

LEGAL ISSUES IN CYBERSPACE CONTRACTING [1997] 3 MLJ clxxxi

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Introduction

The Chairman of British Telecom once said:

Regulation has become the single most important factor determining the future of telecommunication and, indeed, the information industry in general.¹

This means that the design, development and services of the information technology cannot be considered to be a matter only for technical experts. Technology has changed the manner of transacting business and poses challenges to law. The law in cyberspace faces many challenges precisely because of the radical departure from most of our pre-conceived notions about business transactions. In fact, many legal concept will have to be rethought in digital terms.

We encounter the terms 'cyberspace', 'internet', 'information superhighway', 'global information superhighway', etc everyday. There is a need to know the basics of the technical and legal landscape of what is called cyberspace as a growing number of companies use this medium to do business.

Cyberspace, Internet, Information Superhighway and Global Information Infrastructure

Cyberspace may be described as the non-physical 'place' where electronics communication happens and digital data is located.² The word cyberspace was first introduced into language by the science fiction writer, William Gibson in his 1984 novel, *Neuromancer*.³ It refers to the metaphor of electronic communication as a kind of dimensionless space. In Gibson's novel's of society in the near future, cyberspace is post-industrial work environment predicated on a new hardwired communications interference that provides a direct and total sensorial access to a parallel world of potential work spaces.

As employed by Gibson and subsequent science fiction writers, cyberspace is a complete spatialized visualization of all information in global information processing systems, along pathways provided by present and future communications networks, enabling full co-presence and interaction of multiple users, allowing input and output from and to the full human sensorium, remote data collection and control through telepresence, and total integration and inter-communication with a full range of intelligent products and environments in real space. In short, the term describes the situation when some activity takes place entirely within a computer system or a network of such system.⁴

Today, cyberspace is no longer confined to the pages of science fiction. Cyberspace allows its users to obliterate and declare obsolete physical space and time. Within the shadowy realm of cyberspace, time, distance and physical barriers are meaningless.⁵ Business dealings can occur across the globe in an instant without paper, pen or face-to-face contact.⁶ Banking transactions now almost wholly take place in cyberspace; the only 'real' money left is the stuffy in your pocket, and the use of such small change is continuing to decrease as we increasingly rely on credit cards and direct debits methods to pay our purchases.

The word cyberspace in its most narrow formulation is a synonym for the internet. However, it actually encapsulates numerous terms-of-art, among others, the internet, the information superhighway and the Global Information Infrastructure (GII).

The internet is the name of a group of worldwide information resources. It is a collection of all the connected networks in the world, although it is sometimes called worldnet or just the net. The internet consists of a huge number of participants, connected machines, software programmes and a massive quantity of information spread all around the world.

The internet began roughly 20 years ago as an attempt to connect together a US Defense Department called 'the ARPA net' and various other radio and satellite networks. It was originally developed to allow scientists, academics and others to share files. The ARPA net was an experimental network designed to support military research, in particular, research about how to build networks that could withstand partial failure and still function.

The internet is now one of the most extensive networks in existence with an estimated 2.2 million machines participating.⁷ Fifteen million to thirty million people in 137 countries are currently using internet, with approximately one million users added each month.⁸ It is estimated that 30 million messages are sent over the internet via e-mail everyday.⁹ It brings together many people who would never meet under normal circumstances, and facilitates regular communication between people who would otherwise be isolated from each other. In addition to facilitating personal communication between individuals, the internet permits rapid dissemination of information to large audiences. Information placed on the internet spreads quickly from one local network to another. Within days, a single piece of information might be replicated and disseminated to hundreds of different locations. The original desire to provide a means for sharing information has, in fact, evolved into what could be termed as a communal ethic on internet. In this respect, it would be inappropriate to think of the internet as a computer network. The computer networks are simply the medium that carries the information.

The internet is the first global forum and the first global library. Anyone can participate at any time; the internet never closes. Moreover, no matter who you are, you are always welcome. The reason why the internet works so well is that there are no leaders. Nobody is 'in charge' and no single organization pays the cost.

The term information superhighway¹⁰ is said to have been coined by the Vice-President of the USA, Albert Gore, in 1992.¹¹ Since then, the metaphor has become widely used all over the world to denote the worldwide development of a global information infrastructure.¹²

Although he still uses this expression, he now uses the term interchangeable with the terms electronic highway and National Information Infrastructure (NII). Gore stated that four major components would appear on this new information market-place: the owners of the highways, the makers of information appliances, the information providers and the information customers.

According to Andrew Grasso, the information superhighway will connect every home, office, news medium, library, data bank, business, government agency and computer to every person who uses a communication device, such as a telephone, television or personal computer.¹³ This infrastructure could make a wealth of service, data and creative works available, 'on-line', potentially in a form much more useful than is presently available.

The term 'Global Information Infrastructure' ('the GII') is sufficiently amorphous to allow several different groups to lay claim to it: the entertainment sector, computer network users and politicians as well as telecommunications policy-makers.¹⁴ There are several competing definitions. At one level, the GII is seen as a high performance computer network which will facilitate high-speed data access and retrieval. The internet is sometimes seen as the precursor for a GII. Alternatively, the GII could be envisaged as a multimedia network, the primary use of which will be conveying video in conjunction with data, image, text and voice. According to this vision, many of the potential applications will encompass the entertainment, education and health care sector as well as the business market.

A third possible viewpoint sees it as a medium for interactive television, in which the intelligent television set rather than the home computer or the video telephone becomes the main communication channel with a rich diet of multiple new television channels, video-on-demand, home shopping and other services. These three visions of a GII come from different parts of the information industry as it currently exists: the computer industry, the telecommunication industry and the entertainment industry. There are certain common element to each definition: the network will be digital, the capacity will be abundant and the services offered will be personal.¹⁵ The GII will circle the globe with information superhighways on which all people can travel. These highways will allow us to share information, to connect and to communicate as a global community.¹⁶

Cyberspace contracting

Countless goods and services are sold over the internet and the numbers continue to escalate.¹⁷ Internet users increasingly use the internet to make purchases. More than 25,000 merchants in 150 countries sell goods and services over the internet and 32% of the World Wide Web have purchase goods and services over the internet.¹⁸ World wide internet commerce revenues reached US\$350m in 1995.¹⁹ Visa USA estimates that the volume of its internet sales may match that of catalogue sales, which is \$50 billion in ten years.²⁰ Market researchers estimate that internet sales may reach \$300 billion by the year 2000.²¹

Electronic commerce allows business dealings instantly and paperlessly. Electronic commerce may be broadly defined as the automation of the commercial transactions through the use of computers and telecommunications to exchange and process information, transactional documents and forms of payment. As defined by the American Law Institute, an 'electronic transaction' is a transaction in which the parties, or their intermediaries, contemplate that an agreement may be formed through the use of

electronic messages or responses, whether or not either party anticipates that the information or records exchanged will be reviewed by an individual.²²

Thus far, no consensus exists as to how contracts should be formed in an electronics environment.²³ Basically, cyberspace contracting normally takes place through Electronic Data Interchange ('EDI'), a technology and method that enables to transfer information and legally relevant 'documents' electronically to another for direct processing in the other party's information system. This computer-to-computer communication is broadly defined as the exchange of coded electronic mail messages which originate in the sender's computer and travel to the recipient's computer.²⁴ EDI enables the sellers and purchasers to electronically exchange information within a matter of seconds. The messages are transmitted via telecommunication systems, usually by telephone networks or satellites.

EDI utilization can occur in a variety of contexts as a replacement for previous reliance on paper documentation, including a mean of communicating information on a bill of lading, transferring securities and making presentation on a letter of credit.²⁵ Information can be easily found, read and processed. In a commercial context, once the recipient's computer distinguishes that the received message is a purchase order, the computer then transfer the message into an inventory management program. Thus, without human intervention, the order is logged.²⁶

Most modern EDI transactions are commercial in nature, often involving large companies on one or both sides of the relationship. Most EDI environments also involve ongoing relationships between companies engaged in a supply or similar contracts that extends over time. Yet, the technology may also be used for isolated or intermittent transactions between people who have no direct prior dealings.²⁷

Cyberspace contracting and EDI specifically creates legal issues involving the interface between this method of transacting and legal doctrines developed for paper-based environments. Where was the contract formed? Which jurisdiction was it in? When and where was an offer made? How, where and when was it accepted?

Clear legal answers to these questions have not yet been developed. A white paper, Intellectual Property and the National Information Infrastructure (NII), prepared by the US Commerce Department notes:

The law dealing with electronic commerce is not clear — especially for totally paperless transactions. On-line contracting and licensing raise a number of concerns about the validity and enforceability of such transactions.²⁸

The Information Security Committee of the American Bar Association Section of Science and Technology states that:

The law has only begun to adapt to advances in technology. The legal and business communities must develop rules and practices which use new technology to achieve and surpass the effects historically from paper forms.²⁹

Developing law for cyber contract

There are a number of proposals from influential sources like the United Nations, American Law Institute, American Bar Association, US Securities and Exchange Commission and London Insurance Market Network as to how the law should deal with the issues arising in cyber contract.

The United Nations Commission on International Trade Law (UNCITRAL) has promulgated a model law on electronic commerce which is intended to ensure the validity of electronic transaction. The UNCITRAL model provides that a data message may constitute a valid means of offer and acceptance for the formation of a contract. It provides that 'information should not be denied legal effect ... solely on the grounds that it is in the form of a data message'. A data message is defined as 'information generated, sent, received or stored by electronic, optical or similar means, including, but not limited to, electronic data interchange (EDI), electronic mail, telegram, telex or telecopy'. Where the law requires information to be in writing, the requirement is met by a data message 'if the information contained therein is accessible so as to be usable for subsequent reference'. Where a signature is required, the requirement is met by a data message if there is a reliable method for determining the identity of the person 'signing' the data message and indicating that person's approval of the information contained therein. Where the law requires information to be presented or retained in its original form, that requirement is met if 'there exists a reliable assurance as to the integrity of the information from the time it was generated in its final form, as a data message or otherwise'.³⁰

In America, the American Law Institute released a draft of a revised art 2B of the Uniform Commercial Code in December 1995 which deals with contract formation. They provide:

In an electronic transaction, if an electronic message initiated by one party evokes an electronic message or other electronic response by the other, a contract is created when:

the response is received by the initiating party, if the response consists of furnishing digital information or access to it to the initiating party and the message initiated by that party invited such response;

the initiating party receives a message signifying or acknowledging acceptance *of the offer contained in its message*; or

the initiating party sends a response that signifies acceptance, if the response consists of an offer or opportunity to furnish the intangibles or access to the intangibles.

A contract is created under subsection (a) even if no individual representing either party was aware of or reviewed the initial repines, the information, or the action that signifies acceptance of the contract. Electronic records exchanged in an electronic transaction are effective when received in a form and at a location capable of processing the record or the intangible even if no individual is aware of their receipt.

In determining when an electronic message sent to another party is received by that party, the following rules apply:

if the recipient of the record has designated an information system for the purpose of receiving such records, receipt occurs when the record enters the designated information system

In this draft, the concept of an electronic transaction is hinged to a contract that can be created electronically. Paragraphs (a)(1) and (2) apply a receipt rule to two types of acceptances: acceptance by

performance and acceptance by electronic message. This indicates that in order to create a contract, two events must occur which tend to assure that symmetrical knowledge exists between the parties. The two events are the message and the response, both of which are received. Paragraph (a)(3) deals with a form of counter-offer or, at least, a response to an inquiry about the availability of the intangibles. Paragraph (b) makes clear that the creation of a contract does not hinge on the existence of a human decision-maker reviewing any of the relevant materials. The entirely electronic transaction is thus validated, subject to the treatment of attribution issues discussed above.

The Uniform Commercial Code ('the UCC') is based on three principles: liberal construction, freedom of contract and good faith. According to art 2, parties may form a contract by any means sufficient to show agreement, including conduct. Therefore, a purchase order or offer may be accepted by simply promising to ship or actually shipping the goods. Under art 2-207, an acceptance does not have to agree to the exact terms of the offer but may state terms which are in addition to those in the offer, or even incorporate different terms.³¹

According to the UCC, 'written' or 'writing' includes printing, typewriting or any other intentional reduction to tangible form.³² Evidently, the word 'includes' allows for other means of producing a tangible document. A tangible medium, for purposes of the Copyright Act of 1976, includes any means of expression from which copyright material can be perceived, reproduced or otherwise communicated, either directly or with the aid of a machine or device.³³

The tangible medium must be able to contain a 'fixed' work for longer than just a transitory period.³⁴ Therefore, an EDI message stored (or 'fixed') on the hard disk drive of a computer (or other means) should be a sufficient 'tangible form' to qualify as a writing under the UCC, especially when the UCC's principles of liberal construction is applied.

The American Bar Association has issued a report which states that a stored EDI message 'constitutes objective, corroborating evidence, apart from oral testimony of the parties, which demonstrates the possible existence of a contract.'³⁵ The report claims that the EDI message satisfies the writing requirement. Nevertheless, the report further argues that the printout of an EDI record should be sufficient to indicate contract formation if the production onto paper of a stored EDI message is necessary to satisfy the UCC's tangibility requirement for a writing.³⁶

A significant case involving non-traditional writings is *People v Avila*.³⁷ In *Avila*, the court found a lawyer, who falsified the driving records of his clients, guilty of forgery. The driving records were recorded on computer disks, and culpability under the statute required the falsification of a written instrument (defined as 'any paper, document or other instrument containing written or printed matter or the equivalent thereof').³⁸ The court held that computer disks satisfy the definition of a written instrument, and the lawyer's conviction was affirmed.³⁹

The writing must be signed by the party against whom enforcement is sought. As for the necessity of the signature, the UCC defines 'signed' as including 'any symbol executed or adopted by a party with present intention to authenticate a writing'.⁴⁰ A complete signature is not required; authentication may be printed, stamped or written; and a signature may also include initials, a thumbprint, a billhead or a letterhead.⁴¹

The issue regarding signatures is whether the party executed or adopted the symbol to authenticate the writing.

The subsection of this article concerning authentication of evidence provides examples on how to effectively trace 'signatures' back to their makers, such as system passwords and audit trails.⁴² One recent case specifically addresses the signature requirement with respect to facsimile transmissions. In *Parma Tile v Estate of Short*,⁴³ a contractor guaranteed payment of goods to be delivered to its sub-contractor. The guarantee was faxed to the seller, but it was not signed and merely contained the contractor's letterhead. The seller relied on this guarantee and delivered the goods. Both the contractor and the sub-contractor refused to pay, claiming that it requires a written signature at the end of the writing.

The court acknowledge that a signature is required since it proves 'assent to the terms of guarantee, is associated with seriousness and deliberation, and confirms the guarantee's existence and the intent of the guarantor to be bound'.⁴⁴ However, the court went further to say that any symbol or signature located anywhere in the document will suffice 'so long as the intent too be bound is demonstrated'.⁴⁵

The court held that the defendant-contractor's letterhead on the facsimile transmission satisfied the signature requirement and was an enforceable guarantee. In addition, the court stated that the defendant-contractor 'should not be permitted to evade its obligation because of the current and extensive use of electronic transmissions on modern business transactions'.⁴⁶

Almost all states in the USA have enacted some version of the UCC that is considered as a codified and updated version of the common law. In the UK, discussions are still ongoing as to the need for any new legislation on cyber contract. The EDI has been identified and distinguished from other less structured forms of electronic communications. However, the view is that:

... any method of communication requires discipline in order to be effective. The discipline is achieved by applying rules of conduct which by their use have become customary or by law have been imposed. [EDI] has not yet been in existence long enough to have acquired in these ways a collection of standard rules of conduct.⁴⁷

Trading partner agreement

The current approach to resolve many of the legal uncertainties associated with electronic commerce can be done by having a trading partner agreement — a written contract made between the parties prior to engaging in electronic transactions. This agreement requires the parties to confront the legal and technological uncertainties inherent in electronic commerce and to agree in advance on how they should be resolved. One of the more comprehensive model trading partner agreements, known as 'the Model Agreement', was developed by the American Bar Association. One of its primary purposes is to address concerns about the enforceability of electronic transactions. The Model Agreement provides that an electronic communication is legally effective only upon receipt and verification. It also provides that each message authorized by the Model Agreement is deemed to be a 'writing.' A 'signature' is any identification consisting of symbols or codes adopted by a party and electronically attached to or contained in a document transmitted by that party. It also provides that a 'signed' document shall

constitute an 'original' when printed from electronic files established and maintained in the ordinary course of business.⁴⁸

A primary function of the agreement is to specify the type and variety of messages that can be sent and received under the agreement and the general standards or protocols to be followed in the EDI transmission. The general trading partner agreements should deal with a number of transaction issues, including:

- (1) What standards, forms and protocol are to be followed in communicating an offer or an acceptance?
- (2) Does receipt of an offer or other document require acknowledgement by the recipient and if so, in what form?
- (3) When are offers, acceptances and rejections treated as being effective in terms of paper content?
- (4) To the extent relevant, how does agreement define when a 'document' is sent?
- (5) What evidence constitutes evidence of the terms of an offer, its receipt, rejection or acceptance?⁴⁹

Trading partner agreements, while useful, do not represent a complete solution of the legal issues associated with electronic commerce of all sectors particularly insurance industry. However, commercially feasible, trading partner agreements do help to minimize the legal problems and risks of cyberspace contract.⁵⁰

Conclusion

Traditional contract law presupposes a pen and paper, or at least a verbal agreement. Cyberspace eliminates all that. The contract law has now to adapt to the growing dependence on cyberspace transaction. In the US, the law regarding this issue is to enhance the efficiency of the US industry and to encourage further advancement. However, the contract laws of other countries have not adequately address the electronic commerce. Since cyberspace contracting is becoming commonplace and the standard practice, the law must be changed to keep up with the technology.

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Valance I, 'Information Technology & Public Policy' quoted in Allan Collier, 'Information Superhighways and the Internet' *The Law Librarian* Vol 26 No 4 (December 1995) at p vii.

² Anne Meredith Fulton, 'Comment, Cyberspace and the Internet: Who will be the Privacy Police?' 3 *CommLaw Conspectus* (1995) at p 63, quoted in Michael Adler, 'Cyberspace, General Searches and Digital Contraband: The Fourth Amendment and the Net-wide Search' *The Yale Law Journal* Vol 105 (1996) at p 1093.

³ Hilary E Pearson, 'Information in a Digital Age — The Challenge to Copyright' *The Computer Law and Security Report* Vol 12 Issue 2 (1996) at p 90.

⁴ *Ibid.*

⁵ Dan L Burk, 'Patent in Cyberspace: Territoriality and Infringement on Global Networks' *Tulane Law Review* Vol 68 (1993) at p 4.

⁶ Diana JP McKenzie, 'Commerce on the Net: Surfing Through Cyberspace Without Getting Wet' *Journal of Computer and Information Law* (1996) at p 247.

- ⁷ Rex S Heinke and Heather D Rafter, 'Rough Justice in Cyberspace: Liability on The Electronic Frontier' *The Computer Lawyer* (July 1994) at p 1 quoted in Mark L Gordon and Diana JP McKenzie, 'A Lawyer's Roadmap of the Information Superhighways' *Journal of Computer and Information Law* Vol xiii (1995) at p 182.
- ⁸ *Ibid.*
- ⁹ Harold Smith Reeves, 'Property in Cyberspace' *The University of Chicago Law Review* Vol 63 (Spring 1996) at p 761.
- ¹⁰ Andrew Grasso describes the information superhighway as the 'technological means to transmit voice, data, image, and video information from one point to another.' See Ariel B Taitz, 'Removing Road Blocks Along Information Superhighway: Facilitating the Dissemination of New Technology by Changing the Law of Contributory Copyright Infringement' *The George Washington Law Review* Vol 64 (1995) at p 134.
- ¹¹ *Supra* n 1 at p 492.
- ¹² VJJM Bekkers, J Nouwt and BJ Koops (eds), 'Emerging Electronic Highways: Introduction' in *Emerging Electronic Highways: New Challenges for Politics and Law* (1996) Kluwer Law International Netherlands at p 1.
- ¹³ In 'The National Information Infrastructure' *FED B News & J* (Aug 1994) at p 481. See also Jennifer D Choe, 'Interactive Multimedia: A New Technology Tests the Limits of Copyright Law' *46 Rutgers Law Review* (1994) at p 931.
- ¹⁴ <http://www.itu.ch/WTDR 95/c.4 htm>
- ¹⁵ *Ibid.*
- ¹⁶ *Ibid.*
- ¹⁷ *Supra* n 6 at p 251.
- ¹⁸ Randy Gainer, 'Allocating the Risk of Loss for Bank Card Fraud on the Internet' *The John Marshall Journal of Computer & Information Law* Vol XV No 1 (1996) at p 39.
- ¹⁹ Sebastian Rupley, 'Digital Bucks? Stop Here' *PC Mag* (28 May 1996) at p 54.
- ²⁰ Richard Bialek, Sr VP of Consumer Credit and Products, Visa USA on 23 May 1995, addressed to the Washington Software Association, excerpted in the WSA New Bytes (on file with author). This compares with 1994 total retail sales for Visa USA of \$1.5 trillion, catalogue sales of \$50 billion, and television/home sales of \$2.5 billion. *Ibid.*
- ²¹ Russel Mitchell, 'Safe Passage in Cyberspace: Theft-Proof Credit-Card Travel Means Cybertrade Can Take Off' *Business Week* (20 March 1995) at p 33.
- ²² Uniform Commercial Code (Revised) art 2B: Licenses — With comments (1 December 1995 — Draft) ss 2B–102(a)(17), cited in Paul M Hammer, 'Legal Issues in Electronic Commerce in the Insurance Industry' *Defense Council Journal* (April 1997) at p 247.
- ²³ JEJ Prins, 'Contracting in an on-line Market-Place', *supra* n 12 at p 145.
- ²⁴ Robert W McKeon, 'Electronic Data Interchange: Uses and Legal Aspects in the Commercial Arena' *Journal of Computer & Information Law* (1994) at p 511.
- ²⁵ Raymond T Nimmer, 'Electronic Contracting: Legal Issues' *Journal of Computer & Information Law* (1996) at p 213.
- ²⁶ *Supra* n 24 at p 513.
- ²⁷ *Supra* n 25.
- ²⁸ Paul M Hammer, *supra* n 22.
- ²⁹ *Ibid.*
- ³⁰ Paul Hammer, *supra* n 22 at p 252.
- ³¹ *Supra* n 24 at p 531.
- ³² UCC ss 1–201 (46).
- ³³ 17 Unites States Code s 102(a) (1988).
- ³⁴ 17 United States Code s 101 (1988).

³⁵ Electronic Messaging Services Task Force, 'The Commercial Use of Electronic Data Interchange — A Report and Model Trading Partner Agreement' 45 BUS LAW (1990) 1647 at p 1686.

³⁶ Ibid at p 1688, *infra* n 37.

³⁷ 770 P 2d 1330 (Colo App 1988). See also Opinion of Justices, NH711, 327 A 2d 713 (1974) (registering a vote in a voting machine was considered a written ballot.)

³⁸ Ibid at p 1332.

³⁹ Ibid at p 1335.

⁴⁰ UCC ss 1–201(39).

⁴¹ Official Comment 39, UCC ss 1–201.

⁴² Section 2B–102(a)(28).

⁴³ 590 NYS 2d 1019 (Supp 1992).

⁴⁴ Ibid at p 1020.

⁴⁵ Ibid.

⁴⁶ Ibid at p 1021.

⁴⁷ Ian J Lloyd, 'Electronic Commerce and the Law 1995' Computers and the Law, Vol 6 Issue 3 (August/September 1995) at p 28.

⁴⁸ Paul Hummer, *supra* n 21 at p 249.

⁴⁹ For a fuller consideration of the contents of the American Bar Association's Model Agreement, see Raymond T Nimmer, *supra* n 25 at pp 243–245.

⁵⁰ Paul Hummer, *supra* n 22.

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