THE UNITED NATIONS CONVENTION ON THE USE OF ELECTRONIC COMMUNICATIONS IN INTERNATIONAL CONTRACTS AT TEN: PRACTICAL RELEVANCE AND LESSONS LEARNED

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ABSTRACT

The United Nations Commission on International Trade Law prepared the first global treaty specifically devoted to electronic commerce law, the United Nations Convention on the Use of Electronic Communications in International Contracts. That treaty builds on the highly successful UNCITRAL Model Law on Electronic Commerce and the UNCITRAL Model Law on Electronic Signatures. This article describes the main goals of the Electronic Communications Convention and its scope of application. In particular, it illustrates how that Convention may fully enable the use of electronic means under other widely adopted treaties such as the Convention on the Recognition and Enforcement of Foreign Arbitral Awards and the United Nations Convention on Contracts for the International Sale of Goods. The article also describes the main substantive provisions of the Electronic Communications Convention, in particular clarifying how that Convention updates and completes the provisions of the UNCITRAL Model Law on Electronic Commerce. This Model Law is the backbone of electronic commerce law in numerous countries and a de facto legislative standard in

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southern Africa. Finally, the article describes the manner (or patterns) in which the adoption of the Electronic Communications Convention takes place. It stresses that, while the Convention is often used as a source of inspiration for domestic law reform, in order for it to achieve all its intended goals, its formal adoption as a treaty is necessary. The final message is therefore a call upon all states to consider the adoption of that Convention in order to support the broader use of electronic means, especially in the light of the implications for economic development and the promotion of paperless trade.

Keywords: Electronic communications, electronic contracting, digital signatures, legal harmonisation, convention adoption patterns

INTRODUCTION

The United Nations Commission on International Trade Law (UNCITRAL) is the core legal body in the United Nations system for the harmonisation and modernisation of international trade law. That mandate is carried out, inter alia, by preparing uniform law texts and promoting their uniform interpretation. Whereas UNCITRAL often operates by harmonising existing laws, it increasingly deals with issues that have not yet found adequate legal treatment, as has been the case with the law of electronic commerce.

In fact, UNCITRAL already started work in that field in the 1980s, when very few laws on the topic existed. The work of UNCITRAL led to the adoption of two UNCITRAL texts: the UNCITRAL Model Law on Electronic Commerce ('MLEC' – United Nations 1999a – more than 65 states have adopted this instrument) and the UNCITRAL Model Law on Electronic Signatures ('MLES' – United Nations 2002 – more than 30 states have adopted this instrument), both of them significantly successful. These model laws are commonly considered to be global legislative standards in their field, and the principles underpinning them constitute the pillars of global electronic commerce law.[1]

However, these model laws also have some intrinsic limitations arising from their 'soft law' nature. For instance, their provisions may be varied to varying extents when enacted domestically. Such variations inevitably affect uniformity and, consequently, legal predictability, especially in the case of cross-border transactions. Moreover, the MLEC and the MLES were prepared at a time when certain technological models, such as electronic data interchange (EDI), were more prevalent than they are today and many others had yet to appear. Likewise, new business models and practices appear constantly. The desirability of taking stock of the experience gained with the MLEC and the MLES as well as of incorporating provisions catering for recent commercial practices and technologies is therefore evident. Last but not least, formal requirements contained in treaties may pose special challenges to the legal recognition of the use of electronic communications.

Domestic legislation on electronic transactions, even if based on a uniform model law, may not suffice in addressing those cases which require a solution at that same treaty level.

On the basis of these considerations, UNCITRAL decided to prepare the first treaty specifically devoted to electronic commerce law. This decision led to the adoption of the United Nations Convention on the Use of Electronic Communications in International Contracts by the United Nations General Assembly on 23 November 2005 ('ECC' – United Nations nd). The ECC was adopted by General Assembly resolution 60/21 of 9 December 2005 (United Nations 2005). A bibliography of UNCITRAL texts relating to electronic commerce, including the ECC, is regularly compiled by the UNCITRAL Secretariat and is available on the UNCITRAL website (UNCITRAL 2016a; see in particular Boss & Kilian 2008; Hettenbach 2008; Chong & Chao 2006; Eiselen 2007; Gabriel 2006).

The most influential texts in the preparation of the ECC have been, on the one hand, the United Nations Convention on Contracts for the International Sale of Goods, 1980 ('CISG' – United Nations 1988a) with respect to the scope of application and certain final clauses and, on the other hand, the MLEC and the MLES with respect to electronic transactions, including electronic signatures, and electronic contracting. Hence, judicial precedents that apply the CISG, MLEC and MLES may be useful also to illustrate the operation of the corresponding provisions of the ECC.

Given the prominence of the topic in global trade, the ECC immediately attracted broad interest, support and praise for its content. It promotes cross-border electronic commerce by fulfilling four main functions:

- facilitating the use of electronic means in connection with the application of treaties concluded before the use of electronic communications became common;
- reinforcing the level of uniformity in the enactment, interpretation and application of the MLEC and the MLES;
- updating and completing certain provisions of the MLEC and of the MLES, and
- providing modern and uniform core electronic commerce legislation to countries that do not have or have only incomplete law in this area.

Therefore, while the ECC is a piece of 'hard law', having the nature of a treaty, it may also operate as a 'soft law' instrument in a manner akin to a model law.

A state adopting the ECC may decide to align the provisions of its national law to those of the ECC. Some states, such as Australia and Singapore, have indeed decided to amend national legislation while adopting the ECC; however, the Canadian uniform legislation implementing the ECC takes a different approach (Uniform Electronic Communications Convention Act – Uniform Law Conference of Canada, Civil Law Section, 2011). For Canada, this legislative choice leads to the application of the same rules for national and international transactions, therefore avoiding

both potential complications arising from a dual electronic commerce regime and the need to ascertain the domestic or international nature of transactions. One additional benefit arising from this choice is the achievement of greater legislative uniformity at the domestic level, too.

SCOPE OF APPLICATION OF THE ECC

Article 1 of the ECC defines its scope of application: the ECC 'applies to the use of electronic communications in connection with the formation or performance of a contract between parties whose places of business are in different States'. This article is inspired by art 1 of the CISG, and in the CISG the international nature of the electronic communication is determined by the location of the place of business of the parties, as determined also in the light of the specific rules contained in art 6 of the CISG. However, the ECC, unlike art 1(1)(*a*) of the CISG, does not require that all involved parties have their place of business in contracting states. Therefore, the ECC applies if the law applicable to the electronic communications (as determined in accordance with the rules of private international law or, if appropriate, by the *lex fori*) is the law of a state party to the ECC, or if the parties have validly chosen the law of a state party to the ECC as applicable law, or have chosen the ECC itself where the choice of non-state law is allowed. An additional option is the incorporation of the substantive provisions of the ECC in a contract by virtue of the parties' agreement. In practice, the Convention may be applied as a stand-alone treaty in connection with a communication or contract or in conjunction with another treaty (see below, sub art 20 of the ECC). In the former case, the law applicable to the communication or contract and, in the latter case, the 'electrified' treaty regulates the substance of the matter in dispute.

The building blocks of the scope of application of the ECC are the definitions of 'communication' and 'electronic'. 'Communication' is defined in art 4(*a*) of the ECC as

> 'any statement, declaration, demand, notice or request, including an offer and the acceptance of an offer, that the parties are required to make or choose to make in connection with the formation or performance of a contract'.

This definition aims at including both contractual and pre-contractual exchanges. Moreover, the whole interaction does not need to be in electronic form, as only some parts of it may be dematerialised. For instance, a dematerialised commercial document could be issued in a broader mixed-media contractual framework; moreover, that commercial document could include an arbitral clause and therefore refer to law other than the substantive law of that document.

The definition of 'electronic' refers to the definition of 'data message', which is contained in art 4(*c*). It builds on the same definition contained in the MLEC and

the MLES. 'Data message' connects the legal definition of 'electronic communication' to the vast range of available technologies, therefore ensuring technological neutrality.

The ECC applies to all communications exchanged in relation to the formation or performance of a contract by using all those media that are not written or oral (written and oral communications acquire an electronic nature when recorded via an electronic medium). Some parts of that vast scope are, however, carved out by the exceptions contained in art 2 of the ECC. This article refers to contracts with consumers, often excluded from the application of UNCITRAL texts and defined in the terms already used in art 2(*a*) of the CISG; to areas where a high level of legal uniformity has already been achieved contractually (eg international payment systems) or otherwise (eg treaties relating to securities held with an intermediary), along the lines of art 4 of the United Nations Convention on the Assignment of Receivables in International Trade, 2001 (UNCITRAL, 2004a); and to electronic transferable records that entitle the holder to the delivery of goods or the payment of a sum as evidenced in the record. The reason for the latter exclusion is that comprehensive uniform legal standards for electronic transferable records are being developed by UNCITRAL Working Group IV (Electronic Commerce) and therefore were not ready at the time of the adoption of the ECC.

Two other elements may significantly vary the scope of application of the ECC:

- The first is the general principle of party autonomy which underpins all commercial law and is embodied in art 3 of the ECC, with wording found in several UNCITRAL treaties and model laws. It is highly desirable that a practice of default opting out of the ECC will not develop, as this practice has proven to be highly detrimental with respect to the CISG.
- The second is the result of states' declarations.

According to art 19(1)(*a*) of the ECC, a state may lodge a declaration to the effect of limiting the application of the ECC to cases where the parties involved in the transaction have their place of business in contracting states, under a mechanism similar to that adopted in art 1(1)(*a*) of the CISG. Moreover, a state may lodge a declaration under art 19(1)(*b*), the effect of which is to limit the application of the ECC to cases when parties so choose ('opt in'). This solution, originally adopted in the Convention relating to a Uniform Law on the Formation of Contracts for the International Sale of Goods, 1964 ('ULF' – United Nations 1977a) and in the Convention relating to a Uniform Law on the International Sale of Goods, 1964 ('ULIS' – United Nations 1977b), may be useful, for instance, in jurisdictions that would prefer to introduce new legislation gradually. However, opting in requires a certain level of expertise when drafting contracts; that expertise might be lacking in small and medium-sized enterprises, which are less likely to have access to qualified legal counsel. Finally, art 19(2) gives states the option to exclude certain matters from the scope of applica-

tion of the ECC. These exceptions could be similar to those made in corresponding domestic legislation, as is the case with the declaration lodged by Singapore upon ratification of the Convention.

An interesting related matter concerns the possibility of expanding the scope of application of the ECC with respect to non-commercial electronic transactions, that is, business-to-consumer and business-to-government exchanges. In particular, the issue has been raised with respect to the recognition and enforcement of non-commercial arbitral awards (as is the case for online dispute-resolution procedures involving consumers) and with respect to enabling mutual legal recognition of cross-border single-window facilities for facilitating paperless trade. Different legal solutions may be available to achieve the intended goal: they include lodging a declaration according to arts 20 and 22 of the ECC and relying on the expansive effect of the 'electrified' accompanying treaty, for example in the case of the Convention on the Recognition and Enforcement of Foreign Arbitral Awards, 1958 ('New York Convention' – United Nations 1959), its applicability outside the purely commercial context.

With respect to the relationship between the ECC and regional legislation with similar scope, the general rule is that regional law shall prevail over the ECC. This rule is set out in art 17 of the ECC, which aims also to clarify the distribution of legislative power between regional economic integration organisations and their member states. Hence, regional economic integration organisations and their member states should deposit a declaration on their respective legislative competences with the depositary of the ECC. Such declaration enables further clarification of the effective reach of the ECC, and may be useful in overcoming the current impasse that prevents European Union member states from becoming a party to the ECC.

INTERACTION WITH OTHER INTERNATIONAL TRADE-LAW TREATIES

One major goal of the ECC is the removal of obstacles to international trade related to form requirements, such as references to paper-based notions such as 'writing' and 'original', set forth in treaties concluded before the common use of electronic means. Some of those treaties have gained broad participation. It is therefore useful to clarify that those form requirements may be satisfied through the use of functionally equivalent electronic means. The prominent position of treaties in regulating the sources of the law requires that such equivalence be established at the treaty level. Two approaches are possible to achieve this objective.

The first approach requires the formal amendment of the treaty, typically through a protocol, and the subsequent formal adoption of the amended text. However, the amending procedure would have to be repeated for each treaty and would therefore necessitate significant legislative work. Moreover, completing the procedures to ena-

ble all the state parties to the unamended treaty to participate in the amended version usually takes a long time; in the meantime, the dual legal regime applying the treaty could lead to uncertainty and disparity of treatment. Last but not least, the decision to amend a treaty in order to enable the use of electronic communications might be construed as denying the parties a liberal interpretation in terms of the original language (UNCITRAL 2001: para 68). A liberal interpretation of form requirements is not unusual, particularly in common-law jurisdictions.

The second approach aims at establishing general rules of functional equivalence for paper-based requirements such as 'writing', 'signature' and 'original'. This approach does not demand the adoption of an amendment to each treaty but rather the adoption of one text complementing all other relevant international instruments with respect to electronic communications. This is the solution embraced by the ECC, following the examples set in the MLEC and the MLES for functional equivalence at the domestic level. Two examples may clarify how the ECC operates.

The New York Convention is the most widely adopted international trade-law treaty, being in force currently in 156 states; it establishes uniform requirements for the recognition of foreign arbitral agreements and awards. Article II of the Convention mandates recognition by state parties of arbitral agreements in written form, and its para 2 specifies that 'the term "agreement in writing" shall include an arbitral clause in a contract or an arbitration agreement, signed by the parties or contained in an exchange of letters or telegrams'. Some linguistic discrepancies may further complicate the matter. For example, the use of the term 'include' in the English version of art II(2) of the Convention has been interpreted as indicating that the provision did not exhaustively define the requirements of an arbitration agreement but allowed more liberal ways of meeting the form requirement. The text of other language versions, however, indicates that the provision exhaustively identifies the requirements necessary for a valid arbitration agreement.

Moreover, art IV of the Convention requires that, in order to obtain the recognition and enforcement of an award, the applicant shall, at the time of the application, supply, among other documents, the original agreement referred to in art II or a duly certified copy of it. Article IV of the Convention refers also to the 'original or duly certified copy […] of the arbitral award'. The possibility of extending the application of the ECC to arbitral awards may depend also on the qualification of such awards as contractual agreements under applicable law (UNCITRAL 2004b: para 11). Arbitral agreements in electronic form are increasingly common in business practice, given the progressive dematerialisation of commercial documents.

If, therefore, recognition and enforcement of an arbitral award under the New York Convention is sought and the corresponding arbitral agreement was concluded electronically, it is necessary to ensure that the law will recognise the equivalence between the electronic and written forms. This may be possible under domestic law; however, the ECC clarifies with the highest level of certainty that the use of

electronic means indeed satisfies the written form requirement. The recommendation regarding the interpretation of art II, para 2, and art VII, para 1, of the Convention (UNCITRAL 2006) may also be relevant. The legal effect of such a declaration under international law is, however, limited to persuasive value or, at best, evidence of growing international consensus.

Another example of form requirement is provided by the CISG (on the relationship between the CISG and ECC see Butler 2013; Eiselen 2008). The CISG, adopted by 85 states and also widely regarded as a global standard, embraces freedom of form for the contract of sale of goods, except when the contracting state lodges a declaration under arts 11, 12 and 96 of the CISG requiring the contract to be in written form, or the parties to the contract for sale of goods agree to using only written communications without specifically including the use of electronic communications. The 'written form' declaration is a provision that parties to the contract may not vary.

Since this is a formal requirement derogating from the general liberal regime of the CISG, it is doubtful whether equivalence between electronic and written form could be achieved through the application of domestic law. The application of the ECC removes any doubt in this respect by establishing functional equivalence between written and electronic form.

The mechanism set forth in the ECC for interaction with other treaties offers a range of possibilities. First, art 20 of the ECC lists several treaties prepared by UNCITRAL as treaties with respect to which functional equivalence has been established. However, two treaties prepared by UNCITRAL are excluded from the list in art 20: the United Nations Convention on the Carriage of Goods by Sea, 1978 (the 'Hamburg Rules' – United Nations 1999b) and the United Nations Convention on International Bills of Exchange and International Promissory Notes, 1988 (United Nations 1988b). The reason for the exclusion is that these two treaties contain provisions on negotiable documents, which are excluded from the scope of the ECC.

The United Nations Convention on Contracts for the International Carriage of Goods Wholly or Partly by Sea, 2008 (the 'Rotterdam Rules' – UNCITRAL 2009b), which also contains provisions on electronic transferable records, is not explicitly excluded because it was concluded after the adoption of the ECC. Nevertheless, the Rotterdam Rules and the ECC might interact, for instance, with respect to the satisfaction of signature requirements, which are explicitly set out in the Rotterdam Rules, but without addressing their cross-border recognition. This example illustrates how the ECC may be relevant also to treaties dealing with electronic transferable records, though that relevance is limited to issues not related to such records. If UNCITRAL Working Group IV (electronic commerce) successfully finalises its current work on electronic transferable records, it will be possible to consider the desirability and feasibility of preparing an international agreement on electronic transferable records, which might take the form of a protocol amending the ECC.

Article 20(2) indicates that the ECC will apply to all other commercial-law treaties containing form requirements, unless a state declares itself not to be bound by this provision. If the latter declaration is lodged, the declaring state may identify certain treaties to which the ECC will apply, under art 20(3). Article 20(4) provides for the possibility of excluding a specific treaty from the application of the ECC. In other words, according to art 20(3), a state generally opts out of an interaction between the ECC and other treaties, and selectively opts in, whereas, according to art 20(4), a state generally opts in and selectively opts out.

Finally, it should be noted that, even if a state were to decide to exclude all interaction between the ECC and other treaties, the ECC would maintain fundamental relevance with respect to establishing the legal regime of cross-border electronic communications exchanged for commercial purposes.

MAIN SUBSTANTIVE PROVISIONS OF THE ECC

Article 5 of the ECC sets forth interpretation principles by using well-known language used, for instance, in art 7. Significant case law therefore exists on the point.

Article 5(1) imposes on judges a duty of uniform interpretation in the interpretation and application of the ECC common to several other UNCITRAL texts. However, a difference might exist: texts that aim at harmonising existing legal traditions, such as the CISG, have to deal with the 'homeward trend' (Ferrari 2009) due to the presence of entrenched domestic notions. In the case of electronic communications, a domestic legislative standard may not exist or may not be well established: hence, the homeward trend may be less prominent. It is nevertheless important to stress the autonomous nature of the ECC and to promote its uniform interpretation as well as that of the national enactments of uniform model laws complementing the ECC at the national level.

Article 5(2) refers to the general principles on which the ECC is based as those to be used to settle matters governed by the ECC but not specifically dealt with in it. Some of those general principles might be the same as those identified with respect to art 7 of the CISG (eg good faith and *favor contractus*). Additional relevant principles may be found in UNCITRAL texts on electronic communications, namely the MLEC and the MLES.

Article 6 of the ECC concerns the location of the parties. The notion of 'closest relationship' in art 6(2) is inspired by art 10 of the CISG. However, a specific rule was introduced in art 6(1) to assist in determining the physical location of a party. In fact, one feature of the use of electronic means is the dematerialisation of the physical location; hence, each party has to self-assert its location. Article 6(1) clarifies that self-assertion of the place of business may be rebutted.

Moreover, art 6(4) specifies that the location of equipment and of supporting technology or the place from where an information system is accessed is not neces-

sarily relevant to the determination of a party's place of business. The rule is particularly useful, given that the use of cloud technology services may greatly hinder the determination of where certain elements of the information system are located at the time of commercial interaction. Article 6(5) introduces a similar rule with respect to the use of country-specific domain names or email addresses, as mobility has made access to electronic communications so ubiquitous that those listed elements may not be meaningful in the determination of a party's place of business.

Article 7 of the ECC aims at ensuring that the information requirements set forth in other texts are not affected by the application of the ECC. The texts setting forth those requirements may be national or international, of mandatory application or voluntarily adopted.

Article 8 of the ECC establishes at the international level the principle of non-discrimination of electronic communications first formulated in art 5 of the MLEC. Electronic information merely incorporated by reference (eg linked or attached) may also not be discriminated for the fact alone of its incorporation by reference. This rule is not explicit in art 8, but can be inferred from the general principles of uniform electronic communications law as restated in art 5*bis* of the MLEC. The principle of non-discrimination has further implications. For instance, it prevents the imposition of certain requirements in connection with the use of electronic communications when those requirements do not exist with respect to equivalent paper-based transactions.

Article 8(2) clarifies that the use of electronic communications is optional, but that consent to that use may be implicit. Initiating an electronic exchange, or even just sharing an electronic address, might suffice to convey implicit consent. In both cases, this might also amount to an implicit designation of electronic address that is relevant under art 10 of the ECC.

Article 9 of the ECC is a core provision that establishes the functional equivalence between electronic and paper-based communications with respect to the key notions of 'writing', 'signature' and 'original'. It should be noted that those equivalents are meant to operate with respect to the cross-border use of electronic communications, whereas functional equivalence for domestic transactions is set out in national law. The ECC ensures that possible variations in the implementation of functional equivalence at the domestic level do not prevent mutual legal recognition of electronic transactions at the international level.

Article 9(1) clarifies that form requirements are set out in other law or in contractual agreements and that the ECC does not aim to introduce new form requirements.

Article 9(2) establishes the requirements for the functional equivalence of the paper-based notion of 'written form' in the same manner as art 6(1) of the MLEC: as the function of writing is to provide future evidence of the information, that function is achieved if the information contained in the electronic communication is available

for future reference. Parties need to pay special attention to avoiding a lack of accessibility due to technological obsolescence.

Article 9(3) deals with the functional equivalent of handwritten signatures. An electronic signature will satisfy a form requirement for handwritten signature when

> ‘(*a*) A method is used to identify the party and to indicate that party’s intention in respect of the information contained in the electronic communication’;
>
> and
>
> ‘(*b*) The method used is either: (i) As reliable as appropriate for the purpose for which the electronic communication was generated or communicated, in the light of all the cicumstances, including any relevant agreement; or (ii) Proven in fact to have fulfilled the functions described in subparagraph (*a*) above, by itself or together with further evidence.’

Article 9(3) innovates significantly on art 7 of the MLEC and art 6(1) of the MLES. By not repeating the ‘two-tier’ approach contained in art 6(3) of the MLES, art 9(3) promotes technology neutrality in its most rigorous formulation. Under the ‘two-tier’ approach, any electronic signature may have legal recognition in the light of the circumstances, but some electronic signatures, meeting stricter requirements expressed in a technology-neutral manner, may benefit from presumptions regarding their origin, integrity, etc. Moreover, the principle of substantive equivalence in the cross-border recognition of electronic signatures contained in art 12 of the MLES is fully implemented in art 9(3). This principle indicates that a foreign electronic signature may not be discriminated against on the basis of its origin but should be evaluated against the same reliability requirements used to assess an electronic signature created in the jurisdiction where it must be recognised (UNCITRAL 2009a: 158–161).

Furthermore, the notion of ‘person’s approval’ contained in art 7 of the MLEC and art 6(1) of the MLES was substituted in art 9(3) with that of ‘party’s intention’ to better capture the various functions associated with signatures. In fact, paper-based signatures do not always express approval of the signed document but may satisfy other functions such as, for instance, knowledge of content, or witnessing. The actual content of the intention associated with the electronic signature has to be ascertained on a case-by-case basis in the light of the terms in which the intention is expressed and of all other relevant circumstances. In that respect, the ECC requires that the method used clearly indicate the intention of the party, both in terms of expression of the intention itself (along the lines of a statement such as: ‘I sign in order to express this intention.’ and of consent to embrace that intention (that is to say, signifying that ‘by performing this action, I am aware I am signing.’) (Smedinghoff 2008: 153). Moreover, since the definition in art 9(3)(*a*) focuses on the attributes of a method (as opposed to the notion of data), it broadens the range of processes and technologies available (Smedinghoff 2008: 148–151; Chong & Chao 2006: 165–166). This novel approach could be particularly useful when using technologies that blend electronic and non-electronic means.

A safety clause was introduced in art 9(3)(*b*)(ii) to ensure that whenever it is possible to identify the signatory of an electronic communication and to ascertain its intention with respect to the signed communication, that signatory may not repudiate the signature on the basis of the signature's method or nature. Without this provision, the reliability test could lead to the undesirable result of invalidating an otherwise valid communication on the grounds alone that the signature method was not as reliable as appropriate, thus possibly exempting the signatory from its obligations. This test is referred to as 'reliability in practice', while that contained in art 9(3)(*b*)(i) is referred to as 'reliability in theory' (Chong & Chao 2006: 130 note 2). For instance, in *SM Integrated Transware Pte Ltd v Schenker Singapore (Pte) Ltd* (Singapore[1]), one party tried to invalidate a contract concluded by exchange of emails after a negotiation conducted by email, telephone and in person, on the basis that emails would not meet the written form requirement demanded by relevant Singaporean legislation for the contract (lease of land), including the mandated signature of the person against whom the contract is to be enforced. The emails were not signed and did not contain the name of the author typed in the message body. The judge deemed that the signature requirement had been satisfied by the presence of the header indicating the author of the emails (field '[From: sender's name]'), an element sufficient to identify the author of the message together with other factors.

Article 9(3) needs to be appreciated in the light of the experience with art 12 of the MLES on cross-border recognition of electronic signatures. Article 12 is a provision that has seldom been adopted in domestic enactments as a more rigid approach on the recognition of foreign electronic signatures has prevailed. Therefore, domestic laws often require a formal act of recognition of a foreign electronic signature by virtue of a general reciprocity agreement between jurisdictions, of a cross-certification agreement between a foreign certification service provider and a provider accredited in the country where the signature needs to be recognised, or a combination of the two (see, for instance, see Colombia, Ley 527 de 1999, art 43; Oman, Electronic Transactions Law (2008), art 42(3); see also Regulation (EU) No 910/2014 of the European Parliament and of the Council on Electronic Identification and Trust Services for Electronic Transactions in the Internal Market (eIDAS), art 14). In practice, those mechanisms have proved to be cumbersome and find limited practical application. On the contrary, based on the controlling principles of technological neutrality and functional equivalence, art 9(3) adopts a versatile version of the principle of substantive equivalence based on a number of elements, including legal, technological and commercial factors, as well as on contractual agreements of the parties. Therefore, the ECC facilitates both *ex ante* mutual recognition of electronic signatures and *ex post* validation in case of dispute (for a discussion of the relevant factors, see UNCITRAL 2007: para 162).

1 Singapore High Court Suit No 594 of 2003, [2005] SGHC 58, CLOUT case 661.

The importance of art 9(3) for the future development of cross-border electronic commerce cannot be overstated. In this respect, it should be noted that recent bilateral and multilateral free trade agreements often contain a clause mandating the cross-border recognition of electronic signatures based on technology-neutral standards (see, for instance, United States–Korea Free Trade Agreement (KORUS FTA), art 15.4; United States–Colombia Trade Promotion Agreement, art 15.6). Such provisions are related to the favouring of electronic commerce and, in particular, aim at promoting paperless trade. Their effective implementation at a multilateral level may take place only through the mechanism set forth in art 9(3).

Article 9(4) and (5) contains the requirements for establishing the functional equivalent of the paper-based notion of 'original'. Those provisions, which are inspired by art 8(1) and (3) of the MLEC, are also critical to ensuring uniformity across borders and, at the same time, flexibility in the determination of those requirements. In fact, similarly to what could happen with electronic signatures, setting forth too rigid requirements for the functional equivalent of 'original', including demanding the use of certain technologies either implicitly or explicitly, would pose an insurmountable barrier to the cross-border recognition of electronic communications.

The remaining substantive provisions of the ECC deal with electronic contracting. Article 10 deals with time and place of dispatch and receipt of electronic communications. Building on art 15 of the MLEC, it takes into account subsequent technological innovation and business practices.

According to art 10(1), dispatch occurs when the electronic communication leaves the information system under the control of the originator, whereas according to art 15 of the MLEC, the data message is dispatched when it enters a system outside the control of the originator. The notion of 'data message' in the MLEC corresponds functionally to that of 'electronic communication' in the ECC. The rule has been revised in order to avoid consequences for the originator when the message may not enter the information system for reasons outside its control; these could include a firewall or a spam filter, the addressee's or intermediary's system being down, etc. For an interesting case on this point, see *Jafta v Ezemvelo KZN Wildlife* (South Africa[2]).

Article 10(2) distinguishes between a designated and a non-designated electronic address for determining the time of receipt of an electronic communication. That approach had already been adopted in art 15(2) of the MLEC; however, art 10(2) contains a new element with respect to the time of receipt of electronic communications sent to a non-designated electronic address: in such an instance, the communication is deemed to have been received when it is capable of being retrieved and the recipient is aware that the communication was sent (for a judicial application, see *Services Financiers Paccar ltée c Kingsway, Compagnie d'Assurances Gener-*

2 [2008] 10 BLLR 954 (LC).

als (Canada[3]). This rule follows more closely the rule prevailing in the paper world. On the other hand, art 15(2) of the MLEC requires actual retrieval by the addressee, which could allow the addressee to deliberately delay or avoid delivery of an electronic message by not accessing it. The same rule is used in the Unidroit Principles of International Commercial Contracts, art 1.10.3 (Unidroit 2010). The commentary to that article makes explicit reference to art 10(2) of the ECC.

Article 10(3) determines the place of dispatch and receipt of electronic communications similarly to art 15(4) of the MLEC. Article 10(4), complemented by art 6, provides additional rules on the determination of the place of receipt.

Article 11 of the ECC states that a contractual proposal contained in an electronic communication and not addressed to specific parties, but that is generally accessible to parties making use of information systems, is considered an invitation to make offers and not a binding offer, unless the intention to be bound in case of acceptance is clearly indicated in that proposal. This rule did not exist in previous UNCITRAL texts on electronic commerce and is inspired by art 14(2) of the CISG. It finds its rationale in the fact that electronic communications may be exchanged in great quantity instantaneously. Therefore, in a short period of time merchants could receive very high numbers of binding acceptances of their on-line offers. Such a possibility would require large physical stocks of traded goods, leading to inefficient warehouse management or costly cover purchases and, eventually, higher prices for final buyers; hence the desirability of this provision.

Article 12 of the ECC specifies that a contract concluded with the use of automated message systems is valid and enforceable despite the fact that no natural person reviewed or intervened in the actions carried out by the automated message system. This clarification of the application of the principle of non-discrimination with respect to the use of automated electronic systems may be particularly useful in jurisdictions with limited familiarity with such systems (see, for instance, the discussion of the use of electronic automated systems vis-à-vis Islamic contract law in Elsan and Subaty 2009).

Article 13 of the ECC indicates that the ECC does not affect information duties, which are often contained in national law. It is particularly relevant when the application of the ECC is extended, by declaration or agreement of the parties, to transactions with consumers. The preamble to the MLEC contains a remark similar in scope which indicates that '[t]his Law does not override any rule of law intended for the protection of consumers'.

Different considerations pertain to the fact that those information duties may actually hinder cross-border electronic commerce and violate the principle of non-discrimination of electronic commerce, if required only in connection with the use

3 31 May 2012; 2012 QCCA 1030 (CanLII); CLOUT Case 1195. Available at <http://canlii.ca/t/frm9m>.

of electronic communications. That latter case is not uncommon with respect to consumers' protection.

Article 14 of the ECC contains a rule aimed at protecting natural persons from the possibility of being contractually bound in case of input error. The provision did not exist in previous UNCITRAL texts and represents an exception to the principle that UNCITRAL texts on electronic commerce do not interfere with substantive law. The rationale for that exception is related to the peculiar features of the interaction between human beings and machines. However, the scope of art 14 is limited, since the input error may be withdrawn only if a number of rather stringent conditions are met: the input error is made by a natural person dealing with an automated message system; the automated message system does not provide an opportunity to correct the error; the party in error notifies as soon as possible the other party to the error; and the party in error has not received any benefit from the transaction. Therefore, if the automated message system provides the human being with the possibility of reviewing and confirming the information entered, as is often the case in current commercial applications, art 14 will not apply. Moreover, in case of instant delivery of the good or service (for instance, digitally), it might be difficult, if not impossible, for the party invoking the error to prove that it has not benefitted from the transaction.

To sum up, art 14 might find limited practical application, given its requirements, but this may have a significant positive influence in promoting the adoption of mechanisms for the review of electronic transactions by physical persons, therefore reducing input errors.

PATTERNS IN ADOPTION OF THE ECC

The MLEC and the MLES represent a remarkable success that paved the way to legal certainty in the use of electronic communications across the globe through a high level of legal harmonisation. States continue to adopt these model laws at a regular pace, in the process benefitting from the ready availability of modern and comprehensive legislation, complemented by academic studies and increasing case law. These are important advantages, especially for developing countries, when drafting and implementing new legislation. In some regions of the world, those UNCITRAL texts are considered *de facto* common legislative standards (for South-East Asia, see Connelly 2008; UNCTAD 2013; for Central and Latin America, see UNCTAD 2009 and 2010). In other cases, the MLEC and the MLES have been used together with substantive provisions of the ECC to draft regional texts. This was the case in the Caribbean, with the ITU HIPCAR project, and in eastern and southern Africa, with the COMESA Model Law on Electronic Transactions and Guide to Enactment 2010, and in the case of the East African Community Legal Framework for Cyberlaws.

The increasing importance of the cross-border dimension of electronic commerce recommends the adoption of the ECC in conjunction with the enactment of the MLEC and the MLES. Not doing so deprives the enabling legislative framework for electronic commerce of a critical element. Moreover, the adoption of the ECC improves the efficiency of those jurisdictions where the MLEC and the MLES have already been adopted by introducing new provisions and clarifying the operation of others in the light of recent business practices and technological developments.

As the ECC has concluded the first decade of its existence, it is possible to draw a first balance sheet of its adoption and application. The formal number of states parties is not particularly high: seven states have formally adopted it (the Dominican Republic, Honduras, Montenegro, the Republic of the Congo, the Russian Federation, Singapore and Sri Lanka), though others are at an advanced stage in the adoption procedures (eg Australia).

This is, at least in part, due to certain general issues affecting the adoption of uniform commercial-law treaties. For instance, parliamentary time is increasingly scarce, and electronic communications does not enjoy visibility with the general public and is therefore unlikely to receive political attention. Moreover, commercial-law reform is usually not a priority in developing countries due to poor local legal capacity, scarce interest among donors and limited awareness of associated benefits.

Different considerations apply to the current pattern of adoption of uniform laws in developed countries. Traditionally, the leading jurisdictions in this field were located in Western and Central Europe and in North America. However, for different reasons, those jurisdictions have renounced their leadership. On the one hand, European states are fully immersed in the process of regional economic integration, which does not always focus on seamless interaction with global uniform texts; on the other hand, in the past few decades the United States has been cautious in committing to multilateral engagements, including in the commercial-law field. As a result, the trailer effect provided by the adoption of uniform texts by those jurisdictions has been lost. A most welcome recent development was the transmission on 10 February 2016 of the ECC to the US Senate by the US President for advice and consent to accession (US Government Publishing Office 2016).

In the case of the ECC, this trend has led to a peculiar situation. Indeed, states recognise the importance of the provisions of the ECC, but adopt them only domestically. This has happened in at least 15 jurisdictions, from Guatemala (Decree No 47-2008 of 19 August 2008; the decree is already in full compliance with the provisions of the ECC) to Vietnam (Decree No 57/2006/ND-CP of 9 June 2006). However, Vietnam latterly seems interested in formally adopting the ECC (Vietnam News Agency 2014). Even where the substantive provisions of the ECC are transposed in regional legislation, a call for formal treaty adoption is not simultaneously made.

With respect to the relationship between the ECC and bilateral and regional free trade agreements, it should be noted that few trade agreements are concluded

within the framework of a regional economic integration process that also provides enabling rules for commercial exchanges, as in the case of the European Union. However, missing commonality of commercial law, traders may face practical problems that prevent them from fully reaping the opportunities offered by those trade agreements. Hence, uniform texts may contribute to consolidating regional trade patterns by complementing free trade agreements with modern and efficient commercial legislation.

Moreover, as already mentioned, a number of free trade agreements contain rules on the promotion of the use of electronic communications. Those rules sometimes specifically demand that national legislation based on UNCITRAL texts be maintained in order to ensure legislative uniformity (see, for instance, Agreement establishing the ASEAN–Australia–New Zealand Free Trade Area (AANZFTA), 2009, Chapter 10, art 4). More specific provisions on the cross-border recognition of electronic signatures based on technology neutrality are also common (AANZFTA, Chapter 10, art 5). The only way to implement them is through the adoption of the ECC and the operation of its art 9(3).

The relationship between paperless trade facilitation and the adoption of the ECC is made evident in the Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific, 2016, prepared and adopted by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) (ESCAP 2016a; ESCAP 2016b). This agreement aims at establishing a legal framework for the regional harmonisation of legal and technical requirements relating to paperless trade facilitation. It also foresees an implementation mechanism to facilitate the delivery of technical assistance to states. The agreement takes stock of the fact that UNCITRAL texts on electronic commerce are the only global legal standards available for building the legal framework necessary to support paperless trade, and that they have already been widely adopted in Asia and the Pacific. It therefore stresses the importance of establishing the necessary enabling legal framework as a priority matter, and the desirability of doing so by adopting the instrument that guarantees the highest level of uniformity and legal predictability, for example the ECC.

It should further be noted that existing contractual frameworks supporting the operations of private trade facilitation service-providers may not suffice to ensure the enforceability of contractual agreements in electronic form in case of dispute. This would be the case especially when the contracts were concluded with parties that had limited or no prior contact with the service-providers. The matter may be fully addressed by broad state adoption of the ECC and explicit inclusion of the ECC in the contractual framework.

CONCLUSIONS

The ECC offers a new standard for electronic commerce legislation at the global level. Precedent UNCITRAL texts on electronic commerce have been particularly

successful in providing a blueprint for domestic legislation. The ECC should achieve a similar, if not greater, level of acceptance. In fact, the importance of electronic commerce, both domestically and internationally, to the global economy should encourage states to increase the pace of adoption of the ECC.

One of the limits in the current approach to the study and promotion of the ECC lies in the fact that its relationship with other treaties is not sufficiently explored. The dissemination of more information on the ECC among arbitration specialists seems particularly important. Indeed, an increasing number of jurisdictions are supportive of alternative dispute-resolution mechanisms and committed to providing the most modern enabling legislative environment. However, and despite the increasing use of electronic means to conclude arbitral agreements and in arbitral proceedings, there is as yet no strong demand for the adoption of the ECC from the arbitration community. This is unfortunate, given the clear benefits that the adoption of the ECC would bring, for instance, with respect to the enforcement mechanisms set forth in the New York Convention.

Jurisdictions with more experience in the use of electronic communications and in dealing with related legal issues should lead the way and consider the adoption of the ECC promptly. In many cases, this would continue a meaningful tradition in the early adoption of uniform texts. This would also help to reverse the current pattern that sees only domestic adoption of the substantive provisions of the ECC, thus losing out on the benefits arising from formal treaty adoption.

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Endnote

1. Information on the status of the adoption of MLEC and MLES is available on the UNCITRAL website (UNCITRAL 2016b; UNCITRAL 2016c). That information may be incomplete due to the fact that enacting jurisdictions do not always communicate the adoption of texts to the UNCITRAL Secretariat. Therefore, more jurisdictions than those listed on the website are likely to have adopted the texts.