

EDI and Contract Law

by Peter Ng

Introduction

Traders making use of electronic means to do business suffer severe legal difficulties which others using traditional paper-based methods do not. The issue to be considered is whether or not electronic trading gives rise to harsher legal conditions.

The word 'condition' in the context is taken to mean circumstances or situations as opposed to the definition of 'condition' in the contractual law context. However it is possible to argue that the type of legal terms and conditions imposed on electronic traders may be harsher than the type of terms and conditions imposed on paper-based traders.

Scope of this Article

This paper is confined to the Australian context although EDI can hardly be limited geographically. A discussion of the international issues raised by EDI is too large a topic for this paper. However, where relevant, developments in the international arena will be mentioned in so far as they may be relevant to the issues raised by EDI in Australia.

I will begin by explaining what EDI is, how it benefits traders and how it works. Then I will deal with the problems raised by paperless trade in the light of the traditional functions played by paper in the trading process. In particular, I will deal with the problems posed by paper-based language, timing issues and the battle of the forms. This paper concludes with recommendations for making the environment more compatible to EDI as well as recommendations for individual user's implementation of EDI.

What is EDI?

What then exactly is Electronic Data/document Interchange or EDI?

It has been said that there are as many definitions as there are EDI gurus. Wright¹ defines EDI as 'the computer-to-computer exchange of business information in a standard format' or 'paperless communication'. Bradley Crawford² calls it the 'use of computerized communications in commercial transactions'.

Toh³ offers a simple definition: 'the direct transfer of structured business data between computers by means of telecommunications' and a more sophisticated definition: 'the replacement of paper documents by structured telematic messages based on public standards and conveyed directly by one computer to another at the application level, without human intervention'.

Following from Toh's sophisticated definition it is necessary to point out that he uses the word 'telematic' (from the French neologism *telematique*) to convey the convergence between computers, electronic office equipment and telecommunications into an unitary technology⁴.

How does EDI Benefit Traders?

EDI essentially replaces the physical exchange of routine paper such as quotations, purchase orders, invoices and delivery orders documents between trading parties. It also obviates the need for someone to type out an order, place it in an envelope, post it and wait for the person at the other end, upon receipt, to read it and then re-key the information into the recipient's computer.

The problem with paper is that it not only consumes precious trees but also involves higher transport, storage, protection, production and handling costs, not to mention the amount of time needed to process it.

Thus EDI aids communication both by increasing the speed of the operation and increasing accuracy by avoiding errors from re-keying. It also permits the placing of orders for smaller quantities and assists in the successful implementation of just-in-time manufacturing. At the same time the speed at which EDI works allows traders to do business with each other as if they were across the same street when they may in fact be separated by thousands of miles of ocean or land.

Strictly speaking, 'EDI' as understood in the industry, does not include Electronic mail ('E-mail') or telefacsimile ('Fax') as E-mail and faxes both communicate free text, usually in human readable form whereas EDI communication is coded, symbolic information and is in a structured format. Thus EDI data is machine readable only.

By way of clarification it should be pointed out that EDI systems can in fact support free text messages but this should be discouraged as it would defeat the purpose of using EDI. Free text is cumbersome and requires a human being to process. Moreover, if free text is allowed to modify or qualify a sender's message then an unwary user of EDI could fall into a trap, especially if the message in free text is not expected and is thus missed by the recipient.

How Does EDI Work?

EDI can be effected by trading partners in one of two ways. First, trading partners can be directly connected through their computers on a point-to-point basis through a leased line. Second, they can transmit through an intermediary computer system ('network') of one or more third party service providers. Networks commonly furnish 'electronic mail-boxes' so EDI messages can be stored from the time the sender delivers them to the network until the receiver retrieves them. Access to networks is often limited and unless a user can state the identification code he or she is given by the network as well as the password, access will be denied.

A network can and does function as a 'clearinghouse', a central market place with fixed rules, for the interaction of buyers and sellers.

Functions of Paper

Paper has traditionally served several formal legal functions.

Firstly, it acts as a carrier of information.

Secondly, by retaining pieces of paper on which the information is printed it is a permanent storage of evidence.

Thirdly, it shows (partly through a signature on it) that the information is authentic.

Fourthly, it satisfies those laws that require certain legal information to be 'written' and 'signed'.

There are no fundamental legal reasons for using paper. EDI systems can achieve the same legal goals as paper documents.

Problems Raised by Paperless Trade

Apart from the social, economic, political, physical or psychological

problems paperless trading may pose, paperless trading will also pose some legal problems.

However, not all barriers that are thought of as 'legal' problems may actually be legal in nature as much as they may be administrative. An example of a such a 'quasi-legal' problem will be where a government department insists on a paper form despite the entire business having been transacted through EDI. So when government authorities demand paper, traders have no choice but to comply and thus break the paper-less chain. Such problems are outside the scope of this paper.

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Legal Problems

Why they exist

Basically when traders use EDI they are forming contracts binding agreements intended to be enforceable in court. The rights and obligations of parties under an EDI contract are thus affected by any legal problems affecting EDI generally.

The United Nations Commission on International Trade Law ('UNCITRAL') identified in its report in 1984⁵ several legal issues involving electronic communications technology:

1. The legal value of computer records as evidence;

2. The requirements of writing and their application in an electronic environment;
3. Authentication of the source and veracity of electronic transmissions;
4. General conditions applied in electronic transactions;
5. Liability for erroneous or unauthorised transmissions; and
6. Electronic transmissions of bills of lading which have traditionally been represented by a piece of paper;

In 1989, the Commission of the European Communities⁶, after surveying the national laws of its 12 member states, identified 3 principal legal impediments to the development of EDI:

1. the obligation to have signed paper documents;
2. the evanescence of information sent by EDI and the consequent difficulty of adducing proof of what had been transmitted; and
3. the difficulty of determining the moment and place at which the transaction by EDI takes place.

Of the issues above, only those that are relevant to our discussion will be considered.

Toh⁷ talks of the problems in terms of obsolescence of the law and legal uncertainty. He points out that there are three ways in which laws become obsolete. First, the language of the law and practice may be paper-bound. Second, the law may be technology specific. Third, the law may have lost its currency or relevancy, based on fossilized procedures and out-of-date practices.

As for legal uncertainty, it will continue to arise as the technology develops. We need only look at the way the courts in Australia approached the early computer related cases⁸ to see how the uncertainty

resulted in decisions which must have stunned the industry. One of the possible causes of the uncertainty may be the courts' lack of familiarity with the technology. At the same time, there may be a rule in law that exists but parties may be uncertain whether it applies to the new situation and if it does how much of the rule is applicable.

How serious are the problems?

Although EDI has been around for two decades, there seems to have been no lawsuit anywhere in the world that has tested it. This, if correct, seems to be a real indictment of the view stated in the quotation and may suggest the opposite is true i.e. that EDI operates under far better conditions than trading under the conventional paper-based system. However this, like the conclusion in the quotation is equally unrealistic and would be a misunderstanding of EDI.

Wright⁹ suggests several reasons for the lack of litigation.

First, EDI may make misunderstandings and lawsuits in commercial dealings less common as implementation requires considerable advance coordination and testing between partners.

Second, EDI may be more secure and reliable than manual communication.

Third, EDI is largely used by big companies. Two large corporations differing over a small purchase are likely to settle privately. EDI helps make orders smaller and more frequent, which reduces the value of each order.

Fourth, EDI trading parties have long standing trading relationships prior to using EDI.

Therefore, the lack of litigation may be more a result of the business environment EDI operates under than

evidence of an improved legal trading environment. However, there is still good reason to examine the problems raised by EDI and to attempt to recognise them early and try to solve or avoid them before traders are forced to litigation.

The solutions

Solutions to EDI's legal problems will require recognition of the issues and careful legal and business analysis.

As there are few guideposts, developing workable solutions to EDI's legal issues requires good judgement as well as an understanding of the technology, business desires and the

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law. However, EDI is evolving so fast that there are no well-tested models for handling legal issues. There will be the risk that in deciding on a solution we could end up building so many safeguards into a system that the system becomes unworkable.

The language of paper 'writing'

Numerous writers have pointed out the problems posed by the requirement for the need to have 'writing' and 'signature' or both to be legally effective. In addition, the meaning of 'document' also raises questions.

In particular, the law's requirement for 'writing' is a problem common to most common law countries. This requirement is found in both the UK Statute of Frauds as well as in the

American Statute of Frauds. In Victoria, Sections 126 and 128 of the *Instruments Act 1958* (Vic) prohibits the bringing of any action in certain instances unless certain details are in writing signed by the party to be charged.

The requirement for 'writing' to serve as evidence of a transaction may have several goals:

1. to prevent fraud;
2. to force serious thought about the transaction;
3. to coax parties to articulate a greater amount of their terms and with greater care than they would if transacted orally; and
4. to encourage creation of a record.

At the same time properly recorded EDI data satisfies the purposes of the writing requirement because it can be secure and is symbolic information that requires as much seriousness and articulation to produce as writing on paper and it is a record.

At common law, 'writing' in the legal context does not have the same nuance as in ordinary speech. It does not have to be the product of pen and pencil and does not require paper. The courts have accepted the products of mechanical instruments, such as telegrams, as 'writing'¹⁰.

As for the statutory position in Australia, Section 25 of the *Acts Interpretation Act 1901* (Cth) 'writing' is defined to include 'any mode of representing or reproducing words, figures, drawings or symbols in a visible form'. In the Interpretation of *Legislation Act 1984* (Vic) 'writing' is defined to include 'all modes of representing or reproducing words, figures or symbols in a visible form'.

On the basis of the common law authorities on 'writing' Toh¹¹ argues that judges may accept that a computer printout is writing and even

that the CRT monitor display is 'writing'. The *Interpretation Act* 1978 (UK), which defines 'writing' in essentially similar terms as the Commonwealth and Victorian equivalent, is relied on by Toh to say that the definition is wide enough to cover words displayed on monitor screens and printouts. It may even cover the impulses stored in tapes, disks and RAM or ROM as they are all capable of being 'reproduced' in a 'visible form'. Thus, the requirement for 'writing' in some statutes will not pose problems for EDI in Australia. Certainly traders need not worry that they will not be able to bring an action for breach of those contracts which are required by statute to be in 'writing' merely because EDI is used.

'Document'

Like 'writing' many people assume that a 'document' must be on paper. This is not necessarily so.

A 'document' does not even have to contain 'writing'. Impressions of light images¹², encapsulated sound¹³, maps and plans¹⁴ are all 'documents'. Thus at common law, the form or substance on which the document appears does not make any less a document.

In Australia, the position has been codified. Section 25 of the *Acts Interpretation Act* 1901 (Cth) defines 'document' to include 'any article or material from which sounds, images or writings are capable of being reproduced with or without the aid of any other article or device'. The *Interpretation of Legislation Act* 1984 (Vic.) has a wider inclusive definition of 'document'. '[M]ap, plan, graph or drawing', 'photograph', 'disc, tape, sound track or other device in which sounds or other data (not being visual images) are embodied so as to be capable (with or without the aid of any other equip-

ment) of being reproduced therefrom' are all 'documents'.

As the definitions in both the *Acts Interpretation Act* 1901 (Cth) and the *Interpretation of Legislation Act* 1984 (Vic) are inclusive definitions, they do not completely displace the common law definitions so that anything not covered by either Acts will continue to survive. At the same time being inclusive, the definitions in both Acts are not bound to the technology of the day.

Therefore, EDI users in Victoria in particular are more fortunate than their American or British counterparts in not having to grapple with the problem of persuading courts

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that they are able to satisfy legal requirements to produce documents to prove the existence of their contracts or the terms that may be in such contracts. Certainly they are in no lesser position than conventional paper-based traders in being able to produce documentary proof.

The Signature

The signature at common law

Contrary to the commonly held belief that a 'signature' has to be a paper-based handwritten authentication device, at common law much less is required.

A signature performs four important functions in law; signification,

authentication, verification and legalisation¹⁵.

Amongst other things, courts presume from the presence of a signature on a document that:

1. it identifies the 'original' document, the document that is intended to have legal effect¹⁶;
2. it is authorised¹⁷;
3. it is complete and final and additions after the signature are viewed with great suspicions¹⁸;
4. it is regular and authentic¹⁹; and
5. that the party signing intends to be bound by it, and to be responsible for the correctness and completeness of the document's contents²⁰.

Therefore when a person signs a document he is authenticating it, vouching for the validity and authority of the originator, the originating institution and the message.

Signatures act as verification in conjunction with other factors such as a corporation's letterhead or a second signature of say, a bank official or a notary.

Occasionally the law requires a signature before it can be considered legally valid²¹.

Elements of a legal 1Y valid signature

At common law there is no need to identify the person signing specifically or directly as extrinsic evidence will suffice²². Initials²³ or marks²⁴ or a thumb print²⁵ will do. A signature may also be printed²⁶ or stamped²⁷.

Thus at common law there are very few rules about what a signature should be. Unless specifically required by a particular statute it seems that at common law a signature is any mark placed anywhere on a document which identifies a person who has an intention to be bound by the contents of the document.

EDI signature and authentication

One way of authentication is by signature but it is not the only way. Given that under common law there are few requirements as to what would be a valid signature, there should be no objection to electronic signatures.

Indeed, there is no reason why a personal identification number or other symbol cannot be a signature. The security and checking features for EDI - passwords/acknowledgments, trading partner profiles, network audit logs and the like - can corroborate an electronic signature. A record of the use and function of these can link the contents of a message with its originator.

Although no security system can stop a determined mischief maker, a wise mix of techniques can substantially deter forgery or unauthorised use of an electronic signature. The stronger the feature, the greater the certainty of identification. For instance, cryptographic authentication techniques can ensure authentication to a high degree.

Thus contracts consummated through EDI should be considered validly signed and authenticated even though they bear only an electronic signature. In this respect, traders using EDI do not suffer any harsher legal conditions than conventional paper-based traders from the technological differences.

Timing and procedures

A 1988 report on electronic messaging prepared by the American Bar Association Ad Hoc Subcommittee on the Scope of the US Uniform Commercial Code (the 'ABA Report') identifies several timing issues relevant to EDI such as: When is an electronic message legally effective? Should it be when the sender delivers it into the pos-

session of the transporting network? When it arrives at the receivers' mailbox? When the receiver checks his mail box? Timing is important where one or both parties have set a fixed time to communicate an acceptance to a request for quotation, or discounted payment terms are being granted in the case of a remittance given by a certain time.

Wright²⁸ suggests that trading partners enter into a trading agreement which can resolve this issue by strictly requiring parties to pickup messages at particular times in the day. Also it

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could provide a clause stating when a message is deemed effective where the difference of a few hours may be crucial.

Sequence of communications and acknowledgement

The ABA Report also points out that the sequence of communications can be decisive in establishing binding and non-binding terms. In the situation where conflicting messages are exchanged, the prevailing terms might turn on which message is deemed an offer and which a response to or an acceptance of the offer. In EDI, this is relevant with respect to terms normally commu-

nicated in transaction sets, such as price, quantity and terms of payment.

For these reasons, Wright suggests that the trading partner agreement should declare with precision which transaction sets will be communicated, in which order and under what time frames. In addition, the agreement should establish how terms are offered, accepted, rejected and modified, which may not be a simple task because EDI is not designed for much negotiation. Where time is of the essence, the agreement may have to provide a time-frame for the issue of a response.

Also, the respective roles of functional, transmission and application acknowledgements should be clarified as to what will constitute a legal acceptance.

Accountability

The agreement should allocate responsibility between partners for ensuring their system is dependable and secure.

Users rely on their partner's ability to conduct EDI competently as incompetence may be costly and the speed of communications can exacerbate loss. Limits to liability may be agreed in a trading agreement to limit exposure.

The battle of the forms

EDI alters the situation which exists in paper-based trade where traders sending each other printed forms containing their own terms and conditions in the hope that somehow some of the terms which they wish to have applied to the contract will somehow be incorporated as part of the contract. EDI discourages the regular exchange of freeform textual clauses and forces companies to bargain upfront on terms and set them forth in a trading partner agreement (or master purchase agreement). This

goes some way towards ensuring certainty of terms.

It is only when one partner is strong and dictates the terms that it may not be good. Then again this is no different from similar situations in the traditional paper-based commercial world anyway.

One approach to the problem of the battle of forms in the United States is to attach as exhibits to the trading partner agreement each party's respective paper form setting out their own terms, thus reviving the battle of the forms. It is best that such a practice not be resorted to in Australia as it will just transport a problem existing in paper-based trade to EDI trading. It will add nothing to the improvement of the EDI environment. If parties can be convinced enough to embark on a new way of doing business using EDI they should be encouraged to expend the effort to work out all terms between themselves and have them set out in the trading partner agreement.

Miscellaneous Problems

There are additional issues in the EDI environment such as security, capture and storage of evidence, assurance of delivery of messages, preservation of data integrity. Interesting as they are, there is insufficient space here to discuss them. In any case, these issues do not relate directly to the issue of the contractual conditions under which EDI operates.

Recommendations for Reform

EDI, if properly implemented, can answer the fundamental legal objections that might be raised against it. There are, however, few absolutes in determining precisely which controls are necessary in a given system. Wright thinks that the judgment must be made by informed professionals within particular companies,

reviewing the relevant considerations - money, time, practicality, risks.

On the other hand, Toh argues for Government involvement as it is in the government's interest to champion EDI. It has both the resources and the ability to touch every sector of society. In support he points out that outside of the United States, EDI has been to some degree successfully implemented in Singapore (Tradenet), Korea (K-Net). New Zealand (CEDI-FIT) and the Netherlands (INTIS and SAGITTA) and that in all these instances, government interest was crucial.

Government support can be in several ways. Amelia Boss²⁹ suggests that

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there be developed for possible adoption at the national level uniform definitions of 'writing', 'document', 'signature' and other appropriate terms which will include documents transmitted by EDI. But this, 'definitional' approach is piecemeal at best. It is really trying to solve problems that have arisen or have been long recognised by the EDI industry.

Given the resources and the capacity of the government to implement changes, there is strong reason for government in Australia to abandon the myopic approach that existed in the early days of computers that saw the government's inaction

result in decisions like *Apple Computer Inc v. Computer Edge Pty Ltd*³⁰ and which required a hasty legislative response to correct. The civil libertarians may well argue that EDI should be left to private industry and only those who choose to be involved should be involved. But this sort of argument can be raised against anything and, if carried to the extreme, can only result in a new Albania in Australia.

Thus it is submitted that government in Australia should champion EDI as it cannot afford to ignore it and risk being marginalised in the worldwide trend for the increased use of EDI.

Some laws need revision or clarification to be consistent with EDI. Although EDI can start to be used and implemented before these laws are changed, these laws should be examined and changed if necessary.

In Australia, we are fortunate to have statutes that recognise the technological advances of paperless trade and provide legal definitions which take this into account. However, more needs to be done than merely adopting the definitional approach.

The law must adapt to keep pace with the EDI movement. Those statutes, regulations and trade customs which originated before the Information Age and are inconsistent with EDI or may prohibit EDI in certain specific transactions must be changed.

With the economic advantage that EDI can bring through productivity increase it behoves the government to be an active participant in EDI. Government should not just pass laws such as those suggested by Boss or pass laws that are hostile to EDI such as prohibitive tax laws, strict data protection laws or unrealistic standards of security for EDI systems. It should also encourage EDI use through education and training

grants. It should also review rules and laws as well as administrative procedures that impede successful implementation of EDI.

Apart from government involvement, EDI users themselves need to play their part.

Two approaches

Christopher Reed³¹ says: 'A lawyer who is entirely ignorant of the processes involved in the creation and the running of software can hardly be expected to understand how the principles of negligence, or indeed any other rule of law should be applied to it.' Bradley Crawford³² after arguing for a need to reduce or eliminate appeal to the courts for solutions to problems, adds, 'The only problem you might find in implementing that advice is in finding a lawyer who will be able to assist you effectively'.

However as in all other things the lack of knowledge and understanding of EDI on the part of lawyers should not hold back EDI.

EDI users can help themselves by involving both their lawyers and their IT staff to build up the necessary legal structure for a workable and efficient trading environment. In particular, parties should start by drawing up detailed contracts to govern their relationship.

That age-old argument for contracts to be reduced to writing, that it is easier for parties to work out terms and allocate risks before disputes arise than leave it to the court to decide, is no less pertinent in the paperless world of EDI. In fact, it is all the more pertinent as EDI has created gaps in the understanding of how the old law applies to the new EDI situations.

In drawing up an EDI contract two approaches have arisen - an industry code of conduct and a model agreement.

In 1987 the International Chamber of Commerce (ICC) approved the Uniform Rules of Conduct for Interchange of Trade Data by Teletransmission ('UNCID')³³. The UNCID rules come from a family of codes relating to international trade, including the highly successful Uniform Customs and Practice for Documentary Credits³⁴, which applies to letters of credit and was largely a European initiative.

The UNCID rules are the 'Ten Commandments' of EDI. They offer essentially a code of conduct and a selection of succinct, neutral, uni-

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versal procedures for trading. They prescribe the care EDI users should exercise, and they prescribe procedures for acknowledging and confirming communications and for protecting and storing data.

They serve as a starting place for specific trading agreements and are not meant to be exhaustive but a minimum required standard for the use of EDI until national and international rules are settled.

The American Bar Association (ABA) has come up with its Model Electronic Data Interchange Trading Partner Agreement³⁵ in the custom

of other American-style trading partner agreements. It was drawn up as a communications agreement in essence and meant to be used for a variety of commercial needs.

A model trading agreement can help identify issues for trading partners and give guidance on what are fair terms. However, it is unlikely that a single form will eliminate the need for negotiation. It is likely that several forms will eventually emerge over time focusing on different industries.

Here in Australia the EDI Council of Australia ('EDICA') have come up with the Model Electronic Data Interchange Agreement³⁶ which is very similar in terms to the American version. There is no requirement that EDI users here have to adopt the EDICA model but it is a starting point in their negotiations.

General recommendations

General recommendations to those implementing EDI for valuable transactions listed by Wright³⁷ include:

1. Make system reliability and security a priority;
2. Enter a trading partner agreement that addresses 'writing' and 'signing' requirements if any apply;
3. Ensure that the communication levels have the necessary level of checks and controls;
4. Keep an appropriately detailed audit trail;
5. Systematically compare and reconcile audit trail information with messages. Follow up on inconsistencies, and keep a record of reconciliation;
6. Devise a trustworthy system for keeping an unmodified log of data sent and received;
7. Periodically have auditors review the system for weaknesses in reliability and control; and

8. Take all the above into account upfront when designing and developing a system.

Suggested terms for an electronic contract

In drawing up an EDI contract, apart from relying on the model EDICA contract, some of the points listed by Toh³⁸ as requiring consideration are:

1. Allocation of risks and costs, including system costs;
2. Form and manner of giving notices and contractual documents, including rules on when an EDI contract is formed;
3. Standards of record-keeping, particularly in relation to issues of evidence and proof;
4. Standards and manner of authenticating communications between parties;
5. Quantum, assessment and limits of liability;
6. Rights and duties of parties, especially the duty of confidentiality;
7. Pre-litigation dispute resolution mechanism.
8. Choice of law and forum;
9. Mechanism for resolving conflicts between conflicting clauses in different components of the agreement; and
10. Force Majeure clauses.

Where the EDI contract is a communication contract the following points should also be considered:

1. Timing issues;
2. Communications procedures; and
3. Security and control standards.

Conclusion

To deny that EDI has its problems is not just being unrealistic but self-

defeating as it would prevent further improvements in the EDI trading environment. The advance of technology will always raise new situations to be addressed by law.

To say that EDI is a legal minefield forcing unwary users to suffer under harsher legal conditions than paper-based traders overstates the case against EDI. After all, trade existed before the invention of paper. Indeed some Asian cultures to this day prefer to place greater value on a person's spoken word than a mere piece of paper. That is not to say that we should ignore the role of paper but certainly this can be adequately substituted in the EDI environment.

Our dependency on paper and the development of the law based on the culture of paper should be regarded as no more than a step in the evolution of trade and the law. Technology cannot be held back. It is for all of us to adapt and modify and if necessary change laws to accept the new technology to ensure that it works well. £

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Notes and References

1. Wright, *EDI and the American Law. A Practical Guide* (1989) at page xiii.
2. Crawford, 'Strategic Legal Planning for EDI' 68 *Canadian Business Law Journal* 66 at page 66.
3. Toh, *Paperless International Trade: Law of Telematic Data Interchange* (1992) at page 7.
4. Toh's preference for the term 'telematic' comes from the fact that some of the equipment currently in use is electromagnetic rather than electronic and in future it will be electro optic before becoming photonic (using the photons of light rather than the electrons of electricity). So 'electronic' risks becoming an obsolete term. However, much as Toh may have a point, for the purposes of this paper we will have to ignore the impending onslaught of technology for the possibly soon to be dated term 'electronic' as the basis for discussion. In any case, the term EDI itself evolved from ADP (automatic data processing) and EDP (electronic data processing) and in due course 'telematic' may well be the term that should be used.
5. Report of the United Nations Commission on International Trade Law on the Work of its

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6. Commission of the European Communities, *The legal Position of the Member States with Respect to Electronic Data Interchange: Final Report* (Sept. 1989) paragraph 703-05.
7. *Ibid* at page 113.
8. For instance see *Apple Computer, Inc. & Anor v. Computer Edge Pty. Ltd.* (1986) 65 ALR 33.
9. *Wright op. cit.* at page xxi.
10. *Welch v. Crawford* (1906) 25 NZLR 361.
11. *Toh op. cit.* at page 66
12. *Lyell v. Kennedy (N 3)* (1884) 50 LT 730, CA.
13. *Grant v. Southwestern & County Properties Ltd* [1975] 1 Ch 197.
14. *JH Tucker v. Board of Trade* [1955] 1 WLR 1575.
15. *Toh op. cit.* at page 77.
16. See Toh's discussion on the meaning of 'original' *op. cit.*
17. See, eg *R. v. Couper* (1889) 24 QBD 533.
18. See, eg *Re Walker* (1862) 2 SW & Tr 354, 164 ER 1033.
19. *Fox v. Bearblock* (1881) 17 Ch D 429.
20. *L'Estrange v. Graucob* (1934) 2 KB 394.
21. See for instance Sections 126 and 128 of the Instruments Act 1958 (Vic.).
22. *McBain v. Cross* (1871) 25 LT 804 (signature by agent of undisclosed principal).
23. *Taylor v. Dobbins* (1720) 1 Stra 399, 93 ER 592.
24. *Lemaine v. Staneley* (1681) 1 Freem KB 538, 89 ER 402.
25. *Re Finn's Estate* [1935] All ER 419.
26. *Schneider v. Norris* (1814) 2 M & S 287, 105 ER 388.
27. *Jenkyns v. Gaisford & Thring* (1863) LJ (NS)32 PMA 122.
28. *Wright op. cit.*
29. Boss, 'The International Commercial Use of Electronic Data Interchange and Electronic Communications Technologies' 1787 *The Business Lawyer*, Vol. 46 August 1991.
30. See, *supra* n 8.
31. Reed, *Computer Law* (1990).
32. See, *supra* n 2.
33. ICC Pub. No. 452 (1988). Note that although UNCID was finalised in 1987, it bears a 1988 date.
34. ICC Pub. No. 400 (1983).
35. 'The Commercial Use of Electronic Data Interchange - A Report and Model Trading Partner Agreement', (1990) 45 *Bus Lawyer* 1645 (with Agreement and Commentary at page 1717 et seq).
36. Reproduced in Hughes, G. & Sharpe, A., *Computer Contracts Principles & Precedents*.
37. See *Wright op. cit.* at page 15;
38. *Toh op. cit.* at page 317.