The United Nations Convention on the Use of Electronic Communications in International Contracts : an Overview and Analysis

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Henry D. Gabriel *

I. – INTRODUCTION

In this article, I discuss the new *United Nations Convention on the Use of Electronic Communications in International Contracts*. This Convention provides uniform standards for private parties to contract internationally using electronic means and have the contracts enforced under the same standards as if the parties had contracted using traditional paper-based means.

The *Convention on the Use of Electronic Communications in International Contracts* ("the Convention") was drafted by the United Nations Commission on International Trade Law (UNCITRAL).[1] Working Group IV (Electronic Commerce) began work on the Convention in March 2002 [2] and completed its task in October 2004.[3] The Convention was approved first by the UNCITRAL Plenary Session in July 2005,[4] and then by the General Assembly in the fall of 2005.[5]

* DeVan Daggett Professor of Law, Loyola University, New Orleans (United States of America). The author served as a member of the United States delegation to the UNCITRAL Working Group that drafted the Convention.

1 For details regarding the origins, mandate and composition of UNCITRAL, as well as on its work, see <www.uncitral.org>.

2 The initial draft "Preliminary draft convention on [International] Contracts Concluded or Evidenced by Data Messages" (A/CN.9/WG.IV/WP.95) was considered by the Working Group at its first substantive meeting on the Convention.

3 A/60/17 para. 12.

4 A/CN.9/608 para. 1.

5 The United Nations General Assembly adopted the Convention on 23 November 2005 (A/RES/60/21). The text of the Convention is reproduced in this *Review* at 370.

The genesis of the Convention arose out of a meeting in the summer of 2000 in which the future work by UNCITRAL in the area of electronic commerce was discussed. The three suggested topics were: electronic contracting, considered from the perspective of the *United Nations Convention on Contracts for the International Sale of Goods (CISG)*, online dispute settlement, and the dematerialization of documents of title with particular interest in the transport industry. It was determined that the Working Group on transport documents was in the best position to deal with questions of electronic transport documents, and as between online dispute resolution and electronic contracting, it was determined that electronic contracting was the more urgent need.

II. – THE NEED FOR A CONVENTION

The drafting of the Convention, in many respects, was inevitable. The world of international commerce and electronic communication has responded to the rapid growth of instantaneous information and the exponential increase in the demand for goods and services by providing for the growth of commerce electronically, and this has occurred irrespective of the state of the law. Electronic commerce would move ahead without the Convention or other domestic equivalences to facilitate this growth. But the Convention, by removing some of the legal risks inherent in electronic commerce, facilitates the growth in commerce.

Although the need for legal regulation of electronic commerce follows the need for regulation of commerce in general, two important aspects of electronic commerce are important to keep in mind which make electronic commerce unique from other questions of international commerce.

First is the unregulated nature of the Internet. The Internet has brought about fundamental changes to international commerce. Territorial borders and the borders that previously existed between companies and customers, sellers and purchasers and service providers and clients have all disappeared to some extent. Particularly in transnational commerce, international agreements have to be adopted to provide a level of legal certainty and enforceability for contracting parties.

A second aspect of electronic commerce that makes it unique from other general questions of international commerce is the apparent inability of the law to foresee the rapid change in technology and therefore to respond with a set of transactional rules that reflect business practices that use the new technology. This has brought about great uncertainty in the law which has been largely caused by the shift from paper to electronic trading. Questions have continually arisen as to whether electronic contracts are binding and enforceable as well as when and where they are deemed to have been created.

It is these legal uncertainties that have prompted prior projects such as the *UNCITRAL Model Law on Electronic Commerce* [6] and the *UNCITRAL Model Law on*

6 *UNCITRAL Model Law on Electronic Commerce* (1996) (hereinafter: UNCITRAL E-Commerce Model Law) seeks to eliminate barriers to international trade due to inadequate national legislation by enabling or facilitating the use of electronic commerce. This Model Law sets out to accomplish this goal by providing equal treatment to users of paper-based documentation and to users of computer-based information. For a discussion of the Model Law, see generally Renaud SORIEUL / Jennifer R. CLIFT / José Angelo ESTRELLA-FARIA, "Symposium on Borderless Electronic Commerce, Establishing a Legal Framework for Electronic Commerce: The Work of the United Nations Commission on International Trade Law (UNCITRAL)", 35 *International Law* (2001), 107 (providing an introduction to the Model Law, including information on its adoption, and the current work being undertaken at that time by UNCITRAL on uniform rules for electronic signatures). Unlike many UNCITRAL instruments that are designed specifically for international use, the *UNCITRAL E-Commerce Model Law* was designed as a model for domestic legislation as well. The Model Law has already been extensively used worldwide: in a great number of countries, legislation has been enacted which implements provisions of the Model Law, or uniform legislation has been passed which was influenced by the Model Law and the principles on which it is based. For further details, see <www.uncitral.org>.

Electronic Signatures as well as various domestic equivalents.[7] Moreover, other UNCITRAL Working Groups, for example those dealing with Transport Law and International Arbitration and Conciliation,[8] are also looking into the incorporation of electronic commerce into other international instruments.[9] Likewise, the Working Group on Procurement Law is also examining questions of electronic commerce.[10] It is fair to say that every UNCITRAL project presently being considered or likely to be on the agenda in the future will have to address questions of electronic commerce.

The purpose of the Convention can briefly be stated as creating legal recognition for electronic records, electronic signatures and electronic contracts, as well as establishing that the medium in which a record, signature or contract is created, presented or retained does not affect its legal significance. Because the substantive law that governs the underlying transaction may require non-electronic records or signatures, the Convention achieves its purposes by simply overriding the substantive law on these form requirements.

Consistent with most electronic commerce legislation, the Convention is quite short. This brevity is due to the policy decision to eschew provisions that govern the underlying substantive law of the transaction. The Convention is intended to provide a legal framework to do electronically what has in the past been done through paper media, and to the extent possible, it is not intended to create new substantive legal rules.[11]

III. – THE CONVENTION AND THE BASIC ATTRIBUTES OF ELECTRONIC COMMERCE LEGISLATION

Before discussing the specific provisions of the Convention, it is useful to address the general question of whether the Convention meets the basic requirements of electronic commerce legislation. A review of a broad range of electronic commerce legislation indicates a small number of principles that emerge as the basic attributes of a law that governs electronic commerce. A regulatory scheme for electronic commerce can actually be created by providing for three simple rules or concepts which need to the supplemented with a few necessary definitions. These rules are the minimal rules necessary to provide for effective electronic commerce. As will be discussed below, the Convention provides for these three principles.

7 As of September 2006, legislation based on the *UNCITRAL Model Law on Electronic Signatures* had been adopted in China (2004), Mexico (2003), Thailand (2001), and Vietnam (2005). See <www.unictral.org>.

8 A/CN.9/592.

9 A/CN.9/594.

10 A/CN.9/595.

11 The legal problems raised by electronic commerce are certainly not new. The process of contracting by means other than face-to-face communication has challenged courts for at least 50 years. Courts were called upon to determine the enforceability of contracts entered into by mail and by vending machine long before the advent of shrink-wrap terms delivered with mass-market software and click-wrap and browse-wrap terms delivered over the Internet.

A. The "functional-equivalent" approach

It is generally recognized that the legal requirements prescribing the use of traditional paper-based documentation constitute the main obstacle to the development of electronic commerce.[12] At the same time, it is recognized that enabling legislation should not necessitate the wholesale removal of the paper-based requirements themselves or disturb the legal concepts and approaches underlying those requirements.[13]

To resolve these concerns, a new approach, sometimes referred to as the "functional-equivalent approach", has been developed.[14] The concept is to analyze the purposes and functions of the traditional paper-based requirement with a view to determine how those purposes or functions could be fulfilled through electronic commerce. The idea is to single out the basic functions of paper-based form requirements and then provide for these functions, which when met, have the same level of legal recognition as that of paper documents performing the same function. This primarily relates to writings and signatures.

(i) Writing

Under the principle of functional equivalent, the Convention provides for an equivalent to traditional writings that serve the same function of writing.[15]

(ii) Signatures

A signature, be it electronic or hand-written, fulfils a dual function. It identifies the signatory and party to the contract and it also expresses the willingness to be bound by the contract.[16]

The concept of a signature has never rigidly required in most contexts the actual handwriting of a person's name. Substitutes such as a stamp, perforation, a typewritten signature or a printed letterhead have been sufficient to fulfill the signature requirement.[17] However, in some contexts, there exist requirements that combine the traditional handwritten signature with additional security procedures such as the confirmation of the signature by witnesses or the function of notaries in certifying a signature. It is within this framework that the Convention successfully replicates the functionality of signatures.[18]

12 See, *e.g.*, Henry D. GABRIEL, "The Fear of the Unknown: The Need to Provide Special Procedural Protections in International Electronic Commerce", 307 *Loyola Law Review* (2004), 311-12.

13 *Ibid.*

14 *Ibid.*

15 This is covered in Art. 9 of the Convention and is discussed below.

16 A signature may also serve a third function: it may also testify to the true content of the agreement at the time of signing.

17 See, *e.g.*, GABRIEL, *supra* note 12, 314.

18 Art. 9(3) of the Convention.

B. Medium neutrality

Concomitant to the principle of functional equivalence is the principle of medium neutrality. Thus, to the extent that the functional equivalence is met by a data message, the fact that a particular medium, such as an electronic communication, is used should not be a basis for denying the legal effect of the data message. Thus, to the extent that the law otherwise requires a paper record, this requirement is removed. The principle of medium neutrality, which is essential for electronic transactions, is recognized in the Convention.[19]

C. Time and place of dispatch and receipt of data messages

Because a large part of what the Convention and other legal rules that govern electronic commerce are designed to handle is the actual formation of contracts, there is the question of how much substantive law governing contracts is necessary to fulfill this role. To a large extent, the answer is: not much. If the primary role of the Convention and similar legislation is to allow the substitution of electronic records for paper records, once that is achieved, most legal issues can be resolved by applying the underlying legal principles that otherwise govern the legal relationship.

However, because of the technical requirements of electronic systems, the question of time and place of the dispatch and receipt of messages is an area that it has been felt probably deserved substantive treatment in the enabling law. This is particularly true because parties are often conducting electronic transactions through transparent systems without any knowledge or concern about where the actual systems and servers are located. Consistent with this, the Convention specifically provides that the location of the information system is irrelevant for purposes of determining the location of dispatch or receipt of the electronic communication.[20]

These three concepts and rules: functional equivalence, media neutrality and time and place of dispatch and receipt are really all that is necessary to govern electronic commerce.

IV. – FEAR NOT THE CONVENTION

Before examining the text of the Convention, it is worth discussing two questions that are often raised about electronic commerce that could also be viewed as concerns about the Convention. First, there is a persistent concern that electronic commerce legislation such as the Convention will force upon parties the obligation to work within an electronic context regardless of whether the parties choose to do so.[21] This fear is unfounded, as parties cannot, nor should they, be forced to change their

19 *Idem*, Art. 8.

20 Art. 9(4) of the Convention.

21 The result should be the same regardless of whether the legislation creates an "opt in" (the parties must choose to be bound by the legislation) or "opt out" (the parties must choose not to be bound by the legislation) system.

business practices. For this reason, the Convention is designed solely to facilitate electronic commerce for those parties who choose to use electronic media, but not to require the use of electronic records or signatures. As such, these acts only apply to transactions where the parties have agreed to conduct their transactions electronically.

A second concern is whether "computers can contract".[22] The answer is: yes, computers can contract, but only as agents of the person for whom they are operating.[23] Contracts can be formed by machines, and the requisite intent necessary for the formation of a contract arises from the use and programming of the machine.

V. – THE CONVENTION

*(a) **Scope of application** (Article 1)*

(i) Electronic communications

The Convention sets out the principle of functional equivalence between electronic and paper communication, and in many respects does little else. This, of course, is not to suggest that this simple principle is not important.

The Convention does not establish substantive contractual rules that are not specifically related to the use of electronic communications.[24] Nor is the Convention aimed at providing a substantive legal framework for transactions that involve "virtual goods", such as computer software. Neither is it intended to define the line between "goods" and "virtual goods".[25]

(ii) Internationality

Unlike some model laws and other non-binding products of UNCITRAL, the Convention is meant to be adopted as positive law. As such, consistent with the

22 Some commentators have called into question the ability of computers to form contracts: *see, e.g.,* Tom ALLEN / Robin WIDDISON, "Can Computers Make Contracts?", 9 *Harvard. Journal of Law & Technology* (1996), 25; Jean-Francois LEROUGE, "The Use of Electronic Agents Questioned under Contractual Law: Suggested Solutions on a European and American Level", 18 *John Marshall Journal of Computer and Information Law* (1999), 403.

23 See *State Farm Mutual Auto. Ins. Co. v. Bockhorst*, 453 F.2d 533, 537 (10th Cir. 1972) ("[a] computer operates only in accordance with the information and directions supplied by its human programmers"). See also *Travelers Indem. Co. v. Fields*, 317 N.W.2d 176(1982). In addition, commentators have explored the cases and surrounding issues, *see e.g.,* Thomas J. SMEDINGHOFF, "Creating Enforceable Electronic Transactions", 649 *Practicing Law Institute* (2001),85.

24 There is one exception: *Article 11. Invitations to make offers* – "A proposal to conclude a contract made through one or more electronic communications which is not addressed to one or more specific parties, but is generally accessible to parties making use of information systems, including proposals that make use of interactive applications for the placement of orders through such information systems, is to be considered as an invitation to make offers, unless it clearly indicates the intention of the party making the proposal to be bound in case of acceptance."

25 Nor is the Convention concerned with the question of what type of rights are transferred. Thus, for example, the Convention does not address questions of whether a computer software contract involves the "sale" or the "licensing" of the software rights.

mandate of UNCITRAL to produce instruments that govern international trade, the Convention applies only when the transaction is 'international".[26] Thus, purely domestic transactions are governed by the applicable domestic law.[27]

However, unlike some international instruments, such as the *United Nations Convention on the International Sale of Goods* (CISG), the Convention does not require that both parties be located in Contracting States.[28] There is a trade-off here. For example, with the CISG, the requirement that both parties be from Contracting States allows the parties to determine easily whether or not the Convention applies to their contract, without having to apply rules of private international law to identify the applicable law.[29] This narrower application of the CISG is thought to be compensated for by greater legal certainty. The E-Commerce Convention, on the other hand, provides a greater applicability with less certainty by the parties of its applicability.

(iii) Contract plus

There was extensive discussion on the exact scope of the types of transactions that the Convention should cover.[30] Because of the perceived need to provide for specific exclusions,[31] many felt that the general application should be as broad as possible. The limitation was somewhat set by the language difficulty imposed by the attempt to use a term that would be acceptable to all countries in all of the relevant languages.

Thus, for example, the American delegation suggested that the Convention should cover all electronic "transactions". This suggestion was consistent with the scope of the domestic American law, the *Uniform Electronic Transactions Act*, yet the English term "transaction" did not linguistically or legally translate into a definable concept.

In the end, the scope was limited to contracts, not because of the desire to restrict the Convention as such, but because of the inability to come up with an acceptable broader term. However, as electronic communications are used for the exercise of a variety of rights arising out of the contract (such as notices of receipt of goods, notices of claims for failure to perform or notices of termination) or even for performance (as in the case of electronic fund transfers),[32] the scope extends not only to contract formation but to all aspects of performance.

26 Art. 1(1) of the Convention.

27 A/CN9./608/Add. 1 para. 17.

28 Obviously, the law of the forum must either be a jurisdiction that ~~either~~ has adopted the Convention or one where the forum's conflict of laws rules would lead to the law of a jurisdiction that has adopted the Convention.

29 A/CN9./608/Add. 1 para. 18.

30 See, e.g., A/CN.9/WG.IV/WP.110 ft.5: A/CN.9/548 para.84.

31 These are contained in Art. 2 of the Convention.

32 A/CN.9/509 para. 35.

(b) Exclusions *(Article 2)*

(i) Consumer contracts

The Convention does not apply to electronic communications in a consumer contract.[33] However, unlike the corresponding exclusion under Article 2(a) of the CISG,[34] the exclusion of consumer transactions under the draft Convention is an absolute one. Consumer contracts are always excluded, even if the personal, family or household purpose of the contracts is not apparent to the other party.[35]

As reflected in the Secretariat's commentary to the CISG, the drafters assumed that consumer transactions in international transactions would occur in "relatively few cases".[36] Conversely, because the ease of access provided by modern communication systems which were not available at the time of the preparation of the CISG, such as the Internet, greatly increases the likelihood of consumers purchasing goods from sellers established in another country, the Working Group decided that consumers should be completely excluded from the Convention.[37]

This, of course, leaves open the question of applicability of the Convention to a consumer contract when the question of whether a contract is a consumer contract cannot be ascertained until after the contract formation. This lack of certainty is likely to cause problems in those enforcing jurisdictions which have non-conforming domestic laws on the question of electronic contracting.

(ii) Financial markets

The Convention does not apply to transactions in certain financial markets which are generally already subject to specific regulations or industry standards.[38] Because the industry has specific needs that can be best addressed by industry-specific controls, it was felt that this was a necessary exclusion that would prevent the possibility of widespread confusion in the functioning of financial markets and industries.[39]

33 The specific exclusion is for "personal, family or household purposes".

34 Under the CISG, the sale of goods bought for personal, family or household use is excluded "unless the seller, at any time before or at the conclusion of the contract, neither knew nor ought to have known that the goods were bought for any such use". This qualification is intended to promote legal certainty. Without it, the applicability of the CISG would depend on the seller's ability to ascertain the purpose for which the buyer had bought the goods.

35 A/CN.9/608/Add. 1 para 32.

36 A/CN.9/527 para. 86.

37 A/CN.9/548 paras. 101-102.

38 A/CN.9/608/Add. 1 para. 35.

39 A/CN.9/608/Add. 1 para. 36. Moreover, given the global nature of the financial industry, leaving the exclusion to country-based declarations under Art. 18 could also cause unnecessary uncertainty. A/CN.9/558 para. 109.

(iii) Negotiable instruments and documents of title

The Convention excludes negotiable instruments and documents of title.[40] Certainly there is a need to provide for electronic negotiable instruments and documents of title. They are provided for in some domestic laws,[41] and electronic documents of title are currently being provided for by UNCITRAL in the revision of law that governs transport documents.[42] However, given the legal technicalities of negotiability and transfer, and for some, the perceived need of an "original",[43] it was ultimately concluded that the Convention should exclude negotiable instruments and documents, and that these could be left to a later treaty or convention.[44]

(c) Definitions *(Article 4)*

Of course, one of the necessary elements of any electronic commerce legislation is an accurate set of definitions. The Convention includes definitions of the terms as "data message",[45] "originator",[46] "addressee" [47] and "information system".[48] These four [49] definitions are generally recognized as the minimum necessary to regulate e-commerce, and the Convention properly provides for all four.[50]

The definition of an "originator" provides that messages generated automatically by computers without direct human intervention should be regarded as "originating" from the legal entity on behalf of which the computer is operated.[51] However, the Convention should not be interpreted as allowing for a computer to be made the subject of rights and obligations. The obligations naturally flow from the legal entity

40 Art. 2(2) of the Convention.

41 See, e.g., the American *Uniform Commercial Code* Art. 7: Documents of Title §§ 7-102, 7-105, 7-106: *American Uniform Electronic Transactions Act* § 16.

42 A/CN.9/572 para. 158-62.

43 A/CN.9/608/Add. 1 para. 38.

44 A/CN.9/571 para. 136.

45 Art. 4(c) of the Convention.

46 Art. 4(d) of the Convention.

47 Art. 4(e) of the Convention.

48 Art. 4(f) of the Convention.

49 I would add a fifth definition: "intermediary".

50 The Convention also has several other definitions necessary for the internal consistency of the Convention. These are: (Art. 4) (a) "Communication" means any statement, declaration, demand, notice or request, including an offer and the acceptance of an offer, that the parties are required to make or choose to make in connection with the formation or performance of a contract; (b) "Electronic communication" means any communication that the parties make by means of data messages; (g) "Automated message system" means a computer program or an electronic or other automated means used to initiate an action or respond to data messages or performances in whole or in part, without review or intervention by a person each time an action is initiated or a response is generated by the system; (h) "Place of business" means any place where a party maintains a nontransitory establishment to pursue an economic activity other than the temporary provision of goods or services out of a specific location.

51 Art. 12 of the Convention.

that set up the system or program, and assent to the acts of the computer is found in the act of having set up the system.

The "addressee" is the person with whom the originator intends to communicate by transmitting the data message.[52] This definition should be viewed in contrast to the person who might receive, forward or copy the data message in the course of transmission. Therefore, under the definitions of "originator" and "addressee," the originator and the addressee of the data message could be the same person. [53]

The last mandatory definition or concept in an e-commerce regulatory regime is what is an "information system." This definition covers a wide range of technical means used for transmitting, receiving and storing information. As such, the term "information system" could be indicating a communications network, and in other instances could include an electronic mailbox or even a fax machine. Because of the technology involved, the location of the information system is totally irrelevant for the purposes of other aspects of a transaction.[54]

*(d) **Interpretation** (Article 5)*

The Convention contains the standard UNCITRAL language on interpretation.[55] Although it is not clear what particular interpretive problems the Convention may raise, courts are still implored to look to international standards and not domestic law to make these decisions.

*(e) **Location of the parties** (Article 6)*

The Convention contains rules to determine the location of the parties. These are primarily for the purpose of determining whether a given transaction is "international" and therefore within the scope of the Convention. The legal effect of party location, other than to determine the internationality of the transaction under Article 1, is determined by law other than the Convention. Moreover, for some purposes, such as for taxation or duties, other law may govern the question of party location.

The Convention does not create a duty for the parties to disclose their places of business,[56] but it does establish a number of presumptions and default rules to facilitate the determination of a party's location. Primary, although not absolute, importance is placed on a party's indication of its relevant place of business, and a party's statement of

52 Art. 4(e) of the Convention.

53 A/CN.9/608/Add. 1 para. 56.

54 A/CN.9/608/Add. 1 para. 59.

55 See, e.g., Art. 7 CISG.

56 The Working Group had extensive discussions on the desirability of a duty to disclose, but ultimately concluded that the creation of such duty would have created several problems. First, it would impose a procedural requirement that would be irrelevant to the vast majority of contracting parties that know precisely where their counterpart is. Second, it would create a trap for the unwary. And third, it would create an obligation with no definable recourse for the failure to meet the requirement. A/CN.9/608/Add. 1 para. 67.

its place of business creates a rebuttable presumption that the indication is accurate.[57]

The Convention, consistent with prior electronic commerce legislation,[58] as well as common sense based on an elementary knowledge of the way electronic messaging systems work, places no reliance on the physical location of the information systems as a basis to determine the location of the parties themselves, as there may be no rational connection between the location of the parties and the information systems the parties use.[59]

Likewise, although a less obvious conclusion, the Convention does not create a presumption that an Internet Protocol address or domain name which specifies a particular location in fact indicates that that location is the location of the party using the Internet Protocol address or domain name.[60] However, if appropriate, nothing in the Convention prevents a court or arbitrator from taking into account the assignment of a domain name as a possible element, among others, to determine a party's location where appropriate.[61]

*(f) **Disclosure of identity or other information** (Article 7)*

After much debate, it was decided not to impose a mandatory requirement of party disclosure or other information in the Convention. Although some did feel that such a requirement should be included, the arguments to support such provision were primarily based on consumer protection concerns, which of course are not relevant to the Convention as consumer transactions are excluded from its scope.[62] Moreover, a mandatory requirement was seen as possibly imposing in an international transaction a form or procedural requirement that might exceed the requirements of a forum jurisdiction. A reasonable compromise between these views was agreed to, and the Convention simply defers to the law of the forum if that law imposes the obligation to disclose certain information in an electronic contracting environment. This, of course,

57 How this works is captured in the Official Report accompanying the text of the Convention, A/CN.9/577/Add. 1, para. 39:

> The rebuttable presumption of location established by draft Art. 6 serves eminently practical purposes and is not meant to depart from the notion of "place of business", as used in non-electronic transactions. For example, an Internet vendor maintaining several warehouses at different locations from which different goods might be shipped to fulfill a single purchase order effected by electronic means might see a need to indicate one of such locations as its place of business for a given contract. The current draft recognizes that possibility, with the consequence that such an indication could only be challenged if the vendor does not have a place of business at the location it indicated. Without that possibility, the parties might need to enquire, in respect of each contract, which of the vendor's multiple places of business has the closest connection to the relevant contract in order to determine what is the vendor's place of business in that particular case (A/CN.9/571 para. 98). If a party has only one place of business and has not made any indication, it would be deemed to be located at the place that meets the definition of "place of business" under draft Art. 5, subpara (h).

58 See, e.g., *UNCITRAL E-commerce Model Law*, Art. 15.

59 A/CN.9/608/Add. 1 para. 59.

60 A/CN.9/608/Add. 1 para. 74.

61 A/CN.9/571 para. 113.

62 A/CN.9/546 paras. 92-93.

raises the uncertainty of knowing in advance which forum's law will apply,[63] and whether that given forum will apply its domestic law or choose under its conflict of law rules to apply the law of another forum. Moreover, the Convention does not specify any particular sanction for failure to meet this requirement, and therefore the law of the forum will have to determine the appropriate remedy, if any. It does seem unlikely that failure to meet this requirement will be a significant problem under the Convention because the only significance of the Internet Protocol or domain address is to determine whether the parties meet the internationality requirement of the Convention, and since the parties can choose to opt out of the Convention, there is no reason to use a fake location to manipulate the applicability of the Convention.[64]

(g) Neutrality principle *(Article 8)*

Article 8 of the Convention, which is drawn from Article 11 of the *UNCITRAL E-Commerce Model Law*,[65] sets out the central tenet of the Convention: that 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." In many respects, this is all the Convention says or needs to say. It is a simple rule. Parties are legally empowered to use electronic communications in the same way they may use paper-based methods of communication and contracting.

It is important, however, to understand what this rule does not say. This rule does not provide that all paper-based communications can be replaced with an electronic communication. It merely states that the fact that a communication is electronic, in and of itself, is not a basis for legal invalidity. But there may be other grounds for invalidity, such as the necessity to have a given communication notarized or presented in a certain conspicuous manner, which would not be met by the particular electronic communication.

Nor does the Convention set out any substantive rules that would govern when there is an offer or an acceptance or when a contract was formed. These issues are left to law other than the Convention.

Although there was much initial discussion about setting out a complete legal regime for contract formation in the Convention, this view did not prevail because, with the exception of the CISG, there is no uniform legal basis for international contracts. Different legal systems provide different criteria to establish when a contract

63 Presumably there are at least two possible jurisdictions as the parties are by definition coming from different States.

64 If a party misstates its location for some other purpose, such as to commit a fraud, the law that governs the other purpose, such as the law of fraud, is the law that would determine the result of this misrepresentation and the sanctions for doing so.

65 The *UNCITRAL E-Commerce Model Law* Art. 11(1) provides: "In the context of contract formation, unless otherwise agreed by the parties, an offer and the acceptance of an offer may be expressed by means of data messages. Where a data message is used in the formation of a contract, that contract shall not be denied validity or enforceability on the sole ground that a data message was used for that purpose."

is formed.[66] Moreover, by creating distinct substantive contract rules in the Convention, the risk would be created of having two different legal regimes govern the same transaction. This would be the case if a given transaction was both paper-based as well as electronic.

(h) Form requirements *(Article 9)*

(i) Writing

Article 9 of the Convention [67] expands on the rule in Article 8 on media neutrality by explicitly stating that, if the law otherwise requires a communication to be in writing, the requirement is met with an electronic communication. Thus, not only does the Convention set out a rule of media neutrality, it also specifically provides an affirmative legal basis for avoiding the use of otherwise required paper communications.

Because often one of the functions of a paper-based document is to insure a single original document, and this requirement is generally for the purpose of insuring the integrity of the information in the document, the Convention, consistent with most electronic commerce legislation, provides that "[t]here exists a reliable assurance as to the integrity [68] of the information it contains from the time when it was first generated in its final form, as an electronic communication or otherwise."

Unlike some electronic commerce legislation,[69] the Convention does not have a rule about record retention. The Working Group concluded that such a rule was primarily a rule of evidence, and therefore outside the scope of the Convention. [70]

66 A/CN.9/528 para. 103; see also A/CN.9/546 paras. 118-121.

67 Art. 9 is derived from Arts. 6, 7, and 8 of the *UNCITRAL E-Commerce Model Law*.

68 "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 which arises in the normal course of communication, storage and display" – Art. 9(5)(a).

69 See, *e.g.*, *UNCITRAL E-Commerce Model Law*, Art. 10. This article provides:

"(1) Where the law requires that certain documents, records or information be retained, that requirement is met by retaining data messages, provided that the following conditions are satisfied:

(a) the information contained therein is accessible so as to be usable for subsequent reference; and

(b) the data message is retained in the format in which it was generated, sent or received, or in a format which can be demonstrated to represent accurately the information generated, sent or received; and

(c) such information, if any, is retained as enables the identification of the origin and destination of a data message and the date and time when it was sent or received.

(2) An obligation to retain documents, records or information in accordance with paragraph (1) does not extend to any information the sole purpose of which is to enable the message to be sent or received.

(3) A person may satisfy the requirement referred to in paragraph (1) by using the services of any other person, provided that the conditions set forth in subparagraphs (a), (b) and (c) of paragraph (1) are met.

70 However, the Convention is consistent with the *UNCITRAL E-Commerce Model Law* in that it provides that where the law requires information to be in writing, that requirement is met by a data message if the information contained in it is accessible to be usable for subsequent reference. This provision is applicable whether the requirement is in the form of an obligation or whether the law simply provides consequences for the information not being in writing. The term "subsequent reference," shows the difficulty inherent in drafting definitions to cover technological concepts. Thus, for example, although used in other, similar statutes, the drafters of the Model law rejected terms such as "durability" or "non-alterability," as these were seen as

(ii) Signatures

As for signature requirements, the Convention adopts a functional-equivalent approach. In other words, the rules attempt not to create an electronic version of a signature, but to discern the purpose of signatures and meet those purposes. The two major purposes of signatures are: (1) to identify the party making the signature, and (2) to associate that person with the document that has the signature. Thus, under the Convention, if a signature would otherwise be required on a paper document, this requirement is met if there is a reliable method to associate a person with the electronic communication to determine the identity of that person.

In some circumstances, a signature serves a third function. That is for the party signing the document to certify the accuracy of the information in the document. However, since that is not always the function of a signature, under the Convention it is not assumed that an electronic equivalent to a signature signifies the party's attestation to the accuracy of the information contained in the electronic communication. However, if, under the circumstances, a signature on a paper document for the same transaction would signify that the person making the signature was attesting to the accuracy of the information in the communication, this same result would occur in an electronic communication under the Convention when the party met the requirements of a signature under Article 9.

As to what constitutes a reliable method to identify a party for purposes of a signature, the Convention adopts both a subjective and an objective standard,[71] allowing either to suffice alone. This prevents a party from making an argument that the method used was not objectively reliable when in fact it was reliable enough a practice for the parties in the specific transaction.

Article 9 establishes the minimum standards of form requirements. The principle of party autonomy in Article 3 should not be read as providing the parties with an opportunity for a lower standard of reliability.[72]

In most contexts, the concept of a signature has never rigidly required the actual handwriting of a person's name. Therefore, such things as a stamp, perforation or even a typewritten signature or a printed letterhead have been found to be sufficient to fulfill the signature requirement. However, in some contexts, there exist requirements that combine the traditional handwritten signature with additional security procedures such as the confirmation of the signature by witnesses or the function of notaries in certifying a signature. As such, an inherent problem of the dematerialized and intangible nature of electronic contracts was the inability to affix signatures to these agreements to fulfill the functions of a signature, and signature requirements currently present barriers to electronic commerce. It is within this framework that the

establishing too harsh a standard, and terms such as "readability" or "intelligibility," as creating too subjective a criterion. Some domestic laws, such as the American *Uniform Electronic Transactions Act*, also have record retention provisions.

71 Art. 9(3)(b)(i)&(ii) of the Convention.

72 A/CN.9/527 para. 108.

Convention and the other acts have attempted to replicate the functionality of signatures.[73]

(i) Time and place of dispatch and receipt of electronic communications (Article 10)

The Convention provides default rules on the time and place of dispatch and receipt of data messages. These rules, of course, are only intended to apply to electronic communications. Moreover, these rules are for the limited purpose of determining when a message is dispatched or received. The legal consequences of dispatch and receipt are to be determined by other law.

Under the Convention, "dispatch" occurs at the time when an electronic communication leaves an information system under the control of the originator (as distinct from the time when it enters another information system). This is intended to closely mirror the concept of "dispatch" in a non-electronic environment, which in most legal systems is the time when a communication leaves the originator's sphere of control.[74]

As to receipt, the Convention provides a set of presumptions rather than a firm rule. As is common in some electronic commerce legislation, the Convention requires that an electronic communication be capable of being retrieved to be considered to have been received by the addressee.[75] The Convention has an objective test of entry of a communication in an information system to determine when an electronic communication is presumed to be "capable of being retrieved" and therefore "received".

Similar to a number of domestic laws on electronic commerce,[76] the Convention uses the term "electronic address",[77] instead of the term "information system".[78] In practice, the new term, which appears in other international instruments such as the *Uniform Customs and Practices for Documentary Credits ("UCP 500") – Supplement for Electronic Presentation ("eUCP")*, should not lead to any substantive difference with the term "information system".

73 For example, the *UNCITRAL E-Commerce Model Law*, on which this provision of the Convention is based, also focuses on the two basic functions of a signature: to identify the author of a document and to confirm that the author approved the content of that document. Art. 7 of the Model Law provides that where the law requires a signature of a person, that requirement is met with a data message if: (a) a method is used to identify that person and to indicate that person's approval of the information contained in the data message; and (b) that method is as reliable as was appropriate for the purpose for which the data message was generated or communicated, in light of all the circumstances, including any relevant agreement.

74 A/CN.9/571 para. 142.

75 This requirement is not universal in electronic commerce legislation. For example, it is not contained in the *UNCITRAL E-Commerce Model Law*. The Model law focuses on timing of receipt and it defers to the applicable domestic law as to whether the data message needs to meet other requirements to be deemed received. The Secretariat conducted a comparative study on this point. A/CN.9/WG.IV/WP.104/Add. 2 paras. 10-31, available at <http://www.uncitral.org/english/workinggroups/wg_ec/wp-104-add2-e.pdf>.

76 A/CN.9608/Add. 2 para. 57.

77 The term "electronic address" may, depending on the technology used, refer to a communications network, and in other instances could include an electronic mailbox, a telecopy device or another specific "portion or location in an information system that a person uses for receiving electronic messages".

78 "Information system", for example, is used in the *UNCITRAL E-Commerce Model Law*.

The Convention retains the distinction made in Article 15 of the *UNCITRAL E-Commerce Model Law* between the delivery of messages to specifically designated electronic addresses and the delivery of messages to an address that is not specifically designated. In the first case, the rule of receipt is essentially the same as under Article 15(2)(a)(i) of the Model Law. That is, a message is deemed to be received when the message reaches the addressee's electronic address.[79]

One noticeable difference is the rules for receipt of electronic communications sent to a non-designated address. The Model Law distinguishes between communications sent to an information system other than the designated one and communications sent to any information system of the addressee in the absence of any particular designation. In the first case, the Model Law does not regard the message as being received until the addressee retrieves the message. The assumption is that if the originator chose to ignore the addressee's instructions and sent the message to an information system other than the designated system, it would not be reasonable to consider the message delivered to the addressee until the addressee has actually retrieved it. In the second case, the assumption in the Model Law is that from the point of view of the addressee, it is irrelevant to which information system the message is sent, and therefore it is reasonable to presume that the addressee would accept messages through any of its information systems.

On the other hand, the Convention follows the approach taken in a number of jurisdictions that treat both situations in the same manner.[80] Thus, in those cases where the message is not delivered to a designated electronic address, receipt under the Convention only occurs when (a) the electronic communication becomes capable of being retrieved by the addressee by reaching an electronic address of the addressee, and (b) the addressee is actually aware that the communication was sent to that particular address.[81]

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.[82] In other words, no consideration is given to

79 Art. 10(2) of the Convention.

80 See, e.g., the American *Uniform Electronic Transactions Act* § 15.

81 In cases where the addressee has designated an electronic address, but the communication was sent elsewhere, the rule in the Convention is the same as Art. 15 of the Model Law, which requires that the addressee retrieves the message This, in most cases, would be evidence that the addressee became aware that the electronic communication has been sent to that address. The only substantive difference, therefore, between the Convention and the Model Law is the receipt of communications in the absence of any designation. In this particular case, the Working Group decided that developments since the adoption of the Model Law justified a departure from the original rule. In particular, concerns over the security of information and communications in the business world have led to the increased use of security measures such as filters or firewalls which might prevent electronic communications from reaching their addressees. This led to the conclusion that any rules about the receipt of electronic communications should be linked to the consent to use a particular electronic address, and persons who had not agreed to a particular address should not bear the risk of loss of communications that were sent to another address. A/CN.9/571 para. 150.

82 These rules are essentially the same as in Art. 15 of the *UNCITRAL E-Commerce Model Law*.

the place where the electronic servers are located, which may be otherwise irrelevant to the transaction.

The question of whether a data message is intelligible or usable falls outside the scope of the Convention. In addition, the Convention is not intended to run counter to trade usages, under which certain encoded messages are deemed to be received even before they are usable by, or intelligible for, the addressee. It was felt that the Convention should not create a more stringent requirement than currently exists in a paper-based environment, where a message can be considered to be received even if it is never received or not intelligible to the addressee or not intended to be intelligible to the addressee (e.g., where encrypted data is transmitted to a depository for the sole purpose of retention in the context of intellectual property rights protection).

*(j) **Invitations to make offers** (Article 11)*

Even with the best intentions and greatest amount of effort, a little bit of irrelevance slips into every piece of legislation. So with the Convention. Article 11 is intended to cover situations such as the advertising of goods and services over the Internet through a web page. What Article 11 provides is that a proposal to conclude a contract that is made to the public will not be considered an offer unless it is clearly designated as such.

Article 11 raises two problems. First, it is a substantive rule of contract law that has no place in a Convention that is designed to promote and provide for electronic commerce but specifically is not intended to create substantive rules of law to govern the underlying transaction.

The second and more substantive quibble one might have with this Article is that it does not accurately state the law. Although it is often stated that one cannot make an offer to the whole world, or that an advertisement is not an offer, these propositions do not accurately state the law. The principle is that a statement to conclude a contract that is not definite enough to determine the risk the offeror is willing to undertake is too indefinite to be an offer.

Thus, if an advertisement on the Internet to sell a certain product at a certain price does not specify the number of items the seller has to sell, this would generally not be an offer since there is no basis to determine the scope of the seller's obligations as the seller could not anticipate demand. On the other hand, if the seller specified the number of items available, and therefore buyers would understand the sale was limited to that number of items, the advertisement could be an offer. The rule in Article 11 is flawed because it is too broad.

*(k) **The question of mechanical agents** (Article 12)*

Article 12 recognizes that contracts may be formed as a result of actions by automated message systems ("electronic agents"), even if the actions carried out by the systems or the resulting contract were never reviewed by a person. This rule is simply the particularized application of the rule that a contract can be formed by an agent. This

rule has been part of the law since at least the invention of the vending machine, and it really adds nothing new. It does give comfort, though, to those who are still trying to make sense of the world of electronic commerce.

A brief mention of attribution should be made. The *UNCITRAL E-Commerce Model Law*[83] as well as other legal regimes such as the *American Uniform Electronic Transactions Act*,[84] provide attribution rules that allow not only electronic data that is generated by humans to be attributed to the humans, but also electronic messages that are generated by electronic systems such as computers to be attributed to the person who programmed the system and set it in motion. Thus, arguments that computers cannot have the intent to contract are deflected: the person who set up the computer can have the intent, and the intent can be recognized by that person using the computer as a tool. The Convention, however, does not have a specific attribution rule.

*(l) **Availability of contract terms** (Article 13)*

The Convention facilitates electronic commerce by providing a legal basis for using electronic messages. However, it is not intended to supplement or replace existing laws that govern the type of information that other law may require in a given transaction. Although this is implicit in the Convention, Article 13 makes this point explicitly.

One might wonder why Article 13, which is fairly self-evident, is even included in the Convention. The answer has to do with the convoluted history of the section. In earlier drafts of the Convention, there was a provision that had mandatory information requirements. This was driven by a fear that some parties would hide behind the anonymity of the Internet. However, as the negotiations continued, it became clear that this was primarily a consumer protection issue outside the scope of the Convention, and furthermore, to the extent that a jurisdiction wants these requirements, they can be provided for in law other than the Convention. As the original concept of a mandatory information requirement was slowly eroded, the skeletal text remained which is the current Article 13.

*(m) **Errors** (Article 14)*

It is thought by some that electronic commerce creates new problems in the law of error and mistake. Conversely, some believe that the existing laws of error and mistake are adequate to cover the problems arising in electronic commerce, as electronic commerce does not create new problems of error and mistake, but merely creates new applications of familiar problems. In the end, the Working Group decided that one type of error was specific and unique enough to electronic commerce to warrant inclusion in the Convention. The assumption is that there is a potentially higher risk of a mistake in a nearly instantaneous transaction.[85]

83 *UNCITRAL E-Commerce Model Law*, Art. 13.

84 American *Uniform Electronic Transactions Act*, § 9.

85 A/CN.9/509 para. 105; A/CN.9/548 para. 17.

An input error must be distinguished from an error of judgment. An input error is one where the person intends to enter specific information into the system but accidentally enters other information. An error of judgment is occurs when the person intends to enter the information, but would not have done so had the person known other facts or otherwise simply been wiser in making the decision of what information should be entered. Obviously at the margins it is sometimes difficult to tell which kind of error has been made. Errors other than input errors are governed by the appropriate domestic law.[86]

The error rule is quite limited. First, it is limited to cases where the automated message system does not provide for the correction of input errors. In that case, the party making the error has the right to withdraw that portion of the information that was in error. But this is only possible if the party making the error has not received any material benefit from goods or services from the other party.

Implicit in the rule is that if the input error refers only to part of the information, but the error would logically invalidate the entire transaction, the party making the error can withdraw all of the communication.

VI. – CONCLUSION

International commerce and electronic communication has responded to the rapid growth of instantaneous information and the exponential increase in the demand for goods and services by providing for the growth of commerce electronically. Electronic commerce would move ahead without the Convention or other legal solvents to facilitate their growth. But the Convention enhances this development.

It is often the case that the law lags behind the business and commercial practices that it is designed to provide for and regulate. But when the law does lag behind, it is like rust on a moving gear. It does not stop it, but it slows it down, and it makes it less efficient and it inhibits its progress. The Convention is needed oil on this cog.

The Convention recognizes that there are some basic norms that appear necessary in e-commerce legislation, and these principles are necessary to facilitate electronic commerce. First, it is clear that recognition must be afforded to electronic messages and contracts. Second, electronic or digital signatures must be given legal recognition. Third, some provision must be made to allow commercial transactions over the Internet and other electronic systems. And last, there need to be clear rules that govern the time of dispatch and receipt of electronic messages and the place of dispatch and receipt of electronic documents. The single unifying point is that the law must be designed to be technologically and media neutral.

86 A/CN.9/571 para. 190.