

Emerging Issues in Electronic Contracting, Technical Standards and Law Reform

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I. – INTRODUCTION

The explosive growth of electronic commerce transactions in recent years has added fuel to efforts to harmonize international commercial law. Organizations such as the International Institute for the Unification of Private Law (UNIDROIT), the United Nations Commission on International Trade Law (UNCITRAL) and the Hague Conference on Private International Law are all participating in an emerging global debate concerning the changes that should be made to the form or substance of international commercial law to accommodate innovation in the technology of international trade.

Many of the important legal issues raised by cross-border electronic commerce in the 1970s and 1980s have already been successfully addressed by law reform at the national level and by the work of international organizations undertaken in the 1990s. The scope of electronic commerce at that time was narrowly confined to electronic funds transfers or the exchange of data messages, and networked computer systems were massive, complex and highly secure systems. Reforms targeted at this type of electronic commerce included establishing new bodies of private law and government regulation to manage the financial risks created by electronic financial services, and the removal of barriers to the use of electronic media in commercial contracts and communications. But innovation in electronic commerce proceeds at breakneck pace, and it is unclear whether the commercial law reforms of the 1990s will be adequate to promote the rational and orderly development of global markets in the future.

It is possible that changes now taking place in the electronic contracting technologies may significantly change the terms of this debate. This is because new, more powerful technologies now under development are intended to convert a considerable range of business customs and practice today performed by people into

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formal algorithms executed by computers.¹ These technologies are being developed to take advantage of the great advances the Internet has made over old-style electronic commerce technologies: global reach, low barriers to entry, intuitive interfaces, and ubiquitous presence. If such new electronic contracting technologies come into widespread use, then the norms embodied in them may come to have the power to control commercial conduct in a manner normally reserved for law.² Efforts to reform international commercial law may need to include mechanisms to ensure that should such economic power arise, it would be exercised in a fair manner.

II. – EMERGING ELECTRONIC CONTRACTING TECHNOLOGIES

Emerging electronic commerce technologies will displace human judgment and behavior to an ever greater degree. Older electronic commerce technologies often performed simple clerical tasks: repetitive mathematical calculations, making entries in account ledgers, or exchanging price and quantity information within the context of a long-term trading partner relationship. Technologies are now being developed that will permit businesses to use wholly automated processes to search out potential trading partners, interpret contract terms and negotiate much more complex contracts involving a wider range of goods and services. The objective of developing these technologies is to replace more sophisticated human behavior with machine processes in order to lower costs, improve controls and become more agile in responding to competition. In order for these efforts to succeed, a wide range of business practices and customs will have to be standardized and formalized among many enterprises. If new, more powerful electronic commerce technologies are successfully developed and marketed, then many transacting parties may find their access to global markets conditioned by their ability to conform their business behavior to the norms embodied in the technology.

Thinking of changes in the information technology used in online commercial transactions as falling into three generations can be a useful heuristic.³ The first generation is electronic data interchange (EDI) technologies which came into widespread use in the 1980s. The second generation is Internet commerce, and in particular, commerce involving the World Wide Web which came into widespread use in the 1990s. The third generation is still under development and not yet in widespread use. It will permit the automation of a wider range of functions than EDI

¹ One of the technologies that may help to make this possible is XML, which stands for "eXtensible Markup Language", a successor to one of the current standards for Web content HTML ("Hypertext Markup Language") that is more adaptable to the requirements of business communications. See www.ebxml.org (visited March 1, 2002).

² This is one more example of the tendency of networked information technologies to displace law. Professor Joel Reidenberg coined the term "*lex informatica*" to describe this process: Joel REIDENBERG, "Governing Networks and Cyberspace Rule-Making", 1996, 45 *Emory Law Journal*, 911. Professor Lawrence LESSIG makes a similar point in his book, *Code and Other Laws of Cyberspace* (1999).

³ For further discussion of the chronological development of electronic commerce technologies, see "Network Contracts: Managing the Interface ...", *supra*, asterisked note.

could, but will have the ease of use of Web applications. The definition of electronic commerce that underlies this taxonomy is transaction processing that takes place in a networked environment, not simply the use of electronic communications media such as faxes) or computerized information processing (such as stand-alone computers).

In order for businesses to realize the efficiency gains possible with old technologies such as EDI, the technologies of Internet commerce will have to become more standardized. When Internet processes are more standardized, it will be easier for businesses to integrate their back office systems with their Web sites, and it will be easier for customers to interact with their Web sites. When large numbers of businesses all adopt common interfaces for their business information systems and also use the Internet for communications, it will be possible to automate more commercial processes. Businesses should be able to use software agents to seek out new trading partners on the Internet, to do background checks on prospective trading partners, to negotiate contracts, and in transactions involving digital media, to perform the contract online.

If EDI permitted companies to use computer systems to replace low level clerical employees with automated processes, the next generation of electronic commerce technologies is intended to replace middle managers and sales representatives. Internet commerce was often characterized by a surprising lack of automation because information entered into Web forms was often received and processed by the Web site operator as if it were a fax or telex, without any automation at all. If this switch from human processes to machine processes is successful, it will require a greater degree of formalization of business custom and practice than was true with the first or second generation of electronic commerce.

The technical standards embedded in electronic contracting technologies will define in important ways the range of communications that prospective contracting parties can exchange. This effect of directing and channeling communications may have a major impact on how freely individuals and firms can access global markets. The impact is likely to be more beneficial on those who participate directly in the process of developing these technologies, and less beneficial on those who cannot participate. If those who cannot participate directly in the process of developing technologies or setting standards, such as consumers or small and medium-sized enterprises, can choose from an array of competing technologies that offer different options for forming contracts, then lack of participation during the development process may not be a problem later when technologies have actually been installed and are in use. Whether end users will have a wide range of choices may depend in part on whether economic pressures known by economists as "network effects" are present.⁴

⁴ Network effects can contribute to problems known as "lock-in" or "path dependency" in which chronic inefficiencies are produced by the unwillingness of market participants to make changes in existing technologies notwithstanding the existence of better alternatives that would permit markets to operate more efficiently. The economic definition of lock-in is only met if a better alternative to something now in use exists, the costs of switching to the better alternative are less than the losses caused by the inefficiencies of the current system, but something about what is in use now prevents making the switch. If the costs of

III. – STANDARDS AND NETWORK EFFECTS

Technical standards are an essential element of any modern networked environment. Network effects arise whenever the value of a good or service to one individual goes up as more individuals use it.⁵ The most recent user to join a network increases the value of the network to the other individuals on it, but has no way of making existing users compensate the new user for that value conferred. Because the value given to existing users is not priced, it is an externality – in this case, a positive externality. If users of a network based on outmoded or inferior technology are unwilling to leave that network to join a new one because they are uncertain if all the other users of the old network will make the same decision, then users suffer from negative network externalities. The difference between the new network struggling to gain users and the old one trying to hang on to them is usually defined by different technical standards.

Because network effects tend to encourage end users to congregate around a single standard or small number of compatible standards, and then resist change once a network is operational, control over the standards that define a network may confer considerable economic power. From the perspective of parties forming contracts within a networked environment, under certain circumstances they may feel considerable pressure to adopt common standards for their contracting services technologies. At present, common standards for electronic contracting technologies are still under development and no single standard has clearly emerged as dominant. It is unclear what the future holds with regard to standards and the range of choices offered contracting parties wishing to use electronic contracting services in a networked environment.

The success of the Microsoft Windows operating system for personal computers around the world is an example of a proprietary technology that has become a *de facto* standard around the world. This success is due in some considerable measure to network effects because choosing the Windows operating system generally gives end users access to the widest possible range of software applications and to the largest possible number of other end users with whom documents can easily be shared. It is possible that among the many competing electronic contracting technologies now under development, one or a small handful will ultimately come to achieve the type of market dominance Windows now enjoys. It is also possible that many end users may find themselves pressured to adopt a particular electronic contracting technology notwithstanding the fact that it does not meet many of their needs because of a desire to gain access to the largest number of global markets and possible trading partners.

In order to prevent such an outcome, the *Organisation for Advancement of Structured Information Standards* (OASIS) and the United Nations *Centre for Facilitation of*

switching are greater than the benefits that would result from switching, then there is no lock-in even though a better alternative exists. Hence, it is easier to prove that network effects exist, making change difficult, than to prove that “lock-in” exists. However, all three terms – network effects, lock-in and path dependence – are often used interchangeably in general discussions to refer to the same market conditions.

⁵ Carl SHAPIRO / Hal VARIAN, *Information Rules: A Strategic Guide to the Networked Economy* (1998).

Trade and Electronic Business (UN/CEFACT) have joined together to create ebXML, a standard-setting effort designed to be as inclusive as possible while still maintaining the breakneck pace characteristic of Internet commerce.⁶ The first group of standards developed focused on foundational issues and more complex standards are still under development.⁷ Other efforts are underway in competition with ebXML, such as Microsoft's Biz Talk standard.⁸ Other organizations are working on producing standards for products that may ultimately complement the work of ebXML, such as the work of the *World Wide Web Consortium* (W3C), an Internet standard developing body that produced the basic standards for XML itself.⁹

Standard developing bodies are trying to work with commercial developers of business software applications in order to produce electronic contracting technologies that improve business efficiency, are more affordable to small and medium-sized enterprises than the old EDI technologies they would like to replace, and that interoperate with each other, giving end users the widest possible range of choices. If the efforts currently underway succeed in accomplishing all these objectives and nothing more, then there may be no need for law reform in this area. But there are several reasons why these projects might produce unintended consequences and collateral damage in the world of international commercial law.

With any such large, complex undertaking, it is inevitable that there will be a significant time lag between the development of technical standards and the ability of end users finally to access products embodying those standards. Until end users are actually confronted with technologies based on these new standards, it will be very difficult to know whether the standards bodies and commercial developers are considering a wide enough range of business custom and practice when they develop formal models of transactions. Commercial software developers in particular are under pressure to bring products to market quickly, and researching the preferences of end users that are not actively participating in the standard developing process may be expensive and slow.¹⁰ Many end users may have no coherent opinions regarding these new electronic contracting technologies until finished products are widely in use, at which point it may be very difficult to modify technologies already in place.

Although it is possible that new electronic contracting technologies will offer contracting parties many new options that they do not enjoy today, there is also a risk that the economic pressures of commercial software development will lead to the introduction of programs that narrow the range of options parties have in negotiating and

⁶ See www.ebxml.org (visited March 1, 2002).

⁷ Version 1.0 of ebXML was ratified on May 18, 2001. A new project is designed to establish a "universal business language" for Internet commerce. See <http://www.oasis-open.org/committees/ubl/> (visited March 1, 2002).

⁸ See www.biztalk.org (visited March 1, 2002).

⁹ See www.w3c.org (visited March 1, 2002).

¹⁰ See, for example, Lorrie Faith CRANOR / Joseph REAGLE / Mark S. ACKERMAN, "Beyond Concern: Understanding Net Users' Attitudes About Online Privacy" (1999), accessible at < <http://www.research.att.com/projects/privacystudy/> > .

executing contracts. If regulators determine that contracting parties are entitled to a particular level of flexibility in negotiating contracts, or are entitled to demand a specific level of functionality in contracting technologies, the time to make that clear to those developing the relevant technical standards is before the standards have been finalized and implemented in finished products. However, regulators and end users may not have enough information about how new technologies will actually work until after new technical standards have been used to develop and distribute new products.

If regulators and end users wait until after new technologies are already in place, there may be practical constraints on their ability to require changes in the way new systems work. It may be difficult to influence the independent choices of large numbers of autonomous users of the technology who may be located in different countries and pursuing different goals. It may also be difficult and costly to make changes in an installed base of software and hardware that is already completely operational. If electronic contracting technologies can be modified easily by persuading a few key players to make changes in their systems, or by sending out free software patches that end users can quickly and easily install on their systems, then any oversights that occur today could be remedied in the future with relatively little difficulty. At present, there is no way of knowing whether new contracting technologies now being developed will be simple or difficult to modify in the future once they have achieved widespread acceptance.

There is therefore some risk that, if law reform efforts are delayed until after new contracting systems are already in place, legislators may find it difficult or impossible in the short term to overrule the contracting norms embodied in the new technology. In the US, law enforcement agencies discovered that their ability to conduct wiretaps during investigations of illegal conduct was thwarted after the telephone companies replaced old analog phone switching equipment with new digital switches. Law enforcement agencies prevailed upon Congress to pass the 1994 *Communications Assistance to Law Enforcement Act* (CALEA), which required the phone companies to make it possible for law enforcement agencies to conduct wiretaps using the new equipment. Telecommunications companies have challenged the US government in court at every attempt to enforce the act, claiming that the cost of providing the service the government demanded was greatly in excess of the US\$500 million allocated by the law. Seven years after CALEA was passed, little progress has been made in facilitating wiretaps and there is no end in sight of the wrangling between the US government and telephone companies over how many changes need to be made and who should pay for them.¹¹ The problems faced by US law enforcement agencies in trying to force the telecommunications companies to retrofit wiretap functions onto their new equipment remain particularly intractable in part because much of the solution to the problem requires expensive investments in hardware. In principle, conflicts between electronic

¹¹ The most recent case in a long line is *U.S. Telecomm Assn. v. Federal Bureau of Investigation* 276 F.3d 620 (D.C.Cir. 2002).

commerce technologies embodied only in software could be solved much more easily if a "software patch" could be widely distributed and installed.

Even where a problem only exists in software, so that in principle distributing new versions of software could solve it, efforts to force a large number of end users to make consistent changes in software may nevertheless be difficult. US advocates of greater information privacy rights for individuals using Internet services face this type of obstacle. Today there exists in the US an installed base of Internet server and browser software that facilitates the collection of information about the activities and identities of end users that will be difficult to modify effectively. Even the development of widely touted "privacy enhancing technologies" such as the Platform for Privacy Preferences (P3P)¹² have not resolved the concerns of privacy advocates, who note that the standards can be manipulated by software developers in order to diminish rather than enhance individual privacy.¹³ Even very limited attempts to change the behavior of US Internet businesses once Internet business customs and technology supporting those customs were in place have proven disappointing in the context of the US-EU *Safe Harbor Agreement*,¹⁴ and of the US *Children's Online Privacy Protection Act*.¹⁵ While infringements of the privacy of personal information on the Internet may sound in tort rather than contract, the profound conflicts that have been engendered in this context are suggestive of the conflicts that might result if the process of moving to more powerful new electronic contracting technologies is not handled properly.

IV. – PRIVATE LAW, PUBLIC LAW AND NON-GOVERNMENTAL APPROACHES

Within markets established using networked computer systems, pressure to conform behavior to norms developed not as law but as technical standards may operate as a form of coercion. Whether this is a strong or weak form of coercion will depend on a range of technical factors, and at present, there is no way to predict with any confidence which factors will predominate in systems now under development but not yet in widespread use. The economic pressure created by network effects may be felt both by parties that were able to participate directly in the development of new contracting technologies, and also by parties that played no part in their development. The same fairness concerns are not raised, however, with regard to parties that play an active, informed role in developing new technologies, and those who for whatever reason were

¹² See <http://www.w3.org/P3P/> (visited March 1, 2002). P3P is an XML standard developed by the World Wide Web Consortium.

¹³ "Center for Democracy and Technology, P3P and Privacy: An Update for the Privacy Community", March 2000 (available at <http://www.cdt.org/privacy/pet/p3pprivacy.shtml>, visited March 1, 2002).

¹⁴ In January 2002, the EU Commission expressed dissatisfaction with the implementation of the Safe Harbor. See http://www.europa.eu.int/comm/internal_market/en/dataprot/news/datatransf.htm (visited March 1, 2002).

¹⁵ Joseph TUROW, "Privacy Policies on Children's Websites: Do They Play by the Rules?", March 2001, accessible at <http://www.asc.upenn.edu/usr/jturow/privacyreport.pdf>.

excluded from the development process. For example, consumers, small and medium-sized enterprises, and firms in traditional industries are much less likely to play a role in developing new electronic contracting technologies than multinational enterprises or technology firms. Under these circumstances, regulators and end users may feel that some form of law reform may be appropriate now to insure that any coercive powers that may arise due to network effects later are exerted in a fair and lawful manner.¹⁶

Trying to fit a situation as dynamic and fluid as the development of new electronic contracting standards into established legal categories will not be an easy task. At least three different strategies for ensuring the fairness of contracting standards can be identified: reform of private law, such as laws prohibiting unfair contract terms in consumer contracts; reform of public law, such as laws requiring transparency in technical standard-setting; and non-governmental approaches, such as direct participation by consumer groups in open standard-setting processes. Legislation in the form of private and public law will bring with it the risk of "legislative lock-in", however, which may be as problematic as lock-in to technical norms embedded in contracting technologies.¹⁷

With regard to private law, a new liability rule might be added to contract law rules already in place to address gross disparities in the bargaining power of the parties.¹⁸ Such a law might be derived from laws prohibiting unfair or deceptive trade practices, such as laws based on the *Unfair Contract Terms Directive 93/13/EEC*. Although the Directive gives consumers important rights to challenge overreaching terms in standard form contracts, many consumers may be unaware of their rights and so feel compelled to comply with contract terms that could be invalidated, or may be unwilling or unable to take the necessary steps to dispute the terms. Using electronic contracting standards to raise the level of compliance and consumer awareness of the right to enter into contracts free of unfair terms could lower the cost of ensuring compliance with the terms of the Directive. Electronic contracting technologies could be developed that would permit consumers to identify merchants offering standard form contracts that would be unenforceable as unfair, and then avoid doing business with those merchants. For example, on March 1, 2002, on the US Web site of the Dell Computer Corporation, its standard contract terms applicable to consumer transactions included the following provision:

¹⁶ Merely because no one intends to develop standards that violate existing law does not mean technical standards will in fact conform to the requirements of the law; the problem is particularly acute for standards intended for global use. For example, use of early versions of the P3P Privacy Standard developed by the World Wide Web Consortium would have violated EU data protection law and the status of later versions of the standard under EU law remained problematic even after the problem was brought to the attention of the W3C. See Rüdiger GRIMM / Alexander ROSSNAGEL, "P3P and the privacy legislation in Germany: can P3P help to protect privacy worldwide?" (2000), accessible at <http://sit.gmd.de/~grimm/texte/P3P-Germany-e.pdf> (visited March 1, 2002).

¹⁷ Clayton P. GILLETTE, "Lock-In Effects in Law and Norms", 1998, 78 *Boston University Law Review*, 813.

¹⁸ *UNIDROIT Principles of International Commercial Contracts*, § 3.10.

"These terms and conditions are subject to change without prior written notice at any time, in Dell's sole discretion." ¹⁹

This term appears to be the type of term designated in Annex (j) of the *Unfair Contract Terms Directive* as unfair to consumers.²⁰ The laws enacted by member States transposing the requirements of the Directive could be revised to provide that merchants that do not take steps to permit consumers to ascertain whether unfair contract terms are present in an electronic contract face some form of liability. In order to set some limits on the potential liability of online merchants, such a liability rule might require merchants to permit consumers to distinguish fair from unfair contract terms using "reasonable steps taking into consideration available technology." ²¹

The *Electronic Commerce Directive 2000/31/EC* includes provisions that also might provide important new incentives to those developing electronic commerce technologies today to take account of end users' preferences. Article 10 of the Directive requires that end users must be informed at the outset of the contract formation process: how the process will work, how a copy of the agreement can be accessed, and how errors can be detected and corrected. This kind of general legal mandate to guarantee transparency of electronic contracting processes might create economic incentives for developers to invest more in discovering and formalizing end user preferences and responses.

Another feature of the E-Commerce Directive that has been criticized is the modification it makes in traditional contract law doctrines concerning contract formation.²² Article 11 originally would have required that in addition to offer and acceptance, contracting parties would have to confirm their intentions in order to form a valid contract online. The final version of Article 11 contains only a fragment of this original idea, namely that an acknowledgement must be sent to the end user after an order is received. While such a fragment of a rule does not provide particularly helpful guidance to anyone involved in electronic commerce, its insertion nevertheless seems to have been motivated by a legitimate concern that without some novel form of legal intervention, the needs of end users might not be adequately addressed by those developing new contracting technologies.

Government regulation based on public law models may be another way to direct more of the attention of those developing the standards for electronic commerce technologies towards end user needs and expectations. A public law

¹⁹ "Dell.com Terms and Conditions of Sale — Home, Home Office and Small Business Customers", accessible at http://www.dell.com/us/en/gen/misc/policy_008_policy.htm (visited March 1, 2002).

²⁰ Annex (j) designates as unfair any term "enabling the seller or supplier to alter the terms of the contract unilaterally without a valid reason which is specified in the contract."

²¹ This is the standard applied to US operators of Web sites targeting children if required to prove that they obtained verifiable consent of the child's parent to the collection of personal information about the child. 16 *Code of Federal Regulations* § 312.5(b).

²² Christina HULTMARK RAMBERG, "The E-Commerce Directive and formation of contract in a comparative perspective", 26 *European Law Review*, 2001, 429.

overlay of electronic contracting might resemble in some respects the regulations that now apply to modern electronic payment systems. In the US, for example, what was once the private law of negotiable instruments is now a complex patchwork of private obligations and government regulations issued by the Federal Reserve Board. One of the greatest success stories of US electronic commerce legislation is the limitation contained in *Federal Reserve Board Regulation Z* on consumer liability for unauthorized credit card charges, which has prompted major investments in online security without mandating any particular approach to the problem.²³ But identity and activities of those firms now contributing to the process of developing standards for electronic contracting technologies are not so easy to determine or monitor as the identity and activity of regulated financial institutions within a domestic economy. The right to provide banking services in most countries is subject to strict licensing and auditing requirements, but the right to contribute to the technological architecture of global markets is not. In other words, regulators may find themselves at a loss to identify a regulatory "choke point" where the relevant actors can be collared and required to submit to public supervision.

The *Electronic Signatures Directive 1999/93/EC* provides an interesting example of using voluntary incentives to encourage the development of electronic signature services in directions likely to meet the expectations of end users. The E-Signatures Directive manages to identify a sort of regulatory "choke point" by focusing on a particular element of an online commercial transaction, the electronic signature. While it does not mandate the use of any particular technology, it was clearly written with digital signatures and public key infrastructures in mind. The Annexes to the E-Signatures Directive establish voluntary standards that electronic signature products will need to meet if they wish to be recognized as "qualified certificates" and accorded a higher form of legal recognition than other electronic signature products.²⁴ The price of recognition as a provider of "qualified certificates" also includes the risk of liability to relying parties for inaccuracies in certificates.²⁵ The Commission has also promoted the work of the "European Electronic Signature Standardization Initiative"²⁶ in an effort to encourage the development of technical standards that would meet the requirements set forth in the Annexes to the Directive. Whether this framework of voluntary standards combined with liability rules designed to increase public confidence in electronic signatures will work will depend in part on whether digital signatures ever come into widespread use.²⁷

²³ 12 *Code of Federal Regulations* § 226.12. This regulation is based on the *Truth-in-Lending Act*, 15 U.S.C. § 1643.

²⁴ *E-Signatures Directive*, Art. 5.

²⁵ *E-Signatures Directive*, Art. 6.

²⁶ Information about EESSI is available at <http://www.ict.etsi.fr/EESSI/eessi-homepage.htm> (visited March 1, 2002).

²⁷ Jane K. WINN, "The Emperor's New Clothes: The Shocking Truth About Digital Signatures and Internet Commerce", 2000, 37 *Idaho Law Review*, 2001, 353.

Another source of public law model that might be helpful would be laws designed to promote fairness and transparency in the development of technical standards. The EU regulates the work of voluntary standard developing organizations in the member States in order to prevent technical standards from becoming barriers to the growth of the internal market.²⁸ Thinking of contract law reform in terms of the regulation of the transparency and fairness of standard developing represents a radical departure from the traditional canons of commercial law. But if new electronic commerce technologies rely on *de facto* standards instead of technical standards developed by standardization agencies, then such reforms may also fail to achieve their objectives.

Within either a private or public law regime, merchants might also be offered a "safe harbor" from such liability, for example as a consequence of participation in some sort of "seal" program. Seal programs are Internet self-regulation systems that permit commercial sites in voluntary compliance with specific standards to display on their sites a "seal" icon issued by whatever organization promulgated the voluntary standard.²⁹ For example, in the US, the *Better Business Bureau Online* has a "Reliability Program" designed to build online consumer confidence.³⁰ Merchants participating in this program may display the BBBOnline Reliability Program seal. In the unfair contract terms context, a firm might submit contract terms to a government agency³¹ or other public or private organization for review. If the contract terms passed muster, the merchant could display a "fair contract terms" seal and the consumer would only have to find the seal on the merchant's site in order to feel confident a contract contained no unfair terms. The technology required to permit consumers to identify Web sites displaying a seal is quite simple compared with that required to provide consumers with the ability to interpret and reject specific contract terms. But as evidenced by the recent EU evaluation of the US-EU Safe Harbor governing the obligation of US firms to meet EU data protection standards when handling personal data from the EU, ease of implementation may merely disguise a lack of actual compliance with the law.³²

²⁸ *Directive No. 98/34 of the European Parliament and Council laying down a procedure for the provision of information in the field of technical standards and regulations*, Official Journal of the European Communities No. L204/37 (July 21, 1998), superseding Council Directive No. 83/189.

²⁹ In the context of the US-EU Safe Harbor agreement, the EU declared that an adequate enforcement mechanism was a necessary element of a voluntary self-regulation alternative to government regulation. That would presumably be an essential element of any Internet commerce self-regulation scheme designed to protect consumers.

³⁰ See www.bbbonline.com (visited March 1, 2002).

³¹ In order to establish its compliance with the *Children's Online Privacy Protection Rule*, a US operator of a Web site targeting children may prove that it is in compliance with self-regulatory guidelines developed by a trade association that were submitted to the Federal Trade Commission for approval. 16 *Code of Federal Regulations* § 312.10.

³² EU Commission Staff Working Paper on the adequate protection of personal data provided by the *US-EU Safe Harbour Privacy Principles*, February 14, 2002, accessible at http://www.europa.eu.int/comm/internal_market/en/dataprot/news/02-196_en.pdf (visited March 1, 2002).

The problem with either private or public law reforms in this context is that they may fail to provide the desired incentives, or they may stifle innovation, or both. The markets within which electronic contracting services technologies are now developing may be so dynamic that institutions such as legislatures and courts may be unable to intervene to provide incentives for inclusiveness without creating problems worse than the ones to be solved. Given the difficulty in predicting today which technologies being developed today will ultimately prevail in global markets, and whether markets will become “locked-in” to those technologies, a response short of law reform might be most appropriate. International and non-governmental organizations could play a role in collecting information about technologies actually in use, monitoring their impact on contracting behavior, and collecting and analyzing information on the preferences of interested parties that might otherwise be overlooked. Governments could direct investments in electronic commerce technologies for use by public sector organizations in their procurement functions in order to encourage the development of technologies that meet public policy objectives. By taking less formal steps to increase transparency and reduce any “democratic deficit” problem associated with developing standards for electronic contracting, the worst potential problems associated with “lock-in” for either technical norms or legislation might be avoided while minimizing the costs of protecting the interests of those not directly involved in the standard-setting process.

V. – CONCLUSION

Emerging electronic contracting technologies offer both promise and peril: the promise of greater ease of use, economic efficiency and access to global markets, and the peril of *de facto* lawmaking outside any recognized framework of accountability or traditional legal institutions. One of the challenges for law reform in this area will be to make standards as broad as possible in order to accommodate the widest possible range of interests. Another challenge will be to avoid so burdening the standard developing process with administrative overheads that work on new standards is stifled, or requiring the development of standards that are so complex that price of the products embodying standards becomes unreasonably high. Given the uncertainty surrounding which technologies now under development will ultimately achieve widespread acceptance in global markets, and the uncertainty surrounding appropriate law reform strategies, regulatory intervention in the standard developing process today should be directed at increasing transparency and accountability unless and until specific problems emerge. If regulators actively monitor developments in this area to insure that they at least conform to existing law, then they may be in a position to intervene in the process of developing standards and applications before markets become locked-in to technical norms that are unfair to end users.

The problem of keeping technical norms for electronic contracting in line with law and public policy is only a special case of a general problem that will emerge with greater frequency in the future. Technical norms and norms embodied in law will be

necessary complements, but neither will be sufficient on their own to meet the needs of the public. Regulators and courts must work to identify ways to manage the interface between law and technical norms that preserve the effectiveness of legal institutions while harnessing the power of technological innovation for the public interest.



CONTRATS ÉLECTRONIQUES : NORMES TECHNIQUES ET RÉFORMES JURIDIQUES (Résumé)

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Le développement continu de nouvelles technologies électroniques dans la sphère contractuelle est à la fois prometteur, et risqué : d'une part, il laisse entrevoir l'accès à de plus grandes facilités d'utilisation, à une meilleure efficacité et aux marchés globaux ; d'autre part, il peut susciter des régulations spontanées en dehors de tout cadre reconnu pour sa compétence ou indépendamment des institutions juridiques traditionnelles. L'un des objectifs des réformes juridiques dans ce domaine devrait être d'énoncer des normes en mesure de répondre au large éventail des intérêts en présence, en veillant à ce que le processus ne soit pas ralenti par le poids des procédures administratives, et que la complexité des normes ne soit pas de nature à influencer de façon disproportionnée sur le coût de leur élaboration. Compte tenu de l'incertitude de l'avenir que connaîtront les technologies actuellement en développement sur les marchés globaux, et de l'incertitude afférente aux stratégies appropriées en matière de réformes juridiques, toute intervention de caractère réglementaire devrait se limiter à augmenter la transparence et la sécurité, dans l'attente que des problèmes particuliers se présentent. Si les autorités de réglementation suivent de façon active les développements dans ce domaine et s'assurent qu'ils sont conformes aux règles existantes, elles seront en mesure d'intervenir en temps opportun pour élaborer des normes et des critères d'application avant que les marchés ne se trouvent soumis à des normes techniques qui seraient inéquitables pour les utilisateurs finaux.

L'adéquation des normes techniques pour la passation de contrats par voie électronique avec les règles juridiques et l'ordre public n'est que l'un des nombreux problèmes qui se poseront toujours plus fréquemment à l'avenir. L'élaboration de normes techniques va de pair avec l'élaboration de normes juridiques. Une série d'exemples peuvent être fournis : ainsi, la protection des consommateurs contre les clauses abusives, qui fait l'objet de la Directive européenne 93/13/CEE, pourrait donner lieu à une obligation des professionnels de mettre le consommateur en mesure de reconnaître la clause abusive ou non abusive, à l'aide d'un système technologique approprié. L'objectif pour l'intérêt public, reste à la fois celui de garantir l'efficacité juridique et celui de stimuler l'innovation technologique.

