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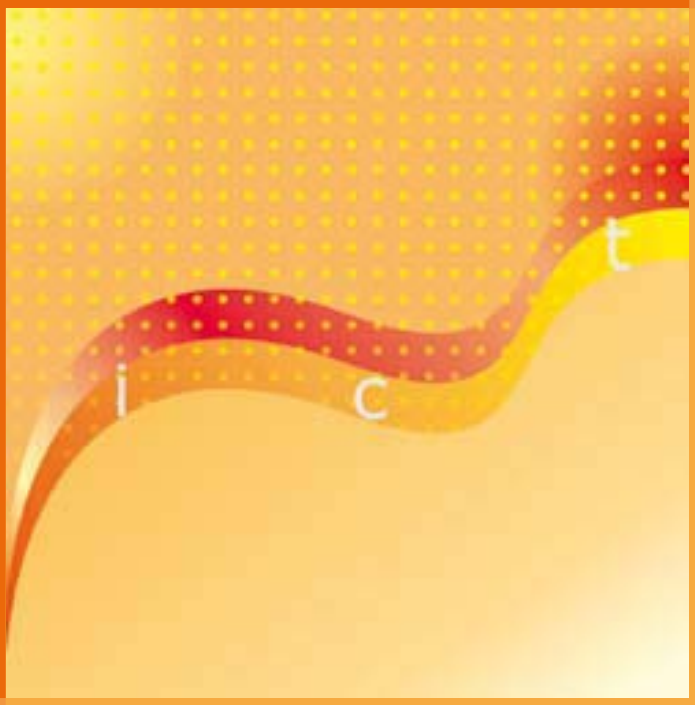
INFORMATION ECONOMY REPORT 2006

The Development Perspective



United Nations

Chapter 8

LAWS AND CONTRACTS IN AN E-COMMERCE ENVIRONMENT

A. Introduction

Most legal systems have developed over many years and comprise a myriad of laws and regulations as well as judicial decision-making. While laws and regulations rarely expressly require the use of paper, they often use terminology that seems to presume the use of paper and other physical acts, phrases such as "under the hand of" and "on the face of". As a consequence, when organizations shift from paper-based communication techniques to electronic methods, there is often uncertainty about how existing laws will treat data messages in terms of validity, enforceability and admissibility. This legal uncertainty is an obstacle to the adoption of e-commerce and therefore many Governments have amended or supplemented existing laws in order to address it.

This chapter examines the legal nature of communications and data messages in electronic commerce. Considerable international harmonization has been achieved in this field, on the basis of a series of initiatives by the United Nations Commission on International Trade Law (UNCITRAL). The most significant of these was the adoption of the United Nations Convention on the Use of Electronic Communications in International Contracts, which was formally adopted in November 2005 and opened for signature in January 2006. The provisions of this Convention will be examined in relation to the conclusion of contracts through data messages and fulfilling requirements of form with data messages. Consideration will also be given to the experience of developing countries in amending their domestic legal framework to reflect the needs of an electronic commerce environment.

While the legal discussion on the specific aspects of the UN Convention that will be examined in this chapter is applicable to all countries, regardless of their level of development, it is worthwhile to note the relevance of the UN Convention for developing countries. It has the potential to facilitate international electronic commerce, which can open the doors to new markets and become a source of economic growth. Some developing countries will require awareness-raising and technical assistance in order to accept and implement the Convention. Such awareness-raising and assistance should take place in the context of international efforts to reduce the digital divide.

B. EDI and trading partner agreements

While electronic contracting has become especially relevant as a result of the Internet revolution since the mid-1990s, electronic business has existed before in a business-to-business context through the use of Electronic Data Interchange (EDI). EDI consists of standard business messages being transmitted from one computer to another computer. It differs from the use of regular e-mail in that it is based on a standard or code that is agreed upon by two parties, enabling the automated processing of the content of a message without human intervention. Over time, a variety of EDI standards have been developed, at industry, national and international levels, including the United Nations UN/EDIFACT standard.[1]

Since the parties to an EDI transaction must rely on using the same EDI messaging standard, parties generally enter into a "trading partner agreement", in which they agree on the EDI standard and additional provisions regarding the treatment and validity of the data messages being exchanged. The trading partner agreement may be a separate agreement or may be integrated into a master purchase agreement containing the substantive provisions of the sales–purchase relationship between the parties. Since the 1990s, a number of model trading partner agreements have been developed on a national, regional or international level. In 2000, for example, the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) adopted a model Electronic Commerce Agreement.[2]

This agreement provides an overview of the issues facing the establishment of a paperless EDI system and is designed to contribute "to the building of trust

between business entities". In the trading partner agreement, the parties can address the specific issues of electronic contracting, such as when a person is bound by a message or by erroneous electronic messages. Generally, by entering into the trading partner agreement, the parties would agree that they consider contracts concluded electronically via EDI to be valid and enforceable obligations between them.

In the absence of an appropriate statutory regime, private law mechanisms, such as contractual agreements, made between the parties to a transaction but recognized and enforceable before the courts, are an important means of addressing the legal uncertainties of doing business electronically.

C. UNCITRAL initiatives

An important concern of many countries is that traditional legal frameworks may prove to be a barrier to increased global electronic trade. As early as 1985, UNCITRAL and the United Nations General Assembly called upon all Governments to review legal requirements for a handwritten signature or other paper-based requirements for trade-related documents in order to permit, where appropriate, the use of electronic technologies.[3] States were slow to respond, and UNCITRAL ultimately concluded that paper-based requirements combined with the lack of harmonization in the rules applicable to electronic commerce constituted a substantial barrier to international trade, and that uniform rules for electronic commerce were necessary.

In 1992, UNCITRAL embarked upon the preparation of legal rules on the subject and gave its final approval to the resulting Model Law on Electronic Commerce, which was eventually adopted by the General Assembly in December 1996.[4] The Model Law has proved a great success, as a basis for national law reform initiatives (see box 8.1), as well as for encouraging similar initiatives in other intergovernmental forums. In November 2002, for example, a meeting of the Commonwealth law ministers, representing 53 developed and developing countries, approved a Model Law on Electronic Transactions and a Model Law on Electronic Evidence.[5]

The main objective of the UNCITRAL Model Law was to offer national legislators a set of internationally acceptable rules allowing a number of legal obstacles to be removed and a more secure legal environment to be created for electronic commerce. The UNCITRAL Model Law is not an international treaty and does not therefore constitute positive law. Instead, it was drafted to provide a guide for individual countries in preparing their own national legislative response. National legislators and policymakers are not required to adopt in its entirety (or reject in its entirety) the UNCITRAL Model Law. Instead, national legislatures may modify it to meet concrete needs or concerns of their jurisdictions. This flexibility fosters the adoption of the core provisions of the UNCITRAL Model Law, which promotes the development of an international system of national electronic contracting legislation that, although not identical, is similar in structure and content. UNCITRAL has also published a Guide to Enactment of the UNCITRAL Model Law on Electronic Commerce,[6] which provides national policymakers with background and explanatory information to assist them in using the Model Law.

Box 8.1

UNCITRAL Model Law on Electronic Commerce (1996)

Legislation implementing provisions of the Model Law has been adopted in:

Australia (1999), China (2004), Colombia* (1999), Dominican Republic* (2002), Ecuador* (2002), France (2000), India* (2000), Ireland (2000), Jordan (2001), Mauritius (2000), Mexico (2000), New Zealand (2002), Pakistan (2002), Panama* (2001), Philippines (2000), Republic of Korea (1999), Singapore (1998), Slovenia (2000), South Africa* (2002), Sri Lanka (2006), Thailand (2002) and Venezuela (2001).

The Model Law has also been adopted in:

The Bailiwick of Guernsey (2000), the Bailiwick of Jersey (2000) and the Isle of Man (2000), all Crown Dependencies of the United Kingdom of Great Britain and Northern Ireland; in Bermuda (1999), Cayman Islands (2000), and the Turks and Caicos Islands (2000), overseas territories of the United Kingdom of Great Britain and Northern Ireland; and in the Hong Kong Special Administrative Region of China (2000).

Uniform legislation influenced by the Model Law and the principles on which it is based has been prepared in:

The United States of America (Uniform Electronic Transactions Act, adopted in 1999 by the National Conference of Commissioners on Uniform State Law);

Canada (Uniform Electronic Commerce Act, adopted in 1999 by the Uniform Law Conference of Canada).

* Except for the provisions on certification and electronic signatures.

Source: www.uncitral.org.

1. Model Law on Electronic Signatures

Building on the success of the Model Law as a precedent for national law reform, UNCITRAL adopted in 2001 a Model Law on Electronic Signatures,[7] which builds on the signature provision in the 1996 Model Law. From a legal and security perspective, signatures provide two key elements — authentication and integrity. The use of such techniques is seen as critical to the widespread adoption of electronic commerce, particularly in terms of meeting the requirements of Governments and regulatory authorities.

The 2001 Model Law addresses an issue raised in the 1996 Model Law concerning the reliability of an electronic signature. Article 7 of the 1996 Model Law states that an electronic signature shall satisfy a requirement for a signature where it meets two criteria: first, that the signature technique identifies the signatory and indicates his or her approval of the message content, which reflects the basic functions of a signature; and second, that the method used was "as reliable as was appropriate for the purpose", which reflects the security functionality of a signature.The 2001 Model Law addresses the issue of reliability by

Box 8.2

United Nations General Assembly Resolution 60/21, United Nations Convention on the Use of Electronic Communications in International Contracts

(December 2005)

Considering that problems created by uncertainties as to the legal value of electronic communications exchanged in the context of international contracts constitute an obstacle to international trade,

Convinced that the adoption of uniform rules to remove obstacles to the use of electronic communications in international contracts, including obstacles that might result from the operation of existing international trade law instruments, would enhance legal certainty and commercial predictability for international contracts and may help States gain access to modern trade routes,

Recalling that, at its thirty-fourth session, in 2001, the Commission decided to prepare an international instrument dealing with issues of electronic contracting, which should also aim at removing obstacles to electronic commerce in existing uniform law conventions and trade agreements, and entrusted its Working Group IV (Electronic Commerce) with the preparation of a draft,[1]

Noting that the Working Group devoted six sessions, from 2002 to 2004, to the preparation of the draft Convention on the Use of Electronic Communications in International Contracts, and that the Commission considered the draft Convention at its thirty-eighth session in 2005,[2]

Being aware that all States and interested international organizations were invited to participate in the preparation of the draft Convention at all the sessions of the Working Group and at the thirty-eighth session of the Commission, either as members or as observers, with a full opportunity to speak and make proposals,

Noting with satisfaction that the text of the draft Convention was circulated for comments before the thirty-eighth session of the Commission to all Governments and international organizations invited to attend the meetings of the Commission and the Working Group as observers, and that the comments received were before the Commission at its thirty-eighth session,[3]

Taking note with satisfaction of the decision of the Commission at its thirty-eighth session to submit the draft Convention to the General Assembly for its consideration,[4]

Taking note of the draft Convention approved by the Commission,[5]

1. *Expresses its appreciation* to the United Nations Commission on International Trade Law for preparing the draft Convention on the Use of Electronic Communications in International Contracts;[5]
2. *Adopts* the United Nations Convention on the Use of Electronic Communications in International Contracts, which is contained in the annex to the present resolution, and requests the Secretary-General to open it for signature;
3. *Calls upon* all Governments to consider becoming party to the Convention.

[1] Official records of the General Assembly, Fifty-sixth Session, Supplement No. 17 and corrigendum (A/56/17 and Corr. 3), paras. 291–295.
[2] Ibid., Sixtieth Session, Supplement No. 17 (A/60/17), chap. III.
[3] A/CN.9/578 and Add.1–17.
[4] Official Records of the General Assembly, Sixtieth Session, Supplement No. 17 (A/60/17), para. 167.
[5] Ibid., annex I.

laying down certain criteria that, if met by a particular form of electronic signature, would be presumed to be reliable for the purposes of Article 7. The 2001 Model Law also places behavioural obligations upon the signatory and the relaying party, as well as a third-party certification service provider (CSP). As such, the 2001 Model follows the stance taken in the European Union Directive on Electronic Signatures in 1999,[8] remaining technology-neutral whilst also promoting the role of CSPs in the establishment of trust and security in an electronic commerce environment.

2. United Nations Convention (2005)

While the Model Laws have been very influential in terms of encouraging harmonized law reform in the field of electronic commerce, they have no formal status as international legal instruments. Therefore, to promote and further facilitate law reform, the Commission in 2001, tasked its Working Group on Electronic Commerce with the drafting of an instrument of public international law. In November 2005 the Convention on the Use of Electronic Communications in International Contracts was adopted by the UN General Assembly,[9] and opened for signature on 16 January 2006 (see box 8.2). The first three signatories were from two least developed countries (LDCs) — Senegal and the Central African Republic — and from one developing county, Lebanon. Already, the Convention has been taken into consideration, together with the UNCITRAL Model Laws and regional laws, in preparing legislation on electronic transactions in Sri Lanka (see box 8.3)

The Convention prepared under the auspices of UNCITRAL[10] aims to enhance legal certainty and commercial predictability where electronic communications are used in relation to international contracts. It is intended to govern the formation and performance of contracts using electronic communications in international transactions. The range of subject matter addressed in the Convention is therefore narrower than that of the 1996 Model Law. Certain types of contracts are excluded from the Convention, for example, including contracts concluded for "personal, family or household purposes" and a range of finance-related agreements, such as inter-

Box 8.3

Sri Lanka - Legislating on electronic transactions

In 2003, the Sri Lankan Parliament adopted legislation establishing an agency, the Information and Communication Technology Agency of Sri Lanka (ICTA), with the specific remit of devising and implementing a strategy and programme of activities to promote an e-Sri Lanka development project, coordinating both public and private sector input. ICTA was granted statutory powers and functions, which include assisting in the development of a national policy on ICTs and taking steps to facilitate its implementation.

Law reform and regulation are an important element of the strategy, addressing three key areas: e-commerce legislation, data protection and computer crime. Subsequent to a joint Cabinet Memorandum of the Prime Minister, the Minister of Trade and Commerce, and the Minister of Science of Technology, ICTA facilitated the preparation of an e-Transactions Bill, which takes into consideration the UNCITRAL Model Laws and Convention, as well as regional laws. The resultant statute, the Electronic Transactions Act No. 19 of 2006, was finally adopted in May 2006.

The Act begins with a statement detailing the objectives of the Act:

" (a) to facilitate domestic and international electronic commerce by eliminating legal barriers and establishing legal certainty;

(b) to encourage the use of reliable forms of electronic commerce;

(c) to facilitate electronic filling of documents with Government and to promote efficient delivery of Government services by means of reliable forms of electronic communications;

and

(d) to promote public confidence in the authenticity, integrity and reliability of data messages and electronic communications."

Such declarations of intent not only offer comfort to the business community, both domestically and foreign investors, who wish to rely on the provisions of the Act; but would also provide important guidance to the judiciary if it is called upon to interpret the provisions of the Act.

Since legislative reforms can take several years to be enacted by Parliament, ICTA has been directed to introduce appropriate regulations under the ICT Act of 2003 in order to give legal effect to technology standards and facilitate e-transactions, with the participation of the Government and private sector stakeholders. Under the e-policy programme, it is envisaged that electronic laws will be in place within a period of three to four years.

bank payment systems and bills of lading (Article 2). In addition, issues concerning the evidential value of electronic communications are also not addressed in the Convention.

General provisions

While the Convention is designed to form the basis of a statutory framework, it retains the concept of party autonomy (Article 3), such that trading partners have the freedom to agree, in contract, to operate in accordance with terms and procedures that differ from the provisions of the Convention. Thus, for example, a trading community operating under an EDI trading partner agreement that reflects the customs and practices of that particular industry would not be obliged to amend such an agreement.

Reflecting the Model Laws, the Convention utilizes a series of terms that underpin it. Electronic commerce, for example, is conducted through the exchange of a variety of electronic messages, called a "data message" under the Convention, Article 4(c).

"Data message" means information generated, sent, received or stored by electronic, magnetic, optical or similar means, including, but not limited to, electronic data interchange, electronic mail, telegram, telex or telecopy;

Alternative phrases have been used in national legislation, such as "electronic record" in the United States and "electronic document" in Canada. However, the Convention provides a standard language that can be adopted without need for further modification.

Legal validity

A fundamental legal concern that a person will have when communicating electronically is whether such communications will be considered valid. Legal validity concerns arise from a number of different sources. First, it may simply be an issue in respect of the trading partner to whom a message is being sent: will the party accept my electronic message and act on it? As discussed above, EDI trading partner agreements are primarily designed to address questions of validity in this context. Second, there will be concerns that communications that pass between trading partners, but which are also required to be made by law, such as tax invoices, will be an acceptable record for the public authority with responsibility for regulatory supervision. Third, communications that are made directly with public authorities, namely e-government applications, raise issues concerning the possibility and validity of sending such communications electronically. Fourth, there is the need for electronic communications to be acceptable in a court of law in the event of a dispute arising between trading partners or a claim being made by a third party affected by the electronic communication. The Convention is designed to contribute to the resolution of all these different validity concerns.

(a) Legal recognition of electronic communications

Data messages may have a variety of legal consequences. Some may simply provide information, such as the arrival time of a shipment, which could give rise to a tortious action if the information-giver was negligent in respect of such information. A message may constitute a contractual offer or acceptance, binding the sender into a binding legal relationship. Alternatively, a message may evidence compliance with a contractual obligation. Some communications, rather than imposing legal obligations upon the parties, transfer certain legal rights between the parties, such as ownership under a bill of lading or share certificate. A data message may be required for regulatory purposes, such as revenue-related matters, for example an invoice indicating the amount of sales tax paid, which are imposed by law or public authorities. Finally, a message may require prior authority or a licence before it may be sent. Under European privacy laws, for example, organizations may require prior authority before transferring personal data to another country. A licence may be required from a rights-holder where the subject matter being communicated is protected by copyright.

Whatever the legal significance of a data message, there is a need to ensure that these communications or information are not deprived of their legal significance simply because the medium that is used for transmission or storage is electronic rather than paper-based. Consequently, most laws contain a declaratory statement that any document sent or stored through the use of electronic technologies is not rendered invalid because of its electronic form. Article 8(1) of the Convention provides that:

1. A communication or a contract shall not be denied validity or enforceability on the sole ground that it is in the form of an electronic communication.

Box 8.4

Legal recognition in ASEAN member States

The 10 ASEAN member States represent a broad range of economic development, from highly developed economies such as Singapore to LDCs such as the Lao People's Democratic Republic. In 2000, the ASEAN member States adopted an e-Asean Framework Agreement designed to encourage the take-up of electronic commerce within the region.

Article 5 of the Framework Agreement concerned the "facilitation of the growth of electronic commerce". Among the issues addressed was the need for laws based on international norms. In 2001, this was developed further into a Reference Framework for Electronic Commerce Legal Infrastructure, which outlined a range of legal measures that should be adopted, including the legal recognition of electronic transactions, as well as the facilitation of cross-border trade and the use and recognition of electronic signatures . At the 10th ASEAN summit in 2004, member States accepted a commitment to adopt such legal measures by 31 December 2008.

To date, six members have successfully adopted legislation on electronic commerce (Brunei Darussalam, Malaysia, Myanmar, Philippines, Singapore and Thailand), while the remaining four have draft legislation that has been prepared (Cambodia, Indonesia, Lao People's Democratic Republic and Viet Nam). All of these statutes reflect the 1996 Model Law.

2. Nothing in this Convention requires a party to use or accept electronic communications, but a party's agreement to do so may be inferred from the party's conduct.

The formulation chosen here makes it clear that while the form in which the information is sent or retained cannot be used as the grounds for denying it validity, it may be denied legal validity on other grounds. For example, a notice that does not contain the information required by applicable law may be invalidated on those grounds; if it contained the required information, however, it could not be invalidated on the grounds it was in electronic form.

Although this provision is simple, its importance cannot be overemphasized. The principle that it articulates, that of non-discrimination, is the cornerstone of most electronic commerce legislation. It stands for the proposition that the use of electronic technologies should not be used as an excuse for invalidating communications and records. As such, the provision gives the certainty to the participants in electronic commerce that what they are doing will be treated as valid and enforceable. ASEAN member States have recognized the importance of the legal recognition of electronic transactions is encouraging the take-up of electronic commerce in the region (see box 8.4).

(b) Contract creation

The use of data messages to conclude contracts may raise numerous questions. First, is such a contract valid? Some types of contracts are subject to specific requirements of form, designed to protect particular interests or persons. While Governments may permit certain types of contract to be concluded electronically, in the same way as oral contracts have been recognized as valid in many legal systems, others may continue to be executed in physical form. Second, can a data message be viewed as the expression of a party's will (a requirement in many jurisdictions), especially where there has been no human review or intervention? Third, what terms are incorporated into the contract? Fourth, when and where can a contract be deemed to have been concluded?

The Convention contains a series of interrelated provisions directed at different aspects of the process of concluding contracts. As already noted, Article 8(1) provides that an electronic contract shall not be denied validity solely on the grounds that it is in electronic form. The effect of this provision is twofold. On the one hand, it emphasizes that electronic contracts constitute binding obligations as much as any traditional contract as long as the requisite elements of a valid contract are in place. This clarification provides the reassurance and certainty necessary for commercial undertakings to rely on the enforceability of electronic contracts. Such reliance is important because it forms the cornerstone for such undertakings to adopt electronic contracting as their way of doing business and promote the growth of electronic commerce.

On the other hand, these provisions make it clear that the rules of electronic contracting do not replace the traditional contract requirements. For example, the use of electronic contracting to exchange an offer and acceptance would not result in an enforceable contract if applicable contract law requires consideration that

is still lacking. This means that a country adopting the provisions of the Convention can merge those provisions easily with its existing contract law, whether the country has common law, civil law or another system of contract law. This is an important feature of virtually all proposed or enacted electronic commerce legislation: it augments existing law but does not displace substantive law. In so doing, it validates the use of electronic means of contracting, thereby giving the participants the certainty that they desire.

The Convention differs from the 1996 Model Law and other existing legislative initiatives that recognize that a jurisdiction may restrict certain types of legal agreement from being formed electronically. The Model Law does not detail such exceptions, leaving it, in Article 11(2), for each jurisdiction to specific the applicable areas. Within the European Union,[11] for example, an exhaustive list is detailed:

(a) contracts that create or transfer rights in real estate, except for rental rights;

(b) contracts requiring by law the involvement of courts, public authorities or professions exercising public authority;

(c) contracts of suretyship granted and on collateral securities furnished by persons acting for purposes outside their trade, business or profession

(d) contracts governed by family law or by the law of succession.

Similarly, Article 15 of the Commonwealth Model Law contains a general exclusion provision, which would enable particular forms of contractual arrangements to be excluded:

15. This Act does not apply to:

(a) the creation or transfer of interests in real property;

(b) negotiable instruments;

(c) documents of title;

(d) wills and trusts created by will; and

(e) any class of documents, transactions or rules of law excluded by regulation under this Act.

In those cases, the nature of the legal rights involved has acted as a restraint on the liberalization from traditional paper-based mechanisms.

(c) Electronic agents

With the progress of computer technology, it is possible to program computers to automatically issue and receive orders without specific human intervention through the use of so-called "electronic agents". An electronic agent is basically a computer program that can independently place or receive purchase orders, respond to electronic records or initiate other action, using applications such as Java and Microsoft's Active X. Traditionally, offers and acceptances were valid only if made on the basis of a human decision. Technology served merely as the tool of transmission. Therefore, under the principles of traditional contract law, the enforceability of contracts entered into by electronic agents was questionable.

The Convention, in contrast to the 1996 Model Law, contains in Article 12 an express provision regarding electronic agents:

A contract formed by the interaction of an automated message system and a natural person, or by the interaction of automated message systems, shall not be denied validity or enforceability on the sole ground that no natural person reviewed or intervened in each of the individual actions carried out by the automated message systems or the resulting contract.

However, national electronic contracting laws that do not contain explicit rules for electronic agents are often broad enough to implicitly include the conclusion of contracts through electronic agents.

(d) Incorporation by reference

In traditional contracts, the terms that comprise the agreement between the parties are either detailed in the body of the agreement or are implied in the contractual relationship by law (through statute or judicial precedent), custom and practice or the action of the parties. In addition, the parties may simply exchange their standard documentation, such as a purchase order, with terms and conditions of doing business detailed on the back of the documents (often in small grey print!), which are never actually agreed between the parties, although a court may be required to decide whose terms take precedent. However, where the parties have an ongoing trading relationship or operate within a particular sector, the terms and conditions of doing business are often referred to in a document, rather than expressed stated. Such incorporation of terms by reference is an important commercial practice, which needs to be replicated in an electronic environment and rendered legally valid.

The issue was addressed in the UNICTRAL Model Law through an amendment to the Law in 1998, incorporated as Article 5*bis*:

"Information shall not be denied legal effect, validity or enforceability solely on the grounds that it is not contained in the data message purporting to give rise to such legal effect, but is merely referred to in that data message."

However, the Convention does not replicate this provision, but instead addresses the issue under a general disclosure provision, discussed below.[12]

Form requirements

As noted in the introduction, legal systems abound with terms and phrases that, while not expressly excluding the use of electronic communications, were clearly used in reference to physical documents and processes, such that uncertainties exist as to whether electronic alternatives are acceptable. Both the 1996 and 2001 Model Laws address such form requirements in considerable detail. These are replicated, in whole or part, in the Convention.

(a) Writing requirements

A legal system may require that certain contracts be concluded as and be embodied in a written document or in a specific form, or they may require that certain documents used in commerce (such as an invoice) be in writing. Such requirements may be contained in general interpretation statutes, where for example a "writing" is required to be "in visible form", potentially excluding contracts concluded through fully automated systems. In addition, the terminology used in legislation may create uncertainty about the validity of an electronic writing. Under EU consumer protection law, for example, certain information must be provided to consumer "in writing or *on another durable medium*".[13] Printing out a data message as a paper document may or may not satisfy these writing requirements, depending often on judicial interpretation. One advantage of e-commerce is the use and storage of a message in an electronic rather than a paper medium.

In such cases, it is questionable to what extent an electronic contract or message may fulfil these form requirements. Electronic commerce legislation will generally address this issue, otherwise there will be uncertainty as to whether an electronic message is valid and enforceable. Such uncertainty could significantly depress the use of e-commerce by commercial parties, particularly in business transactions where substantial amounts of money or goods are involved.

Governments have two basic options for dealing with this issue: (i) removing the form requirement altogether by changing the country's otherwise applicable substantive law (often but not exclusively the law of contract), or (ii) adapting the form requirement to e-commerce. One of the original reasons for these form requirements was to prevent, with regard to important contracts such as the sale of land, the commission of fraud through false claims of an oral promise. However, there may be other reasons for a form requirement, such as to alert a party to the legal significance and responsibility of entering into a contract or an evidentiary function to provide for predictability and clarity in the enforcement of an obligation set forth in a written contract. Therefore, a legal system may not wish to completely abrogate its form requirements under existing law. Nonetheless, as will be seen below, most e-commerce legislation operates on the assumption that all form requirements are covered and modified, unless otherwise specified in that legislation.

The alternative is to adapt the traditional form requirement to electronic contracts by providing a rule that electronic contracts may, in principle, be sufficient to satisfy the writing or form requirement. The Convention adopts this more flexible alternative, in Article 9(2):

Where the law requires that a communication or a contract should be in writing, or provides consequences for the absence of a writing, that requirement is met by an electronic communication if the information contained therein is accessible so as to be usable for subsequent reference.

The key to the Convention provision is that it be available and readable in the future. Accessibility means that the information should be readable, either by machine or by humans. There is no requirement that the information be available indefinitely or be unalterable; even paper can be destroyed or lost, and its contents changed.

Again, in contrast to the 1996 Model Law, the Convention does not provide for exclusions from this general facilitative provision. However, a jurisdiction may be expected to exempt contracts or documents in legal areas where the possibility and incentive for

fraud or abuse are so high or where legal uncertainty would be so detrimental that there is still a need for a paper document (for example, wills or real property transfers).

(b) Signature or signing requirements

In addition to requiring that information be in the form of a writing, laws and regulations may require that the writing be "signed". In some cases, this requirement may be expressly defined, either in a particular statute or under general interpretative legislative provisions. Obviously, if these requirements were applied so as to require pen and ink signatures made by hand, the effect would be to undermine attempts to validate electronic messages. As a result, most electronic commerce legislation deals with the validity of electronic signatures. Article 9(3) of the Convention provides that:

Where the law requires that a communication or a contract should be signed by a party, or provides consequences for the absence of a signature, that requirement is met in relation to an electronic communication if:

(a) A method is used to identify the party and to indicate that party's intention in respect of the information contained in the electronic communication;

and

(b) The method used is either:

(i) As reliable as appropriate for the purpose for which the electronic communication was generated or communicated, in the light of all the circumstances, including any relevant agreement; or

(ii) Proven in fact to have fulfilled the functions described in subparagraph (a) above, by itself or together with further evidence.

Part (a) of the definition defines the traditional legal functions of a signature that are to be fulfilled by the electronic signature: identification and validating the integrity of the message content. Under some legal systems a signature also indicates the signatory's intention to be bound by his or her signature. This has not been incorporated in the Convention, but has been adopted in some national rules.

In its treatment of signatures, the Convention simply looks at whether electronic signatures may satisfy signature requirements in the law. The approach exemplified is that of minimalism: that the legislation is operating primarily to validate and support but not regulate electronic commerce by providing for a functional equivalent for paper transactions. It does not address other aspects of signatures, for example when a signature is "authentic" and in turn demonstrates that the writing on which it appears is authentic. This aspect was addressed by UNICTRAL in its Model Law on Electronic Signatures (2001), but has not been replicated in the Convention.

Rather than simply facilitating electronic signatures, the 2001 Model Law imposes a certain minimum standard upon signatures used in certain contexts. A similar approach has been adopted under the EU Signatures Directive. Under the Directive, differential legal recognition is given to two categories of signature: "electronic signatures" and "advanced electronic signatures". The latter category are considered to be more secure and therefore are granted beneficial legal presumptions in terms of satisfying a legal requirement for a handwritten signature and in terms of admissibility. There is considerable controversy in this field as to whether such differential legal treatment of electronic signatures is beneficial in terms of facilitating e-commerce. Concern has been expressed that some signature laws have granted beneficial legal recognition to a particular technological form of electronic signature, namely the public-key digital signature using a certification infrastructure. Such technology-specific legislation is seen as entrenching a technology that may be superseded in time, as a result of which the legislation would be rendered obsolete. However, for communications with administrations in certain e-government contexts, such as health, those standards may seem a necessary element for ensuring secure transmissions.

(c) Requirements for originals

When a person opens an envelope with a paper letter inside, unless there are extraordinary circumstances, the letter is the one placed there by the sender. The same may not be true with electronic communications. When a person "sends" an electronic message, it sends an exact duplicate of the message that was created; the sender can then delete what was created or store it. Every time an electronic message is sent, received, retrieved, stored or read, it is electronically replicated. Moreover, during the process of sending, receiving, storing or retrieving, the message will normally be "processed" through one or more software programs: to be compressed, decompressed, encrypted or

formatted in the desirable form. As a result, to speak of an "original" electronic document is almost nonsensical.

Consequently, any legal requirement that an "original" be produced or retained is an insurmountable burden on e-commerce, unless that requirement is adapted for electronic messages. Thus, we find the following in Article 9(4) and (5) of the Convention:

> 4. Where the law requires that a communication or a contract should be made available or retained in its original form, or provides consequences for the absence of an original, that requirement is met in relation to an electronic communication if:
>
> (a) There exists a reliable assurance as to the integrity of the information it contains from the time when it was first generated in its final form, as an electronic communication or otherwise; and
>
> (b) Where it is required that the information it contains be made available, that information is capable of being displayed to the person to whom it is to be made available.
>
> 5. For the purposes of paragraph 4 (a):
>
> (a) The criteria for assessing integrity shall be whether the information has remained complete and unaltered, apart from the addition of any endorsement and any change that arises in the normal course of communication, storage and display;
>
> and
>
> (b) The standard of reliability required shall be assessed in the light of the purpose for which the information was generated and in the light of all the relevant circumstances.

This provision recognizes that the essence of "originality" requirements is the integrity of the information contained in the document, and that the information must not be compromised. What is "reliable" depends on all the relevant circumstances; no absolute definition exists. Thus, it is possible that a document which has all the essential information but has been stripped of the formatting information may still satisfy the requirements of an original, as long as the information is complete and unaltered.

(d) Dematerialization of financial instruments

When data messages are sent instead of paper documents, the data message should be able to replicate the legal functionality of the paper it is replacing. Broadly speaking, such functionality can be divided into three categories. First, paper has an information function, conveying certain data to the recipient, such as the description of goods. Data messages are very good at representing every sort of information. Second, paper has an evidential function, evidencing the obligations of the parties and their compliance with such obligations. In most legal systems, for example, oral contracts are valid for many types of commercial contracts, although their evidential value may render such contracts unenforceable. Data messages are generally perceived as being evidentially somewhere between oral contracts and written documents. A third function of paper in certain contexts is a symbolic function — the paper somehow represents the information which it contains. The most common example relates to "negotiable" instruments, such as the use of bills of lading in international trade and share certificates under company legislation. With a negotiable instrument, the legal rights detailed in the document, such as title to specified goods, are transferred simply by delivery of the physical instrument. Replacing such a symbolic function through data messages is clearly a more significant challenge to lawmakers and organizations wishing to adopt e-commerce techniques. "Dematerialization" is the term commonly used to refer to procedures designed to replicate this symbolic function.

As a consequence of the negotiability feature, instruments such as bills of lading and share certificates have been heavily relied upon in the arrangement of commercial financing, particularly in international trade. Banks and finance houses will be willing to extend credit to an entity on the basis of security given to them in the form of negotiable instruments. In the event that the entity defaults on a transaction, the bank has possession of certain of the entity's assets represented by the instruments, which it can dispose of in order to recoup the loan. Such functionality will need to be replicated in an e-commerce environment, or the parties will continue to rely on the use of paper instruments.

To replicate the function of a negotiable instrument, any scenario of data messages will need to be able to evidence the obligation and evidence the chain of transfers in respect of that instrument. In a physical environment, the parties relied on the existence of an

original document. In an e-commerce environment, originality has no real meaning since everything is a copy of copy, and it therefore has to be replaced by a secure and verifiable record of the transfers of data messages between various parties.

Full dematerialization, in the sense that the paper instrument is completely replaced by an exchange of data messages, is sometimes achieved after a period of partial dematerialization, where the physical instrument is retained but is "immobilized" — that is, it does not move between lawful holders, but is held by a trusted third party registry, which records any changes in ownership which occur and delivers the instrument, if required, to the final holder.

From a legal perspective, the validity of a dematerialized instrument may be achieved either through law reform or through the use of contractual mechanisms to bind the various parties involved. Law reform is clearly the preferred route in terms of establishing legal security and facilitating the adoption of e-commerce techniques. In terms of international trade, national legislation in many jurisdictions simply reflects international treaties governing such activities, such as the Hague Convention of 1924, which use terminology that can restrict the adoption of e-commerce techniques.

As well as the need to reform national and international laws, there has been a need to reform international custom and practice in the area. Such custom and practice have been codified by the International Chamber of Commerce (ICC) in various documents, such as INCOTERMS 2000 and the Uniform Customs and Practice for Documentary Credits (UCP) 500, on which many involved in international trade rely.[14] INCOTERMS was revised in 2000 to expressly recognize the use of data messages as replacements for paper documents.[15] The current UCP has been supplemented by the eUCP (2001), which is designed to redefine existing terminology, such as references to a document that "appears on its face" to be correct, in order to encompass electronic alternatives.

The UNCITRAL 1996 Model Law on Electronic Commerce expressly addresses such issues in Articles 16 and 17, providing that data messages should be accepted as an alternative to using a paper document. In stark contrast, however, the Convention expressly excludes the application of its provisions to such symbolic documents.[16]

Regulating the contract creation process

As a general proposition, most electronic commerce legislation leaves in place underlying contract law on such issues as contract formation, enforceability, terms and remedies. There are a few instances, however, where there has been supplementation of that law, specifically in areas where there is a perceived need to deal with unique aspects of electronic commerce.

(a) Disclosures

Article 13 of the Convention addresses the availability of contract terms:

> Nothing in this Convention affects the application of any rule of law that may require a party that negotiates some or all of the terms of a contract through the exchange of electronic communications to make available to the other party those electronic communications which contain the contractual terms in a particular manner, or relieves a party from the legal consequences of its failure to do so.

Generally, contract law requires that a party has had the opportunity to review the terms and conditions of a contract before being bound by it. In particular, if the parties have no prior contracting history and have no knowledge of each other's terms and conditions, the issue arises as to whether the party had the opportunity to review the terms and conditions before declaring its consent. Otherwise, the terms and conditions may not bind the party. This has special relevance for the Internet, where parties often contract without having dealt with each other previously.

There are various ways of disclosing the terms and conditions of a contract on the Internet. In a web-based environment, for example, the supplier will often present the customer with his standard terms of doing business during the course of the transaction process, obliging the customer to "click" his consent before proceeding with the transaction. Alternatively, the supplier may simply present a hypertext link to the customer, where the standard terms are detailed, and rely on implied consent from having provided the customer with the opportunity to review such terms. Such an approach may be vulnerable to challenge, however, depending on the placement of the link; if it is at the bottom of a web page, for example, the customer will be required to take the initiative and scoll down the page. Such transparency requirements directly impact on the way in which websites are designed.

(b) **Error correction**

Mistakes arise in all forms of human endeavour, for example the wrong price for a product is given or the wrong quantity is ordered. How are such errors to be dealt with in an electronic commerce environment? Article 14 of the Convention provides as follows:

> 1. Where a natural person makes an input error in an electronic communication exchanged with the automated message system of another party and the automated message system does not provide the person with an opportunity to correct the error, that person, or the party on whose behalf that person was acting, has the right to withdraw the portion of the electronic communication in which the input error was made if:
>
> (a) The person, or the party on whose behalf that person was acting, notifies the other party of the error as soon as possible after having learned of the error and indicates that he or she made an error in the electronic communication; and
>
> (b) The person, or the party on whose behalf that person was acting, has not used or received any material benefit or value from the goods or services, if any, received from the other party.
>
> 2. Nothing in this article affects the application of any rule of law that may govern the consequences of any error other than as provided for in paragraph 1.

By restricting the protection to natural persons, the provision is primarily designed to protect the interests of consumers in a web-based environment, rather than B2B electronic commerce. In contrast to the 1996 Model Law,[17] the Convention does not address record retention and evidential issues; therefore, in the event of a dispute, there may continue to be uncertainties concerning the admissibility and probative value of the computer-derived evidence that either party may seek to rely upon.

(c) Dispatch and receipt of electronic messages

One of the most significant characteristics of e-commerce is that geographical boundaries become irrelevant: people throughout the world can communicate quickly and easily, and many times may do so without knowledge of the location of the other party. While geography may be irrelevant for e-commerce, however, geography – and particularly the *place* where certain acts such as the dispatch or receipt of a communication occur – is still relevant to several legal issues in such areas as private international law (i.e. choice of law and forum) or contract creation. Moreover, determining the place of dispatch or receipt raises a variety of questions. Is the message sent when the "send" button is pushed, or is something else needed? Is a message received when my server receives it, it is put in my mailbox, I download it or I read it? These and similar questions require a clear, and consistent, answer. Therefore, many e-commerce laws contain provisions defining *when* and *where* dispatch and receipt occur. Again, these laws are virtually all drawn from, or similar to, Article 15 of the UNCITRAL Model Law, which has now been redrafted in Article 10 of the Convention:

> 1. The time of dispatch of an electronic communication is the time when it leaves an information system under the control of the originator or of the party who sent it on behalf of the originator or, if the electronic communication has not left an information system under the control of the originator or of the party who sent it on behalf of the originator, the time when the electronic communication is received.
>
> 2. The time of receipt of an electronic communication is the time when it becomes capable of being retrieved by the addressee at an electronic address designated by the addressee. The time of receipt of an electronic communication at another electronic address of the addressee is the time when it becomes capable of being retrieved by the addressee at that address and the addressee becomes aware that the electronic communication has been sent to that address. An electronic communication is presumed to be capable of being retrieved by the addressee when it reaches the addressee's electronic address.
>
> 3. An electronic communication is deemed to be dispatched at the place where the originator has its place of business and is deemed to be received at the place where the addressee has its place of business, as determined in accordance with article 6.
>
> 4. Paragraph 2 of this article applies notwithstanding that the place where the information system supporting an electronic address is located may be different from the place where the electronic

communication is deemed to be received under paragraph 3 of this article.

In each case, the question of "when" something is sent or received turns on whether the message is within the sphere controlled by the sender or the recipient. Thus, dispatch occurs when the message "enters an information system outside the control" of the sender. Similarly, where the recipient has designated a certain information system for receipt of messages, receipt occurs when the message enters that information system. However, if the recipient has not designated any such information system, no receipt occurs until the recipient actually receives it.

The "where" issue is more complicated. The difficulty with "where" something occurs is that the physical location of the parties at any relevant time (particularly with laptop use combined with cellular or wireless technology) may not only be constantly changing, but may also be unknown. Thus, any relationship between their location and the transaction may be fortuitous. Moreover, the location of the computers or systems processing the information may be equally irrelevant to the transaction. As a result, a data message is deemed dispatched at the place where the sender has its place of business, and is deemed received at the place where the recipient has its place of business. Both these locations are comparatively easy to ascertain; indeed, the Convention lays out in Article 6 rules for determining the parties' place of business:

1. For the purposes of this Convention, a party's place of business is presumed to be the location indicated by that party, unless another party demonstrates that the party making the indication does not have a place of business at that location.

2. If a party has not indicated a place of business and has more than one place of business, then the place of business for the purposes of this Convention is that which has the closest relationship to the relevant contract, having regard to the circumstances known to or contemplated by the parties at any time before or at the conclusion of the contract.

3. If a natural person does not have a place of business, reference is to be made to the person's habitual residence.

4. A location is not a place of business merely because that is: (a) where equipment and technology supporting an information system used by a party in connection with the formation of a contract are located; or (b) where the information system may be accessed by other parties.

5. The sole fact that a party makes use of a domain name or electronic mail address connected to a specific country does not create a presumption that its place of business is located in that country.

D. Concluding remarks and policy recommendations

Electronic commerce systems generate a range of issues in respect of the validity, enforceability and admissibility of the data messages being exchanged.

This chapter has examined some salient aspects of the new UN Convention designed to facilitate and harmonize national approaches to addressing such issues. However, the Convention cannot, and is not intended to, address all issues raised by the development of electronic contracting. In this regard, one should bear in mind that electronic contracting is not an isolated area of law; rather, it constitutes a new and exciting opportunity to conduct business faster and in a more cost-efficient. This means that the types of issues and the resolution of these issues are framed specifically by the existing requirements of traditional contract law. For example, the fewer form requirements included in traditional contract law, the less intricate the rules for recognition of contracts in electronic format need to be. On the other hand, if existing law has very strict or elaborate form requirements for contracts and data messages, the e-commerce legislation may need to be more extensive in addressing how electronic contracts fit into such formalized systems. Therefore, at the outset, one should look at the issues addressed in the Convention and at other issues raised by e-commerce in the light of existing national law.

The wide acceptance of the UNCITRAL 1996 Model Law as a basis for e-commerce legislation in large as well as smaller countries is a testimony to its adaptability. The Convention attempts to build on the success of the UNCITRAL Model Law and enhance convergence of electronic contracting laws around the world. The countries or jurisdictions implementing the Convention will create similar electronic contracting legal systems. As a consequence, businesses from one of those countries or jurisdictions will quickly be familiar with the general rules of

Box 8.5

UNCTAD technical assistance on the legal aspects of e-commerce

UNCTAD can assist developing countries in addressing the legal aspects of e-commerce through the activities described below.

1. *Organization and delivery of a training course on the legal aspects of e-commerce*
The objective is to prepare lawmakers and government officials in all aspects to be considered for the drafting of e-commerce laws. The training course also targets entrepreneurs who wish to venture into e-commerce operations and who are not familiar with the legal environment for e-commerce.

Programme outline:

Module 1: Regulating e-commerce
Module 2: The legal validity of data messages
Module 3: Consumer protection and e-commerce
Module 4: Protecting intellectual property assets
Module 5: Content regulation
Module 6: Taxing e-commerce
Module 7: Privacy online
Module 8: Securing e-commerce

2. *Policy advice*

- Assessing the needs for law reform

This consists in the preparation of a legal inventory of existing laws and regulations that need adaptation to accommodate e-commerce in cooperation with relevant ministries and institutions. This review aims to identify legal obstacles and uncertainties and propose appropriate amendments in the light of the current state of e-commerce development of individual beneficiary countries, bearing in mind regional electronic commerce laws and the broader international framework.
Feasibility missions to beneficiary countries can be organized to discuss and assess the needs for e-commerce law reform with all relevant stakeholders. A local counterpart is identified in cooperation with the relevant ministries and in some cases with local law firms in order to encourage a participatory approach.

- Drafting e-commerce legislation

A national stakeholders' meeting can be organized to discuss the findings and proposals as identified in the needs assessment phase.
On the basis of the assessment of the need for law reform, a draft of e-commerce legislation is prepared in consultation with government authorities involved in the preparation of electronic commerce laws, and there are consultations with all relevant stakeholders for final approval.
Requesting UNCTAD's assistance
Developing countries that would like to receive technical assistance on e-commerce law reform should send an official request to UNCTAD's Secretary-General by fax at +41 22 917 0042, with a copy to +41 22 917 0052.
For further information, see also:

- http://r0.unctad.org/ecommerce/ecommerce_en/ecomlaw.htm;
- http://r0.unctad.org/trainfortrade/tftpresentation/eu2/courses/eclen.htm.

electronic contracting in another of those countries or jurisdictions. Such familiarity, in turn, makes it easier for businesses to deal electronically with business partners in other countries or jurisdictions, which, after all, is what a large portion of e-commerce is about. The result could well be a significant increase in e-commerce, and private and government revenue, in those countries.

Recommendations

The following highlights some policy considerations and recommendations that policymakers in developing countries may need to address when they consider reviewing their legal infrastructure to ensure that it is supportive of and conducive to the practice of electronic commerce:

- In reviewing their legal framework, Governments should give consideration to using the Model Law on Electronic Commerce and the Model Law on Electronic Signatures of the United Nations Commission on International Trade Law as a basis for preparing new laws or adjusting current laws. Consideration should also be given to the introduction of rules to provide certainty with regard to the legal effect of using specific technologies within a technologically neutral legal infrastructure.

- To remove obstacles to the use of electronic communications in international contracts, including obstacles that might result from the operation of existing international trade law instruments, Governments should consider becoming party to the United Nations Convention on the Use of Electronic Communications in International Contracts, 2005.

- Countries should ensure that national legislation facilitates the use of out-of-court dispute settlement schemes. In parallel, many countries should also consider investing more in modernizing their judicial system by training judges, increasing the number of judges, equipping their courts with up-to-date infrastructures and allowing them to proceed online if need be.

- Education and awareness should be treated as a priority by Governments and the international community. Thus, in response to its member States' requests for capacity building in the area of legal aspects of e-commerce, UNCTAD is offering training and advisory services for the preparation of an enabling legal and regulatory environment for e-commerce (see box 8.5).

Notes

1. ISO 9735. See generally http://www.gefeg.com/jswg/.

2. Available at http://www.unece.org/cefact/recommendations/rec31/rec31_ecetrd257e.pdf.

3. Official Records of the General Assembly, Fortieth Session, Resolution A/40/17.

4. Official Records of the General Assembly, Fifty-first Session, Resolution A/51/628.

5. LMM(02)11 Revised. Available from www.thecommonwealth.org/.

6. Available at http://www.uncitral.org in English, French, Arabic, Chinese, Russian and Spanish.

7. Official Records of the General Assembly, Fifty-sixth Session, Resolution A/56/80. Available at http://www.uncitral.org in English, French, Arabic, Chinese, Russian and Spanish.

8. Directive 1999/93/EC "on a community framework for electronic signatures", OJ L 13/12, 19.1.2000.

9. Official Records of the General Assembly, Sixtieth Session, Resolution A/60/21. Available at http://www.uncitral.org in English, French, Arabic, Chinese, Russian and Spanish.

10. See text of the Convention in http://www.uncitral.org.

11. Directive 2000/31/EC on Certain Legal Aspects of Information Society Services, in Particular Electronic Commerce, in the Internal Market (the "e-commerce Directive"). Available at http://europa.eu.int/eur-lex.

12. At 3.2.4.1.

13. Directive 1997/7/EC "on the protection of consumers in respect of distance contracts", OJ L 144/19, 4.6.1997, at art. 5(1).

14. Available at http://www.iccwbo.org.

15. In 2000, UNCITRAL adopted a decision commending the use of Incoterms 2000 as a record of good international commercial practice.

16. Article 2(2).

17. Articles 9 and 10.