



**JOINT IDA-AGC REVIEW OF
ELECTRONIC TRANSACTIONS ACT
STAGE I: ELECTRONIC CONTRACTING ISSUES**

(Consultation Paper)

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**EXECUTIVE SUMMARY OF PUBLIC CONSULTATION
ON REVIEW OF ELECTRONIC TRANSACTIONS ACT
STAGE I: ELECTRONIC CONTRACTING ISSUES**

1 The Infocomm Development Authority of Singapore and the Attorney-General's Chambers are conducting a review of the Electronic Transactions Act (ETA) and Electronic Transactions (Certification Authority) Regulations (CA Regulations). For this purpose, a public consultation is being carried out in 3 stages dealing with electronic contracting issues, exclusions from the ETA under section 4 and secure electronic signatures and certification authorities.

2 Stage I of the Public Consultation concerns possible amendments to the ETA relating to **electronic contracting**. The consultation seeks guidance and feedback for the Singapore delegation on issues currently under consideration at the international level by UNCITRAL, in relation to ongoing work on a draft Convention on Electronic Contracting by the UNCITRAL Working Group on Electronic Commerce. It also seeks public views on the potential impact of the proposed Convention.

3 Work on the UNCITRAL Convention on Electronic Contracting seeks to harmonise national laws as to how international contracts can be entered into electronically. Work on the Convention is in its final stages. If Singapore accedes to such a Convention, it is expected that the ETA will be amended for consistency with the provisions of the Convention.

4 This Consultation Paper on Electronic Contracting Issues highlights the main changes and issues which would arise from adopting the provisions of the draft UNCITRAL Convention on Electronic Contracting as it currently stands. It also discusses some other electronic contracting issues that arise apart from the Convention. Briefly, the Paper focuses on the following issues:

- Party Autonomy: Consent to Accept Electronic Communications and Variation by Agreement
- Recognition of Electronic Signatures
- Formation of Contract: Effectiveness of Electronic Communications and Attribution
- Time and Place of Despatch and Receipt

- Automated Information Systems
- Other Contract Issues e.g. Incorporation by Reference, Provision of Originals, etc.

5 The issues are described in greater detail below:

Party Autonomy: Consent and Variation (Part 2)

Consent to Accept Electronic Communications (para. 2.1)

Whether to adopt a provision (draft UNCITRAL Convention on Electronic Contracting, article 8, paragraph 2) that the electronic transactions legislation should not compel parties to accept contractual offers or acts of acceptance by electronic means in the context of all contractual transactions.

Variation (Section 5 of the ETA) (para. 2.2- 2.5)

Whether to amend or replace section 5 (which provides for variation of Parts II and IV of the ETA by agreement of the parties) in view of overlap with other provisions making specific sections apply subject to agreement otherwise, and the need for mandatory requirements which should not be open to variation by agreement of parties. Also, whether a variation provision would be necessary if there is a consent provision (see para.2.1).

Recognition of Electronic Signatures (Part 3)

Whether provisions on recognition of electronic signatures in the draft UNCITRAL Convention (article 9, paragraph 3) would be consistent with the ETA, especially in relation to function and reliability requirements. (Further issues relating to the definition of electronic signatures and digital signatures will be addressed in Stage III of the consultation on review of the ETA.)

Formation of Contract: Effectiveness of Electronic Communications and Attribution (Part 4)

Formation and Validity of Contracts (para. 4.1)

Whether there should be a provision on when an offer and acceptance in electronic form takes effect.

Invitation to make Offers (para. 4.2)

Whether a proposal to enter a contract made by electronic means to the world at large should be treated as an invitation to make offers, unless the proposal indicates that the person making the proposal intended to be bound in case of acceptance (draft UNCITRAL Convention, article 12).

Effectiveness of Communications between Parties (Section 12 of ETA) (para. 4.3)

Whether references to “declaration, demand, notice or request” should be added to section 12 of the ETA for consistency with the draft UNCITRAL Convention.

Attribution (Section 13 of the ETA) (para. 4.4)

Whether section 13 should be retained or amended in view of complications arising from the advent of the Internet, IT outsourcing and other IT developments. Also whether section 13(2)(b) should apply only if the information system was programmed by a person with authority to program the system on behalf of the originator, and whether “originator” should be defined to exclude an intermediary.

Time and Place of Despatch and Receipt (Section 15 of the ETA) (Part 5)

Whether to replace the rules of despatch and receipt in section 15 by adopting general rules that focus on the control over the electronic message or the capability of retrieving the data message (draft UNCITRAL Convention, article 10). Difficulties in determining whether parties are using the same information system. Whether to define “information system”. (Definition of “automated information system” is considered in Part 6.)

Automated Information Systems (Part 6)

Whether to adopt definition of “automated information system” from article 5(f) of the draft UNCITRAL Convention (para.6.1). Whether to clarify that contracts resulting from the interaction of automated information systems shall not be denied validity or enforceability on the sole ground that no person reviewed each of the individual actions carried out by such systems or the resulting agreement (draft UNCITRAL Convention, article 14) (para. 6.2). Other issues relating to the use of automated information systems e.g. conflicting terms (para.6.3) and attribution (para. 6.4). Whether to adopt a

provision to deal with the legal effects of errors made by a natural person communicating with an automated information system (para. 6.5).

Other Contract Issues (Part 7)

Incorporation By Reference (para. 7.1)

Whether to adopt a provision to clarify the validity of incorporation by reference in electronic communications. (UNCITRAL Model Law on Electronic Commerce, Article 5 *bis*)

Provision of Originals (para. 7.2)

Whether to provide for the requirement for an original to be met by an electronic functional equivalent and the criteria that must be met. (Draft UNCITRAL Convention, article 8).

Other issues (para 7.3)

Issues relating to the application of the Sale of Goods Act (Cap. 393) to software and digitised products, the validity of shrink-wrap and click-wrap agreements, whether the doctrine of privity of contract poses difficulties in allowing the purchaser to seek remedies from the immediate seller for defective software and consumer protection and other issues.

CONSULTATION PAPER

JOINT IDA-AGC REVIEW OF ELECTRONIC TRANSACTIONS ACT STAGE I: ELECTRONIC CONTRACTING ISSUES

PART I INTRODUCTION

- 1.1 This Joint IDA-AGC¹ Consultation Paper focuses on **Electronic Contracting Issues**. It is intended to solicit the views of industry and business, professionals, the public and Government Ministries and agencies, in order to inform the Government in considering possible amendments to the ETA relating to electronic commerce and to provide guidance and feedback to the Singapore delegation on issues currently under consideration at the international level by UNCITRAL².
- 1.2 This Consultation Paper discusses the following issues:
- Party Autonomy: Consent to Accept Electronic Communications and Variation by Agreement.
 - Recognition of Electronic Signatures
 - Formation of Contract: Effectiveness of Electronic Communications and Attribution.
 - Time and Place of Despatch and Receipt
 - Automated Information Systems
 - Other Contract Issues e.g. Incorporation by Reference, Provision of Originals, etc.
- 1.3 With the enactment of the Electronic Transactions Act (Cap.88) in 1998, Singapore became the first country in the world to enact electronic transactions legislation based on the UNCITRAL Model

¹ Infocomm Development Authority of Singapore – Attorney-General’s Chambers.

² UNCITRAL, or the United Nations Commission on International Trade Law, has a charter to “further the progressive harmonization and unification of the law of international trade”. UNCITRAL does its work through six Working Groups. This includes Working Group IV on Electronic Commerce.

Law on Electronic Commerce. Since then, numerous other countries have adopted electronic commerce legislation based on the UNCITRAL model.³

- 1.4 Work is currently being undertaken at the international level by the UNCITRAL Working Group on Electronic Commerce to draft a Convention on Electronic Contracting to harmonise national laws as to how international contracts can be entered electronically.⁴ Given the commitment of the Singapore Government to developing e-commerce and the obvious advantages that e-commerce holds for Singapore, Singapore is following closely UNCITRAL's work in this regard with the intention of adopting into our laws the outcomes of this important initiative.
- 1.5 If Singapore accedes to such a Convention, it is expected that the ETA will be amended for consistency with the provisions of the Convention. Although the Convention concerns international contracts, it is likely that a similar regime will be adopted for domestic contracts since it is generally undesirable to have a duality of regimes for international and domestic contracts. This is particularly so in the context of contracts concluded by electronic means since the actual location of the parties may not be known to or relevant to the parties.
- 1.6 In view of these developments overseas and internationally, the Ministry of Information, Communications and the Arts (MITA), the Infocomm Development Authority of Singapore (IDA) and the Attorney-General's Chambers (AGC) are undertaking a joint review of the Electronic Transactions Act. Stages II and III, which will follow in the coming months, will deal with other issues arising from the review of the Electronic Transactions Act, namely, **Exclusions from the ETA under section 4** and **Secure Electronic Signatures, Certification Authorities and e-Government**, respectively.

³ See Annex B for list of recent legislation on electronic transactions and useful websites.

⁴ For summary of progress made prior to the 42nd session of UNCITRAL Working Group IV from 11-21 Nov 2003 in A/CN.9/WG.IV/WP.103 at www.uncitral.org. All references in this paper to the draft UNCITRAL Convention are to the version contained therein unless otherwise stated. Report of the 42nd session was not publicly available at the time of completion of this paper.

- ❖ Please send your feedback to the Law Reform and Revision Division of the Attorney-General's Chambers, marked "**Re: Electronic Contracting Issues**"
 - via e-mail, at agc_lrrd@agc.gov.sg;
 - by post (a diskette containing a soft copy would be appreciated) to "**Law Reform and Revision Division, Attorney-General's Chambers, 1 Coleman Street, #05-04 The Adelphi, Singapore 179803**"; or
 - via fax, at **6332 4700**

- ❖ The closing date for this consultation is **15 March 2004**.

- ❖ A soft copy of the consultation paper may be downloaded from <http://www.ida.gov.sg/idaweb/pnr/index.jsp> or <http://www.agc.gov.sg> (under Publications).

- ❖ If you need any clarifications, please contact:
 - **Mr Lawrence Tan** via e-mail at lawrence_tan@ida.gov.sg; or
 - **Mrs Joyce Chao** via e-mail at agc_lrrd@agc.gov.sg.

- ❖ The Consultation will be carried out in 3 stages. This Consultation on Electronic Contracting Issues forms the first stage.

PART 2

PARTY AUTONOMY: CONSENT AND VARIATION

2.1 Consent to Accept Electronic Communications

2.1.1 Article 8, paragraph 2, of the draft UNCITRAL Convention on Electronic Contracting contains a general provision that “Nothing in this Convention requires a person to use or accept information in the form of data messages, but a person’s consent to do so may be inferred from the person’s conduct”.

2.1.2 The consent provision reflects the idea that electronic transactions legislation should not compel parties to accept contractual offers or acts of acceptance by electronic means if they do not want to do so and upholds the principle of party autonomy. It also addresses concerns relating to universal access⁵ and other difficulties relating to the receipt⁶ and authentication⁷ of email.

2.1.3 All recent electronic transactions legislation by developed countries have included consent requirements on the use of electronic communications. Some countries have consent provisions applicable to specific sections of their legislation⁸; others have a general consent

⁵ Information may be delivered in a number of ways, including by letter, fax, e-mail or the Web. However, not everyone can send and receive electronic communications, either because they lack access to the necessary facilities or because they do not know how to use or are uncomfortable with the technology. This “digital divide” exists even in technologically advanced countries like the US and Singapore.

⁶ It is the practice of many email providers to terminate free email accounts if they have not been accessed regularly. People change their email accounts frequently or may not access their email accounts regularly. Important email may be inadvertently deleted. It is a common practice for people to delete email *en bloc* without bothering to read them if they find their mail box full of junk mail.

⁷ The use of electronic communications also gives rise to unique problems of authentication. On the recipient’s part, he cannot be sure that an email purporting to be sent by a particular person is indeed so (short of checking by telephone or some other independent means) unless there is an authentication system in place. Authentication systems require proper installation on the recipient’s end to work. This is more feasible in the case of a closed system limited to registered users than on the Internet.

⁸ The **Australian** Commonwealth Electronic Transactions Act only has consent provisions that apply to specific provisions and consent is only required for persons other than a Commonwealth entity (i.e. an authority of the Commonwealth of Australia) e.g. s.9 (writing), s.10 (signature) etc. In the case of public authorities, their particular requirements have to be met. Consent may be inferred from conduct (s.5).

provision applicable to the whole Act⁹; while still others have both.¹⁰ The US¹¹ applies a stricter standard in respect of consumer disclosures required to be provided in writing; consent is only effective in that case if there is a clear and conspicuous statement informing the consumer of his options, his right to withdraw consent, etc.

2.1.4 The consent requirement in the UNCITRAL draft Convention is stated in a manner that preserves the status quo. It does not create any new positive requirement for consent, merely that the Convention does not force any person to use or accept electronic communications. It is left to the applicable law to determine whether consent or agreement is required to use electronic communications in a particular case.

2.1.5 **Although the UNCITRAL Convention applies only to international contracts, since it is undesirable to create a different regime just for international contracts, the consent requirement should apply equally to domestic contracts. Therefore, if Singapore accedes to the UNCITRAL Convention, it is likely the ETA will be amended to include a similar consent provision for domestic as well as international contracts.**

⁹The **Canadian** Uniform Electronic Commerce Act employs a general consent provision applicable to the whole Act: “Nothing in this Act requires a person to use or accept information in electronic form, but a person’s consent to do so can be inferred from the person’s conduct” (s.6(1)). However, the Government’s consent cannot be inferred by its conduct but must be expressed by communication (s.6(2)).

The **New Zealand** Electronic Transactions Act has a general provision applicable to the Part of the Act on Application of Legal Requirements to Electronic Transactions i.e. relating to requirements for writing, signatures, retention and originals: “Nothing in [Part 3 of the Act] requires a person to use, provide, or accept information in an electronic form without that person’s consent” (s.17(1)). Consent may be inferred from conduct (s.17(2)). The default provisions on time and place of despatch and receipt apply except to the extent that the parties agree otherwise (s.9(a)). However, since the NZ Act only applies to statutory requirements, the requirement for consent applies only to statutory matters. In private dealings, parties may assume that electronic communications will be valid unless another party to the deal specifically says they are not. On its application to Government agencies, the *Electronic Transactions Act 2002: Plain English Section by Section Explanation* published by the Ministry of Economic Development states that “making the electronic means to make the application available on the Internet would constitute implied consent”. Further in a case “where there has been an explicit statement [e.g. guidelines in relation to when a Government agency will or will not accept electronic communications], it is most unlikely that consent to use of electronic technology in a manner inconsistent with those guidelines could be inferred from conduct”.

¹⁰ E.g. **Irish** Electronic Transactions Act s.12 (writing requirement), s.13 (signature requirement), etc. General provision in s.24.

¹¹ The **US E-Sign Act** has a broad consent requirement: sec.101(b)(2). It does not apply to a governmental agency except with respect to contracts to which it is a party.

Q1: Should the ETA include a consent provision similar to that in the draft UNCITRAL Convention, article 8, paragraph 2 (see para 2.1.1) in the context of all contractual transactions?

2.2 Variation (Section 5 of the ETA)

2.2.1 Although the ETA does not have a general consent requirement as discussed above,¹² it supports the principle of party autonomy through section 5 (which provides for variation of Parts II and IV of the ETA by agreement of the parties) and specific provisions in other sections making those sections subject to agreement otherwise by the parties.

2.2.2 Section 5 of the ETA provides that, as between parties involved in various enumerated electronic transactions, any provision of Part II (which relates to legal recognition of electronic records, requirements for writing, electronic signatures, and retention of electronic records) or Part IV (which relates to formation and validity of contracts, validity of declaration of intent or other statements, attribution, acknowledgement of receipt and time and place of despatch and receipt) of the Act may be varied by agreement.

2.2.3 It is based closely on the wording of article 4 of the UNCITRAL Model Law on Electronic Commerce. An equivalent provision in the draft Convention on Electronic Contracting was considered by the UNCITRAL Working Group at its 41st session.¹³ On one view, a party's right to exclude the application of the Convention or derogate or vary any of its provisions should be unrestricted. A contrary view was that the Working Group should consider which provisions of the Convention should be mandatory. It was suggested that a better way to preserve mandatory form requirements might be by including appropriate exclusions in article 2 (relating to exclusions from the Convention). However, finalisation of the provision has been deferred pending full consideration by the Working Group of the other operative provisions of the draft Convention.

¹² Paragraph 2.1.

¹³ Article 4 of the draft Convention. Report of Working Group IV (Electronic Commerce) on the work of its 41st session (A/CN.9/528), paragraphs 70-75.

2.2.4 The electronic transactions legislation of many other jurisdictions have adopted similar formulations.¹⁴ In jurisdictions where a general requirement for consent to accept electronic communications has been adopted, they do not have any general variation provision in their legislation. These jurisdictions, however, have provisions for variation in respect of specific provisions and they use the words “except to the extent” or “unless” the parties “otherwise agree”.¹⁵

2.2.5 We will consider in the following paragraphs:

- (a) whether to rationalise the provisions on variation by agreement in sections in Part IV of the ETA that overlap with section 5 (paragraph 2.3);
- (b) whether the application of section 5 to Part II of the ETA should be amended (paragraph 2.4); and
- (c) whether section 5 should be replaced by specific provisions within the relevant sections allowing variation by agreement otherwise by the parties (paragraph 2.5).

2.3 Application of Section 5 to Part IV of ETA

2.3.1 Many of the provisions of Part IV¹⁶ of the ETA expressly provide that they apply “unless otherwise agreed by the parties”.¹⁷ In other provisions it is implicit that the agreement of the parties prevails over the default provisions.¹⁸ These repeated references to “unless otherwise agreed by the parties” are redundant in view of section 5. In fact, they may be a source of confusion rather than clarity vis-à-vis the status of provisions that are not similarly prefixed but which fall within Part IV.

2.3.2 We propose to remove the redundancy between section 5 and the references to the right of parties to vary specific provisions in Part

¹⁴ Australian Commonwealth Electronic Transactions Act section 105, Illinois Electronic Commerce Security Act.

¹⁵ Canadian Uniform Electronic Commerce Act s.29 (Formation and operation of contracts), s.23 (Time and place of sending and receipt of electronic documents); New Zealand Electronic Transactions Act s.9 (Default rules about Dispatch and Receipt of Electronic Communications).

¹⁶ Part IV relates to formation and validity of contracts, validity of declaration of intent or other statements, attribution, acknowledgement of receipt and time and place of despatch and receipt.

¹⁷ E.g. s.11(1) and 15(1) and (2).

¹⁸ E.g. s.14(1) “where .. the originator has requested or has agreed”, s.14(2) “where the originator has not agreed ... that acknowledgment be given in a particular form”.

IV. Since **all** provisions under Part IV ought to be able to be varied by agreement of the contracting parties, section 5 is adequate for this purpose. Alternatively, section 5 may be replaced by specific provisions within the relevant sections allowing variation by agreement otherwise by the parties. (See further discussion in paragraph 2.5.)

2.4 Application of Section 5 to Part II of ETA

2.4.1 Article 4 of the UNCITRAL Model Law on Electronic Commerce limits its application to chapter III of part one¹⁹. The Guide to Enactment²⁰ explains that the provisions contained in chapter II of part one (equivalent to Part II of the ETA) should be regarded as stating the minimum acceptable form requirements and are, for that reason, to be regarded as mandatory, unless expressly stated otherwise.

2.4.2 Unlike the UNCITRAL Model Law, section 5 of the ETA applies to the provisions of Part II²¹ of the ETA. This allows parties to agree not to use electronic records to satisfy a rule of law²² requiring writing,

¹⁹ Equivalent to Part IV of the ETA.

²⁰ Guide to Enactment of UNCITRAL Model Law on Electronic Commerce (1996), paragraphs 44 and 45 of the Guide to Enactment.

“44. The Model Law is ... 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.

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.”

²¹ Part II relates to legal recognition of electronic records, requirement for writing, electronic signatures, and retention of electronic records.

²² As to the phrase “rule of law” in the ETA, the provision is based on the UNCITRAL Model Law and the meaning intended in the Model Law is instructive. The Guide to Enactment of the UNCITRAL Model Law states that the words “the law” are to be understood as encompassing not

signature or retention of records. It also enables parties to agree to additional requirements for the use of electronic records. For example, section 6 of the Civil Law Act (Cap.43) imposes a requirement that certain contracts must be evidenced in writing. This is a mandatory statutory requirement intended to protect certain parties against fraud. The effect of Part II of the ETA is to allow electronic records, e.g. e-mail, to satisfy such a legal requirement for writing. A party may have legitimate reasons for refusing to accept electronic communications for this purpose or insist on additional safeguards in the use of electronic communications and should be free to agree with the other party accordingly.

2.4.3 There appears to be no objection in allowing parties to agree not to use electronic records or to use electronic records subject to certain additional requirements. Such “variation” of the provisions of Part II (which are intended to facilitate the use of electronic communications) does not derogate from the underlying rules of law (e.g. the requirement for writing, signature, etc) that are considered to be mandatory (under the principle expressed in relation to the UNCITRAL Model Law²³). Similarly, agreeing to additional requirements in relation to the use of electronic communications does not derogate from the underlying rules of law.²⁴ The provision requiring consent to use electronic communications found in the draft Convention shows that it is not intended to force any person to accept electronic communications in contractual transactions.²⁵

only statutory or regulatory law but also judicially-created law and other procedural law, including common 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”. The definition of “rule of law” in the ETA merely states that it includes written law, which in turn is defined in the Interpretation Act (Cap.1) to mean “the Constitution and all previous Constitutions having application to Singapore and all Acts, Ordinances and enactments by whatever name called and subsidiary legislation made thereunder for the time being in force in Singapore”. In its ordinary meaning, the term would also include common law. (By contrast, the New Zealand and Australian electronic transactions legislation apply only to statutory enactments.)

²³ See footnote 20.

²⁴ The legal consequences would however differ. In the case of a rule of law, illegality may arise from failure to satisfy the rule of law and often the law will render a transaction void on account of such failure. Failure to comply with an agreement, depending on the context may prevent the formation of a binding contract (thus in effect rendering the transaction void) or result in a breach of contract (which may or may not be grounds for termination of the contract and may result in liability for damages). It would therefore be prudent for parties to agree also on the consequences of failure to comply with the additional requirements they seek to impose.

²⁵ Consent requirement is discussed in paragraph 2.1.

- 2.4.4 As it stands, however, section 5 appears even to allow parties to agree to less stringent or different requirements from those in Part II. For example, parties could agree to use an electronic record that is not “accessible so as to be usable for subsequent reference” in satisfaction of a requirement for writing. In effect, this would significantly undermine the safeguards that the rules of law requiring writing are intended to provide, whenever parties chose to use electronic records. **Parties should not be allowed to opt for requirements that fall below the standards set out in the provisions of Part II.** These should be regarded as mandatory minimum standards imposed on electronic records to make them functional equivalents of the forms required by the rules of law which they seek to satisfy.
- 2.4.5 **Similarly, it should also be made clear that section 5 does not allow parties to agree to derogate from express requirements relating to the use of electronic records provided under other laws.** Section 9(4) specifically provides that section 9 (which allows retention in the form of electronic records to satisfy legal requirements for retention of a document, etc) does not apply to any rule of law which expressly provides for the retention of documents in the form of electronic records or preclude the Government from specifying additional requirements for such retention. In such a case, it is envisaged that the requirements for retention of electronic records would have been exhaustively provided by that rule of law and any additional specifications by relevant public bodies. Thus, parties are not allowed to vary the requirements by agreement.
- 2.4.6 Some jurisdictions expressly exclude the possibility of contracting out of certain fundamental requirements in respect of criminal provisions, consumer transactions, obligations of good faith, reasonableness, diligence and care and the allocation of loss where less than commercially reasonable security procedures are used.
- 2.4.7 **We are of the view that variation of Part II of the ETA by agreement of the parties should continue to be possible, subject to the limitation that parties should not be permitted to agree to standards that are lower than the mandatory requirements for electronic communications provided in the ETA or in other rules of law.**

2.5 Replacement or Variation of Section 5

- 2.5.1 There has been feedback to IDA that the words “may be varied by agreement” in section 5 of the ETA may result in some ambiguity as to the applicability of the ETA provisions. It was suggested that section 5 should be reworded to the effect that the provisions of the ETA shall apply to the extent that they are not inconsistent with any relevant agreement. An alternative way of expressing the same concept is to say that the Act (or a section or other provision) applies subject to the agreement otherwise by the parties.
- 2.5.2 Although we do not think the suggested amendment to section 5 would not make any significant difference to the operation of the provision as the existing wording of section 5 already allows parties to agree to arrangements that differ from certain provisions of the ETA, **adopting the language of inconsistency²⁶ may have a conceptual advantage in that it avoids any suggestion that legislation may be varied by agreement of the parties or that the explicit agreement of the parties is required to vary the application of the provisions in Part IV.²⁷**
- 2.5.3 In jurisdictions where a general requirement for consent to accept electronic communications has been adopted, the words “except to the extent” or “unless” the parties “otherwise agree” have been used in specific provisions.²⁸
- 2.5.4 It may be preferable to replace section 5 by specific provisions within the relevant sections making the sections apply subject to the agreement otherwise of the parties. Such specific provisions would allow a more nuanced approach to the right of parties to agree to arrangements different from the default position provided by the ETA.**

²⁶ i.e. that the provisions of the ETA shall apply to the extent that they are not inconsistent with any relevant agreement.

²⁷ The alternative formulation (i.e. that a provision applies subject to the agreement otherwise by the parties) may still imply a need for express agreement.

²⁸ See footnote 15.

- Q2.** Do you agree that parties should be able to agree:
- (a) not to use electronic records to satisfy rules of law requiring writing, signature and retention of records;
 - (b) to requirements that are more stringent than those in Part II of the ETA? (See paragraph 2.4.3.)
- Q3.** Do you agree that parties should not be able to agree to standards that are lower than the mandatory requirements for electronic communications provided in the ETA or in other rules of law? (See paragraph 2.4.7.)
- Q4.** Should section 5 be replaced with specific provisions within the relevant sections making the provisions apply subject to agreement otherwise by the parties. (See paragraph 2.3.2 and 2.5.4.)?
- Q5.** If section 5 is retained, should it be amended to adopt the language of inconsistency²⁹ rather than making reference to a right to vary provisions of the ETA? (See paragraph 2.5.2)

2.5.5 It may be questioned whether, there is a need for both a general consent requirement and provisions for variation of the provisions of the ETA. The current draft of the UNCITRAL Convention on Electronic Contracting, as well as the legislation of many jurisdictions, contain both. This may be explained on the grounds that the consent provision relates to consent to the use of electronic communications. Without such consent, the provisions on variation do not come into play at all. Only if the party has consented to use or receive electronic communications will the issue of variation of the rules applicable to those communications become relevant.³⁰

- Q6.** Should there be both a general consent provision and provision for variation ETA provisions by agreement of the parties (whether in section 5 or in specific provisions)?

²⁹ See footnote 26.

³⁰ The Report of Working Group IV on the work of its 41st session (paragraph 138) (A/CN. 9/528) notes that draft article 4 (on Party Autonomy) allowed parties to exclude the application of the convention as a whole or only to derogate from or vary the effect of any of its provisions. While an exclusion of the convention as a whole would normally require a specific reference to that effect, variations from its individual provisions could be effected without specific reference to the provisions being derogated from.

PART 3

RECOGNITION OF ELECTRONIC SIGNATURES

3 Recognition of Electronic Signatures

- 3.1 Section 8 of the ETA provides for electronic signatures to satisfy any rule of law that requires a signature, or provides for certain consequences if a document is not signed.
- 3.2 The UNCITRAL Model Law on Electronic Signatures and the draft Convention on Electronic Contracting provide similarly, but impose an additional reliability requirement. Article 9, paragraph 3, of the draft Convention provides as follows:

“3. Where the law requires that a contract or other communications, declaration, demand, notice or request that the parties are required to make or choose to make in connection with a contract should be signed, or provides consequences for the absence of a signature, that requirement is met in relation to a data message if:

Variant A

- (a) A method is used to identify that person and to indicate that person’s approval of the information contained in the data message,³¹ and
- (b) That method is as reliable as appropriate to the purpose for which the data message was generated or communicated, in the light of all the circumstances, including any relevant agreement.

Variant B³²

... an electronic signature is used which is as reliable as appropriate to the purpose for which the data message was generated or communicated in the light of all the circumstances, including any relevant agreement.

³¹ The draft UNCITRAL Convention also defines “Electronic signature” in article 5 with reference to the same functions.

³² Based on article 6, paragraph 3, of the UNCITRAL Model Law on Electronic Signatures.

4. An electronic signature is considered to be reliable for the purposes of satisfying the requirements referred to in paragraph 3 of this article if:

- (a) The signature creation data are, within the context in which they are used, linked to the signatory and no other person;
- (b) The signature creation data were, at the time of signing, under the control of the signatory and of no other person;
- (c) Any alteration to the electronic signature, made after the time of signing, is detectable; and
- (d) Where the purpose of the legal requirement for a signature is to provide assurances as to the integrity of the information to which it relates, any alteration made to that information after the time of signing is detectable.

5. Paragraph 4 of this article does not limit the ability of any person:

- (a) To establish in any other way, for the purposes of satisfying the requirement referred to in paragraph 3 of this article, the reliability of an electronic signature;
- (b) To adduce evidence of the non-reliability of an electronic signature.”.

3.3 **Function of electronic signature.** The requirement in paragraph 3(a) of Variant A is reflected in the definition of “electronic signature” in the ETA³³ which requires an electronic signature to be “executed or adopted with the intention of authenticating or approving the electronic record”. Although there is no express reference to the identification function in the ETA definition, that function must be implicit in the use of an electronic signature.

3.4 In contrast, the Commonwealth Model Law on Electronic Transactions³⁴ merely states that the signature is “created or adopted

³³ "electronic signature" means any letters, characters, numbers or other symbols in digital form attached to or logically associated with an electronic record, and executed or adopted with the intention of authenticating or approving the electronic record (s.2 of the ETA).

³⁴ At the Commonwealth Law Minister’s Meeting 2002, the Model Law was presented for consideration by Ministers as a basis for the passage of laws by member countries that seek to adopt

in order to sign a document”.³⁵ The word “sign” was used to show that the legal effect of an electronic signature is the same as a handwritten signature.

3.5 Since a signature can perform a variety of functions depending on the nature of the document that was signed (as recognised in the Guide to Enactment of the UNCITRAL Model Law on Electronic Commerce³⁶) it may be questioned whether the definition of “electronic signature” is too restrictive in its reference to the listed functions.³⁷ For example, sometimes a person may sign a document without any intention of approving the information contained therein, but merely to indicate that he has seen the document.

3.6 **Reliability requirement.** Both Variants of article 9 of the UNCITRAL Convention impose a requirement that the electronic signature used must be “as reliable as appropriate to the purpose for which the data message [being signed] was generated or communicated, in the light of the circumstances, including any relevant agreement”. It establishes a flexible approach to the level of security required of the method of identification used. Variant B, in addition, goes on to list a set of criteria which will render an electronic signature sufficiently reliable i.e. if an electronic signature satisfies all those criteria, it will be considered to be reliable. Paragraph 5 of

legislation on the major issues covered by the UNCITRAL Model Law and adapted for the specific use of common law jurisdiction LMM 102/89. See <http://www.thecommonwealth.org>.

³⁵ The Canadian Uniform Electronic Commerce Act, which forms the basis of electronic transactions legislation recently enacted by various provinces in Canada, also adopts this wording.

³⁶ Guide to Enactment of the UNCITRAL Model Law on Electronic Commerce, para.53.

³⁷ The Report of the Electronic Commerce Expert Group to the Attorney General, Australia (31 March 1998) on “Electronic Commerce: Building the Legal Framework” summarises 5 main functions of signature requirements as:

- (a) evidentiary – to ensure the availability of admissible and reliable evidence e.g. Statute of Frauds.
- (b) cautionary – to encourage deliberation and reflection before action, serving to draw attention that the transaction has significant legal consequences.
- (c) reliance – to warrant veracity of contents of record or adoption by signer for purpose of protecting the recipient relying on those contents.
- (d) channelling – to mark intent to act in a legally significant way.
- (e) record-keeping – for execution of government regulations.

Apart from being used to identify a person and to provide certainty as to the personal involvement of that person in the act of signing or to associate that person with the content of a document, a signature might additionally or alternatively attest to the intent of a person to be bound by the content of a signed contract, to endorse authorship of a text, to associate himself with the content of a document written by someone else, or the fact that (and the time when) a person had been at a given place.

article 9 makes it clear that reliability may be established in any other way.

- 3.7 Section 8(2) of the ETA reflects the flexible approach in Variant A (as well as Variant B) and paragraph 5 of article 9 as it provides that an electronic signature may be proved in any manner. In addition, it provides that such proof includes showing a procedure existed by which it is necessary for a party, in order to proceed further with a transaction, to have executed a symbol or security procedure for the purpose of verifying that an electronic record is that of the party.
- 3.8 The reliability criteria in Variant B resembles more closely the criteria for a secure electronic signature in section 17 of the ETA. Section 16 of the ETA provides criteria³⁸ for considering whether a security procedure is commercially reasonable. There is a rebuttable presumption in the case of a secure electronic signature that the signature is that of the person to whom it correlates and that it was affixed by that person with the intention of signing or approving the electronic record.
- 3.9 Despite the differences in formulation, the ETA seems largely consistent with the proposed draft UNCITRAL Convention as far as the provisions on recognition of electronic signatures are concerned.**

- Q7:** Should the ETA be amended to adopt the provisions of article 9 of the draft UNCITRAL Convention on the recognition of electronic signatures?
- Q8:** Should section 8 of the ETA or the definition of “electronic signature” be amended in any way? If yes, please explain the problem addressed by the suggested amendments.

- 3.10 Further issues relating to the definition of electronic signatures and to digital signatures will be addressed in Stage III of the public consultation on Review of the ETA which will follow shortly.

³⁸ The criteria are non-exhaustive as s.16(2) uses the term “including”.

PART 4

FORMATION OF CONTRACT: EFFECTIVENESS OF ELECTRONIC COMMUNICATIONS AND ATTRIBUTION

4.1 Formation and Validity of Contracts

- 4.1.1 Currently, it is unclear whether the general rule (that a contract is concluded only on actual receipt of the offeree's acceptance) or the postal acceptance rule (that the contract is concluded at the point of posting)³⁹ applies with regard to transactions concluded via electronic means. On one view, electronic communications (by analogy with telexes and telefaxes) should be considered as forms of instant communications and therefore actual receipt should be required. On the other hand, not all electronic transactions are instantaneous. Electronic records may be collated and transmitted in batches, saved in computer systems for retransmission or forwarded from computer system to computer system only when the recipient requests his electronic messages. In this case, the postal acceptance rule should arguably apply.⁴⁰
- 4.1.2 It has therefore been suggested that the ETA should clarify which rule should prevail, with the possibility of statutory exceptions to achieve balance between the parties concerned.⁴¹ For example, it may be statutorily provided that an offer and acceptance in the form of a data message become effective when they are received by the addressee. Earlier versions of the draft UNCITRAL Convention⁴² contained such a provision, reflecting the essence of the rules of contract formation

³⁹ On the postal acceptance rule, see *Cheshire, Fifoot and Furmston's Law of Contract*, Second Singapore and Malaysian Edition, edited by Andrew Phang Boon Leong, p.117-120. The principle was stated in *Adams v Lindsell* (1818) 1 B & Ald 681, and confirmed in *Byrne v Van Tienhoven* (1880) 5 CPD 334 at 348. It was applied in Singapore as early as 1932: *Lee Seng Heng v Guardian Assurance Co. Ltd* [1932] SLR 110.

⁴⁰ *Reed, Computer Law* (3rd ed, 1996) pp 304-305.

⁴¹ Andrew Phang & Yeo Tiong Min in *The Impact of Cyberspace on Contract Law*, The Impact of the Regulatory Framework on E-commerce in Singapore (Technology Law Development Group Symposium, Singapore Academy of Law, 5 Apr 2002) at p.43-45.

⁴² A/CN.9/WG.IV/WP.103. article 13, paragraph 2. Variant A provided "When conveyed in the form of a data message, an offer and the acceptance of an offer become effective when they are received by the addressee". Variant B provided "Where the law of a Contracting State attaches consequences to the moment in which an offer or an acceptance of an offer reaches the offeror or the offeree, and a data message is used to convey such an offer or acceptance, the data message is deemed to reach the offeror or the offeree when it is received by the offeror or the offeree."

contained in the United Nations Sales Convention⁴³. The provision was however deleted at the 42nd session of the UNCITRAL Working Group IV as it dealt with matters of substantive contract law which the draft Convention should not affect.⁴⁴ Such a provision would provide certainty on substantive contractual issues such as withdrawal, revocation or modification of an offer or acceptance.

4.1.3 The contrary view is that such a provision should not be adopted as it will create a duality of regimes for electronic and paper-based transactions. Furthermore, since some forms of electronic communications are instantaneous and some are not, it is doubtful whether a single rule should apply to all these differing situations.⁴⁵ There may also be complications in applying such a provision to transactions that involve both paper-based and electronic communications. No single rule of offer and acceptance is likely to provide a complete solution for electronic transactions as the circumstances of communication vary widely. Technology and practice in this area are still developing and convergence of technologies is likely to have a significant impact on the way electronic transactions are carried out.

4.1.4 **If there is to be a provision providing a default rule for the formation of electronic contracts**, parties should be allowed to opt-out of the default rule by agreement otherwise. **Alternatively, parties may be required to opt-in to such a regime if they decide to adopt it, instead of making it the default rule.** That way, parties will have a ready-made set of rules they may adopt if they wish to. A drawback of the latter approach is that those who are unaware of the provision are the least likely to have considered the need to provide for the situation and will be deprived of benefiting from the provision when they most need it.

⁴³ Article 15, paragraph 1 of the UN Sales Convention reads: “An offer becomes effective when it reaches the offeree.” Article 18, paragraph 2 reads: “An acceptance of an offer becomes effective at the moment the indication of assent reaches the offeror...”

⁴⁴ Further article 13 may have created a duality of regimes. It was pointed out that article 13 was not required to facilitate a determination of the time of contract formation because article 8 already expressly recognized the possibility of offer and acceptance being communicated by means of data messages. A/CN.9/WG.IV/XLII/CRP.1/Add.7.

⁴⁵ See also Phang Khang Chau & Phua Wee Chuan, *Response To: “The Impact of Cyberspace on Contract Law”*, The Impact of the Regulatory Framework on E-commerce in Singapore (Technology Law Development Group Symposium, Singapore Academy of Law, 5 Apr 2002) at p.61.

Q9: Should the ETA provide when an offer and acceptance in electronic form takes effect? If yes, please suggest the terms of the necessary legislative provision to effect the change and comment whether the provision should apply only if the parties opt-in.

4.2 Invitation to make Offers

4.2.1 Article 12 of the draft UNCITRAL Convention on Electronic Contracting contains a provision to treat a proposal for concluding a contract making use of information systems that is not addressed to one or more specific persons to be treated as an invitation to make offers⁴⁶, unless it indicates the intention of the person making the proposal to be bound in case of acceptance. The Working Group noted that the provision, which was inspired by the United Nations Sales Convention, was intended to clarify an issue that had raised a considerable amount of discussion since the advent of the Internet. The proposed rule results from an analogy with offers made through more traditional means to the world at large.⁴⁷

4.2.2 The underlying concern which the provision addresses is that a presumption of binding intention would be detrimental for sellers holding limited stocks of certain goods, if the seller were to be liable to fulfil all purchase orders received from a potentially unlimited number of buyers. The provisions would also be relevant in cases of on-line pricing errors.⁴⁸

4.2.3 There is however a question whether the “invitation to treat” model is appropriate for transposition into the Internet environment and whether distinctions should be drawn between websites offering goods

⁴⁶ i.e. invitation to treat.

⁴⁷ See Report of Working Group on the work of its 41st session (A/CV.9/528) paragraphs 109-120, especially paragraph 110. At the 42nd session of Working Group IV, it was agreed to retain variant B as a basis for future discussion (A/CN.9/WG.IV/XLII/CRP.1/Add.6).

⁴⁸ Numerous cases of pricing errors by on-line suppliers have occurred. Few cases have been decided by courts since most such disputes are settled privately. The outcome of cases would presumably turn upon whether there was a binding contract at the time the supplier sought to withdraw from the transaction. This would often be determined by the actual terms of the communications involved in the specific transaction, the terms of any pricing policy and how effectively they are brought to the attention of the buyer (possibly raising the issues of incorporation discussed in paragraph 7.1) and whether it would be obvious to the buyer that the pricing error was a mistake. See article entitled *Are Sellers Bound by Mistakes in Online Advertisements?* (30 Jun 2003) by Henno Groell, Lyn Penfold and Jorge L. Contreras on www.haledorr.com which surveys the German and UK approach to on-line pricing errors.

or services using interactive applications⁴⁹ and those which do not. For example, some case law supports the view that “click-wrap” agreements and Internet auctions might be interpreted as immediately binding.

- 4.2.4 A question also arises whether there might be any difficulty, in the context of an electronic proposal, in indicating the intention to create a binding contract immediately upon receiving a response. Presumably an express statement to the effect should suffice. But would the use of the term “offer” to describe the proposal be sufficient indication of the intention to be bound? Indeed, it is already common practice to include a statement to the contrary (i.e. that the proposal is not intended to be binding) in electronic advertisements.⁵⁰
- 4.2.5 A further objection to such a provision is that it sets out a separate regime for electronic contracts.

Q10: Should the ETA provide that proposals to enter a contract made by electronic means to the world at large are to be treated as an invitation to make offers, unless the proposal indicates that the person making the proposal intended to be bound in case of acceptance?

4.3 Effectiveness of Communications between Parties (Section 12 of ETA)

- 4.3.1 **Section 12 of the ETA** provides that a declaration of intent or other statement shall not be denied legal effect, validity or enforceability solely on the ground that it is an electronic record. It reflects article 8, paragraph 1, of the draft UNCITRAL Convention.⁵¹ The draft Convention however refers to “a declaration, demand, notice or request that parties are required to make or may wish to make in

⁴⁹ The term “interactive applications” is intended to be an objective term describing a situation apparent to any person accessing the system i.e. that the exchange of information was prompted through a system by means of immediate actions and responses having an appearance of automaticity.

⁵⁰ Amazon.com, for example, provides a direct link to its pricing policy from the terms of use on its website. The policy explicitly states that the price of any item is not confirmed until the customer completes the order. In addition, Amazon indicates that items in the catalog may be mispriced and the price will be verified prior to shipment. If the correct price is higher, Amazon will, at its discretion, either contract the customer prior to shipment or cancel the order and notify the customer accordingly. See footnote 48.

⁵¹ On electronic contracting. A/CN.9/WG.IV/XLII/CRP.1/Add.1.

connection with a contract”. These provisions provide for the validity of both pre- and post-contractual communication made in electronic form.⁵²

Q11: Should references to “declaration, demand, notice or request” be added to section 12 of the ETA for consistency with the UNCITRAL draft Convention?

4.4 Attribution (Section 13 of the ETA)

4.4.1 Section 13 of the ETA, in summary, deems an electronic record to be that of the originator even if it was not created personally by the originator if it was sent by (a) a person authorised to do so by the originator or (b) an information system programmed by or on behalf of the originator to send that electronic record. Further, section 13(3) enables an addressee to regard an electronic record received by him as coming from the originator if it was received according to a procedure agreed with the originator, even if the electronic record was sent by someone else. If the electronic record was sent by an unauthorised person, the addressee can still regard it as coming from the originator if that person was allowed by the originator to send the electronic record as if it was the originator who sent it.⁵³

4.4.2 But the addressee is not entitled to presume that the message came from the originator from the point in time when the originator informed the addressee that the message is not his, and gives the addressee reasonable time to act, or when the addressee knows or ought to know that the message was not the originator’s or if, in all the circumstances of the case, it is unconscionable for the addressee to regard the electronic record as that of the originator or to act on that assumption.⁵⁴

⁵² Section 11 of the ETA (and article 13 of the draft UNCITRAL Convention) make parallel provisions in the context of electronic records used in contract formation.

⁵³ Jeffrey Chan Wah Teck “Legal Issues in E-Commerce and Electronic Contracting: The Singapore Position”, a workshop paper presented at the 8th ASEAN Law Association General Assembly 2003, available at www.sal.org.sg. See also article by Andrew Phang and Daniel Seng “*The Singapore Electronic Transactions Act 1998 and the Proposed Article 2B of the Uniform Commercial Code*” [1999] 7 International Journal of Law and Information Technology 103, at p.110.

⁵⁴ Section 13(4)

- 4.4.3 The rules are specifically designed to provide certainty to enable e-commerce to be relied upon as a tool for business. It attempts to balance issues of certainty and the allocation of risk. The position, simply stated, is that the party using a human agent or pre-programmed computer system assumes responsibility for their actions unless the other party knew or ought to know that the message is not the originator's (i.e. did not reflect the originator's intentions). The provision has been in the ETA since the enactment of the ETA and we are not aware that it has caused any practical difficulties.
- 4.4.4 Nevertheless, the provisions of the UNCITRAL Model Law⁵⁵, on which section 13 of the ETA is based, has from time to time been criticised either on the ground that they are redundant (i.e. they so obvious as to be tautological) or, worse still, contradictory to the existing domestic law rules in some jurisdictions.
- 4.4.5 Further, the provision was enacted before the advent of the Internet. In view of the wide range of business models now available for electronic commerce, e.g. IT outsourcing, where the contracting party may be different from the party that provides the information technology platform and "fronts" the transaction, it may be counterproductive to attempt to settle general rules of attribution. Indeed, in recognition of the complexity of attribution issues in the context of automated information systems, the draft UNCITRAL Convention on Electronic Contracting does not address the issue of attribution at all. The issue of attribution in relation to automated information systems is further discussed in **Part 6**.⁵⁶

<p>Q12: Should the attribution provision in section 13 be retained? If section 13 is retained, should it be amended in any way? (See also amendments to section 13 discussed in paragraphs 4.4.6 to 4.4.9. below)</p>
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- 4.4.6 **Authority to program information system.** It is also noted that section 13(2)(a) refers to "a person who had authority to act on behalf of the originator", whereas section 13(2)(b) refers to an information system programmed "on behalf of the originator" without addressing the issue of authority. Arguably the requirement for authority is

⁵⁵ Article 13.

⁵⁶ Para. 6.4.

implicit in the reference to “on behalf”. Nevertheless, consistent wording could be adopted in section 13(2)(b) to make it clear that the provision applies only if the information system was programmed by a person with authority to program the system on behalf of the originator.

- 4.4.7 On the other hand, it could be difficult for an addressee to determine whether an information system was programmed with the authority of the purported originator and it would not conduce to certainty if the addressee is required to determine this fact. It would be counterproductive and a hindrance to electronic commerce if the addressee had to check with the originator on the authority of the programmer for each transaction. Possibly the addressee should be able to rely upon the electronic communication as coming from the originator if it appeared to be the originator’s and the addressee is not put on notice of any irregularity. Furthermore, such a provision requiring proof of authority of the programmer may create different regime for electronic contracts.
- 4.4.8 The lack of a definition of the term “information system” in the ETA is discussed in paragraph 5.13.
- 4.4.9 **Definition of originator.** The ETA does not contain any definition of “originator”. The UNCITRAL draft Convention defines the term “originator” as “a person by whom, or on whose behalf, the data message purports to have been sent or generated ... but does not include a person acting as an intermediary with respect to that data message”. “Intermediary” has not however been defined by the draft UNCITRAL Convention. Adopting this definition of “originator” could help to avoid a circuitous reading of section 13.⁵⁷

⁵⁷ Section 13(1) arguably begs the question as to who may be considered the originator of a particular electronic record.

PART 5

TIME AND PLACE OF DESPATCH AND RECEIPT (SECTION 15 OF THE ETA)

- 5.1 **Section 15** of the ETA provides for the **time** of despatch and receipt of an electronic record unless otherwise provided. An electronic record is *despatched* when it enters an information system outside the control of the originator or his agent.⁵⁸ As regards *receipt* of an electronic record, a number of separate rules apply. If an information system has been designated for receipt of the record, the electronic record is received when it enters the designated information system. If the electronic record was sent to another information system that was not designated by the addressee, receipt occurs when it is retrieved by the addressee.⁵⁹ If no information system was designated by the addressee, receipt occurs when the electronic record enters the information system of the addressee.⁶⁰
- 5.2 The record is deemed to be despatched at the **place** of business of the originator and received at the addressee's place of business.⁶¹ This recognises the unique environment of cyberspace where the information system is often located at a place different from the location of the parties. The place of receipt or despatch of an electronic record may be relevant in determining where a contract is deemed to have been concluded, and this in turn may be critical in deciding the applicable law. A number of rules are therefore provided to determine the place of business of the originator and the addressee.⁶²
- 5.3 It has been noted at UNCITRAL that the different criteria for determining receipt of data messages⁶³ may lead to conflicting results.⁶⁴ For example, if "information system" covers systems that carry data messages to their addressees, e.g. an external server, a data message may be deemed to be received by an addressee even though it

⁵⁸ Section 15(1)

⁵⁹ Section 15(2)(a)

⁶⁰ Section 15(2)(b).

⁶¹ Section 15(4).

⁶² Section 15(5).

⁶³ Namely, entry into *a designated information system* as opposed to entry into *an information system of the addressee*.

⁶⁴ A/CN.9/WG.IV/XLII/CRP.1/Add.3, para.9.

is lost prior to retrieval, as long as the loss occurred after it had entered the server's system in the case of *entry into a designated information system*. If the addressee did not designate an information system, entry into the server's system may not be *entry into an information system of the addressee*.

- 5.4 Section 15 of the ETA is based on article 15 of the UNCITRAL Model Law on Electronic Commerce. The UNCITRAL Working Group on Electronic Commerce is currently considering modifications to a similar provision in **article 10 of the draft Convention** on Electronic Contracting in the following terms:⁶⁵

“Article 10

1. The time of dispatch of a data message is deemed to be the time when the data message [enters an information system outside the control of the originator or of the person who sent the data message on behalf of the originator] [leaves an information system under the control of the originator], or, if the message had not [entered an information system outside the control of the originator or of the person who sent the data message on behalf of the originator] [left an information system under the control of the originator of the person who sent the data message on behalf of the originator], at the time when the message is received.
2. The time of receipt of a data message shall be deemed to be the time when it becomes capable of being retrieved by the addressee or by any other person named by the addressee. A data message is presumed to be capable of being retrieved by an addressee when it enters an information system of the addressee, unless it was unreasonable for the originator to have chosen that particular information system for sending the data message, having regard to the circumstances of the case and the content of the data message.”.

- 5.5 These modifications replace the objective factual situations in the existing provision with general rules that focus on the control over the electronic message or the capability of retrieving the data message.

⁶⁵ See Report of Working Group IV paragraphs 132-151. A/CN.9/WG.IV/XLII/CRP.1/Add.3.

- 5.6 The two alternative formulations under consideration by the UNCITRAL Working Group in the case of **despatch**⁶⁶, namely when the message *left an information system under the originator's control* or when it *entered an information system outside the originator's control*, are actually different sides of the same coin. The former has the advantage of being more in line with the notion of despatch than the latter formulation. However, the latter formulation may be preferable because it focuses on an element that the parties would have more easily accessible evidence, since transmission protocols of data messages typically indicate the time of delivery of messages but do not state the time they leave their own systems.
- 5.7 In the case of **receipt**,⁶⁷ they focus on the moment when the message became capable of being retrieved.⁶⁸ This modification may however be criticised on the ground that they may lack the high level of predictability and certainty with respect to contract formation required by practical business concerns. The originator of a message would have no means of determining when a message that had entered an information system outside his own control was capable of being retrieved from that system. Parties would be unable to determine beforehand when their messages become effective. The existing provisions on receipt will safeguard the interests of the originator, whereas the modifications would leave the originator at the mercy of

⁶⁶ Article 10, paragraph 1 of the UNCITRAL Convention (See para.5.5.).

⁶⁷ Article 10, paragraph 2 of the UNCITRAL Convention (See para.5.5.).

⁶⁸ This is similar to the rule adopted in some jurisdictions in the absence of a designated information system. The message is deemed to be received when the addressee *became aware* of the data message and the message was *capable of being retrieved*. The Canadian Uniform Electronic Commerce Act provides a presumption that an electronic record is received only when the addressee becomes aware of the record *and* it is accessible by the recipient: UECA section 23(2)(b). The Australian Commonwealth Electronic Transactions Act and New Zealand Electronic Transactions Act provide that the time of receipt is the time when the electronic communication comes to the attention of the addressee. The Report of the Australian Electronic Commerce Expert Group to the Attorney-General on Electronic Commerce: Building the Legal Framework, paras 2.15.15 and 2.15.17, noted the need to address the issue of whether an electronic record is communicated only if it is actually read by the recipient.

Such a rule is more equitable than holding an addressee bound by a message sent to an information system that the addressee could not reasonably expect would be used in the context of its dealings with the originator or for the purpose for which the message was sent. On the other hand, it may be potentially unfair for the addressee unilaterally to have power to determine whether and when receipt would occur. The test is also inherently more uncertain since it will often depend on factors within the knowledge of the recipient or the ISP alone. It may also be difficult to obtain evidence from an ISP based outside the jurisdiction of the court. The test of entry into a particular information system is, on the other hand, technically easier to prove.

an addressee's willingness to become aware of a data message or the possible malfunctioning of the addressee's system.

- 5.8 The modifications also seem to abandon the notion of “designated information system”. The possibility of designating a specific information system to receive certain information is of great practical importance, in particular for large corporations that may have multiple communication systems. It would be unreasonable to bind a large corporation just because a message was sent to one of its many electronic mailboxes and it had become *capable of being retrieved* by the corporation. Although the distinction between designated and non-designated systems may seem complicated, it serves a useful practical purpose since an addressee should not be bound by messages that were sent to an information system where the addressee did not expect to receive them.
- 5.9 The UNCITRAL Working Group however noted that the new proposal in fact reaches the same result as the existing provision, albeit through a different formulation. Linking the time of receipt to the capability of retrieving an electronic message is consistent with the normal principle that non-electronic contractual communications have to reach the addressee's sphere of control.⁶⁹ Further, the test of reasonableness⁷⁰ implicitly contemplates the possibility of designating a particular means of electronic communication. An addressee would be able to challenge the originator's choice to send a message to a particular address as unreasonable because it disregarded the addressee's designation of another system.
- 5.10 This proposal does not however state what criteria will be applicable in place of the “entry” criteria in case the message is unreasonably addressed. Would awareness of the message and the ability to retrieve suffice? Or is actual retrieval required? Presumably much would depend on the surrounding facts.
- 5.11 The UNCITRAL Working Group agreed to retain paragraph 3 (equivalent to section 15(3) of the ETA) which clarifies that receipt may occur even if the place of receipt did not coincide with the party's

⁶⁹ i.e. the actual receipt rule. See article 24 of the UN Convention on Contracts for the International Sale of Goods.

⁷⁰ See article 10, paragraph 2 in paragraph 5.4 above.

place of business and paragraph 5 (equivalent to section 15(5) of the ETA) which deems the originator's place of business to be the place of despatch and the addressee's place of business to be the place of receipt. This is important because, unlike postal communications, data messages are often deemed to be received when delivered to information systems outside the party's place of business.

- 5.12 **Parties using the same information system.** The UNCITRAL Working Group deleted paragraph 4 of the draft UNCITRAL Convention dealing with despatch and receipt where the originator and the addressee use the same information system on the basis that the issue would be considered in conjunction with paragraph 1. There is much academic debate on whether it can ever be said that two parties use the same information system. For example, even if two users are logged on to the same network (e.g. UNO wireless LAN), each party's information system is arguably designated by his unique IP address and is therefore arguably different from the other party's information system. Paragraph 4 provided that where the originator and the addressee use the same information system, both the despatch and the receipt occur when the data message becomes capable of being retrieved and processed by the addressee. The subjective criterion for despatch based on when the message becomes capable of being retrieved was proposed because the objective criteria based on the moment when the message "enters an information system" could not be used.

<p>Q13: Would there be any other implications in adopting the provisions on time and place of despatch or receipt in article 10 of the draft UNCITRAL Convention? (See paragraphs 5.5 and 5.11)</p>
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5.13 Definition of Information System

- 5.13.1 The term "information system", used extensively in sections 13 (Attribution)⁷¹ and 15 (Time and place of despatch and receipt) of the ETA, is not defined in the ETA. This was possibly because the drafters anticipated that this could be developed on the basis of future experience in a changing environment in line with the prescriptions as to the interpretation and application of the ETA in section 3 i.e. to

⁷¹ Issues relating to Attribution are discussed in paragraph 4.4.

facilitate electronic commerce, eliminate barriers to electronic commerce, etc.⁷²

5.13.2 Before the advent of the Internet, most information systems were owned and controlled by the user. Today, in the context of Internet and Internet Service Providers (ISP), an electronic record may have entered a person's mailbox held with the ISP, but the person may not be aware of it and may not be able to access it. For example, hotmail.com is hosted on a Microsoft server in the US. If the ISP server or the Internet is down, the user would be unable to access his email. Further it is usual for persons to have multiple email accounts which they may only check infrequently. A similar problem arises where data management has been outsourced.

5.13.3 Discussions at UNCITRAL highlight the point that the notion of "information system" is ambiguous in view of the range of information technology options now available and in use.⁷³ "Information system" is defined in the draft Convention to mean a system for generating, sending, receiving, storing or otherwise processing data messages. The term is intended to cover the entire range of technical means for generating, sending, receiving, storing or otherwise processing data messages and, depending on context, could include a communications network, an electronic mailbox or even a telecopier. However, it was pointed out that care should be taken to avoid confusion between information systems and information service providers or telecommunications carriers that might offer intermediary services or technical support infrastructure for the exchange of data messages. The UNCITRAL Working Group noted that the notion of "entry" into an information system referred to the moment when a data message became available for procession[sic] within an information system.

5.13.4 Adopting the current definition of "information system" from the draft UNCITRAL Convention⁷⁴ would probably not serve any purpose for the ETA. The existing flexible approach is probably

⁷² Jeffrey Chan Wah Teck "Legal Issues in E-Commerce and Electronic Contracting: The Singapore Position" p.246, a workshop paper presented at the 8th ASEAN Law Association General Assembly 2003, available at www.sal.org.sg.

⁷³ Discussions of UNCITRAL Working Group at its 42nd Session on articles 10 and 12 of the draft Convention on Electronic Contracting in A/CN.9/wg.IV/XLII/CRP.1/Add.3 and Add.6.

⁷⁴ See para 5.13.3.

advisable in view of the unpredictability of future developments in technology. Specific provisions such as sections 13 and 15 that make reference to the term may however need to be clarified as appropriate. (Section 13 (Attribution) is discussed in paragraph 4.4 and section 15 (Time and Place of Despatch and Receipt) is considered in this Part).

Q14: Should the ETA adopt a definition of “information system” based on the draft UNCITRAL Convention whether generally, or in relation to any specific provisions?

5.13.5 The adoption of a definition of the term “automated information system” is considered in paragraph 6.2.

PART 6

AUTOMATED INFORMATION SYSTEMS

6.1 Definition of Automated Information System

6.1.1 The advent of the Internet has given rise to new modes of commercial dealing. In particular, it is now possible to conclude a web-based contract over the Internet. Typically, this involves an individual keying in the particulars of the transaction at a Website, for example, the details of his purchase. When the individual confirms his order, the computer software running the Website (variously referred to as an “automated information system”, “electronic agent” or “bot”⁷⁵) automatically generates a response based on the information provided (e.g. confirms fulfilment of the order). On a more sophisticated level, a company may program a bot (*A*) to present other e-business companies with different sets of acceptable pricing structures. *A* can connect on the Internet with another bot (*B*) which is programmed to accept one or more of those pricing structures. Following a series of on-line security checks, *A* and *B* will electronically conclude the deal without any human intervention. In many cases, such transactions will entail the formation of contracts.⁷⁶

6.1.2 The draft UNCITRAL Convention on Electronic Contracting defines automated information system as:

“a computer program or an electronic or other automated means used to initiate an action or respond to data messages or performances in whole or in part, without review or intervention by a natural person each time an action is initiated or a response is generated by the system”.⁷⁷

⁷⁵ Short for robot.

⁷⁶ The analogy with electronic data exchanges (EDI) is limited because of vital distinctions e.g. EDI assumes a highly structured form of messaging, assumes an on-going relationship based usually on an ‘interchange agreement’ between parties, and is usually employed between substantial business concerns. See “*Internet Law and Regulation*” edited by Graham JH Smith, Second Edition, para 10.1.1. Web contracts on the other hand may consist of informal emails (though electronic agents are likely to utilise more structured fields), may involve random once-off purchases and may occur between individuals.

⁷⁷ Article 5(f). The Canadian Uniform Electronic Commerce Act and US E-Sign Act employ the term “electronic agent”. The US E-Sign Act defines “electronic agent” to mean a computer program or an electronic or other automated means used independently to initiate an action or respond to

- 6.1.3 This definition, based on the definition of “electronic agent” in section 2(6) of the US Uniform Electronic Transactions Act, was included in view of article 14 of the draft Convention (discussed in paragraph 6.2). A similar definition is also used in the Canadian Uniform Electronic Commerce Act.
- 6.1.4 The term “automated information” is used in relation to the provision discussed below.
- 6.1.5 This definition of “automated information system” is able to stand by itself, without the need to adopt the definition of “information system” from the UNCITRAL Convention. See discussion of definition of “information system” in paragraph 5.13.

<p>Q15: Should the ETA adopt the definition of “automated information system” from the draft UNCITRAL Convention? (see paragraph 6.1.2)</p>
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6.2 Contractual Intention

- 6.2.1 The law is unclear whether automated means of communication by automated information systems can convey the intention needed to form a contract where the communication has not been reviewed by a natural person before the contract was made. Upon one view, if a computer is programmed to make or accept offers in predetermined circumstances, the intention to create legal relations exists on the part of the user of the computer.⁷⁸ An analogy may be drawn with the use of vending machines. On the other hand, it is arguable that such intention relates to the computer system, and not specific transactions. Traditional contract doctrine looks at the intention of the parties surrounding the offer and acceptance of the specific agreement in dispute.⁷⁹

electronic records or performances in whole or in part without renew or action by an individual at the time of the action or response. The Canadian Uniform Act defines “electronic agent” in similar terms.

⁷⁸ This is the view preferred by the New Zealand Law Commission in its Report 50 on “*Electronic Commerce Part One, A Guide for the Legal and Business Community*”, October 1998, paras.56-58.

⁷⁹ David Castell “Electronic Contract Formation” Juris Diction. Article accessed at <http://www.jurisdicion.com/ecom3.htm>.

- 6.2.2 With automated information systems, it is necessary to distinguish between merely functional processes, e.g. acknowledgement of receipt, and contractual responses, e.g. offer and acceptance.⁸⁰ The more sophisticated the automated system, the more difficult would be the task of linking contractual intent to the person.⁸¹
- 6.2.3 In order to remove possible doubts concerning the validity of contracts resulting from the interaction of automated information systems, the UNCITRAL Working Group is considering article 14 in the draft UNCITRAL Convention which is cast as a principle of non-discrimination along the following lines:
- “14. A contract formed by the interaction of an automated information system and a person, or by the interaction of automated information systems, shall not be denied validity or enforceability on the sole ground that no person reviewed each of the individual actions carried out by such systems or the resulting agreement.”.
- 6.2.4 A number of jurisdictions have enacted similar provisions in their electronic transactions legislation.⁸²
- 6.2.5 We propose to include a similar provision in the ETA to make it explicit that contracts formed by the interaction of an automated information system and an individual or by the interaction of an automated information systems will not be denied validity or enforceability on the sole ground that no person reviewed each of the individual actions carried out by such systems or the resulting agreement.**
- 6.2.5 The general provision proposed above would not however address all issues related to the use of automated information systems, for example, issues relating to **conflicting contract terms, attribution and single keystroke error**. These issues are complicated and, given the varied situations they involve, it is unlikely that a simple statutory solution can be found. The resolution of such issues may be more

⁸⁰ In a US case *Corinthian Pharmaceutical Systems Inc. v Lederle Laboratories* (1989) 724 F.Supp 605 (S.D.Ind.) the court dealing with an automated order taking system held that the order tracking was a merely functional acknowledgement of the order, not an acceptance.

⁸¹ David Castell “Electronic Contract Formation” Juris Diction. Article accessed at <http://www.jurisdiction.com/ecom3.htm>.

⁸² US E-Sign Act, section 101(h) and Canadian Uniform Electronic Commerce Act, section 21.

appropriately dealt with by general law. We include a brief explanation of the issues below.

Q16: Should the ETA adopt a provision to clarify the validity of contracts resulting from the interaction of automated information systems from the draft UNCITRAL Convention? (see paragraph 6.2.3)

6.3 **Conflicting Terms**

6.3.1 While an automated information system can check for pre-programmed specifics, they may not be able to recognise non-standard terms.⁸³ If the automated information system nevertheless concludes the order, should the user be bound by the terms? The general provision like that in the draft UNCITRAL Convention would not resolve this issue.

Q17: Can you suggest any means of resolving the issue of conflicting terms in contracts concluded by automated information systems? (see paragraph 6.3.1)

6.4 **Attribution**

6.4.1 The attribution provisions in article 13 of the UNCITRAL Model Law (on which section 13⁸⁴ of the ETA is based) were not designed with the range of sophisticated automated information systems available now or in the future within contemplation. Finding an acceptable solution for the attribution of electronic communication in the varied circumstances of such transactions would pose great difficulty. Given these complications, an overwhelming majority at UNCITRAL felt that the draft Convention should not address this issue. The current draft Convention on Electronic Contracting does not therefore contain any attribution provision.

6.4.2 The ETA however already has an attribution provision in section 13, based on the UNCITRAL Model Law on Electronic Commerce. It is uncertain how the attribution provisions should apply to automated information systems.

⁸³ e.g. an exclusion from liability unless sued within 15 days instead of the usual period under the Limitation Act.

⁸⁴ See general discussion on Attribution and section 13 in paragraph 4.4.

6.4.3. A particularly difficult question arises in the case where an automated information system responds in a manner that was not intended by the sender, either because it was inadequately or wrongly programmed, or because of malfunction of the computer system or corruption of data or the operation of a computer virus. Should an electronic communication sent by an automated information system be attributed to a human sender in such circumstances?

6.4.4 In the case of human error in programming, the sender would probably have a right of action against the programmer. Unless what was communicated was so obviously wrong that the recipient must be aware of the mistake, the offeror would probably be bound by the resulting contract.⁸⁵ The failure by the offeror to require a verification procedure may suggest that he has assumed the risk of such mistakes.⁸⁶ The existing provisions on attribution in section 13 of the ETA are consistent with this. In attributing the act of the automated information system to the person using that agent, that person would be prevented from disavowing an intention to create legal relations.⁸⁷ The proper allocation of responsibility in the case of malfunction of the automated information system or corruption or virus is however more difficult to decide.

Q18: Should section 13 of the ETA apply to contracts concluded by automated information systems? Should provisions be made to attribute communications in any specific situations involving the use of automated information systems?

6.5 Single Keystroke Error

6.5.1 The ease with which transactions can be concluded over the Internet highlights the need for adequate safeguards. In computer communications, it is easy to hit a wrong key when typing quickly or to click the mouse on the wrong spot on a screen, and by doing so to send a command with legal consequences (the single keystroke error). To minimise such incidents, most websites require an individual to

⁸⁵ See *Cheshire, Fifoot and Furmston's Law of Contract – Second Singapore and Malaysian Edition* (1998) p.383ff generally on doctrine of mistake, bring it to there being a concluded contract rather than a mere invitation to make an offer (see paragraph 4.2 on Article 12 of the draft UNCITRAL Convention).

⁸⁶ New Zealand Law Commission in its Report 50 paras 59-60.

⁸⁷ New Zealand Law Commission in its Report 50 para 63.

confirm the particulars of a transaction before processing it. On the other hand, where the individual does not have an opportunity to prevent or correct a material error, it would seem unfair to hold him responsible for the legal consequences that may flow from a *bona fide* mistake.

6.5.2 Under the common law doctrine of mistake which applies under Singapore law,⁸⁸ a mistake is immaterial unless it is fundamental i.e. it results in a complete difference in substance between what the mistaken party bargained for and what the contract purports. It is likely that a court would allow the apparent contract to stand unless, on the facts, it must have been obvious to the other party that the person had made a mistake.

6.5.3 Article 16 of the draft UNCITRAL Convention on Electronic Contracting contains a provision on errors in electronic communications.⁸⁹ The provision requires a party offering goods or services through an automated information system to make available to parties that use the system some technical means allowing them to identify and correct errors.

6.5.4 Additionally, the UNCITRAL Working Group is considering a provision that deals with the legal effects of errors made by a natural person communicating with an automated information system.⁹⁰ The provision (inspired by Canadian legislation⁹¹) makes the contract unenforceable if the person made an error and:

- (a) the system did not provide the person with an opportunity to prevent or correct the error;
- (b) the person notifies the other person of the error as soon as practicable when he learns of it;
- (c) the person takes reasonable steps to return the goods or services received or, if instructed to do so, to destroy them;

⁸⁸ See footnote 85.

⁸⁹ It was not considered at the 42nd session of the Working Group. Comments at earlier sessions therefore still stand.

⁹⁰ It had been suggested at the Working Group that the provision might not be appropriate in the context of commercial transactions (which the Convention is intended to govern). (A/CN.9/509, paragraphs 110 and 111)

⁹¹ Section 22 of the Canadian Uniform Electronic Commerce Act.

- (d) the person has not used or received any material benefit or value from the goods or services.

6.5.5 Such a provision would balance the need for certainty in commercial relationships and the need to protect consumers from unfair trade practices. It allows individuals to avoid an electronic transaction on the basis of mistake in narrowly defined circumstances⁹². The provision is intended to supplement the common law. The provision “gives online merchants a way of giving themselves a good deal of security against allegations of mistake, and encourages good business practices in everybody’s interests”⁹³.

- Q19.** Should the ETA contain a provision requiring a party offering goods or services through an automated information system to make available to parties that use the system some technical means allowing them to identify and correct errors? (See paragraph 6.5.3)
- Q20.** Should the ETA provide for the legal effect of a “single keystroke error”? If yes, please suggest the terms of such a provision. (See paragraph 6.5.4).

⁹² A common law defence of mistake exists under Singapore and Canadian law.

⁹³ Annotations to the Canadian Uniform Electronic Commerce Act.

PART 7

OTHER CONTRACT ISSUES

7.1 Incorporation by Reference

7.1.1 The UNCITRAL Model Law on Electronic Commerce, article 5 *bis*, adopted by the Commission in June 1998, provides as follows:

“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 message.* [Italics added]”

7.1.2 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.⁹⁴

7.1.3 Incorporation by reference is often regarded as essential to widespread use of electronic communications in commerce. It follows that practitioners should not have imposed upon them an obligation to overload their electronic communications 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.⁹⁵ 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.⁹⁶ While electronic commerce relies heavily on the mechanism of incorporation by reference, the accessibility of the full text of the information being

⁹⁴ UNCITRAL Model Law on Electronic Commerce, Guide to Enactment, para 46-4.

⁹⁵ UNCITRAL Model Law on Electronic Commerce, Guide to Enactment, para 46-2.

⁹⁶ UNCITRAL Model Law on Electronic Commerce, Guide to Enactment, para 46-3.

referred to may be considerably improved by the use of electronic communications e.g. by hypertext links to URLs.⁹⁷

7.1.4 Article 5 *bis* seeks 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.⁹⁸ Article 5 *bis* is not to be interpreted as creating a specific legal regime for incorporation by reference in an electronic environment or introducing more restrictive requirements with respect to incorporation by reference in electronic commerce than might already apply in paper-based trade. 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.⁹⁹

7.1.5 Article 5 *bis* is not intended to interfere with consumer-protection or other national or international law of a mandatory nature, e.g. rules protecting weaker parties in the context of contracts of adhesion¹⁰⁰. That result could 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*.¹⁰¹

7.1.6 As there does not seem to be any significant doubt that the general principles of law relating to incorporation by reference apply in the realm of electronic transactions, **we do not think that it is necessary to adopt a provision similar to Article 5 *bis* of the UNCITRAL Model Law.**

7.1.7 A more difficult question is whether it is necessary to clarify the way in which those principles apply to specific situations involving

⁹⁷ UNCITRAL Model Law on Electronic Commerce, Guide to Enactment, para 46-5.

⁹⁸ UNCITRAL Model Law on Electronic Commerce, Guide to Enactment, para 46-6.

⁹⁹ UNCITRAL Model Law on Electronic Commerce, Guide to Enactment, para 46-7.

¹⁰⁰ i.e. standard term contracts.

¹⁰¹ 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." UNCITRAL Model Law on Electronic Commerce, Guide to Enactment, para 46-7.

electronic transactions. At common law, there are 3 main modes of incorporation, namely by *signature*, by *reasonable notice* or by a *consistent course of dealing*. The existing legal principles relating to incorporation by *course of dealing* would appear to apply to electronic transactions without much modification. There has been academic comment that the presence of Internet websites may result in at least slight alteration of the rules in relation to *reasonable notice*. This would depend upon whether or not consumers are more or less likely to read terms on Internet websites. As for incorporation by signature, it has been suggested that it would conduce to flexibility if legislation provided for alteration and verification of authenticity^{102 103}.

- 7.1.8 As it would be a difficult, and most likely impossible, task to do so exhaustively given the lack of empirical information and the many possible variations in which the issue of incorporation may arise in the context of electronic transactions, **the principles applicable to incorporation by reference in the context of electronic communications should probably be left to be decided on particular fact situations by the courts.**

- Q21:** Should the ETA adopt a provision stating that incorporation by reference applies in electronic transactions? If yes, please specify the terms of such a proposal. (See paragraph 7.1.1 and 7.1.6).
- Q22:** Should the ETA elaborate specific rules as to whether there is incorporation in particular specified circumstances? If yes, please specify the terms of such a provision. (See paragraph 7.1.8)

7.2 Provision of Originals

- 7.2.1 The UNCITRAL Model Law on Electronic Commerce provides for the requirement for an original to be met by an electronic functional equivalent. The functional equivalent must satisfy the twin criteria of providing a reliable assurance as to the integrity of the information

¹⁰² See Part 3 on Recognition of Electronic Signatures.

¹⁰³ Andrew Phang and Yeo Tiong Min, "The Impact of Cyberspace on Contract Law", in Seng Kiat Boon Daniel, ed, *The Impact of the Regulatory Framework on E-Commerce in Singapore* (Singapore Academy of Law, 2002) 39-58.

and having the capability of being displayed to the person to whom it is to be presented.¹⁰⁴

7.2.2 Many countries have adopted provisions modelled on the UNCITRAL Model Law relating to the criteria by which the requirement for originals can be satisfied by electronic documents. They have generally adopted the twin criteria of reliable assurance of integrity (or accuracy) and accessibility.¹⁰⁵ “Integrity” means that the information has remained complete and unaltered, apart from any changes that arise in the normal course of communication, storage or display. The standard of reliability is to be assessed in relation to the document and in the light of all the circumstances. “Accessibility” covers both the usability of the record for subsequent reference and its capability of being retained by the person to whom the record is provided. This is an extension of the requirement in the UNCITRAL Model Law which merely provides that the information must be capable of being displayed to the person.¹⁰⁶ The Singapore ETA does not contain any provision on originals.

¹⁰⁴ Article 8 provides:

(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: [...].

¹⁰⁵ Canadian Uniform Electronic Commerce Act s.11, Irish Electronic Commerce Act 2000 s.17, Hong Kong Electronic Transactions Ordinance s.7. See also the US E-Sign Act s.101(d)(1) and (3). Section 32 of the New Zealand Electronic Commerce Act which relates to the “legal requirement to compare a document with an original document” however only adopts the requirement of reasonable assurance of integrity. However section 28 of the New Zealand Act relating to the requirement to provide information or to produce information in paper form adopts those criteria and could apply to the provision of originals.

¹⁰⁶ Hong Kong adopted the UNCITRAL formulation i.e. capability of display.

- 7.2.3 A primary application of article 8 is in respect of documents of title and negotiable instruments and 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. These areas have however been largely excluded from the ambit of the ETA.
- 7.2.4 Negotiable instruments and documents of title have been excluded from the ETA as the "unique document security concerns" relating to such documents would be better dealt with through a specific legislative and technological regime, rather than by a general provision. The Singapore Bills of Exchange Act has been amended to allow for the transmission of digitised images of cheques.¹⁰⁷ Provisions for electronic bills of lading may be made via regulations under the Bills of Lading Act.¹⁰⁸ However the lack of international consensus on the elements of an electronic bill of lading is a major obstacle to its adoption. Private contractual regimes such as the Bolero Project provide an alternative means of implementation. Similar concerns would probably apply to other types of documents of title such as delivery orders, store warrants and dock warrants. Exclusions from the ETA under section 4 will be addressed in Stage II of the public consultation on Review of the ETA.
- 7.2.5 Article 8 of the UNCITRAL Model Law however is also intended to apply to documents which (while not negotiable or used to transfer rights or title) need to 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 may be altered, which would be difficult to detect in copies. 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. 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,

¹⁰⁷ (Cap.23).

¹⁰⁸ (Cap.384) s.1(5).

or the parties would be forced to use paper documents to supplement the electronic commerce transaction.¹⁰⁹

7.2.6 In the case of requirements imposed by commercial practice, we are hesitant to override established commercial practice by legislation. It may be preferable to leave private parties to agree on the acceptability of electronic equivalents if they so desire.¹¹⁰

7.2.8 Since the primary areas requiring the production of originals have been or should be dealt with by specific provisions, there remains little room for the operation of a general provision on the use of originals. Requirements imposed by commercial practice do not pose an obstacle to electronic commerce since these requirements can usually be removed by agreement between the parties.

Q23: Should the ETA include a provision on electronic originals in the context of contractual transactions? If yes, what should be the criteria for the electronic functional equivalent?

7.3 Other Issues

7.3.1 Apart from the ETA, the main sources of contract law in Singapore are case law, the Sale of Goods Act¹¹¹, the Unfair Contract Terms Act¹¹² and the Vienna Sales Convention¹¹³. In addition, the Contracts (Rights of Third Parties) Act¹¹⁴ and the Consumer Protection (Fair Trading) Act 2003¹¹⁵ have a bearing on consumer transactions. Much of Singapore's statutory framework pre-dates both the Internet and the rise of the computer software industry¹¹⁶. Case law (which evolves

¹⁰⁹ UNCITRAL Model Law, Guide to Enactment.

¹¹⁰ The operation of Article 8 is limited to requirements of law, which the Guide to Enactment clarifies does not include law merchant (see paragraph 8.13). Article 8 therefore probably does not apply to such requirements imposed by commercial practice.

¹¹¹ The Sale of Goods Act (Cap.393) provides for the terms under which goods are sold and includes many provisions intended to stipulate what terms apply in the absence of clear terms in a contract of sale.

¹¹² The Unfair Contract Terms Act (Cap.396) regulates exclusion clauses and limitation of liability clauses in most consumer and standard form contracts.

¹¹³ The UN Convention on Contracts for the International Sale of Goods 1980, applicable in Singapore by virtue of the Sales of Goods (United Nations Conventions) Act (Cap.283A).

¹¹⁴ (Cap.53B).

¹¹⁵ Act No. 27 of 2003.

¹¹⁶ Singapore's Sale of Goods Act (Cap.393) re-enacts the UK Sale of Goods Act 1979 (as amended in 1996) which is in turn a consolidation of the original Sale of Goods Act 1893. Singapore's Unfair

when courts decide novel issues by analogy to decided cases) generally has not caught up with the technology. To date, very few cases involving software contracts have reached the stage of court proceedings¹¹⁷ locally or in the UK¹¹⁸, possibly because excessive uncertainty as to the very basis upon which a court may decide inhibits litigation¹¹⁹. Consequently some of the most basic questions concerning the application of provisions of contractual and non-contractual liability in the information technology field admit of no easy or certain answer.¹²⁰

7.3.2 Meaning of “goods” in the Sale of Goods Act. The local courts have yet to consider basic issues such as whether downloadable software and digitised products are “goods” within the meaning of our Sale of Goods Act. Even if digitised products are capable of being “goods”, there is the related question of whether such products are “sold” if the intellectual property rights in the software remain with the original owner as is almost invariably the case (i.e. the end user is merely granted a licence to use the software).

7.3.3 Shrink-wrap or click-wrap contracts. Another question is whether shrink-wrap¹²¹ and click-wrap agreements¹²² are enforceable under

Contract Terms Act (Cap.396) re-enacts the UK Unfair Contract Terms Act 1977. Both UK Acts were received into Singapore law through the Application of English Law Act (Cap.7A). The Consumer Protection (Fair Trading) Act 2003 does not currently address electronic commerce issues specifically.

¹¹⁷ With one exception, all of the cases which have reached the stage of High Court proceedings have concerned relatively high-value contracts for software which has either been developed under the terms of a specific contract for one or a small number of clients or which has been modified extensively to suit the needs of a particular customer. To date, there have been no cases concerned with the extent of liabilities that will apply to mass-produced or standard software packages such as word processing or spreadsheet programs.

¹¹⁸ Guidance is often sought from UK case law in the absence of any local ruling on a point of law. As Singapore and UK share a common legal tradition, UK court decisions have persuasive value even though they do not bind our courts.

¹¹⁹ See Ian J Lloyd, *Information Technology Law – Third Edition*, Reed Elsevier (UK) Ltd, 2000 at p. 495

¹²⁰ *Ibid.* E.g. issues relating to offer and acceptance, time of formation of contract, shrink-wrap and click-wrap contracts, etc . See discussions in New Zealand Law Commission in its Report 50 on “*Electronic Commerce Part One, A Guide for the Legal and Business Community*”, October 1998, Chapter 3; “*Internet Law and Regulation*” edited by Graham JH Smith, Second Edition, Chapter 10; “*Computer Law*”, Colin Tapper, Fourth edition, Chapter 5.

¹²¹ A shrink-wrap contract is essentially a contract where the vendor offers to license the use of his product (e.g. computer software) on terms that accompany the product. The licensee is deemed to have agreed to these terms through the conduct of retaining the product and using it after being given a chance to read the terms.

Singapore law. Mass-market softwares are normally sold with software licences either prominently displayed on the packaging, with a term that specifies that they become effective when the transparent wrapping is torn by the customer, or may not even be accessible at all before the software packages are sold. In the case of software sold online, a term may specify that the customer accepts the terms displayed onscreen by further clicking his mouse on a button onscreen.

7.3.4 Various legal analyses have been sought to legitimize this commercial practice but there has yet been no authoritative judicial pronouncement on the validity of this practice. The most supportable approach treats the software licence as the producer's offer to the software user, which the user accepts by the conduct of breaking the shrinkwrap or using the software or, in the case of online distribution, clicking the mouse.

7.3.5 **Privity of contract.** The sale of computer software entails the purchaser acquiring rights to both medium as well as software. The transaction is complicated by the fact that the rights are acquired against different parties – the immediate seller supplies the medium but the developer of the software supplies the licence to use the software. The more important right is of course the licence to use functional and operative software, not the right to the medium as such. The doctrine of privity of contract may pose difficulties in allowing the purchaser to seek remedies from the immediate seller for defective software. Under the Contracts (Rights of Third Parties) Act 2001,¹²³ such rights can be conferred on the purchaser by an appropriately worded contract or if the contract purports to benefit a third party and there is nothing to rebut the presumption that that the parties intended to give the third party a right to enforce the contract. Parties are however free to contract out of the position under the Contracts (Rights of Third Parties) Act.¹²⁴ In contrast, the US does not recognise a substantive doctrine of privity of contract.

¹²² A click-wrap contract is basically an on-line shrink-wrap contract. Typically, a person is required to intimate his acceptance of terms displayed onscreen by a mouse-click.

¹²³ (Cap.53B). It came into force on 1 Jan 2002.

¹²⁴ See Report on the Act (LRRD No.2/2001) available at <http://www.agc.gov.sg>.

- 7.3.6 **Standard terms¹²⁵ and consumer protection issues.** Software is typically marketed in a “mass-market” context (i.e. software developers do not individually negotiate terms with consumers). One result of this is that such contracts will therefore be on the standard terms of the distributor rather than arrived at by negotiation with the user. Because of limitation of space, the contract terms are likely to be in fine print or embedded deep in the Web-page.¹²⁶ This also raises consumer protection issues.¹²⁷
- 7.3.7 **Viral contracts.** There is also the emerging issue of viral contracts whereby software is distributed on terms which are intended to follow the software down the chain of distribution. In usual contract practice, this is achieved by assignment. The situation is more complicated in relation to software distribution online because it may not be possible to assess the risks involved as there is no immediate knowledge of potential parties to the agreement. Open source products in particular attempt to implement a system of holding creations in common by means of a viral contract.
- 7.3.8 Some of these issues¹²⁸ are dealt with in a model law developed by the US National Conference of Commissioners on Uniform State Laws (NCCUSL) in the **Uniform Computer Information Transactions Act (UCITA)**.¹²⁹ UCITA has however encountered growing opposition from major consumer and library groups, federal and state

¹²⁵ These are referred to as “adhesion contracts” in the US.

¹²⁶ See discussion on Incorporation by Reference in paragraph 7.1.

¹²⁷ The provisions on unfair practices in the Consumer Protection (Fair Trading Act) 2003 would apply also to electronic contracts e.g. fine print.

¹²⁸ E.g. the formation of online contracts, parol evidence rule, warranties, assignments, breach (including anticipatory breach), and remedies.

¹²⁹ US Uniform Law Commissioners, “A Few Facts about... Uniform Computer Information Transactions Act”, 2000. The text of UCITA and related materials are available at <http://www.ucitaonline.com>.

The UCITA grew out of work on Art 2B of the Uniform Commercial Code (UCC), which was intended to complement Art 2 UCC.

The model law represents the world’s first and only comprehensive uniform computer information licensing law. NCCUSL states that the legislation “uses the accepted and familiar principles of contract law, setting the rules for creating electronic contracts and the use of electronic signatures for contract adoption, thereby making computer information transactions as well-grounded in the law as traditional transactions”. It is premised on the view that the rules for one paradigm (manufactured goods) yield uncertainty, complexity and risk of error when applied to another (computer information) thus adding unnecessary costs to transactions. The Introduction to the UCITA reports that a recent study in the European Union found that huge expenditures were made for the legal costs associated with uncertainty of transactional and other law in Internet transactions.

consumer protection officials, state attorney-generals and certain trade and professional groups, including the American Bar Association (ABA)¹³⁰, and is unlikely to see widespread adoption.¹³¹ It is reported that 3 states have adopted “bomb shelter” legislation to shield their state’s residents from UCITA being applied to their contracts.¹³²

Q24: Should any concepts of contract law (including those highlighted above) be clarified in relation to electronic transactions? If yes, please explain the problem faced, with reference to practical examples, and propose possible solutions.

¹³⁰ UCITA was substantially amended by NCCUSL in 2002 following a review of commentary received from all parties, including recommendations of the ABA. The NCCUSL had sought a resolution from ABA’s governing body approving UCITA. However, as it became evident that a clear consensus on the model law was unlikely to appear, the resolution was withdrawn on the advice of a number of ABA leaders

¹³¹ To date, the model Act has been enacted into law only in the states of Maryland and Virginia. It was reportedly under consideration for introduction in a number of additional states in the 2003 legislative session. As at Jul 2001, legislation based on the model law had been introduced (but has not been passed to date) in 14 other states: Arizona, Delaware, District of Columbia, Hawaii, Illinois, Iowa, Louisiana, Maine, New Hampshire, New Jersey, Oklahoma, Oregon, Texas and Washington. Information from Baker & McKenzie website
<http://www.bmck.com/ecommerce/ucitacomp.htm>.

¹³² Vermont, Iowa, West Virginia and North Carolina were reported to have enacted such laws, whilst Massachusetts was considering such a measure. Library Journal article dated 6.11.2003 at www.libraryjournal.com/article/CA30372.

LIST OF QUESTIONS

- Q1:** Should the ETA include a consent provision similar to that in the draft UNCITRAL Convention, article 8, paragraph 2 (see para 2.1.1) in the context of all contractual transactions?
- Q2.** Do you agree that parties should be able to agree:
- (a) not to use electronic records to satisfy rules of law requiring writing, signature and retention of records;
 - (b) to requirements that are more stringent than those in Part II of the ETA? (See paragraph 2.4.3.)
- Q3.** Do you agree that parties should not be able to agree to standards that are lower than the mandatory requirements for electronic communications provided in the ETA or in other rules of law? (See paragraph 2.4.7.)
- Q4.** Should section 5 be replaced with specific provisions within the relevant sections making the provisions apply subject to agreement otherwise by the parties? (See paragraph 2.3.2 and 2.5.4.)
- Q5.** If section 5 is retained, should it be amended to adopt the language of inconsistency¹³³ rather than making reference to a right to vary provisions of the ETA? (See paragraph 2.5.2)
- Q6.** Should there be both a general consent provision and provision for variation ETA provisions by agreement of the parties (whether in section 5 or in specific provisions)?
- Q7:** Should the ETA be amended to adopt the provisions of article 9 of the draft UNCITRAL Convention on the recognition of electronic signatures?
- Q8:** Should section 8 of the ETA or the definition of “electronic signature” be amended in any way? If yes, please explain the problem addressed by the suggested amendments.

¹³³ See footnote 26.

- Q9:** Should the ETA provide when an offer and acceptance in electronic form takes effect? If yes, please suggest the terms of the necessary legislative provision to effect the change and comment whether the provision should apply only if the parties opt-in.
- Q10:** Should the ETA provide that proposals to enter a contract made by electronic means to the world at large are to be treated as an invitation to make offers, unless the proposal indicates that the person making the proposal intended to be bound in case of acceptance?
- Q11:** Should references to “declaration, demand, notice or request” be added to section 12 of the ETA for consistency with the UNCITRAL draft Convention?
- Q12:** Should the attribution provision in section 13 be retained? If section 13 is retained, should it be amended in any way?
(See also amendments to section 13 discussed in paragraphs 4.4.6 to 4.4.9. below)
- Q13:** Would there be any other implications in adopting the provisions on time and place of despatch or receipt in article 10 of the draft UNCITRAL Convention? (See paragraphs 5.5 and 5.11)
- Q14:** Should the ETA adopt a definition of “information system” based on the draft UNCITRAL Convention whether generally, or in relation to any specific provisions?
- Q15:** Should the ETA adopt the definition of “automated information system” from the draft UNCITRAL Convention? (paragraph 6.1.2)
- Q16:** Should the ETA adopt a provision to clarify the validity of contracts resulting from the interaction of automated information systems from the draft UNCITRAL Convention? (see paragraph 6.2.3)
- Q17:** Can you suggest any means of resolving the issue of conflicting terms in contracts concluded by automated information systems? (see paragraph 6.3.1)

- Q18:** Should section 13 of the ETA apply to contracts concluded by automated information systems? Should provisions be made to attribute communications in any specific situations involving the use of automated information systems?
- Q19.** Should the ETA contain a provision requiring a party offering goods or services through an automated information system to make available to parties that use the system some technical means allowing them to identify and correct errors? (See paragraph 6.5.3)
- Q20.** Should the ETA provide for the legal effect of a “single keystroke error”? If yes, please suggest the terms of such a provision. (See paragraph 6.5.4).
- Q21:** Should the ETA adopt a provision stating that incorporation by reference applies in electronic transactions? If yes, please specify the terms of such a proposal. (See paragraph 7.1.1 and 7.1.6).
- Q22:** Should the ETA elaborate specific rules as to whether there is incorporation in particular specified circumstances? If yes, please specify the terms of such a provision. (See paragraph 7.1.8)
- Q23:** Should the ETA include a provision on electronic originals in the context of contractual transactions? If yes, what should be the criteria for the electronic functional equivalent?
- Q24:** Should any concepts of contract law (including those highlighted above) be clarified in relation to electronic transactions? If yes, please explain the problem faced, with reference to practical examples, and propose possible solutions.

LEGISLATION REFERENCES

Singapore

Electronic Transactions Act (Cap.88) (1998)
<http://www.ecitizen.gov.sg/>

Australia

<http://www.austlii.org/>
Commonwealth Electronic Transactions Act 2000
New South Wales Electronic Transactions Act 2000
<http://www.legislation.nsw.gov.au/>
Electronic Transactions (Victoria) Act 2000
<http://www.dms.dpc.vic.gov.sg/>

Canada

Uniform Electronic Commerce Act
<http://www.ulcc.ca/>
British Columbia Electronic Transactions Act (2001)
<http://www.qp.gov.bc/>
New Brunswick Electronic Transactions Act (2001)
Consultation paper: <http://www.gov.nb.ca/justice/under.htm>>.Paper
Ontario Electronic Commerce Act 2000
Manitoba Electronic Commerce and Information Act 2000

Hong Kong

Electronic Transactions Ordinance (Cap.553)
<http://www.justice.gov.hk/>

Ireland

Electronic Commerce Act 2000
<http://irlgov.ie/bills28/acts/2000/default.htm>

New Zealand

Electronic Transactions Act 2002
<http://www.legislation.govt.nz/>

UK

Electronic Communications Act 2000
<http://www.hms0.gov.uk/>

US

Electronic Signatures in Global and National Commerce Act (E-SIGN Act) (2000)
<http://www.access.gpo.gov/>

UNCITRAL

<http://www.uncitral.org/>
Model Law on Electronic Signatures (2001)
Model Law on Electronic Commerce, with Guide to Enactment (1996) and article 6bis (1998)

Draft Convention on Electronic Contracting
draft used for discussion at 41st session of Working Group IV,
see A/CN.9/WG.IV/WP.103

