UNCITRAL Model Law on Electronic Commerce with Guide to Enactment

1996

with additional article 5 bis as adopted in 1998

GENERAL ASSEMBLY RESOLUTION 51/162 OF 16 DECEMBER 1996

UNCITRAL MODEL LAW ON ELECTRONIC COMMERCE

Resolution adopted by the General Assembly

[on the report of the Sixth Committee (A/51/628)]

51/162 Model Law on Electronic Commerce adopted by the United Nations Commission on International Trade Law

The General Assembly,

Recalling its resolution 2205 (XXI) of 17 December 1966, by which it created the United Nations Commission on International Trade Law, with a mandate to further the progressive harmonization and unification of the law of international trade and in that respect to bear in mind the interests of all peoples, in particular those of developing countries, in the extensive development of international trade,

Noting that an increasing number of transactions in international trade are carried out by means of electronic data interchange and other means of communication, commonly referred to as "electronic commerce", which involve the use of alternatives to paper-based methods of communication and storage of information,

Recalling the recommendation on the legal value of computer records adopted by the Commission at its eighteenth session, in 1985,(1) and paragraph 5(b) of General Assembly resolution 40/71 of 11 December 1985, in which the Assembly called upon Governments and international organizations to take action, where appropriate, in conformity with the recommendation of the Commission,(1) so as to ensure legal security in the context of the widest possible use of automated data processing in international trade,

Convinced that the establishment of a model law facilitating the use of electronic commerce that is acceptable to States with different legal, social and economic systems, could contribute significantly to the development of harmonious international economic relations,

Noting that the Model Law on Electronic Commerce was adopted by the Commission at its twenty-ninth session after consideration of the observations of Governments and interested organizations,

Believing that the adoption of the Model Law on Electronic Commerce by the Commission will assist all States significantly in enhancing their legislation governing the use of alternatives to paper-based methods of communication and storage of information and in formulating such legislation where none currently exists,

1. Expresses its appreciation to the United Nations Commission on International Trade Law for completing and adopting the Model Law on Electronic Commerce contained in the annex to the present resolution and for preparing the Guide to Enactment of the Model Law;

2. Recommends that all States give favourable consideration to the Model Law when they enact or revise their laws, in view of the need for uniformity of the law applicable to alternatives to paper-based methods of communication and storage of information;

3. Recommends also that all efforts be made to ensure that the Model Law, together with the Guide, become generally known and available.

85th plenary meeting

16 December 1996

UNCITRAL Model Law on Electronic Commerce

[Original: Arabic, Chinese, English, French, Russian, Spanish]

Part one. Electronic commerce in general ➦

Chapter I. General provisions ➦

Article 1. Sphere of application*

This Law** applies to any kind of information in the form of a data message used in the context*** of commercial**** activities.

---

* The Commission suggests the following text for States that might wish to limit the applicability of this Law to international data messages:

"This Law applies to a data message as defined in paragraph (1) of article 2 where the data message relates to international commerce."

** This Law does not override any rule of law intended for the protection of consumers.

*** The Commission suggests the following text for States that might wish to extend the applicability of this Law: "This Law applies to any kind of information in the form of a data message, except in the following situations: [...]."

**** The term "commercial" should be given a wide interpretation so as to cover matters arising from all relationships of a commercial nature, whether contractual or not. Relationships of a commercial nature include, but are not limited to, the following transactions: any trade transaction for the supply or exchange of goods or services; distribution agreement; commercial representation or agency; factoring; leasing; construction of works; consulting; engineering; licensing; investment; financing; banking; insurance; exploitation agreement or concession; joint venture and other forms of industrial or business cooperation; carriage of goods or passengers by air, sea, rail or road

---

Article 2. Definitions

For the purposes of this Law:

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

(b) "Electronic data interchange (EDI)" means the electronic transfer from computer to computer of information using an agreed standard to structure the information;

(c) "Originator" of a data message means a person by whom, or on whose behalf, the data message purports to have been sent or generated prior to storage, if any, but it does not include a person acting as an intermediary with respect to that data message;

(d) "Addressee" of a data message means a person who is intended by the originator to receive the data message, but does not include a person acting as an intermediary with

respect to that data message;

(e) "Intermediary", with respect to a particular data message, means a person who, on behalf of another person, sends, receives or stores that data message or provides other services with respect to that data message;

(f) "Information system" means a system for generating, sending, receiving, storing or otherwise processing data messages.

Article 3. Interpretation

(1) In the interpretation of this Law, regard is to be had to its international origin and to the need to promote uniformity in its application and the observance of good faith.

(2) Questions concerning matters governed by this Law which are not expressly settled in it are to be settled in conformity with the general principles on which this Law is based.

Article 4. Variation by agreement

(1) As between parties involved in generating, sending, receiving, storing or otherwise processing data messages, and except as otherwise provided, the provisions of chapter III may be varied by agreement.

(2) Paragraph (1) does not affect any right that may exist to modify by agreement any rule of law referred to in chapter II.

Chapter II. Application of legal requirements to data messages ➦

Article 5. Legal recognition of data messages

Information shall not be denied legal effect, validity or enforce- ability solely on the grounds that it is in the form of a data message.

Article 5 bis. Incorporation by reference

(as adopted by the Commission at its thirty-first session, in June 1998)

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.

Article 6. Writing

(1) Where the law requires information to be in writing, that requirement is met by a data message if the information contained therein is accessible so as to be usable for subsequent reference.

(2) Paragraph (1) applies whether the requirement therein is in the form of an obligation or whether the law simply provides consequences for the information not being in writing.

(3) The provisions of this article do not apply to the following: [...].

Article 7. Signature

(1) Where the law requires a signature of a person, that requirement is met in relation to 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 the light of all the circumstances, including any relevant agreement.

(2) Paragraph (1) applies whether the requirement therein is in the form of an obligation or whether the law simply provides consequences for the absence of a signature.

(3) The provisions of this article do not apply to the following: [...].

Article 8. Original

(1) Where the law requires information to be presented or retained in its original form, that requirement is met by a data message if:

(a) there exists a reliable assurance as to the integrity of the information from the time when it was first generated in its final form, as a data message or otherwise; and

(b) where it is required that information be presented, that information is capable of being displayed to the person to whom it is to be presented.

(2) Paragraph (1) applies whether the requirement therein is in the form of an obligation or whether the law simply provides consequences for the information not being presented or retained in its original form.

(3) For the purposes of subparagraph (a) of paragraph (1):

(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 which 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.

(4) The provisions of this article do not apply to the following: [...].

Article 9. Admissibility and evidential weight of data messages

(1) In any legal proceedings, nothing in the application of the rules of evidence shall apply so as to deny the admissibility of a data message in evidence:

(a) on the sole ground that it is a data message; or,

(b) if it is the best evidence that the person adducing it could reasonably be expected to obtain, on the grounds that it is not in its original form.

(2) Information in the form of a data message shall be given due evidential weight. In assessing the evidential weight of a data message, regard shall be had to the reliability of the manner in which the data message was generated, stored or communicated, to the reliability of the manner in which the integrity of the information was maintained, to the manner in which its originator was identified, and to any other relevant factor.

Article 10. Retention of data messages

(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.

Chapter III. Communication of data messages ➦

Article 11. Formation and validity of contracts

(1) 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.

(2) The provisions of this article do not apply to the following: [...].

Article 12. Recognition by parties of data messages

(1) As between the originator and the addressee of a data message, a declaration of will or other statement shall not be denied legal effect, validity or enforceability solely on the grounds that it is in the form of a data message.

(2) The provisions of this article do not apply to the following: [...].

Article 13. Attribution of data messages

(1) A data message is that of the originator if it was sent by the originator itself.

(2) As between the originator and the addressee, a data message is deemed to be that of the originator if it was sent:

(a) by a person who had the authority to act on behalf of the originator in respect of that data message; or

(b) by an information system programmed by, or on behalf of, the originator to operate automatically.

(3) As between the originator and the addressee, an addressee is entitled to regard a data message as being that of the originator, and to act on that assumption, if:

(a) in order to ascertain whether the data message was that of the originator, the addressee properly applied a procedure previously agreed to by the originator for that purpose; or

(b) the data message as received by the addressee resulted from the actions of a person whose relationship with the originator or with any agent of the originator enabled that person to gain access to a method used by the originator to identify data messages as its own.

(4) Paragraph (3) does not apply:

(a) as of the time when the addressee has both received notice from the originator that the data message is not that of the originator, and had reasonable time to act accordingly; or

(b) in a case within paragraph (3)(b), at any time when the addressee knew or should have known, had it exercised reasonable care or used any agreed procedure, that the data message was not that of the originator.

(5) Where a data message is that of the originator or is deemed to be that of the originator, or the addressee is entitled to act on that assumption, then, as between the originator and the addressee, the addressee is entitled to regard the data message as received as being what the originator intended to send, and to act on that assumption. The addressee is not so entitled when it knew or should have known, had it exercised reasonable care or used any agreed procedure, that the transmission resulted in any error in the data message as received.

(6) The addressee is entitled to regard each data message received as a separate data message and to act on that assumption, except to the extent that it duplicates another data message and the addressee knew or should have known, had it exercised reasonable care or used any agreed procedure, that the data message was a duplicate.

Article 14. Acknowledgement of receipt

(1) Paragraphs (2) to (4) of this article apply where, on or before sending a data message, or by means of that data message, the originator has requested or has agreed with the addressee that receipt of the data message be acknowledged.

(2) Where the originator has not agreed with the addressee that the acknowledgement be given in a particular form or by a particular method, an acknowledgement may be given by

(a) any communication by the addressee, automated or otherwise, or

(b) any conduct of the addressee,

sufficient to indicate to the originator that the data message has been received.

(3) Where the originator has stated that the data message is conditional on receipt of the acknowledgement, the data message is treated as though it has never been sent, until the acknowledgement is received.

(4) Where the originator has not stated that the data message is conditional on receipt of the acknowledgement, and the acknowledgement has not been received by the originator within the time specified or agreed or, if no time has been specified or agreed, within a reasonable time, the originator:

(a) may give notice to the addressee stating that no acknowledgement has been received and specifying a reasonable time by which the acknowledgement must be received; and

(b) if the acknowledgement is not received within the time specified in subparagraph (a), may, upon notice to the addressee, treat the data message as though it had never been sent, or exercise any other rights it may have.

(5) Where the originator receives the addressee's acknowledgement of receipt, it is presumed that the related data message was received by the addressee. That presumption does not imply that the data message corresponds to the message received.

(6) Where the received acknowledgement states that the related data message met technical requirements, either agreed upon or set forth in applicable standards, it is presumed that those requirements have been met.

(7) Except in so far as it relates to the sending or receipt of the data message, this article is not intended to deal with the legal consequences that may flow either from that data message or from the acknowledgement of its receipt.

Article 15. Time and place of dispatch and receipt of data messages

(1) Unless otherwise agreed between the originator and the addressee, the dispatch of a data message occurs when it enters an information system outside the control of the originator or of the person who sent the data message on behalf of the originator.

(2) Unless otherwise agreed between the originator and the addressee, the time of receipt of a data message is determined as follows:

(a) if the addressee has designated an information system for the purpose of receiving data messages, receipt occurs:

(i) at the time when the data message enters the designated information system; or

(ii) if the data message is sent to an information system of the addressee that is not the designated information system, at the time when the data message is retrieved by the addressee;

(b) if the addressee has not designated an information system, receipt occurs when the data message enters an information system of the addressee.

(3) Paragraph (2) applies notwithstanding that the place where the information system is located may be different from the place where the data message is deemed to be received under paragraph (4).

(4) Unless otherwise agreed between the originator and the addressee, a data message 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. For the purposes of this paragraph:

(a) if the originator or the addressee has more than one place of business, the place of business is that which has the closest relationship to the underlying transaction or, where there is no underlying transaction, the principal place of business;

(b) if the originator or the addressee does not have a place of business, reference is to be made to its habitual residence.

(5) The provisions of this article do not apply to the following: [...].

Part two. Electronic commerce in specific areas ➦

Chapter I. Carriage of goods ➦

Article 16. Actions related to contracts of carriage of goods

Without derogating from the provisions of part one of this Law, this chapter applies to any action in connection with, or in pursuance of, a contract of carriage of goods, including but not limited to:

(a) (i) furnishing the marks, number, quantity or weight of goods;

(ii) stating or declaring the nature or value of goods;

(iii) issuing a receipt for goods;

(iv) confirming that goods have been loaded;

(b) (i) notifying a person of terms and conditions of the contract;

(ii) giving instructions to a carrier;

(c) (i) claiming delivery of goods;

(ii) authorizing release of goods;

(iii) giving notice of loss of, or damage to, goods;

(d) giving any other notice or statement in connection with the performance of the contract;

(e) undertaking to deliver goods to a named person or a person authorized to claim delivery;

(f) granting, acquiring, renouncing, surrendering, transferring or negotiating rights in goods;

(g) acquiring or transferring rights and obligations under the contract.

Article 17. Transport documents

(1) Subject to paragraph (3), where the law requires that any action referred to in article 16 be carried out in writing or by using a paper document, that requirement is met if the action is carried out by using one or more data messages.

(2) Paragraph (1) applies whether the requirement therein is in the form of an obligation or whether the law simply provides consequences for failing either to carry out the action in writing or to use a paper document.

(3) If a right is to be granted to, or an obligation is to be acquired by, one person and no other person, and if the law requires that, in order to effect this, the right or obligation must be conveyed to that person by the transfer, or use of, a paper document, that requirement is met if the right or obligation is conveyed by using one or more data messages, provided that a reliable method is used to render such data message or messages unique.

(4) For the purposes of paragraph (3), the standard of reliability required shall be assessed in the light of the purpose for which the right or obligation was conveyed and in the light of all the circumstances, including any relevant agreement.

(5) Where one or more data messages are used to effect any action in subparagraphs (f) and (g) of article 16, no paper document used to effect any such action is valid unless the use of data messages has been terminated and replaced by the use of paper documents. A paper document issued in these circumstances shall contain a statement of such termination. The replacement of data messages by paper documents shall not affect the rights or obligations of the parties involved.

(6) If a rule of law is compulsorily applicable to a contract of carriage of goods which is in, or is evidenced by, a paper document, that rule shall not be inapplicable to such a contract of carriage of goods which is evidenced by one or more data messages by reason of the fact that the contract is evidenced by such data message or messages instead of by a paper document.

(7) The provisions of this article do not apply to the following: [...].

* * * * *

Guide to Enactment of the UNCITRAL Model Law on Electronic Commerce (1996) ➦

Purpose of this guide ➦

1. In preparing and adopting the UNCITRAL Model Law on Electronic Commerce (hereinafter referred to as "the Model Law"), the United Nations Commission on International Trade Law (UNCITRAL) was mindful that the Model Law would be a more effective tool for States modernizing their legislation if background and explanatory information would be provided to executive branches of Governments and legislators to

assist them in using the Model Law. The Commission was also aware of the likelihood that the Model Law would be used in a number of States with limited familiarity with the type of communication techniques considered in the Model Law. This Guide, much of which is drawn from the travaux préparatoires of the Model Law, is also intended to be helpful to users of electronic means of communication as well as to scholars in that area. In the preparation of the Model Law, it was assumed that the draft Model Law would be accompanied by such a guide. For example, it was decided in respect of a number of issues not to settle them in the draft Model Law but to address them in the Guide so as to provide guidance to States enacting the draft Model Law. The information presented in this Guide is intended to explain why the provisions in the Model Law have been included as essential basic features of a statutory device designed to achieve the objectives of the Model Law. Such information might assist States also in considering which, if any, of the provisions of the Model Law might have to be varied to take into account particular national circumstances.

I. INTRODUCTION TO THE MODEL LAW ➦

A. Objectives ➦

2. The use of modern means of communication such as electronic mail and electronic data interchange (EDI) for the conduct of international trade transactions has been increasing rapidly and is expected to develop further as technical supports such as information highways and the INTERNET become more widely accessible. However, the communication of legally significant information in the form of paperless messages may be hindered by legal obstacles to the use of such messages, or by uncertainty as to their legal effect or validity. The purpose of the Model Law is to offer national legislators a set of internationally acceptable rules as to how a number of such legal obstacles may be removed, and how a more secure legal environment may be created for what has become known as "electronic commerce". The principles expressed in the Model Law are also intended to be of use to individual users of electronic commerce in the drafting of some of the contractual solutions that might be needed to overcome the legal obstacles to the increased use of electronic commerce.

3. The decision by UNCITRAL to formulate model legislation on electronic commerce was taken in response to the fact that in a number of countries the existing legislation governing communication and storage of information is inadequate or outdated because it does not contemplate the use of electronic commerce. In certain cases, existing legislation imposes or implies restrictions on the use of modern means of communication, for example by prescribing the use of "written", "signed" or "original" documents. While a few countries have adopted specific provisions to deal with certain aspects of electronic commerce, there exists no legislation dealing with electronic commerce as a whole. This may result in uncertainty as to the legal nature and validity of information presented in a form other than a traditional paper document. Moreover, while sound laws and practices are necessary in all countries where the use of EDI and electronic mail is becoming widespread, this need is also felt in many countries with respect to such communication techniques as telecopy and telex.

4. The Model Law may also help to remedy disadvantages that stem from the fact that inadequate legislation at the national level creates obstacles to international trade, a significant amount of which is linked to the use of modern communication techniques. Disparities among, and uncertainty about, national legal regimes governing the use of such communication techniques may contribute to limiting the extent to which businesses may access international markets.

5. Furthermore, at an international level, the Model Law may be useful in certain cases as a

tool for interpreting existing international conventions and other international instruments that create legal obstacles to the use of electronic commerce, for example by prescribing that certain documents or contractual clauses be made in written form. As between those States parties to such international instruments, the adoption of the Model Law as a rule of interpretation might provide the means to recognize the use of electronic commerce and obviate the need to negotiate a protocol to the international instrument involved.

6. The objectives of the Model Law, which include enabling or facilitating the use of electronic commerce and providing equal treatment to users of paper-based documentation and to users of computer-based information, are essential for fostering economy and efficiency in international trade. By incorporating the procedures prescribed in the Model Law in its national legislation for those situations where parties opt to use electronic means of communication, an enacting State would create a media-neutral environment.

B. Scope

7. The title of the Model Law refers to "electronic commerce". While a definition of "electronic data interchange (EDI)" is provided in article 2, the Model Law does not specify the meaning of "electronic commerce". In preparing the Model Law, the Commission decided that, in addressing the subject matter before it, it would have in mind a broad notion of EDI, covering a variety of trade-related uses of EDI that might be referred to broadly under the rubric of "electronic commerce" (see A/CN.9/360, paras. 28-29), although other descriptive terms could also be used. Among the means of communication encompassed in the notion of "electronic commerce" are the following modes of transmission based on the use of electronic techniques: communication by means of EDI defined narrowly as the computer-to-computer transmission of data in a standardized format; transmission of electronic messages involving the use of either publicly available standards or proprietary standards; transmission of free-formatted text by electronic means, for example through the INTERNET. It was also noted that, in certain circumstances, the notion of "electronic commerce" might cover the use of techniques such as telex and telecopy.

8. It should be noted that, while the Model Law was drafted with constant reference to the more modern communication techniques, e.g., EDI and electronic mail, the principles on which the Model Law is based, as well as its provisions, are intended to apply also in the context of less advanced communication techniques, such as telecopy. There may exist situations where digitalized information initially dispatched in the form of a standardized EDI message might, at some point in the communication chain between the sender and the recipient, be forwarded in the form of a computer-generated telex or in the form of a telecopy of a computer print-out. A data message may be initiated as an oral communication and end up in the form of a telecopy, or it may start as a telecopy and end up as an EDI message. A characteristic of electronic commerce is that it covers programmable messages, the computer programming of which is the essential difference between such messages and traditional paper-based documents. Such situations are intended to be covered by the Model Law, based on a consideration of the users' need for a consistent set of rules to govern a variety of communication techniques that might be used interchangeably. More generally, it may be noted that, as a matter of principle, no communication technique is excluded from the scope of the Model Law since future technical developments need to be accommodated.

9. The objectives of the Model Law are best served by the widest possible application of the Model Law. Thus, although there is provision made in the Model Law for exclusion of certain situations from the scope of articles 6, 7, 8, 11, 12, 15 and 17, an enacting State may well decide not to enact in its legislation substantial restrictions on the scope of application of the Model Law.

10. The Model Law should be regarded as a balanced and discrete set of rules, which are recommended to be enacted as a single statute. Depending on the situation in each enacting State, however, the Model Law could be implemented in various ways, either as a single statute or in several pieces of legislation (see below, para. 143).

C. Structure

11. The Model Law is divided into two parts, one dealing with electronic commerce in general and the other one dealing with electronic commerce in specific areas. It should be noted that part two of the Model Law, which deals with electronic commerce in specific areas, is composed of a chapter I only, dealing with electronic commerce as it applies to the carriage of goods. Other aspects of electronic commerce might need to be dealt with in the future, and the Model Law can be regarded as an open-ended instrument, to be complemented by future work.

12. UNCITRAL intends to continue monitoring the technical, legal and commercial developments that underline the Model Law. It might, should it regard it advisable, decide to add new model provisions to the Model Law or modify the existing ones.

D. A "framework" law to be supplemented by technical regulations ➦

13. The Model Law is intended to provide essential procedures and principles for facilitating the use of modern techniques for recording and communicating information in various types of circumstances. However, it is a "framework" law that does not itself set forth all the rules and regulations that may be necessary to implement those techniques in an enacting State. Moreover, the Model Law is not intended to cover every aspect of the use of electronic commerce. Accordingly, an enacting State may wish to issue regulations to fill in the procedural details for procedures authorized by the Model Law and to take account of the specific, possibly changing, circumstances at play in the enacting State, without compromising the objectives of the Model Law. It is recommended that, should it decide to issue such regulation, an enacting State should give particular attention to the need to maintain the beneficial flexibility of the provisions in the Model Law.

14. It should be noted that the techniques for recording and communicating information considered in the Model Law, beyond raising matters of procedure that may need to be addressed in the implementing technical regulations, may raise certain legal questions the answers to which will not necessarily be found in the Model Law, but rather in other bodies of law. Such other bodies of law may include, for example, the applicable administrative, contract, criminal and judicial-procedure law, which the Model Law is not intended to deal with.

E. The "functional-equivalent" approach ➦

15. The Model Law is based on the recognition that legal requirements prescribing the use of traditional paper-based documentation constitute the main obstacle to the development of modern means of communication. In the preparation of the Model Law, consideration was given to the possibility of dealing with impediments to the use of electronic commerce posed by such requirements in national laws by way of an extension of the scope of such notions as "writing", "signature" and "original", with a view to encompassing computer-based techniques. Such an approach is used in a number of existing legal instruments, e.g., article 7 of the UNCITRAL Model Law on International Commercial Arbitration and article 13 of the United Nations Convention on Contracts for the International Sale of Goods. It was observed that the Model Law should permit States to adapt their domestic legislation to developments in communications technology applicable to trade law without necessitating the wholesale removal of the paper-based requirements

themselves or disturbing the legal concepts and approaches underlying those requirements. At the same time, it was said that the electronic fulfilment of writing requirements might in some cases necessitate the development of new rules. This was due to one of many distinctions between EDI messages and paper-based documents, namely, that the latter were readable by the human eye, while the former were not so readable unless reduced to paper or displayed on a screen.

16. The Model Law thus relies on a new approach, sometimes referred to as the "functional equivalent approach", which is based on an analysis of the purposes and functions of the traditional paper-based requirement with a view to determining how those purposes or functions could be fulfilled through electronic-commerce techniques. For example, among the functions served by a paper document are the following: to provide that a document would be legible by all; to provide that a document would remain unaltered over time; to allow for the reproduction of a document so that each party would hold a copy of the same data; to allow for the authentication of data by means of a signature; and to provide that a document would be in a form acceptable to public authorities and courts. It should be noted that in respect of all of the above-mentioned functions of paper, electronic records can provide the same level of security as paper and, in most cases, a much higher degree of reliability and speed, especially with respect to the identification of the source and content of the data, provided that a number of technical and legal requirements are met. However, the adoption of the functional-equivalent approach should not result in imposing on users of electronic commerce more stringent standards of security (and the related costs) than in a paper-based environment.

17. A data message, in and of itself, cannot be regarded as an equivalent of a paper document in that it is of a different nature and does not necessarily perform all conceivable functions of a paper document. That is why the Model Law adopted a flexible standard, taking into account the various layers of existing requirements in a paper-based environment: when adopting the "functional-equivalent" approach, attention was given to the existing hierarchy of form requirements, which provides distinct levels of reliability, traceability and unalterability with respect to paper-based documents. For example, the requirement that data be presented in written form (which constitutes a "threshold requirement") is not to be confused with more stringent requirements such as "signed writing", "signed original" or "authenticated legal act".

18. The Model Law does not attempt to define a computer-based equivalent to any kind of paper document. Instead, it singles out basic functions of paper-based form requirements, with a view to providing criteria which, once they are met by data messages, enable such data messages to enjoy the same level of legal recognition as corresponding paper documents performing the same function. It should be noted that the functional-equivalent approach has been taken in articles 6 to 8 of the Model Law with respect to the concepts of "writing", "signature" and "original" but not with respect to other legal concepts dealt with in the Model Law. For example, article 10 does not attempt to create a functional equivalent of existing storage requirements.

F. Default rules and mandatory law ➦

19. The decision to undertake the preparation of the Model Law was based on the recognition that, in practice, solutions to most of the legal difficulties raised by the use of modern means of communication are sought within contracts. The Model Law embodies the principle of party autonomy in article 4 with respect to the provisions contained in chapter III of part one. Chapter III of part one contains a set of rules of the kind that would typically be found in agreements between parties, e.g., interchange agreements or "system rules". It should be noted that the notion of "system rules" might cover two different categories of rules, namely, general terms provided by communication networks and

specific rules that might be included in those general terms to deal with bilateral relationships between originators and addressees of data messages. Article 4 (and the notion of "agreement" therein) is intended to encompass both categories of "system rules".

20. The rules contained in chapter III of part one may be used by parties as a basis for concluding such agreements. They may also be used to supplement the terms of agreements in cases of gaps or omissions in contractual stipulations. In addition, they may be regarded as setting a basic standard for situations where data messages are exchanged without a previous agreement being entered into by the communicating parties, e.g., in the context of open-networks communications.

21. The provisions contained in chapter II of part one are of a different nature. One of the main purposes of the Model Law is to facilitate the use of modern communication techniques and to provide certainty with the use of such techniques where obstacles or uncertainty resulting from statutory provisions could not be avoided by contractual stipulations. The provisions contained in chapter II may, to some extent, be regarded as a collection of exceptions to well-established rules regarding the form of legal transactions. Such well-established rules are normally of a mandatory nature since they generally reflect decisions of public policy. The provisions contained in chapter II should be regarded as stating the minimum acceptable form requirement and are, for that reason, of a mandatory nature, unless expressly stated otherwise in those provisions. The indication that such form requirements are to be regarded as the "minimum acceptable" should not, however, be construed as inviting States to establish requirements stricter than those contained in the Model Law.

G. Assistance from UNCITRAL secretariat ➦

22. In line with its training and assistance activities, the UNCITRAL secretariat may provide technical consultations for Governments preparing legislation based on the UNCITRAL Model Law on Electronic Commerce, as it may for Governments considering legislation based on other UNCITRAL model laws, or considering adhesion to one of the international trade law conventions prepared by UNCITRAL.

23. Further information concerning the Model Law as well as the Guide and other model laws and conventions developed by UNCITRAL, may be obtained from the secretariat at the address below. The secretariat welcomes comments concerning the Model Law and the Guide, as well as information concerning enactment of legislation based on the Model Law.

International Trade Law Branch

Office of Legal Affairs

United Nations Vienna International Centre

P.O. Box 500

A-1400, Vienna, Austria

Telephone: (43-1) 26060-4060 or 4061

Telefax: (43-1) 26060-5813

E-mail: uncitral@uncitral.org

Internet: http://www.uncitral.org

II. ARTICLE-BY-ARTICLE REMARKS ➦

Part one. Electronic commerce in general ➦

Chapter I. General provisions ➦

Article 1. Sphere of application

24. The purpose of article 1, which is to be read in conjunction with the definition of "data message" in article 2(a), is to delineate the scope of application of the Model Law. The approach used in the Model Law is to provide in principle for the coverage of all factual situations where information is generated, stored or communicated, irrespective of the medium on which such information may be affixed. It was felt during the preparation of the Model Law that exclusion of any form or medium by way of a limitation in the scope of the Model Law might result in practical difficulties and would run counter to the purpose of providing truly "media-neutral" rules. However, the focus of the Model Law is on "paperless" means of communication and, except to the extent expressly provided by the Model Law, the Model Law is not intended to alter traditional rules on paper-based communications.

25. Moreover, it was felt that the Model Law should contain an indication that its focus was on the types of situations encountered in the commercial area and that it had been prepared against the background of trade relationships. For that reason, article 1 refers to "commercial activities" and provides, in footnote ****, indications as to what is meant thereby. Such indications, which may be particularly useful for those countries where there does not exist a discrete body of commercial law, are modelled, for reasons of consistency, on the footnote to article 1 of the UNCITRAL Model Law on International Commercial Arbitration. In certain countries, the use of footnotes in a statutory text would not be regarded as acceptable legislative practice. National authorities enacting the Model Law might thus consider the possible inclusion of the text of footnotes in the body of the Law itself.

26. The Model Law applies to all kinds of data messages that might be generated, stored or communicated, and nothing in the Model Law should prevent an enacting State from extending the scope of the Model Law to cover uses of electronic commerce outside the commercial sphere. For example, while the focus of the Model Law is not on the relationships between users of electronic commerce and public authorities, the Model Law is not intended to be inapplicable to such relationships. Footnote *** provides for alternative wordings, for possible use by enacting States that would consider it appropriate to extend the scope of the Model Law beyond the commercial sphere.

27. Some countries have special consumer protection laws that may govern certain aspects of the use of information systems. With respect to such consumer legislation, as was the case with previous UNCITRAL instruments (e.g., the UNCITRAL Model Law on International Credit Transfers), it was felt that an indication should be given that the Model Law had been drafted without special attention being given to issues that might arise in the context of consumer protection. At the same time, it was felt that there was no reason why situations involving consumers should be excluded from the scope of the Model Law by way of a general provision, particularly since the provisions of the Model Law might be found appropriate for consumer protection, depending on legislation in each enacting State. Footnote ** thus recognizes that any such consumer protection law may take precedence

over the provisions in the Model Law. Legislators may wish to consider whether the piece of legislation enacting the Model Law should apply to consumers. The question of which individuals or corporate bodies would be regarded as "consumers" is left to applicable law outside the Model Law.

28. Another possible limitation of the scope of the Model Law is contained in the first footnote. In principle, the Model Law applies to both international and domestic uses of data messages. Footnote * is intended for use by enacting States that might wish to limit the applicability of the Model Law to international cases. It indicates a possible test of internationality for use by those States as a possible criterion for distinguishing international cases from domestic ones. It should be noted, however, that in some jurisdictions, particularly in federal States, considerable difficulties might arise in distinguishing international trade from domestic trade. The Model Law should not be interpreted as encouraging enacting States to limit its applicability to international cases.

29. It is recommended that application of the Model Law be made as wide as possible. Particular caution should be used in excluding the application of the Model Law by way of a limitation of its scope to international uses of data messages, since such a limitation may be seen as not fully achieving the objectives of the Model Law. Furthermore, the variety of procedures available under the Model Law (particularly articles 6 to 8) to limit the use of data messages if necessary (e.g., for purposes of public policy) may make it less necessary to limit the scope of the Model Law. As the Model Law contains a number of articles (articles 6, 7, 8, 11, 12 , 15 and 17) that allow a degree of flexibility to enacting States to limit the scope of application of specific aspects of the Model Law, a narrowing of the scope of application of the text to international trade should not be necessary. Moreover, dividing communications in international trade into purely domestic and international parts might be difficult in practice. The legal certainty to be provided by the Model Law is necessary for both domestic and international trade, and a duality of regimes governing the use of electronic means of recording and communication of data might create a serious obstacle to the use of such means.

References(2)

A/50/17, paras. 213-219;

A/CN.9/407, paras. 37-40;

A/CN.9/406, paras. 80-85; A/CN.9/WG.IV/WP.62, article 1;

A/CN.9/390, paras. 21-43; A/CN.9/WG.IV/WP.60, article 1;

A/CN.9/387, paras. 15-28; A/CN.9/WG.IV/WP.57, article 1;

A/CN.9/373, paras. 21-25 and 29-33; A/CN.9/WG.IV/WP.55, paras. 15-20.

Article 2. Definitions

"Data message"

30. The notion of "data message" is not limited to communication but is also intended to encompass computer-generated records that are not intended for communication. Thus, the notion of "message" includes the notion of "record". However, a definition of "record" in line with the characteristic elements of "writing" in article 6 may be added in jurisdictions

where that would appear to be necessary.

31. The reference to "similar means" is intended to reflect the fact that the Model Law was not intended only for application in the context of existing communication techniques but also to accommodate foreseeable technical developments. The aim of the definition of "data message" is to encompass all types of messages that are generated, stored, or communicated in essentially paperless form. For that purpose, all means of communication and storage of information that might be used to perform functions parallel to the functions performed by the means listed in the definition are intended to be covered by the reference to "similar means", although, for example, "electronic" and "optical" means of communication might not be, strictly speaking, similar. For the purposes of the Model Law, the word "similar" connotes "functionally equivalent".

32. The definition of "data message" is also intended to cover the case of revocation or amendment. A data message is presumed to have a fixed information content but it may be revoked or amended by another data message.

"Electronic Data Interchange (EDI)"

33. The definition of EDI is drawn from the definition adopted by the Working Party on Facilitation of International Trade Procedures (WP.4) of the Economic Commission for Europe, which is the United Nations body responsible for the development of UN/EDIFACT technical standards.

34. The Model Law does not settle the question whether the definition of EDI necessarily implies that EDI messages are communicated electronically from computer to computer, or whether that definition, while primarily covering situations where data messages are communicated through a telecommunications system, would also cover exceptional or incidental types of situation where data structured in the form of an EDI message would be communicated by means that do not involve telecommunications systems, for example, the case where magnetic disks containing EDI messages would be delivered to the addressee by courier. However, irrespective of whether digital data transferred manually is covered by the definition of "EDI", it should be regarded as covered by the definition of "data message" under the Model Law.

"Originator" and "Addressee"

35. In most legal systems, the notion of "person" is used to designate the subjects of rights and obligations and should be interpreted as covering both natural persons and corporate bodies or other legal entities. Data messages that are generated automatically by computers without direct human intervention are intended to be covered by subparagraph (c). However, the Model Law should not be misinterpreted as allowing for a computer to be made the subject of rights and obligations. Data messages that are 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. Questions relevant to agency that might arise in that context are to be settled under rules outside the Model Law.

36. The "addressee" under the Model Law is the person with whom the originator intends to communicate by transmitting the data message, as opposed to any person who might receive, forward or copy the data message in the course of transmission. The "originator" is the person who generated the data message even if that message was transmitted by another person. The definition of "addressee" contrasts with the definition of "originator", which is not focused on intent. It should be noted that, under the definitions of "originator" and "addressee" in the Model Law, the originator and the addressee of a given data message could be the same person, for example in the case where the data message was

intended for storage by its author. However, the addressee who stores a message transmitted by an originator is not itself intended to be covered by the definition of "originator".

37. The definition of "originator" should cover not only the situation where information is generated and communicated, but also the situation where such information is generated and stored without being communicated. However, the definition of "originator" is intended to eliminate the possibility that a recipient who merely stores a data message might be regarded as an originator.

"Intermediary"

38. The focus of the Model Law is on the relationship between the originator and the addressee, and not on the relationship between either the originator or the addressee and any intermediary. However, the Model Law does not ignore the paramount importance of intermediaries in the field of electronic communications. In addition, the notion of "intermediary" is needed in the Model Law to establish the necessary distinction between originators or addressees and third parties.

39. The definition of "intermediary" is intended to cover both professional and non-professional intermediaries, i.e., any person (other than the originator and the addressee) who performs any of the functions of an intermediary. The main functions of an intermediary are listed in subparagraph (e), namely receiving, transmitting or storing data messages on behalf of another person. Additional "value-added services" may be performed by network operators and other intermediaries, such as formatting, translating, recording, authenticating, certifying and preserving data messages and providing security services for electronic transactions. "Intermediary" under the Model Law is defined not as a generic category but with respect to each data message, thus recognizing that the same person could be the originator or addressee of one data message and an intermediary with respect to another data message. The Model Law, which is focused on the relationships between originators and addressees, does not, in general, deal with the rights and obligations of intermediaries.

"Information system"

40. The definition of "information system" is intended to cover the entire range of technical means used for transmitting, receiving and storing information. For example, depending on the factual situation, the notion of "information system" could be indicating a communications network, and in other instances could include an electronic mailbox or even a telecopier. The Model Law does not address the question of whether the information system is located on the premises of the addressee or on other premises, since location of information systems is not an operative criterion under the Model Law.

References

A/51/17, paras. 116-138;

A/CN.9/407, paras. 41-52;

A/CN.9/406, paras. 132-156; A/CN.9/WG.IV/WP.62, article 2;

A/CN.9/390, paras. 44-65; A/CN.9/WG.IV/WP.60, article 2;

A/CN.9/387, paras. 29-52; A/CN.9/WG.IV/WP.57, article 2;

A/CN.9/373, paras. 11-20, 26-28 and 35-36; A/CN.9/WG.IV/WP.55, paras. 23-26;

A/CN.9/360, paras. 29-31; A/CN.9/WG.IV/WP.53, paras. 25-33.

Article 3. Interpretation

41. Article 3 is inspired by article 7 of the United Nations Convention on Contracts for the International Sale of Goods. It is intended to provide guidance for interpretation of the Model Law by courts and other national or local authorities. The expected effect of article 3 is to limit the extent to which a uniform text, once incorporated in local legislation, would be interpreted only by reference to the concepts of local law.

42. The purpose of paragraph (1) is to draw the attention of courts and other national authorities to the fact that the provisions of the Model Law (or the provisions of the instrument implementing the Model Law), while enacted as part of domestic legislation and therefore domestic in character, should be interpreted with reference to its international origin in order to ensure uniformity in the interpretation of the Model Law in various countries.

43. As to the general principles on which the Model Law is based, the following non-exhaustive list may be considered: (1) to facilitate electronic commerce among and within nations; (2) to validate transactions entered into by means of new information technologies; (3) to promote and encourage the implementation of new information technologies; (4) to promote the uniformity of law; and (5) to support commercial practice. While the general purpose of the Model Law is to facilitate the use of electronic means of communication, it should not be construed in any way as imposing their use.

References

A/50/17, paras. 220-224;

A/CN.9/407, paras. 53-54;

A/CN.9/406, paras. 86-87; A/CN.9/WG.IV/WP.62, article 3;

A/CN.9/390, paras. 66-73; A/CN.9/WG.IV/WP.60, article 3;

A/CN.9/387, paras. 53-58; A/CN.9/WG.IV/WP.57, article 3;

A/CN.9/373, paras. 38-42; A/CN.9/WG.IV/WP.55, paras. 30-31.

Article 4. Variation by agreement

44. The decision to undertake the preparation of the Model Law was based on the recognition that, in practice, solutions to the legal difficulties raised by the use of modern means of communication are mostly sought within contracts. The Model Law is thus intended to support the principle of party autonomy. However, that principle is embodied only with respect to the provisions of the Model Law contained in chapter III of part one. The reason for such a limitation is that the provisions contained in chapter II of part one may, to some extent, be regarded as a collection of exceptions to well-established rules regarding the form of legal transactions. Such well-established rules are normally of a

mandatory nature since they generally reflect decisions of public policy. An unqualified statement regarding the freedom of parties to derogate from the Model Law might thus be misinterpreted as allowing parties, through a derogation to the Model Law, to derogate from mandatory rules adopted for reasons of public policy. The provisions contained in chapter II of part one should be regarded as stating the minimum acceptable form requirement and are, for that reason, to be regarded as mandatory, unless expressly stated otherwise. The indication that such form requirements are to be regarded as the "minimum acceptable" should not, however, be construed as inviting States to establish requirements stricter than those contained in the Model Law.

45. Article 4 is intended to apply not only in the context of relationships between originators and addressees of data messages but also in the context of relationships involving intermediaries. Thus, the provisions of chapter III of part one could be varied either by bilateral or multilateral agreements between the parties, or by system rules agreed to by the parties. However, the text expressly limits party autonomy to rights and obligations arising as between parties so as not to suggest any implication as to the rights and obligations of third parties.

References

A/51/17, paras. 68, 90 to 93, 110, 137, 188 and 207 (article 10);

A/50/17, paras. 271-274 (article 10);

A/CN.9/407, para. 85;

A/CN.9/406, paras. 88-89; A/CN.9/WG.IV/WP.62, article 5;

A/CN.9/390, paras. 74-78; A/CN.9/WG.IV/WP.60, article 5;

A/CN.9/387, paras. 62-65; A/CN.9/WG.IV/WP.57, article 5;

A/CN.9/373, para. 37; A/CN.9/WG.IV/WP.55, paras. 27-29.

Chapter II. Application of legal requirements to data messages ➦

Article 5. Legal recognition of data messages

46. Article 5 embodies the fundamental principle that data messages should not be discriminated against, i.e., that there should be no disparity of treatment between data messages and paper documents. It is intended to apply notwithstanding any statutory requirements for a "writing" or an original. That fundamental principle is intended to find general application and its scope should not be limited to evidence or other matters covered in chapter II. It should be noted, however, that such a principle is not intended to override any of the requirements contained in articles 6 to 10. By stating that "information shall not be denied legal effectiveness, validity or enforceability solely on the grounds that it is in the form of a data message", article 5 merely indicates that the form in which certain information is presented or retained cannot be used as the only reason for which that information would be denied legal effectiveness, validity or enforceability. However, article 5 should not be misinterpreted as establishing the legal validity of any given data message or of any information contained therein.

References

A/51/17, paras. 92 and 97 (article 4);

A/50/17, paras. 225-227 (article 4);

A/CN.9/407, para. 55;

A/CN.9/406, paras. 91-94; A/CN.9/WG.IV/WP. 62, article 5 bis;

A/CN.9/390, paras. 79-87;

A/CN.9/WG.IV/WP. 60, article 5 bis;

A/CN.9/387, paras. 93-94.

Article 5 bis. Incorporation by reference

46-1. Article 5 bis was adopted by the Commission at its thirty-first session, in June 1998. It is intended to provide guidance as to how legislation aimed at facilitating the use of electronic commerce might deal with the situation where certain terms and conditions, although not stated in full but merely referred to in a data message, might need to be recognized as having the same degree of legal effectiveness as if they had been fully stated in the text of that data message. Such recognition is acceptable under the laws of many States with respect to conventional paper communications, usually with some rules of law providing safeguards, for example rules on consumer protection. The expression "incorporation by reference" is often used as a concise means of describing situations where a document refers generically to provisions which are detailed elsewhere, rather than reproducing them in full.

46-2. In an electronic environment, incorporation by reference is often regarded as essential to widespread use of electronic data interchange (EDI), electronic mail, digital certificates and other forms of electronic commerce. For example, electronic communications are typically structured in such a way that large numbers of messages are exchanged, with each message containing brief information, and relying much more frequently than paper documents on reference to information accessible elsewhere. In electronic communications, practitioners should not have imposed upon them an obligation to overload their data messages with quantities of free text when they can take advantage of extrinsic sources of information, such as databases, code lists or glossaries, by making use of abbreviations, codes and other references to such information.

46-3. Standards for incorporating data messages by reference into other data messages may also be essential to the use of public key certificates, because these certificates are generally brief records with rigidly prescribed contents that are finite in size. The trusted third party which issues the certificate, however, is likely to require the inclusion of relevant contractual terms limiting its liability. The scope, purpose and effect of a certificate in commercial practice, therefore, would be ambiguous and uncertain without external terms being incorporated by reference. This is the case especially in the context of international communications involving diverse parties who follow varied trade practices and customs.

46-4. The establishment of standards for incorporating data messages by reference into other data messages is critical to the growth of a computer-based trade infrastructure. Without the legal certainty fostered by such standards, there might be a significant risk that the application of traditional tests for determining the enforceability of terms that seek to be incorporated by reference might be ineffective when applied to corresponding electronic commerce terms because of the differences between traditional and electronic commerce

mechanisms.

46-5. While electronic commerce relies heavily on the mechanism of incorporation by reference, the accessibility of the full text of the information being referred to may be considerably improved by the use of electronic communications. For example, a message may have embedded in it uniform resource locators (URLs), which direct the reader to the referenced document. Such URLs can provide "hypertext links" allowing the reader to use a pointing device (such as a mouse) to select a key word associated with a URL. The referenced text would then be displayed. In assessing the accessibility of the referenced text, factors to be considered may include: availability (hours of operation of the repository and ease of access); cost of access; integrity (verification of content, authentication of sender, and mechanism for communication error correction); and the extent to which that term is subject to later amendment (notice of updates; notice of policy of amendment).

46-6. One aim of article 5 bis is to facilitate incorporation by reference in an electronic context by removing the uncertainty prevailing in many jurisdictions as to whether the provisions dealing with traditional incorporation by reference are applicable to incorporation by reference in an electronic environment. However, in enacting article 5 bis, attention should be given to avoid introducing more restrictive requirements with respect to incorporation by reference in electronic commerce than might already apply in paper-based trade.

46-7. Another aim of the provision is to recognize that consumer-protection or other national or international law of a mandatory nature (e.g., rules protecting weaker parties in the context of contracts of adhesion) should not be interfered with. That result could also be achieved by validating incorporation by reference in an electronic environment "to the extent permitted by law", or by listing the rules of law that remain unaffected by article 5 bis. Article 5 bis is not to be interpreted as creating a specific legal regime for incorporation by reference in an electronic environment. Rather, by establishing a principle of non-discrimination, it is to be construed as making the domestic rules applicable to incorporation by reference in a paper-based environment equally applicable to incorporation by reference for the purposes of electronic commerce. For example, in a number of jurisdictions, existing rules of mandatory law only validate incorporation by reference provided that the following three conditions are met: (a) the reference clause should be inserted in the data message; (b) the document being referred to, e.g., general terms and conditions, should actually be known to the party against whom the reference document might be relied upon; and (c) the reference document should be accepted, in addition to being known, by that party.

References

A/53/17, paras. 212-221;

A/CN.9/450;

A/CN.9/446, paras. 14-24;

A/CN.9/WG.IV/WP.74;

A/52/17, paras. 248-250;

A/CN.9/437, paras. 151-155;

A/CN.9/WG.IV/WP. 71, paras 77-93;

A/51/17, paras. 222-223;

A/CN.9/421, paras. 109 and 114;

A/CN.9/WG.IV/WP.69, paras. 30, 53, 59-60 and 91;

A/CN.9/407, paras. 100-105 and 117;

A/CN.9/WG.IV/WP.66;

A/CN.9/WG.IV/WP.65;

A/CN.9/406, paras. 90 and 178-179;

A/CN.9/WG.IV/WP.55, para. 109-113;

A/CN.9/360, paras. 90-95;

A/CN.9/WG.IV/WP.53, paras. 77-78;

A/CN.9/350, paras. 95-96;

A/CN.9/333, paras. 66-68.

Article 6. Writing

47. Article 6 is intended to define the basic standard to be met by a data message in order to be considered as meeting a requirement (which may result from statute, regulation or judge-made law) that information be retained or presented "in writing" (or that the information be contained in a "document" or other paper-based instrument). It may be noted that article 6 is part of a set of three articles (articles 6, 7 and 8), which share the same structure and should be read together.

48. In the preparation of the Model Law, particular attention was paid to the functions traditionally performed by various kinds of "writings" in a paper-based environment. For example, the following non-exhaustive list indicates reasons why national laws require the use of "writings": (1) to ensure that there would be tangible evidence of the existence and nature of the intent of the parties to bind themselves; (2) to help the parties be aware of the consequences of their entering into a contract; (3) to provide that a document would be legible by all; (4) to provide that a document would remain unaltered over time and provide a permanent record of a transaction; (5) to allow for the reproduction of a document so that each party would hold a copy of the same data; (6) to allow for the authentication of data by means of a signature; (7) to provide that a document would be in a form acceptable to public authorities and courts; (8) to finalize the intent of the author of the "writing" and provide a record of that intent; (9) to allow for the easy storage of data in a tangible form; (10) to facilitate control and sub-sequent audit for accounting, tax or regulatory purposes; and (11) to bring legal rights and obligations into existence in those cases where a "writing" was required for validity purposes.

49. However, in the preparation of the Model Law, it was found that it would be inappropriate to adopt an overly comprehensive notion of the functions performed by writing. Existing requirements that data be presented in written form often combine the requirement of a "writing" with concepts distinct from writing, such as signature and original.

Thus, when adopting a functional approach, attention should be given to the fact that the requirement of a "writing" should be considered as the lowest layer in a hierarchy of form requirements, which provide distinct levels of reliability, traceability and unalterability with respect to paper documents. The requirement that data be presented in written form (which can be described as a "threshold requirement") should thus not be confused with more stringent requirements such as "signed writing", "signed original" or "authenticated legal act". For example, under certain national laws, a written document that is neither dated nor signed, and the author of which either is not identified in the written document or is identified by a mere letterhead, would be regarded as a "writing" although it might be of little evidential weight in the absence of other evidence (e.g., testimony) regarding the authorship of the document. In addition, the notion of unalterability should not be considered as built into the concept of writing as an absolute requirement since a "writing" in pencil might still be considered a "writing" under certain existing legal definitions. Taking into account the way in which such issues as integrity of the data and protection against fraud are dealt with in a paper-based environment, a fraudulent document would nonetheless be regarded as a "writing". In general, notions such as "evidence" and "intent of the parties to bind themselves" are to be tied to the more general issues of reliability and authentication of the data and should not be included in the definition of a "writing".

50. The purpose of article 6 is not to establish a requirement that, in all instances, data messages should fulfil all conceivable functions of a writing. Rather than focusing upon specific functions of a "writing", for example, its evidentiary function in the context of tax law or its warning function in the context of civil law, article 6 focuses upon the basic notion of the information being reproduced and read. That notion is expressed in article 6 in terms that were found to provide an objective criterion, namely that the information in a data message must be accessible so as to be usable for subsequent reference. The use of the word "accessible" is meant to imply that information in the form of computer data should be readable and interpretable, and that the software that might be necessary to render such information readable should be retained. The word "usable" is not intended to cover only human use but also computer processing. As to the notion of "subsequent reference", it was preferred to such notions as "durability" or "non-alterability", which would have established too harsh standards, and to such notions as "readability" or "intelligibility", which might constitute too subjective criteria.

51. The principle embodied in paragraph (3) of articles 6 and 7, and in paragraph (4) of article 8, is that an enacting State may exclude from the application of those articles certain situations to be specified in the legislation enacting the Model Law. An enacting State may wish to exclude specifically certain types of situations, depending in particular on the purpose of the formal requirement in question. One such type of situation may be the case of writing requirements intended to provide notice or warning of specific factual or legal risks, for example, requirements for warnings to be placed on certain types of products. Another specific exclusion might be considered, for example, in the context of formalities required pursuant to international treaty obligations of the enacting State (e.g., the requirement that a cheque be in writing pursuant to the Convention providing a Uniform Law for Cheques, Geneva, 1931) and other kinds of situations and areas of law that are beyond the power of the enacting State to change by means of a statute.

52. Paragraph (3) was included with a view to enhancing the acceptability of the Model Law. It recognizes that the matter of specifying exclusions should be left to enacting States, an approach that would take better account of differences in national circumstances. However, it should be noted that the objectives of the Model Law would not be achieved if paragraph (3) were used to establish blanket exceptions, and the opportunity provided by paragraph (3) in that respect should be avoided. Numerous exclusions from the scope of articles 6 to 8 would raise needless obstacles to the development of modern communication techniques, since what the Model Law contains are very fundamental principles and approaches that are expected to find general application.

References

A/51/17, paras. 180-181 and 185-187 (article 5);

A/50/17, paras. 228-241 (article 5);

A/CN.9/407, paras. 56-63;

A/CN.9/406, paras. 95-101; A/CN.9/WG.IV/WP.62, article 6;

A/CN.9/390, paras. 88-96; A/CN.9/WG.IV/WP.60, article 6;

A/CN.9/387, paras. 66-80; A/CN.9/WG.IV/WP.57, article 6; A/CN.9/WG.IV/WP.58, annex;

A/CN.9/373, paras. 45-62; A/CN.9/WG.IV/WP.55, paras. 36-49;

A/CN.9/360, paras. 32-43; A/CN.9/WG.IV/WP.53, paras. 37-45;

A/CN.9/350, paras. 68-78;

A/CN.9/333, paras. 20-28;

A/CN.9/265, paras. 59-72.

Article 7. Signature

53. Article 7 is based on the recognition of the functions of a signature in a paper-based environment. In the preparation of the Model Law, the following functions of a signature were considered: to identify a person; to provide certainty as to the personal involvement of that person in the act of signing; to associate that person with the content of a document. It was noted that, in addition, a signature could perform a variety of functions, depending on the nature of the document that was signed. For example, a signature might attest to the intent of a party to be bound by the content of a signed contract; the intent of a person to endorse authorship of a text; the intent of a person to associate itself with the content of a document written by someone else; the fact that, and the time when, a person had been at a given place.

54. It may be noted that, alongside the traditional handwritten signature, there exist various types of procedures (e.g., stamping, perforation), sometimes also referred to as "signatures", which provide various levels of certainty. For example, in some countries, there exists a general requirement that contracts for the sale of goods above a certain amount should be "signed" in order to be enforceable. However, the concept of a signature adopted in that context is such that a stamp, perforation or even a typewritten signature or a printed letterhead might be regarded as sufficient to fulfil the signature requirement. At the other end of the spectrum, there exist requirements that combine the traditional handwritten signature with additional security procedures such as the confirmation of the signature by witnesses.

55. It might be desirable to develop functional equivalents for the various types and levels of signature requirements in existence. Such an approach would increase the level of certainty as to the degree of legal recognition that could be expected from the use of the various means of authentication used in electronic commerce practice as substitutes for "signatures". However, the notion of signature is intimately linked to the use of paper.

Furthermore, any attempt to develop rules on standards and procedures to be used as substitutes for specific instances of "signatures" might create the risk of tying the legal framework provided by the Model Law to a given state of technical development.

56. With a view to ensuring that a message that was required to be authenticated should not be denied legal value for the sole reason that it was not authenticated in a manner peculiar to paper documents, article 7 adopts a comprehensive approach. It establishes the general conditions under which data messages would be regarded as authenticated with sufficient credibility and would be enforceable in the face of signature requirements which currently present barriers to electronic commerce. Article 7 focuses on the two basic functions of a signature, namely to identify the author of a document and to confirm that the author approved the content of that document. Paragraph (1)(a) establishes the principle that, in an electronic environment, the basic legal functions of a signature are performed by way of a method that identifies the originator of a data message and confirms that the originator approved the content of that data message.

57. Paragraph (1)(b) establishes a flexible approach to the level of security to be achieved by the method of identification used under paragraph (1)(a). The method used under paragraph (1)(a) should be as reliable as is appropriate for the purpose for which the data message is generated or communicated, in the light of all the circumstances, including any agreement between the originator and the addressee of the data message.

58. In determining whether the method used under paragraph (1) is appropriate, legal, technical and commercial factors that may be taken into account include the following: (1) the sophistication of the equipment used by each of the parties; (2) the nature of their trade activity; (3) the frequency at which commercial transactions take place between the parties; (4) the kind and size of the transaction; (5) the function of signature requirements in a given statutory and regulatory environment; (6) the capability of communication systems; (7) compliance with authentication procedures set forth by intermediaries; (8) the range of authentication procedures made available by any intermediary; (9) compliance with trade customs and practice; (10) the existence of insurance coverage mechanisms against unauthorized messages; (11) the importance and the value of the information contained in the data message; (12) the availability of alternative methods of identification and the cost of implementation; (13) the degree of acceptance or non-acceptance of the method of identification in the relevant industry or field both at the time the method was agreed upon and the time when the data message was communicated; and (14) any other relevant factor.

59. Article 7 does not introduce a distinction between the situation in which users of electronic commerce are linked by a communication agreement and the situation in which parties had no prior contractual relationship regarding the use of electronic commerce. Thus, article 7 may be regarded as establishing a basic standard of authentication for data messages that might be exchanged in the absence of a prior contractual relationship and, at the same time, to provide guidance as to what might constitute an appropriate substitute for a signature if the parties used electronic communications in the context of a communication agreement. The Model Law is thus intended to provide useful guidance both in a context where national laws would leave the question of authentication of data messages entirely to the discretion of the parties and in a context where requirements for signature, which were usually set by mandatory provisions of national law, should not be made subject to alteration by agreement of the parties.

60. The notion of an "agreement between the originator and the addressee of a data message" is to be interpreted as covering not only bilateral or multilateral agreements concluded between parties exchanging directly data messages (e.g., "trading partners agreements", "communication agreements" or " interchange agreements") but also

agreements involving intermediaries such as networks (e.g., "third-party service agreements"). Agreements concluded between users of electronic commerce and networks may incorporate "system rules", i.e., administrative and technical rules and procedures to be applied when communicating data messages. However, a possible agreement between originators and addressees of data messages as to the use of a method of authentication is not conclusive evidence of whether that method is reliable or not.

61. It should be noted that, under the Model Law, the mere signing of a data message by means of a functional equivalent of a handwritten signature is not intended, in and of itself, to confer legal validity on the data message. Whether a data message that fulfilled the requirement of a signature has legal validity is to be settled under the law applicable outside the Model Law.

References

A/51/17, paras. 180-181 and 185-187 (article 6);

A/50/17, paras. 242-248 (article 6);

A/CN.9/407, paras. 64-70;

A/CN.9/406, paras. 102-105; A/CN.9/WG.IV/WP.62, article 7;

A/CN.9/390, paras. 97-109; A/CN.9/WG.IV/WP.60, article 7;

A/CN.9/387, paras. 81-90; A/CN.9/WG.IV/WP.57, article 7; A/CN.9/WG.IV/WP.58, annex;

A/CN.9/373, paras. 63-76; A/CN.9/WG.IV/WP.55, paras. 50-63;

A/CN.9/360, paras. 71-75; A/CN.9/WG.IV/WP.53, paras. 61-66;

A/CN.9/350, paras. 86-89;

A/CN.9/333, paras. 50-59;

A/CN.9/265, paras. 49-58 and 79-80.

Article 8. Original

62. If "original" were defined as a medium on which information was fixed for the first time, it would be impossible to speak of "original" data messages, since the addressee of a data message would always receive a copy thereof. However, article 8 should be put in a different context. The notion of "original" in article 8 is useful since in practice many disputes relate to the question of originality of documents, and in electronic commerce the requirement for presentation of originals constitutes one of the main obstacles that the Model Law attempts to remove. Although in some jurisdictions the concepts of "writing", "original" and "signature" may overlap, the Model Law approaches them as three separate and distinct concepts. Article 8 is also useful in clarifying the notions of "writing" and "original", in particular in view of their importance for purposes of evidence.

63. Article 8 is pertinent to documents of title and negotiable instruments, in which the notion of uniqueness of an original is particularly relevant. However, attention is drawn to

the fact that the Model Law is not intended only to apply to documents of title and negotiable instruments, or to such areas of law where special requirements exist with respect to registration or notarization of "writings", e.g., family matters or the sale of real estate. Examples of documents that might require an "original" are trade documents such as weight certificates, agricultural certificates, quality or quantity certificates, inspection reports, insurance certificates, etc. While such documents are not negotiable or used to transfer rights or title, it is essential that they be transmitted unchanged, that is in their "original" form, so that other parties in international commerce may have confidence in their contents. In a paper-based environment, these types of document are usually only accepted if they are "original" to lessen the chance that they be altered, which would be difficult to detect in copies. Various technical means are available to certify the contents of a data message to confirm its "originality". Without this functional equivalent of originality, the sale of goods using electronic commerce would be hampered since the issuers of such documents would be required to retransmit their data message each and every time the goods are sold, or the parties would be forced to use paper documents to supplement the electronic commerce transaction.

64. Article 8 should be regarded as stating the minimum acceptable form requirement to be met by a data message for it to be regarded as the functional equivalent of an original. The provisions of article 8 should be regarded as mandatory, to the same extent that existing provisions regarding the use of paper-based original documents would be regarded as mandatory. The indication that the form requirements stated in article 8 are to be regarded as the "minimum acceptable" should not, however, be construed as inviting States to establish requirements stricter than those contained in the Model Law.

65. Article 8 emphasizes the importance of the integrity of the information for its originality and sets out criteria to be taken into account when assessing integrity by reference to systematic recording of the information, assurance that the information was recorded without lacunae and protection of the data against alteration. It links the concept of originality to a method of authentication and puts the focus on the method of authentication to be followed in order to meet the requirement. It is based on the following elements: a simple criterion as to "integrity" of the data; a description of the elements to be taken into account in assessing the integrity; and an element of flexibility, i.e., a reference to circumstances.

66. As regards the words "the time when it was first generated in its final form" in paragraph (1)(a), it should be noted that the provision is intended to encompass the situation where information was first composed as a paper document and subsequently transferred on to a computer. In such a situation, paragraph (1)(a) is to be interpreted as requiring assurances that the information has remained complete and unaltered from the time when it was composed as a paper document onwards, and not only as from the time when it was translated into electronic form. However, where several drafts were created and stored before the final message was composed, paragraph (1)(a) should not be misinterpreted as requiring assurance as to the integrity of the drafts.

67. Paragraph (3)(a) sets forth the criteria for assessing integrity, taking care to except necessary additions to the first (or "original") data message such as endorsements, certifications, notarizations, etc. from other alterations. As long as the contents of a data message remain complete and unaltered, necessary additions to that data message would not affect its "originality". Thus when an electronic certificate is added to the end of an "original" data message to attest to the "originality" of that data message, or when data is automatically added by computer systems at the start and the finish of a data message in order to transmit it, such additions would be considered as if they were a supplemental piece of paper with an "original" piece of paper, or the envelope and stamp used to send that "original" piece of paper.

68. As in other articles of chapter II of part one, the words "the law" in the opening phrase of article 8 are to be understood as encompassing not only statutory or regulatory law but also judicially-created law and other procedural law. In certain common law countries, where the words "the law" would normally be interpreted as referring to common law rules, as opposed to statutory requirements, it should be noted that, in the context of the Model Law, the words "the law" are intended to encompass those various sources of law. However, "the law", as used in the Model Law, is not meant to include areas of law that have not become part of the law of a State and are sometimes, somewhat imprecisely, referred to by expressions such as "lex mercatoria" or "law merchant".

69. Paragraph (4), as was the case with similar provisions in articles 6 and 7, was included with a view to enhancing the acceptability of the Model Law. It recognizes that the matter of specifying exclusions should be left to enacting States, an approach that would take better account of differences in national circumstances. However, it should be noted that the objectives of the Model Law would not be achieved if paragraph (4) were used to establish blanket exceptions. Numerous exclusions from the scope of articles 6 to 8 would raise needless obstacles to the development of modern communication techniques, since what the Model Law contains are very fundamental principles and approaches that are expected to find general application.

References

A/51/17, paras. 180-181 and 185-187 (article 7);

A/50/17, paras. 249-255 (article 7);

A/CN.9/407, paras. 71-79;

A/CN.9/406, paras. 106-110; A/CN.9/WG.IV/WP.62, article 8;

A/CN.9/390, paras. 110-133; A/CN.9/WG.IV/WP.60, article 8;

A/CN.9/387, paras. 91-97; A/CN.9/WG.IV/WP.57, article 8; A/CN.9/WG.IV/WP.58, annex;

A/CN.9/373, paras. 77-96;

A/CN.9/WG.IV/WP.55, paras. 64-70;

A/CN.9/360, paras. 60-70; A/CN.9/WG.IV/WP.53, paras. 56-60;

A/CN.9/350, paras. 84-85;

A/CN.9/265, paras. 43-48.

Article 9. Admissibility and evidential weight of data messages

70. The purpose of article 9 is to establish both the admissibility of data messages as evidence in legal proceedings and their evidential value. With respect to admissibility, paragraph (1), establishing that data messages should not be denied admissibility as evidence in legal proceedings on the sole ground that they are in electronic form, puts emphasis on the general principle stated in article 4 and is needed to make it expressly applicable to admissibility of evidence, an area in which particularly complex issues might arise in certain jurisdictions. The term "best evidence" is a term understood in, and

necessary for, certain common law jurisdictions. However, the notion of "best evidence" could raise a great deal of uncertainty in legal systems in which such a rule is unknown. States in which the term would be regarded as meaningless and potentially misleading may wish to enact the Model Law without the reference to the "best evidence" rule contained in paragraph (1).

71. As regards the assessment of the evidential weight of a data message, paragraph (2) provides useful guidance as to how the evidential value of data messages should be assessed (e.g., depending on whether they were generated, stored or communicated in a reliable manner).

References

A/50/17, paras. 256-263 (article 8);

A/CN.9/407, paras. 80-81;

A/CN.9/406, paras. 111-113; A/CN.9/WG.IV/WP.62, article 9;

A/CN.9/390, paras. 139-143; A/CN.9/WG.IV/WP.60, article 9;

A/CN.9/387, paras. 98-109; A/CN.9/WG.IV/WP.57, article 9; A/CN.9/WG.IV/WP.58, annex;

A/CN.9/373, paras. 97-108; A/CN.9/WG.IV/WP.55, paras. 71-81;

A/CN.9/360, paras. 44-59; A/CN.9/WG.IV/WP.53, paras. 46-55;

A/CN.9/350, paras. 79-83 and 90-91;

A/CN.9/333, paras. 29-41;

A/CN.9/265, paras. 27-48.

Article 10. Retention of data messages

72. Article 10 establishes a set of alternative rules for existing requirements regarding the storage of information (e.g., for accounting or tax purposes) that may constitute obstacles to the development of modern trade.

73. Paragraph (1) is intended to set out the conditions under which the obligation to store data messages that might exist under the applicable law would be met. Subparagraph (a) reproduces the conditions established under article 6 for a data message to satisfy a rule which prescribes the presentation of a "writing". Subparagraph (b) emphasizes that the message does not need to be retained unaltered as long as the information stored accurately reflects the data message as it was sent. It would not be appropriate to require that information should be stored unaltered, since usually messages are decoded, compressed or converted in order to be stored.

74. Subparagraph (c) is intended to cover all the information that may need to be stored, which includes, apart from the message itself, certain transmittal information that may be necessary for the identification of the message. Subparagraph (c), by imposing the retention of the transmittal information associated with the data message, is creating a

standard that is higher than most standards existing under national laws as to the storage of paper-based communications. However, it should not be understood as imposing an obligation to retain transmittal information additional to the information contained in the data message when it was generated, stored or transmitted, or information contained in a separate data message, such as an acknowledgement of receipt. Moreover, while some transmittal information is important and has to be stored, other transmittal information can be exempted without the integrity of the data message being compromised. That is the reason why subparagraph (c) establishes a distinction between those elements of transmittal information that are important for the identification of the message and the very few elements of transmittal information covered in paragraph (2) (e.g., communication protocols), which are of no value with regard to the data message and which, typically, would automatically be stripped out of an incoming data message by the receiving computer before the data message actually entered the information system of the addressee.

75. In practice, storage of information, and especially storage of transmittal information, may often be carried out by someone other than the originator or the addressee, such as an intermediary. Nevertheless, it is intended that the person obligated to retain certain transmittal information cannot escape meeting that obligation simply because, for example, the communications system operated by that other person does not retain the required information. This is intended to discourage bad practice or wilful misconduct. Paragraph (3) provides that in meeting its obligations under paragraph (1), an addressee or originator may use the services of any third party, not just an intermediary.

References

A/51/17, paras. 185-187 (article 9);

A/50/17, paras. 264-270 (article 9);

A/CN.9/407, paras. 82-84;

A/CN.9/406, paras. 59-72; A/CN.9/WG.IV/WP.60, article 14;

A/CN.9/387, paras. 164-168;

A/CN.9/WG.IV/WP.57, article 14;

A/CN.9/373, paras. 123-125; A/CN.9/WG.IV/WP.55, para. 94.

Chapter III. Communication of data messages ➦

Article 11. Formation and validity of contracts

76. Article 11 is not intended to interfere with the law on formation of contracts but rather to promote international trade by providing increased legal certainty as to the conclusion of contracts by electronic means. It deals not only with the issue of contract formation but also with the form in which an offer and an acceptance may be expressed. In certain countries, a provision along the lines of paragraph (1) might be regarded as merely stating the obvious, namely that an offer and an acceptance, as any other expression of will, can be communicated by any means, including data messages. However, the provision is needed in view of the remaining uncertainties in a considerable number of countries as to whether contracts can validly be concluded by electronic means. Such uncertainties may stem from the fact that, in certain cases, the data messages expressing offer and acceptance are

generated by computers without immediate human intervention, thus raising doubts as to the expression of intent by the parties. Another reason for such uncertainties is inherent in the mode of communication and results from the absence of a paper document.

77. It may also be noted that paragraph (1) reinforces, in the context of contract formation, a principle already embodied in other articles of the Model Law, such as articles 5, 9 and 13, all of which establish the legal effectiveness of data messages. However, paragraph (1) is needed since the fact that electronic messages may have legal value as evidence and produce a number of effects, including those provided in articles 9 and 13, does not necessarily mean that they can be used for the purpose of concluding valid contracts.

78. Paragraph (1) covers not merely the cases in which both the offer and the acceptance are communicated by electronic means but also cases in which only the offer or only the acceptance is communicated electronically. As to the time and place of formation of contracts in cases where an offer or the acceptance of an offer is expressed by means of a data message, no specific rule has been included in the Model Law in order not to interfere with national law applicable to contract formation. It was felt that such a provision might exceed the aim of the Model Law, which should be limited to providing that electronic communications would achieve the same degree of legal certainty as paper-based communications. The combination of existing rules on the formation of contracts with the provisions contained in article 15 is designed to dispel uncertainty as to the time and place of formation of contracts in cases where the offer or the acceptance are exchanged electronically.

79. The words "unless otherwise stated by the parties", which merely restate, in the context of contract formation, the recognition of party autonomy expressed in article 4, are intended to make it clear that the purpose of the Model Law is not to impose the use of electronic means of communication on parties who rely on the use of paper-based communication to conclude contracts. Thus, article 11 should not be interpreted as restricting in any way party autonomy with respect to parties not involved in the use of electronic communication.

80. During the preparation of paragraph (1), it was felt that the pro- vision might have the harmful effect of overruling otherwise applicable provisions of national law, which might prescribe specific formalities for the formation of certain contracts. Such forms include notarization and other requirements for "writings", and might respond to considerations of public policy, such as the need to protect certain parties or to warn them against specific risks. For that reason, paragraph (2) provides that an enacting State can exclude the application of paragraph (1) in certain instances to be specified in the legislation enacting the Model Law.

References

A/51/17, paras. 89-94 (article 13);

A/CN.9/407, para. 93;

A/CN.9/406, paras. 34-41; A/CN.9/WG.IV/WP.60, article 12;

A/CN.9/387, paras. 145-151; A/CN.9/WG.IV/WP.57, article 12;

A/CN.9/373, paras. 126-133; A/CN.9/WG.IV/WP.55, paras. 95-102;

A/CN.9/360, paras. 76-86; A/CN.9/WG.IV/WP.53, paras. 67-73;

A/CN.9/350, paras. 93-96;

A/CN.9/333, paras. 60-68.

Article 12. Recognition by parties of data messages

81. Article 12 was added at a late stage in the preparation of the Model Law, in recognition of the fact that article 11 was limited to dealing with data messages that were geared to the conclusion of a contract, but that the draft Model Law did not contain specific provisions on data messages that related not to the conclusion of contracts but to the performance of contractual obligations (e.g., notice of defective goods, an offer to pay, notice of place where a contract would be performed, recognition of debt). Since modern means of communication are used in a context of legal uncertainty, in the absence of specific legislation in most countries, it was felt appropriate for the Model Law not only to establish the general principle that the use of electronic communication should not be discriminated against, as expressed in article 5, but also to include specific illustrations of that principle. Contract formation is but one of the areas where such an illustration is useful and the legal validity of unilateral expressions of will, as well as other notices or statements that may be issued in the form of data messages, also needs to be mentioned.

82. As is the case with article 11, article 12 is not to impose the use of electronic means of communication but to validate such use, subject to contrary agreement by the parties. Thus, article 12 should not be used as a basis to impose on the addressee the legal consequences of a message, if the use of a non-paper-based method for its transmission comes as a surprise to the addressee.

References

A/51/17, paras. 95-99 (new article 13 bis).

Article 13. Attribution of data messages

83. Article 13 has its origin in article 5 of the UNCITRAL Model Law on International Credit Transfers, which defines the obligations of the sender of a payment order. Article 13 is intended to apply where there is a question as to whether a data message was really sent by the person who is indicated as being the originator. In the case of a paper-based communication the problem would arise as the result of an alleged forged signature of the purported originator. In an electronic environment, an unauthorized person may have sent the message but the authentication by code, encryption or the like would be accurate. The purpose of article 13 is not to assign responsibility. It deals rather with attribution of data messages by establishing a presumption that under certain circumstances a data message would be considered as a message of the originator, and goes on to qualify that presumption in case the addressee knew or ought to have known that the data message was not that of the originator.

84. Paragraph (1) recalls the principle that an originator is bound by a data message if it has effectively sent that message. Paragraph (2) refers to the situation where the message was sent by a person other than the originator who had the authority to act on behalf of the originator. Paragraph (2) is not intended to displace the domestic law of agency, and the question as to whether the other person did in fact and in law have the authority to act on behalf of the originator is left to the appropriate legal rules outside the Model Law.

85. Paragraph (3) deals with two kinds of situations, in which the addressee could rely on a data message as being that of the originator: firstly, situations in which the addressee

properly applied an authenti- cation procedure previously agreed to by the originator; and secondly, situations in which the data message resulted from the actions of a person who, by virtue of its relationship with the originator, had access to the originator's authentication procedures. By stating that the addressee "is entitled to regard a data as being that of the originator", paragraph (3) read in conjunction with paragraph (4)(a) is intended to indicate that the addressee could act on the assumption that the data message is that of the originator up to the point in time it received notice from the originator that the data message was not that of the originator, or up to the point in time when it knew or should have known that the data message was not that of the originator.

86. Under paragraph (3)(a), if the addressee applies any authentication procedures previously agreed to by the originator and such application results in the proper verification of the originator as the source of the message, the message is presumed to be that of the originator. That covers not only the situation where an authentication procedure has been agreed upon by the originator and the addressee but also situations where an originator, unilaterally or as a result of an agreement with an intermediary, identified a procedure and agreed to be bound by a data message that met the requirements corresponding to that procedure. Thus, agreements that became effective not through direct agreement between the originator and the addressee but through the participation of third-party service providers are intended to be covered by para- graph (3)(a). However, it should be noted that paragraph (3)(a) applies only when the communication between the originator and the addressee is based on a previous agreement, but that it does not apply in an open environment.

87. The effect of paragraph (3)(b), read in conjunction with paragraph (4)(b), is that the originator or the addressee, as the case may be, is responsible for any unauthorized data message that can be shown to have been sent as a result of negligence of that party.

88. Paragraph (4)(a) should not be misinterpreted as relieving the originator from the consequences of sending a data message, with retroactive effect, irrespective of whether the addressee had acted on the assumption that the data message was that of the originator. Paragraph (4) is not intended to provide that receipt of a notice under subparagraph (a) would nullify the original message retroactively. Under subparagraph (a), the originator is released from the binding effect of the message after the time notice is received and not before that time. Moreover, paragraph (4) should not be read as allowing the originator to avoid being bound by the data message by sending notice to the addressee under subparagraph (a), in a case where the message had, in fact, been sent by the originator and the addressee properly applied agreed or reasonable authentication procedures. If the addressee can prove that the message is that of the originator, paragraph (1) would apply and not paragraph (4)(a). As to the meaning of "reasonable time", the notice should be such as to give the addressee sufficient time to react. For example, in the case of just-in-time supply, the addressee should be given time to adjust its production chain.

89. With respect to paragraph (4)(b), it should be noted that the Model Law could lead to the result that the addressee would be entitled to rely on a data message under paragraph (3)(a) if it had properly applied the agreed authentication procedures, even if it knew that the data message was not that of the originator. It was generally felt when preparing the Model Law that the risk that such a situation could arise should be accepted, in view of the need for preserving the reliability of agreed authentication procedures.

90. Paragraph (5) is intended to preclude the originator from disavowing the message once it was sent, unless the addressee knew, or should have known, that the data message was not that of the originator. In addition, paragraph (5) is intended to deal with errors in the content of the message arising from errors in transmission.

91. Paragraph (6) deals with the issue of erroneous duplication of data messages, an issue of considerable practical importance. It establishes the standard of care to be applied by the addressee to distinguish an erroneous duplicate of a data message from a separate data message.

92. Early drafts of article 13 contained an additional paragraph, expressing the principle that the attribution of authorship of a data message to the originator should not interfere with the legal consequences of that message, which should be determined by other applicable rules of national law. It was later felt that it was not necessary to express that principle in the Model Law but that it should be mentioned in this Guide.

References

A/51/17, paras. 189-194 (article 11);

A/50/17, paras. 275-303 (article 11);

A/CN.9/407, paras. 86-89;

A/CN.9/406, paras. 114-131; A/CN.9/WG.IV/WP.62, article 10;

A/CN.9/390, paras. 144-153; A/CN.9/WG.IV/WP.60, article 10;

A/CN.9/387, paras. 110-132; A/CN.9/WG.IV/WP.57, article 10;

A/CN.9/373, paras. 109-115; A/CN.9/WG.IV/WP.55, paras. 82-86.

Article 14. Acknowledgement of receipt

93. The use of functional acknowledgements is a business decision to be made by users of electronic commerce; the Model Law does not intend to impose the use of any such procedure. However, taking into account the commercial value of a system of acknowledgement of receipt and the widespread use of such systems in the context of electronic commerce, it was felt that the Model Law should address a number of legal issues arising from the use of acknowledgement procedures. It should be noted that the notion of "acknowledgement" is sometimes used to cover a variety of procedures, ranging from a mere acknowledgement of receipt of an unspecified message to an expression of agreement with the content of a specific data message. In many instances, the procedure of "acknowledgement" would parallel the system known as "return receipt requested" in postal systems. Acknowledgements of receipt may be required in a variety of instruments, e.g., in the data message itself, in bilateral or multilateral communication agreements, or in "system rules". It should be borne in mind that variety among acknowledgement procedures implies variety of the related costs. The provisions of article 14 are based on the assumption that acknowledgement procedures are to be used at the discretion of the originator. Article 14 is not intended to deal with the legal consequences that may flow from sending an acknowledgement of receipt, apart from establishing receipt of the data message. For example, where an originator sends an offer in a data message and requests acknowledgement of receipt, the acknowledgement of receipt simply evidences that the offer has been received. Whether or not sending that acknowledgement amounted to accepting the offer is not dealt with by the Model Law but by contract law outside the Model Law.

94. The purpose of paragraph (2) is to validate acknowledgement by any communication or

conduct of the addressee (e.g., the shipment of the goods as an acknowledgement of receipt of a purchase order) where the originator has not agreed with the addressee that the acknowledgement should be in a particular form. The situation where an acknowledgement has been unilaterally requested by the originator to be given in a specific form is not expressly addressed by article 14, which may entail as a possible consequence that a unilateral requirement by the originator as to the form of acknowledgements would not affect the right of the addressee to acknowledge receipt by any communication or conduct sufficient to indicate to the originator that the message had been received. Such a possible interpretation of paragraph (2) makes it particularly necessary to emphasize in the Model Law the distinction to be drawn between the effects of an acknowledgement of receipt of a data message and any communication in response to the content of that data message, a reason why paragraph (7) is needed.

95. Paragraph (3), which deals with the situation where the origin- ator has stated that the data message is conditional on receipt of an acknowledgement, applies whether or not the originator has specified that the acknowledgement should be received by a certain time.

96. The purpose of paragraph (4) is to deal with the more common situation where an acknowledgement is requested, without any statement being made by the originator that the data message is of no effect until an acknowledgement has been received. Such a provision is needed to establish the point in time when the originator of a data message who has requested an acknowledgement of receipt is relieved from any legal implication of sending that data message if the requested acknowledgement has not been received. An example of a factual situation where a provision along the lines of paragraph (4) would be particularly useful would be that the originator of an offer to contract who has not received the requested acknowledgement from the addressee of the offer may need to know the point in time after which it is free to transfer the offer to another party. It may be noted that the provision does not create any obligation binding on the originator, but merely establishes means by which the originator, if it so wishes, can clarify its status in cases where it has not received the requested acknowledgement. It may also be noted that the provision does not create any obligation binding on the addressee of the data message, who would, in most circumstances, be free to rely or not to rely on any given data message, provided that it would bear the risk of the data message being unreliable for lack of an acknowledgement of receipt. The addressee, however, is protected since the originator who does not receive a requested acknowledgement may not automatically treat the data message as though it had never been transmitted, without giving further notice to the addressee. The procedure described under paragraph (4) is purely at the discretion of the originator. For example, where the originator sent a data message which under the agreement between the parties had to be received by a certain time, and the originator requested an acknowledgement of receipt, the addressee could not deny the legal effectiveness of the message simply by withholding the requested acknowledgement.

97. The rebuttable presumption established in paragraph (5) is needed to create certainty and would be particularly useful in the context of electronic communication between parties that are not linked by a trading-partners agreement. The second sentence of paragraph (5) should be read in conjunction with paragraph (5) of article 13, which establishes the conditions under which, in case of an inconsistency between the text of the data message as sent and the text as received, the text as received prevails.

98. Paragraph (6) corresponds to a certain type of acknowledgement, for example, an EDIFACT message establishing that the data message received is syntactically correct, i.e., that it can be processed by the receiving computer. The reference to technical requirements, which is to be construed primarily as a reference to "data syntax" in the context of EDI communications, may be less relevant in the context of the use of other means of communication, such as telegram or telex. In addition to mere consistency with the rules of "data syntax", technical requirements set forth in applicable standards may

include, for example, the use of procedures verifying the integrity of the contents of data messages.

99. Paragraph (7) is intended to dispel uncertainties that might exist as to the legal effect of an acknowledgement of receipt. For example, paragraph (7) indicates that an acknowledgement of receipt should not be confused with any communication related to the contents of the acknowledged message.

References

A/51/17, paras. 63-88 (article 12);

A/CN.9/407, paras. 90-92;

A/CN.9/406, paras. 15-33; A/CN.9/WG.IV/WP.60, article 11;

A/CN.9/387, paras. 133-144; A/CN.9/WG.IV/WP.57, article 11;

A/CN.9/373, paras. 116-122; A/CN.9/WG.IV/WP.55, paras. 87-93;

A/CN.9/360, para. 125; A/CN.9/WG.IV/WP.53, paras. 80-81;

A/CN.9/350, para. 92;

A/CN.9/333, paras. 48-49.

Article 15. Time and place of dispatch and receipt of data messages

100. Article 15 results from the recognition that, for the operation of many existing rules of law, it is important to ascertain the time and place of receipt of information. The use of electronic communication techniques makes those difficult to ascertain. It is not uncommon for users of electronic commerce to communicate from one State to another without knowing the location of information systems through which communication is operated. In addition, the location of certain communication systems may change without either of the parties being aware of the change. The Model Law is thus intended to reflect the fact that the location of information systems is irrelevant and sets forth a more objective criterion, namely, the place of business of the parties. In that connection, it should be noted that article 15 is not intended to establish a conflict-of-laws rule.

101. Paragraph (1) defines the time of dispatch of a data message as the time when the data message enters an information system outside the control of the originator, which may be the information system of an intermediary or an information system of the addressee. The concept of "dispatch" refers to the commencement of the electronic transmission of the data message. Where "dispatch" already has an established meaning, article 15 is intended to supplement national rules on dispatch and not to displace them. If dispatch occurs when the data message reaches an information system of the addressee, dispatch under paragraph (1) and receipt under paragraph (2) are simultaneous, except where the data message is sent to an information system of the addressee that is not the information system designated by the addressee under paragraph (2)(a).

102. Paragraph (2), the purpose of which is to define the time of receipt of a data message, addresses the situation where the addressee unilaterally designates a specific information system for the receipt of a message (in which case the designated system may or may not be an information system of the addressee), and the data message reaches an information

system of the addressee that is not the designated system. In such a situation, receipt is deemed to occur when the data message is retrieved by the addressee. By "designated information system", the Model Law is intended to cover a system that has been specifically designated by a party, for instance in the case where an offer expressly specifies the address to which acceptance should be sent. The mere indication of an electronic mail or telecopy address on a letterhead or other document should not be regarded as express designation of one or more information systems.

103. Attention is drawn to the notion of "entry" into an information system, which is used for both the definition of dispatch and that of receipt of a data message. A data message enters an information system at the time when it becomes available for processing within that information system. Whether a data message which enters an information system is intelligible or usable by the addressee is outside the purview of the Model Law. The Model Law does not intend to overrule provisions of national law under which receipt of a message may occur at the time when the message enters the sphere of the addressee, irrespective of whether the message is intelligible or usable by the addressee. Nor is the Model Law 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 Model Law 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 not intelligible for 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).

104. A data message should not be considered to be dispatched if it merely reached the information system of the addressee but failed to enter it. It may be noted that the Model Law does not expressly address the question of possible malfunctioning of information systems as a basis for liability. In particular, where the information system of the addressee does not function at all or functions improperly or, while functioning properly, cannot be entered into by the data message (e.g., in the case of a telecopier that is constantly occupied), dispatch under the Model Law does not occur. It was felt during the preparation of the Model Law that the addressee should not be placed under the burdensome obligation to maintain its information system functioning at all times by way of a general provision.

105. The purpose of paragraph (4) is to deal with the place of receipt of a data message. The principal reason for including a rule on the place of receipt of a data message is to address a circumstance characteristic of electronic commerce that might not be treated adequately under existing law, namely, that very often the information system of the addressee where the data message is received, or from which the data message is retrieved, is located in a jurisdiction other than that in which the addressee itself is located. Thus, the rationale behind the provision is to ensure that the location of an information system is not the determinant element, and that there is some reasonable connection between the addressee and what is deemed to be the place of receipt, and that that place can be readily ascertained by the originator. The Model Law does not contain specific provisions as to how the designation of an information system should be made, or whether a change could be made after such a designation by the addressee.

106. Paragraph (4), which contains a reference to the "underlying transaction", is intended to refer to both actual and contemplated underlying transactions. References to "place of business", "principal place of business" and "place of habitual residence" were adopted to bring the text in line with article 10 of the United Nations Convention on Contracts for the International Sale of Goods.

107. The effect of paragraph (4) is to introduce a distinction between the deemed place of receipt and the place actually reached by a data message at the time of its receipt under

paragraph (2). That distinction is not to be interpreted as apportioning risks between the originator and the addressee in case of damage or loss of a data message between the time of its receipt under paragraph (2) and the time when it reached its place of receipt under paragraph (4). Paragraph (4) merely establishes an irrebuttable presumption regarding a legal fact, to be used where another body of law (e.g., on formation of contracts or conflict of laws) require determination of the place of receipt of a data message. However, it was felt during the preparation of the Model Law that introducing a deemed place of receipt, as distinct from the place actually reached by that data message at the time of its receipt, would be inappropriate outside the context of computerized transmissions (e.g., in the context of telegram or telex). The provision was thus limited in scope to cover only computerized transmissions of data messages. A further limitation is contained in paragraph (5), which reproduces a provision already included in articles 6, 7, 8, 11 and 12 (see above, para. 69).

References

A/51/17, paras. 100-115 (article 14);

A/CN.9/407, paras. 94-99;

A/CN.9/406, paras. 42-58; A/CN.9/WG.IV/WP.60, article 13;

A/CN.9/387, paras. 152-163; A/CN.9/WG.IV/WP.57, article 13;

A/CN.9/373, paras. 134-146; A/CN.9/WG.IV/WP.55, paras. 103-108;

A/CN.9/360, paras. 87-89; A/CN.9/WG.IV/WP.53, paras. 74-76;

A/CN.9/350, paras. 97-100;

A/CN.9/333, paras. 69-75.

Part two. Electronic commerce in specific areas ➦

108. As distinct from the basic rules applicable to electronic commerce in general, which appear as part one of the Model Law, part two contains rules of a more specific nature. In preparing the Model Law, the Commission agreed that such rules dealing with specific uses of electronic commerce should appear in the Model Law in a way that reflected both the specific nature of the provisions and their legal status, which should be the same as that of the general provisions contained in part one of the Model Law. While the Commission, when adopting the Model Law, only considered such specific provisions in the context of transport documents, it was agreed that such provisions should appear as chapter I of part two of the Model Law. It was felt that adopting such an open-ended structure would make it easier to add further specific provisions to the Model Law, as the need might arise, in the form of additional chapters in part two.

109. The adoption of a specific set of rules dealing with specific uses of electronic commerce, such as the use of EDI messages as substitutes for transport documents does not imply that the other provisions of the Model Law are not applicable to such documents. In particular, the provisions of part two, such as articles 16 and 17 concerning transfer of rights in goods, presuppose that the guarantees of reliability and authenticity contained in articles 6 to 8 of the Model Law are also applicable to electronic equivalents to transport documents. Part two of the Model Law does not in any way limit or restrict the field of

application of the general provisions of the Model Law.

Chapter I. Carriage of goods ➦

110. In preparing the Model Law, the Commission noted that the carriage of goods was the context in which electronic communications were most likely to be used and in which a legal framework facilitating the use of such communications was most urgently needed. Articles 16 and 17 contain provisions that apply equally to non-negotiable transport documents and to transfer of rights in goods by way of transferable bills of lading. The principles embodied in articles 16 and 17 are applicable not only to maritime transport but also to transport of goods by other means, such as road, railroad and air transport.

Article 16. Actions related to contracts of carriage of goods

111. Article 16, which establishes the scope of chapter I of part two of the Model Law, is broadly drafted. It would encompass a wide variety of documents used in the context of the carriage of goods, including, for example, charter-parties. In the preparation of the Model Law, the Commission found that, by dealing comprehensively with contracts of carriage of goods, article 16 was consistent with the need to cover all transport documents, whether negotiable or non-negotiable, without excluding any specific document such as charter-parties. It was pointed out that, if an enacting State did not wish chapter I of part two to apply to a particular kind of document or contract, for example if the inclusion of such documents as charter-parties in the scope of that chapter was regarded as inappropriate under the legislation of an enacting State, that State could make use of the exclusion clause contained in paragraph (7) of article 17.

112. Article 16 is of an illustrative nature and, although the actions mentioned therein are more common in maritime trade, they are not exclusive to such type of trade and could be performed in connection with air transport or multimodal carriage of goods.

References

A/51/17, paras. 139-172 and 198-204 (draft article x);

A/CN.9/421, paras. 53-103; A/CN.9/WG.IV/WP.69, paras. 82-95;

A/50/17, paras. 307-309;

A/CN.9/407, paras. 106-118; A/CN.9/WG.IV/WP.67, annex; A/CN.9/WG.IV/WP.66, annex II;

A/49/17, paras. 198, 199 and 201;

A/CN.9/390, para. 155-158.

Article 17. Transport documents

113. Paragraphs (1) and (2) are derived from article 6. In the context of transport documents, it is necessary to establish not only functional equivalents of written information about the actions referred to in article 16, but also functional equivalents of the performance of such actions through the use of paper documents. Functional equivalents are particularly needed for the transfer of rights and obligations by transfer of written documents. For example, paragraphs (1) and (2) are intended to replace both the requirement for a written contract of carriage and the requirements for endorsement and transfer of possession of a

bill of lading. It was felt in the preparation of the Model Law that the focus of the provision on the actions referred to in article 16 should be expressed clearly, particularly in view of the difficulties that might exist, in certain countries, for recognizing the transmission of a data message as functionally equivalent to the physical transfer of goods, or to the transfer of a document of title representing the goods.

114. The reference to "one or more data messages" in paragraphs (1), (3) and (6) is not intended to be interpreted differently from the reference to "a data message" in the other provisions of the Model Law, which should also be understood as covering equally the situation where only one data message is generated and the situation where more than one data message is generated as support of a given piece of information. A more detailed wording was adopted in article 17 merely to reflect the fact that, in the context of transfer of rights through data messages, some of the functions traditionally performed through the single transmission of a paper bill of lading would necessarily imply the transmission of more than one data message and that such a fact, in itself, should entail no negative consequence as to the acceptability of electronic commerce in that area.

115. Paragraph (3), in combination with paragraph (4), is intended to ensure that a right can be conveyed to one person only, and that it would not be possible for more than one person at any point in time to lay claim to it. The effect of the two paragraphs is to introduce a requirement which may be referred to as the "guarantee of singularity". If procedures are made available to enable a right or obligation to be conveyed by electronic methods instead of by using a paper document, it is necessary that the guarantee of singularity be one of the essential features of such procedures. Technical security devices providing such a guarantee of singularity would almost necessarily be built into any communication system offered to the trading communities and would need to demonstrate their reliability. However, there is also a need to overcome requirements of law that the guarantee of singularity be demonstrated, for example in the case where paper documents such as bills of lading are traditionally used. A provision along the lines of paragraph (3) is thus necessary to permit the use of electronic communication instead of paper documents.

116. The words "one person and no other person" should not be interpreted as excluding situations where more than one person might jointly hold title to the goods. For example, the reference to "one person" is not intended to exclude joint ownership of rights in the goods or other rights embodied in a bill of lading.

117. The notion that a data message should be "unique" may need to be further clarified, since it may lend itself to misinterpretation. On the one hand, all data messages are necessarily unique, even if they duplicate an earlier data message, since each data message is sent at a different time from any earlier data message sent to the same person. If a data message is sent to a different person, it is even more obviously unique, even though it might be transferring the same right or obligation. Yet, all but the first transfer might be fraudulent. On the other hand, if "unique" is interpreted as referring to a data message of a unique kind, or a transfer of a unique kind, then in that sense no data message is unique, and no transfer by means of a data message is unique. Having considered the risk of such misinterpretation, the Commission decided to retain the reference to the concepts of uniqueness of the data message and uniqueness of the transfer for the purposes of article 17, in view of the fact that the notions of "uniqueness" or "singularity" of transport documents were not unknown to practitioners of transport law and users of transport documents. It was decided, however, that this Guide should clarify that the words "a reliable method is used to render such data message or messages unique" should be interpreted as referring to the use of a reliable method to secure that data messages purporting to convey any right or obligation of a person might not be used by, or on behalf of, that person inconsistently with any other data messages by which the right or obligation was conveyed by or on behalf of that person.

118. Paragraph (5) is a necessary complement to the guarantee of singularity contained in paragraph (3). The need for security is an overriding consideration and it is essential to ensure not only that a method is used that gives reasonable assurance that the same data message is not multiplied, but also that no two media can be simultaneously used for the same purpose. Paragraph (5) addresses the fundamental need to avoid the risk of duplicate transport documents. The use of multiple forms of communication for different purposes, e.g., paper-based communications for ancillary messages and electronic communications for bills of lading, does not pose a problem. However, it is essential for the operation of any system relying on electronic equivalents of bills of lading to avoid the possibility that the same rights could at any given time be embodied both in data messages and in a paper document. Paragraph (5) also envisages the situation where a party having initially agreed to engage in electronic communications has to switch to paper communications where it later becomes unable to sustain electronic communications.

119. The reference to "terminating" the use of data messages is open to interpretation. In particular, the Model Law does not provide information as to who would effect the termination. Should an enacting State decide to provide additional information in that respect, it might wish to indicate, for example, that, since electronic commerce is usually based on the agreement of the parties, a decision to "drop down" to paper communications should also be subject to the agreement of all interested parties. Otherwise, the originator would be given the power to choose unilaterally the means of communication. Alternatively, an enacting State might wish to provide that, since paragraph (5) would have to be applied by the bearer of a bill of lading, it should be up to the bearer to decide whether it preferred to exercise its rights on the basis of a paper bill of lading or on the basis of the electronic equivalent of such a document, and to bear the costs for its decision.

120. Paragraph (5), while expressly dealing with the situation where the use of data messages is replaced by the use of a paper document, is not intended to exclude the reverse situation. The switch from data messages to a paper document should not affect any right that might exist to surrender the paper document to the issuer and start again using data messages.

121. The purpose of paragraph (6) is to deal directly with the application of certain laws to contracts for the carriage of goods by sea. For example, under the Hague and Hague-Visby Rules, a contract of carriage means a contract that is covered by a bill of lading. Use of a bill of lading or similar document of title results in the Hague and Hague-Visby Rules applying compulsorily to a contract of carriage. Those rules would not automatically apply to contracts effected by one or more data message. Thus, a provision such as paragraph (6) is needed to ensure that the application of those rules is not excluded by the mere fact that data messages are used instead of a bill of lading in paper form. While paragraph (1) ensures that data messages are effective means for carrying out any of the actions listed in article 16, that provision does not deal with the substantive rules of law that might apply to a contract contained in, or evidenced by, data messages.

122. As to the meaning of the phrase "that rule shall not be inapplicable" in paragraph (6), a simpler way of expressing the same idea might have been to provide that rules applicable to contracts of carriage evidenced by paper documents should also apply to contracts of carriage evidenced by data messages. However, given the broad scope of application of article 17, which covers not only bills of lading but also a variety of other transport documents, such a simplified provision might have had the undesirable effect of extending the applicability of rules such as the Hamburg Rules and the Hague-Visby Rules to contracts to which such rules were never intended to apply. The Commission felt that the adopted wording was more suited to overcome the obstacle resulting from the fact that the Hague-Visby Rules and other rules compulsorily applicable to bills of lading would not automatically apply to contracts of carriage evidenced by data messages, without inadvertently extending the application of such rules to other types of contracts.

References

A/51/17, paras. 139-172 and 198-204 (draft article x);

A/CN.9/421, paras. 53-103; A/CN.9/WG.IV/WP.69, paras 82-95;

A/50/17, paras. 307-309

A/CN.9/407, paras. 106-118 A/CN.9/WG.IV/WP.67, annex; A/CN.9/WG.IV/WP.66, annex II;

A/49/17, paras. 198, 199 and 201;

A/CN.9/390, para. 155-158.

III. HISTORY AND BACKGROUND OF THE MODEL LAW ➦

123. The UNCITRAL Model Law on Electronic Commerce was adopted by the United Nations Commission on International Trade Law (UNCITRAL) in 1996 in furtherance of its mandate to promote the harmonization and unification of international trade law, so as to remove unnecessary obstacles to international trade caused by inadequacies and divergences in the law affecting trade. Over the past quarter of a century, UNCITRAL, whose membership consists of States from all regions and of all levels of economic development, has implemented its mandate by formulating international conventions (the United Nations Conventions on Contracts for the International Sale of Goods, on the Limitation Period in the International Sale of Goods, on the Carriage of Goods by Sea, 1978 ("Hamburg Rules"), on the Liability of Operators of Transport Terminals in International Trade, on International Bills of Exchange and International Promissory Notes, and on Independent Guarantees and Stand-by Letters of Credit), model laws (the UNCITRAL Model Laws on International Commercial Arbitration, on International Credit Transfers and on Procurement of Goods, Construction and Services), the UNCITRAL Arbitration Rules, the UNCITRAL Conciliation Rules, and legal guides (on construction contracts, countertrade transactions and electronic funds transfers).

124. The Model Law was prepared in response to a major change in the means by which communications are made between parties using computerized or other modern techniques in doing business (sometimes referred to as "trading partners"). The Model Law is intended to serve as a model to countries for the evaluation and modernization of certain aspects of their laws and practices in the field of commercial relationships involving the use of computerized or other modern communication techniques, and for the establishment of relevant legislation where none presently exists. The text of the Model Law, as reproduced above, is set forth in annex I to the report of UNCITRAL on the work of its twenty-ninth session.(3)

125. The Commission, at its seventeenth session (1984), considered a report of the Secretary-General entitled "Legal aspects of automatic data processing" (A/CN.9/254), which identified several legal issues relating to the legal value of computer records, the requirement of a "writing", authentication, general conditions, liability and bills of lading. The Commission took note of a report of the Working Party on Facilitation of International Trade Procedures (WP.4), which is jointly sponsored by the Economic Commission for Europe and the United Nations Conference on Trade and Development, and is responsible for the development of UN/EDIFACT standard messages. That report suggested that, since the legal problems arising in this field were essentially those of international trade law, the Commission as the core legal body in the field of international trade law appeared to be the appropriate central forum to undertake and coordinate the necessary action.(4) The

Commission decided to place the subject of the legal implications of automatic data processing to the flow of international trade on its programme of work as a priority item.(5)

126. At its eighteenth session (1985), the Commission had before it a report by the Secretariat entitled "Legal value of computer records" (A/CN.9/265). That report came to the conclusion that, on a global level, there were fewer problems in the use of data stored in computers as evidence in litigation than might have been expected. It noted that a more serious legal obstacle to the use of computers and computer-to-computer telecommunications in international trade arose out of requirements that documents had to be signed or be in paper form. After discussion of the report, the Commission adopted the following recommendation, which expresses some of the principles on which the Model Law is based:

"The United Nations Commission on International Trade Law,

"Noting that the use of automatic data processing (ADP) is about to become firmly established throughout the world in many phases of domestic and international trade as well as in administrative services,

"Noting also that legal rules based upon pre-ADP paper-based means of documenting international trade may create an obstacle to such use of ADP in that they lead to legal insecurity or impede the efficient use of ADP where its use is otherwise justified,

"Noting further with appreciation the efforts of the Council of Europe, the Customs Co-operation Council and the United Nations Economic Commission for Europe to overcome obstacles to the use of ADP in international trade arising out of these legal rules,

"Considering at the same time that there is no need for a unification of the rules of evidence regarding the use of computer records in international trade, in view of the experience showing that substantial differences in the rules of evidence as they apply to the paper-based system of documentation have caused so far no noticeable harm to the development of international trade,

"Considering also that the developments in the use of ADP are creating a desirability in a number of legal systems for an adaptation of existing legal rules to these developments, having due regard, however, to the need to encourage the employment of such ADP means that would provide the same or greater reliability as paper-based documentation,

"1. Recommends to Governments:

"(a) to review the legal rules affecting the use of computer records as evidence in litigation in order to eliminate unnecessary obstacles to their admission, to be assured that the rules are consistent with developments in technology, and to provide appropriate means for a court to evaluate the credibility of the data contained in those records;

"(b) to review legal requirements that certain trade transactions or trade related documents be in writing, whether the written form is a condition to the enforceability or to the validity of the transaction or document, with a view to permitting, where appropriate, the transaction or document to be recorded and transmitted in computer-readable form;

"(c) to review legal requirements of a handwritten signature or other paper-based method of authentication on trade related documents with a view to permitting, where appropriate, the use of electronic means of authentication;

"(d) to review legal requirements that documents for submission to governments be in writing and manually signed with a view to permitting, where appropriate, such documents to be submitted in computer-readable form to those administrative services which have acquired the necessary equipment and established the necessary procedures;

"2. Recommends to international organizations elaborating legal texts related to trade to take account of the present Recommendation in adopting such texts and, where appropriate, to consider modifying existing legal texts in line with the present Recommendation."(6)

127. That recommendation (hereinafter referred to as the "1985 UNCITRAL Recommendation") was endorsed by the General Assembly in resolution 40/71, paragraph 5(b), of 11 December 1985 as follows:

"The General Assembly,

"... Calls upon Governments and international organizations to take action, where appropriate, in conformity with the Commission's recommendation so as to ensure legal security in the context of the widest possible use of automated data processing in international trade; ...". (7)

128. As was pointed out in several documents and meetings involving the international electronic commerce community, e.g. in meetings of WP. 4, there was a general feeling that, in spite of the efforts made through the 1985 UNCITRAL Recommendation, little progress had been made to achieve the removal of the mandatory requirements in national legislation regarding the use of paper and handwritten signatures. It has been suggested by the Norwegian Committee on Trade Procedures (NORPRO) in a letter to the Secretariat that "one reason for this could be that the 1985 UNCITRAL Recommendation advises on the need for legal update, but does not give any indication of how it could be done". In this vein, the Commission considered what follow-up action to the 1985 UNCITRAL Recommendation could usefully be taken so as to enhance the needed modernization of legislation. The decision by UNCITRAL to formulate model legislation on legal issues of electronic data interchange and related means of communication may be regarded as a consequence of the process that led to the adoption by the Commission of the 1985 UNCITRAL Recommendation.

129. At its twenty-first session (1988), the Commission considered a proposal to examine the need to provide for the legal principles that would apply to the formation of international commercial contracts by electronic means. It was noted that there existed no refined legal structure for the important and rapidly growing field of formation of contracts by electronic means and that future work in that area could help to fill a legal vacuum and to reduce uncertainties and difficulties encountered in practice. The Commission requested the Secretariat to prepare a preliminary study on the topic.(8)

130. At its twenty-third session (1990), the Commission had before it a report entitled "Preliminary study of legal issues related to the formation of contracts by electronic means" (A/CN.9/333). The report summarized work that had been undertaken in the European Communities and in the United States of America on the requirement of a "writing" as well as other issues that had been identified as arising in the formation of contracts by electronic means. The efforts to overcome some of those problems by the use of model communication agreements were also discussed.(9)

131. At its twenty-fourth session (1991), the Commission had before it a report entitled "Electronic Data Interchange" (A/CN.9/350). The report described the current activities in the various organizations involved in the legal issues of electronic data interchange (EDI)

and analysed the contents of a number of standard interchange agreements already developed or then being developed. It pointed out that such documents varied considerably according to the various needs of the different categories of users they were intended to serve and that the variety of contractual arrangements had sometimes been described as hindering the development of a satisfactory legal framework for the business use of electronic commerce. It suggested that there was a need for a general framework that would identify the issues and provide a set of legal principles and basic legal rules governing communication through electronic commerce. It concluded that such a basic framework could, to a certain extent, be created by contractual arrangements between parties to an electronic commerce relationship and that the existing contractual frameworks that were proposed to the community of users of electronic commerce were often incomplete, mutually incompatible, and inappropriate for international use since they relied to a large extent upon the structures of local law.

132. With a view to achieving the harmonization of basic rules for the promotion of electronic commerce in international trade, the report suggested that the Commission might wish to consider the desirability of preparing a standard communication agreement for use in international trade. It pointed out that work by the Commission in this field would be of particular importance since it would involve participation of all legal systems, including those of developing countries that were already or would soon be confronted with the issues of electronic commerce.

133. The Commission was agreed that the legal issues of electronic commerce would become increasingly important as the use of electronic commerce developed and that it should undertake work in that field. There was wide support for the suggestion that the Commission should undertake the preparation of a set of legal principles and basic legal rules governing communication through electronic commerce.(10) The Commission came to the conclusion that it would be premature to engage immediately in the preparation of a standard communication agreement and that it might be preferable to monitor developments in other organizations, particularly the Commission of the European Communities and the Economic Commission for Europe. It was pointed out that high-speed electronic commerce required a new examination of basic contract issues such as offer and acceptance, and that consideration should be given to legal implications of the role of central data managers in international commercial law.

134. After deliberation, the Commission decided that a session of the Working Group on International Payments would be devoted to identifying the legal issues involved and to considering possible statutory provisions, and that the Working Group would report to the Commission on the desirability and feasibility of undertaking further work such as the preparation of a standard communication agreement.(11)

135. The Working Group on International Payments, at its twenty-fourth session, recommended that the Commission should undertake work towards establishing uniform legal rules on electronic commerce. It was agreed that the goals of such work should be to facilitate the increased use of electronic commerce and to meet the need for statutory provisions to be developed in the field of electronic commerce, particularly with respect to such issues as formation of contracts; risk and liability of commercial partners and third-party service providers involved in electronic commerce relationships; extended definitions of "writing" and "original" to be used in an electronic commerce environment; and issues of negotiability and documents of title (A/CN.9/360).

136. While it was generally felt that it was desirable to seek the high degree of legal certainty and harmonization provided by the detailed provisions of a uniform law, it was also felt that care should be taken to preserve a flexible approach to some issues where legislative action might be premature or inappropriate. As an example of such an issue, it

was stated that it might be fruitless to attempt to provide legislative unification of the rules on evidence that may apply to electronic commerce massaging (ibid., para. 130). It was agreed that no decision should be taken at that early stage as to the final form or the final content of the legal rules to be prepared. In line with the flexible approach to be taken, it was noted that situations might arise where the preparation of model contractual clauses would be regarded as an appropriate way of addressing specific issues (ibid., para. 132).

137. The Commission, at its twenty-fifth session (1992), endorsed the recommendation contained in the report of the Working Group (ibid., paras. 129-133) and entrusted the preparation of legal rules on electronic commerce (which was then referred to as "electronic data interchange" or "EDI") to the Working Group on International Payments, which it renamed the Working Group on Electronic Data Interchange.(12)

138. The Working Group devoted its twenty-fifth to twenty-eighth sessions to the preparation of legal rules applicable to "electronic data interchange (EDI) and other modern means of communication" (reports of those sessions are found in documents A/CN.9/373, 387, 390 and 406).(13)

139. The Working Group carried out its task on the basis of background working papers prepared by the Secretariat on possible issues to be included in the Model Law. Those background papers included A/CN.9/WG.IV/WP.53 (Possible issues to be included in the programme of future work on the legal aspects of EDI) and A/CN.9/WG.IV/WP.55 (Outline of possible uniform rules on the legal aspects of electronic data interchange). The draft articles of the Model Law were submitted by the Secretariat in documents A/CN.9/WG.IV/WP.57, 60 and 62. The Working Group also had before it a proposal by the United Kingdom of Great Britain and Northern Ireland relating to the possible contents of the draft Model Law (A/CN.9/WG.IV/WP.58).

140. The Working Group noted that, while practical solutions to the legal difficulties raised by the use of electronic commerce were often sought within contracts (A/CN.9/WG.IV/WP.53, paras. 35-36), the contractual approach to electronic commerce was developed not only because of its intrinsic advantages such as its flexibility, but also for lack of specific provisions of statutory or case law. The contractual approach was found to be limited in that it could not overcome any of the legal obstacles to the use of electronic commerce that might result from mandatory provisions of applicable statutory or case law. In that respect, one difficulty inherent in the use of communication agree- ments resulted from uncertainty as to the weight that would be carried by some contractual stipulations in case of litigation. Another limitation to the contractual approach resulted from the fact that parties to a contract could not effectively regulate the rights and obligations of third parties. At least for those parties not participating in the contractual arrangement, statutory law based on a model law or an international convention seemed to be needed (see A/CN.9/350, para. 107).

141. The Working Group considered preparing uniform rules with the aim of eliminating the legal obstacles to, and uncertainties in, the use of modern communication techniques, where effective removal of such obstacles and uncertainties could only be achieved by statutory provisions. One purpose of the uniform rules was to enable potential electronic commerce users to establish a legally secure electronic commerce relationship by way of a communication agreement within a closed network. The second purpose of the uniform rules was to support the use of electronic commerce outside such a closed network, i.e., in an open environment. However, the aim of the uniform rules was to enable, and not to impose, the use of EDI and related means of communication. Moreover, the aim of the uniform rules was not to deal with electronic commerce relationships from a technical perspective but rather to create a legal environment that would be as secure as possible, so as to facilitate the use of electronic commerce between communicating parties.

142. As to the form of the uniform rules, the Working Group was agreed that it should proceed with its work on the assumption that the uniform rules should be prepared in the form of statutory provisions. While it was agreed that the form of the text should be that of a "model law", it was felt, at first, that, owing to the special nature of the legal text being prepared, a more flexible term than "model law" needed to be found. It was observed that the title should reflect that the text contained a variety of provisions relating to existing rules scattered throughout various parts of the national laws in an enacting State. It was thus a possibility that enacting States would not incorporate the text as a whole and that the provisions of such a "model law" might not appear together in any one particular place in the national law. The text could be described, in the parlance of one legal system, as a "miscellaneous statute amendment act". The Working Group agreed that this special nature of the text would be better reflected by the use of the term "model statutory provisions". The view was also expressed that the nature and purpose of the "model statutory provisions" could be explained in an introduction or guidelines accompanying the text.

143. At its twenty-eighth session, however, the Working Group reviewed its earlier decision to formulate a legal text in the form of "model statutory provisions" (A/CN.9/390, para. 16). It was widely felt that the use of the term "model statutory provisions" might raise uncertainties as to the legal nature of the instrument. While some support was expressed for the retention of the term "model statutory provisions", the widely prevailing view was that the term "model law" should be preferred. It was widely felt that, as a result of the course taken by the Working Group as its work progressed towards the completion of the text, the model statutory provisions could be regarded as a balanced and discrete set of rules, which could also be implemented as a whole in a single instrument (A/CN.9/406, para. 75). Depending on the situation in each enacting State, however, the Model Law could be implemented in various ways, either as a single statute or in various pieces of legislation.

144. The text of the draft Model Law as approved by the Working Group at its twenty-eighth session was sent to all Governments and to interested international organizations for comment. The comments received were reproduced in document A/CN.9/409 and Add.1-4. The text of the draft articles of the Model Law as presented to the Commission by the Working Group was contained in the annex to document A/CN.9/406.

145. At its twenty-eighth session (1995), the Commission adopted the text of articles 1 and 3 to 11 of the draft Model Law and, for lack of sufficient time, did not complete its review of the draft Model Law, which was placed on the agenda of the twenty-ninth session of the Commission.(14)

146. The Commission, at its twenty-eighth session,(15) recalled that, at its twenty-seventh session (1994), general support had been expressed in favour of a recommendation made by the Working Group that preliminary work should be undertaken on the issue of negotiability and transferability of rights in goods in a computer-based environment as soon as the preparation of the Model Law had been completed.(16) It was noted that, on that basis, a preliminary debate with respect to future work to be undertaken in the field of electronic data interchange had been held in the context of the twenty-ninth session of the Working Group (for the report on that debate, see A/CN.9/407, paras. 106-118). At that session, the Working Group also considered proposals by the International Chamber of Commerce (A/CN.9/WG.IV/WP.65) and the United Kingdom of Great Britain and Northern Ireland (A/CN.9/WG.IV/WP.66) relating to the possible inclusion in the draft Model Law of additional provisions to the effect of ensuring that certain terms and conditions that might be incorporated in a data message by means of a mere reference would be recognized as having the same degree of legal effectiveness as if they had been fully stated in the text of the data message (for the report on the discussion, see A/CN.9/407, paras. 100-105). It was agreed that the issue of incorporation by reference might need to be considered in the context of future work on negotiability and transferability of rights in goods (A/CN.9/407, para. 103). The Commission endorsed the recommendation made by the Working Group

that the Secretariat should be entrusted with the preparation of a background study on negotiability and transferability of EDI transport documents, with particular emphasis on EDI maritime transport documents, taking into account the views expressed and the suggestions made at the twenty-ninth session of the Working Group.(17)

147. On the basis of the study prepared by the Secretariat (A/CN.9/WG.IV/WP.69), the Working Group, at its thirtieth session, discussed the issues of transferability of rights in the context of transport documents and approved the text of draft statutory provisions dealing with the specific issues of contracts of carriage of goods involving the use of data messages (for the report on that session, see A/CN.9/421). The text of those draft provisions as presented to the Commission by the Working Group for final review and possible addition as part II of the Model Law was contained in the annex to document A/CN.9/421.

148. In preparing the Model Law, the Working Group noted that it would be useful to provide in a commentary additional information concerning the Model Law. In particular, at the twenty-eighth session of the Working Group, during which the text of the draft Model Law was finalized for submission to the Commission, there was general support for a suggestion that the draft Model Law should be accompanied by a guide to assist States in enacting and applying the draft Model Law. The guide, much of which could be drawn from the travaux préparatoires of the draft Model Law, would also be helpful to users of electronic means of communication as well as to scholars in that area. The Working Group noted that, during its deliberations at that session, it had proceeded on the assumption that the draft Model Law would be accompanied by a guide. For example, the Working Group had decided in respect of a number of issues not to settle them in the draft Model Law but to address them in the guide so as to provide guidance to States enacting the draft Model Law. The Secretariat was requested to prepare a draft and submit it to the Working Group for consideration at its twenty-ninth session (A/CN.9/406, para. 177).

149. At its twenty-ninth session, the Working Group discussed the draft Guide to Enactment of the Model Law (hereinafter referred to as "the draft Guide") as set forth in a note prepared by the Secretariat (A/CN.9/WG.IV/WP.64). The Secretariat was requested to prepare a revised version of the draft Guide reflecting the decisions made by the Working Group and taking into account the various views, suggestions and concerns that had been expressed at that session. At its twenty-eighth session, the Commission placed the draft Guide to Enactment of the Model Law on the agenda of its twenty-ninth session.(18)

150. At its twenty-ninth session (1996), the Commission, after consideration of the text of the draft Model Law as revised by the drafting group, adopted the following decision at its 605th meeting, on 12 June 1996:

"The United Nations Commission on International Trade Law,

"Recalling its mandate under General Assembly resolution 2205 (XXI) of 17 December 1966 to further the progressive harmonization and unification of the law of international trade, and in that respect to bear in mind the interests of all peoples, and in particular those of developing countries, in the extensive development of international trade,

"Noting that an increasing number of transactions in international trade are carried out by means of electronic data interchange and other means of communication commonly referred to as 'electronic commerce', which involve the use of alternatives to paper-based forms of communication and storage of information,

"Recalling the recommendation on the legal value of computer records adopted by the Commission at its eighteenth session, in 1985, and paragraph 5(b) of General Assembly

resolution 40/71 of 11 December 1985 calling upon Governments and international organizations to take action, where appropriate, in conformity with the recommendation of the Commission(19) so as to ensure legal security in the context of the widest possible use of automated data processing in international trade,

"Being of the opinion that the establishment of a model law facilitating the use of electronic commerce, and acceptable to States with different legal, social and economic systems, contributes to the development of harmonious international economic relations,

"Being convinced that the UNCITRAL Model Law on Electronic Commerce will significantly assist all States in enhancing their legislation governing the use of alternatives to paper-based forms of communication and storage of information, and in formulating such legislation where none currently exists,

"1. Adopts the UNCITRAL Model Law on Electronic Commerce as it appears in annex I to the report on the current session;

"2. Requests the Secretary-General to transmit the text of the UNCITRAL Model Law on Electronic Commerce, together with the Guide to Enactment of the Model Law prepared by the Secretariat, to Governments and other interested bodies;

"3. Recommends that all States give favourable consideration to the UNCITRAL Model Law on Electronic Commerce when they enact or revise their laws, in view of the need for uniformity of the law applicable to alternatives to paper-based forms of communication and storage of information."(20)

---

1. See Official Records of the General Assembly, Fortieth Session, Supplement No. 17 (A/40/17), chap. VI, sect. B.

2. Reference materials listed by symbols in this Guide belong to the following three categories of documents:

A/50/17 and A/51/17 are the reports of UNCITRAL to the General Assembly on the work of its twenty-eighth and twenty-ninth sessions, held in 1995 and 1996, respectively;

A/CN.9/... documents are reports and notes discussed by UNCITRAL in the context of its annual session, including reports presented by the Working Group to the Commission;

A/CN.9/WG.IV/... documents are working papers considered by the UNCITRAL Working Group on Electronic Commerce (formerly known as the UNCITRAL Working Group on Electronic Data Interchange) in the preparation of the Model Law.

3. Official Records of the General Assembly, Fifty-first Session, Supplement No. 17 (A/51/17), Annex I.

4. "Legal aspects of automatic trade data interchange" (TRADE/WP.4/R.185/Rev.1). The report submitted to the Working Party is reproduced in A/CN.9/238, annex.

5. Official Records of the General Assembly, Thirty-ninth Session, Supplement No. 17 (A/39/17), para. 136.

6. Official Records of the General Assembly, Fortieth Session, Supplement No. 17 (A/40/17), para. 360.

7. Resolution 40/71 was reproduced in United Nations Commission on International Trade Law Yearbook, 1985, vol. XVI, Part One, D. (United Nations publication, Sales No. E.87.V.4).

8. Official Records of the General Assembly, Forty-third Session, Supplement No. 17 (A/43/17), paras. 46 and 47, and ibid., Forty-fourth Session, Supplement No. 17 (A/44/17), para. 289.

9. Ibid., Forty-fifth Session, Supplement No. 17 (A/45/17), paras. 38 to 40.

10. It may be noted that the Model Law is not intended to provide a comprehensive set of rules governing all aspects of electronic commerce. The main purpose of the Model Law is to adapt existing statutory requirements so that they would no longer constitute obstacles to the use of paperless means of communication and storage of information.

11. Official Records of the General Assembly, Forty-sixth Session, Supplement No. 17 (A/46/17), paras. 311 to 317.

12. Ibid., Forty-seventh Session, Supplement No. 17 (A/47/17), paras. 141 to 148.

13. The notion of "EDI and related means of communication" as used by the Working Group is not to be construed as a reference to narrowly defined EDI under article 2(b) of the Model Law but to a variety of trade-related uses of modern communication techniques that was later referred to broadly under the rubric of "electronic commerce". The Model Law is not intended only for application in the context of existing communication techniques but rather as a set of flexible rules that should accommodate foreseeable technical developments. It should also be emphasized that the purpose of the Model Law is not only to establish rules for the movement of information communicated by means of data messages but equally to deal with the storage of information in data messages that are not intended for communication.

14. Official Records of the General Assembly, Fiftieth Session, Supplement No. 17 (A/50/17), para. 306.

15. Ibid., para. 307.

16. Ibid., Forty-ninth Session, Supplement No. 17 (A/49/17), para. 201.

17. Ibid., Fiftieth Session, Supplement No. 17 (A/50/17), para. 309.

18. Ibid., para. 306.

19. Ibid., Fortieth Session, Supplement No. 17 (A/40/17), paras. 354 - 360.

20. Ibid., Fifty-first Session, Supplement No. 17 (A/51/17), para. 209.