a large number of the small claims and low-value transactions arising from B2C online interactions. When ADR<sup>59</sup> takes place using computer-mediated communications in the online environment, often it is referred to as online dispute resolution (ODR). Both e-disputes and brick and mortar disputes can be resolved using ODR. At the moment there are four types of ODR systems<sup>60</sup>:

- Online settlement: it is the most developed form of ODR. It uses an expert system to automatically settle financial claims<sup>61</sup>.
- Online arbitration: it uses a website to resolve disputes with the aid of qualified arbitrators<sup>62</sup>.
- Online mediation: using a website to resolve disputes with the aid of qualified mediator.
- Online resolution of consumer complaints: it provides online handling of consumer complaints<sup>63</sup>. In view of the special rules applicable to consumers in many jurisdictions, most of the existing ODR do not preclude the consumer to have recourse to the court system if it disagrees with the decision rendered or the solution proposed by the ODR.

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<sup>58</sup> ADR refers to out-of-court methods for resolving disputes, including negotiation, mediation and arbitration.

<sup>59</sup> The two most common types of ADR/ODR tools are mediation and arbitration. Mediation is a voluntary process in which a third-party facilitator assists the parties to the dispute to voluntarily arrive at a mutually agreed upon solution. Generally, mediation requires a third party neutral who is trusted by both parties and who is capable of protecting the integrity of the proceedings. Arbitration, on the other hand, has three main characteristics: it is consensual, the decision-maker or arbitrator is a neutral selected by or through a process agreed upon by the parties, and the process results in a definitive and binding award that is recognized by and through most national courts.

<sup>60</sup> Van den Heuvel E, "Online Dispute Resolution as a Solution to Cross-Border E-Disputes". Available at [http://www.ocde.org/dsti/sti/it/secur/act/online\\_trust/documents.htm#related\\_documents](http://www.ocde.org/dsti/sti/it/secur/act/online_trust/documents.htm#related_documents).

<sup>61</sup> Cybersettle was the first company to offer an online computer-assisted method for settling insurance claims. It was followed shortly afterwards by Clicknsettle, which offers parties with any kind of monetary dispute the possibility of reaching a settlement with the help of an automated expert system.

<sup>62</sup> eResolution is one of the companies that settles domain names disputes online in accordance with the ICANN Uniform Domain Name Dispute Resolution Policy.

<sup>63</sup> See the ODR international survey of Consumers International on cross-border disputes in cyberspace. Available at <http://www.consumersinternational.org/campaigns/electronic/sumadr-final.html>.

ODR exists in a variety of contexts, including within a particular online marketplace (e.g. mediation in online auction sites<sup>64</sup>, arbitration in the domain name context and automated negotiation process for insurance disputes), as part of a trustmark or seal programme<sup>65</sup>, or on an independent basis. These ADR/ODR mechanisms vary from those which are fully automated - in that a computer programme without human intervention generates outcomes - to most others ADR/ODR providers that offer dispute settlement with human intervention. As of December 2000, more than forty online ADR mechanisms had been identified<sup>66</sup>.

Since the adoption in December 1999 of the OECD "Guidelines for Consumer Protection in the Context of Electronic Commerce"<sup>67</sup>, a number of international workshops and conferences took place to explore ODR mechanisms: the European Commission<sup>68</sup>, the Federal Trade Commission of the United States<sup>69</sup> and the Joint meeting of the OECD, the Hague Conference on Private International Law and the ICC<sup>70</sup> hosted these type of events. The Trans-Atlantic Consumer Dialogue (TACD)

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<sup>64</sup> See as an example Ebay ODR system in [http://www.squaretrade.com/eb/ebay\\_020801.html?marketplace\\_name=ebay&campaign=EBY\\_OD\\_2#odr](http://www.squaretrade.com/eb/ebay_020801.html?marketplace_name=ebay&campaign=EBY_OD_2#odr).

<sup>65</sup> Among other examples, AOL Certified Merchant Programme is a self-described "dispute avoidance" programme by which AOL guarantees to make the consumer whole if a dispute arises with any AOL-certified merchant. Many other online merchants settles consumer disputes simply by refunding the customer's money or replacing the products free of charge.

<sup>66</sup> Several organisations have conducted inventories of ADR mechanisms, including the OECD, Consumers International, the International Chamber of Commerce and the Global Business Dialogue. The inventories can be found at the following sites:  
[http://www.oecd.org/dsti/sti/it/secur/act/online\\_trust/orientation\\_document.pdf](http://www.oecd.org/dsti/sti/it/secur/act/online_trust/orientation_document.pdf);  
<http://www.consumersinternational.org/campaigns/electronic/sumadr-final.html>;  
[http://www.oecd.org/dsti/sti/it/secur/act/online\\_trust/ICCInventory.doc](http://www.oecd.org/dsti/sti/it/secur/act/online_trust/ICCInventory.doc);  
<http://www.gbde.org/library/adr.doc>  
Source: Government and Private Sector Initiatives to Promote and Implement the OECD Guidelines for Consumer Protection in the Context of Electronic Commerce, DSTI/CP(2000)7/FINAL, 28 February 2001. Available at <http://www.ocde.org/dsti/sti/it/consumer/>.

<sup>67</sup> Available at <http://www.ocde.org/dsti/sti/it/consumer/>.

<sup>68</sup> See <http://dsa-isis.jrc.it/ADR/workshop.html>

<sup>69</sup> See Alternative Dispute Resolution for Consumer Transactions in the Borderless Online Marketplace, June 6-7, 2000. Summary of Public Workshop, Federal Trade Commission: 6. See for the full transcript <http://www.ftc.gov/bcp/altdisresolution/transcripts.htm>.

<sup>70</sup> See [http://www.ocde.org/dsti/sti/it/secur/act/online\\_trust/online\\_trust\\_workshop.htm](http://www.ocde.org/dsti/sti/it/secur/act/online_trust/online_trust_workshop.htm).

issued a recommendation on ADR in the context of e-commerce<sup>71</sup> and the Global Business Dialogue on e-commerce released a paper that provides recommendations for Internet merchants, ADR service providers, and governments<sup>72</sup>.

<b>Main ADR Forms and Processes</b>				
<b>Corporate Complaint Services</b>	<b>Assisted Negotiation</b>	<b>Mediation</b>	<b>Arbitration</b>	<b>Litigation</b>
	Facilitation Conciliation	<p><i>On a Sliding Scale:</i></p> <p>Automated, or not</p> <p>More or less active guidance by the neutral</p> <p>Voluntary or mandatory participation</p> <p>No obligation on the parties to agree, before entering ADR, that the outcome will be binding</p>	<p>Voluntary or mandatory submission</p> <p>Automated or not</p> <p>Final and binding</p>	
<b>Informal to Formal ADR</b>				

*Source:* "Building Trust in the Online Environment: B2C Dispute Resolution". Joint Conference of the OECD, HCOPII, and ICC. The Hague, 11-12 December 2000. Orientation Document.

<sup>71</sup> Available at <http://www.tacd.org/ecommercef.htm#adr>

<sup>72</sup> Available at <http://www.gbde.org/library/adr.doc>

## Concluding remarks

The existence of a predictable and supportive legal framework has been singled out as an essential tool to enhance the much-needed level of trust of both business and consumers in international transactions.<sup>73</sup> It is hereby suggested that developing countries wishing to accommodate e-commerce might wish to give consideration to the following policy recommendations:

- To ensure that e-transactions are given the same legal effect as traditional paper-based transactions, Governments are urged to examine their legal infrastructure to ascertain if paper-based form requirements prevent laws from being applied in an e-environment. In reviewing their legal infrastructures, consideration might be given to using the United Nations Commission on International Trade Law (UNCITRAL) Model Law on Electronic Commerce, as a basis for preparing new laws or adjusting current laws;
- As regards encryption and electronic signatures, there seems to be a consensus that a mechanism for secure authentication of electronic communication is critical to the development of e-commerce. These mechanisms must provide for confidentiality, authentication (enabling each party in a transaction to ascertain with certainty the identity of the other party), and non-repudiation (ensuring that the parties to a transaction cannot subsequently deny their participation). The new draft Model Law on Electronic Signatures and the draft Guide to Enactment currently being finalized by UNCITRAL along with some recent samples of regional legislation on electronic signatures described in the chapter might guide developing countries wishing to prepare legislation on electronic signatures;
- Concerning negotiability of e-messages, it seems that there is a need for a trusted third party to stand behind and verify the authenticity and singularity (uniqueness) of the message. It is likely that a "registry" would have to fulfil this function. Under such a registry, the registrar will manage the transfer of title from one party

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<sup>73</sup> In many of the joint statements the United States has signed with other countries, it has been underlined that " The role of government is to provide, where necessary, a clear, consistent and predictable legal framework, to promote a pro-competitive environment in which electronic commerce can flourish and to ensure adequate protection of public interest objectives."

to the other. The basic principle is that all users should share a universal confidence that the registry can be trusted not to duplicate a message. For such a system to succeed a number of important issues relating to confidentiality and the rights and liabilities of both the users and providers of the service will need to be satisfactorily addressed<sup>74</sup>;

- As pointed out in this paper a key element to building trust consist in ensuring that users and consumers have effective redress for disputes arising from transactions on-line. Given that traditional dispute settlement mechanisms do not provide effective redress in e-commerce transactions, there is a need to consider ADR/ODR mechanisms that would provide speedy, low-cost redress for a large number of the small claims and low-value transactions arising from consumers' on-line interactions. The adoption of rules and standards concerning consumer protection, resolution of disputes on-line and choice of court clauses will significantly enhance, it is assumed, consumer confidence in e-commerce;
- International co-operation is absolutely essential, because of the very essence of e-commerce. It is important in this regard that harmonized rules based on international standards are adopted in order to fight against criminal activities and that judicial co-operation is strengthened.

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<sup>74</sup> See "Electronic Commerce: Legal Considerations", *op.cit.*: para. 59