



Legal, Regulatory and Policy Issues of E-Commerce in Asia

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Abstract

This paper reviews the current status and ongoing development of ICT law and regulation as it impacts on electronic commerce and economic development in the Asia Pacific region. In particular, the paper will look at how the regional countries have developed their local laws to address the various legal issues of electronic commerce law and regulation. While many countries have adopted or adapted the model ICT laws, such domestic legal development would arguably be only the first of many to come. This paper also surveys the immediate regulatory issues that need to be addressed for the continued growth of E-commerce.

1. Introduction

A recent study predicts that the Asia-Pacific region will overtake Europe and challenge the United States as the preeminent electronic commerce area within the next few years.ⁱ According to this study, Australia, New Zealand, Singapore and Korea is expected to experience far more intensive electronic commerce activity than Europe and, possibly, the United States as a direct result of the current aggressive exploitation of electronic commerce throughout the region. In addition, other noteworthy Asian entrants to the burgeoning field of electronic commerce include India, an emerging powerhouse that recently announced a target of US\$50 billion export software sales by 2008,ⁱⁱ and China, which is leapfrogging over the PC era to launch straight into mobile Internet access.

To be effective and competent in doing business online in Asia, it is necessary for businessmen and their legal advisors to be familiar with the ever-changing landscape of electronic commerce laws in the different Asian countries. The country reports in the Forum series for the year 2000 of the *Asia Business Law Review* provide an overview of the applicable laws governing electronic commerce in select Asian jurisdictions and aid the foreign investor in understanding the applicable legal regime in the countries he decides to do business in.

2. Electronic Commerce and the Internet

Electronic commerce is an important part of the growth of the Internet. Electronic commerce is the general term for Internet and non-Internet computer-to-computer processing of a growing variety of transactions, ranging from electronic data interchange ('EDI') – the well-established handling of business-to-business purchase orders, invoicing, remittance notices and other routine documents – to electronic payment systems, credit cards and consumer sales of goods and services.

Increasingly, however, electronic commerce is used to mean Internet commerce for two reasons. Firstly, the Internet's size, growth rate and ease of access open up immense market opportunities for large, medium and small firms. Secondly, the economics of the Internet will make it increasingly attractive – under some circumstances – to move electronic commerce onto the Internet from the many company, industry and special-purpose value-added networks that are currently the main vehicles for EDI, Financial EDI and other electronic commerce transactions.ⁱⁱⁱ

The Internet greatly increases the ease of accessing, reproducing, and transmitting information. This ease raises a host of legal issues including the risk of copyright infringement, the protection of patent rights, and the preservation of trade secrets. The Internet also raises privacy concerns and issues pertaining to the validity and enforcement

of agreements entered into via the medium of the Internet. Conflict of law issues take on an added dimension of complexity and confusion due to the inherent fluid nature of the Internet, where users habitually trigger the application of the laws of multiple jurisdictions in a matter of seconds. It is becoming increasingly evident that the process of mapping existing legal concepts and tools into this new domain is not straightforward, and that a number of familiar legal concepts will need to be rethought and perhaps re-engineered before they can be efficiently applied in the new environment.

In dealing with the disparate areas of electronic commerce law, one is constantly reminded of the tale of the tortoise trying to keep up with the hare.^{iv} Technology develops at an extremely fast pace. As a result, the formulation of new government regulations or legal principles governing new technologies practically always lags behind. Most governments act reactively and amend or create regulations after industry acceptance of these technologies has taken place. This gives rise to the maddening and steadily widening gap between new technologies and adequate government regulation.

The existing body of law is, however, not entirely helpless and oftentimes the law is able to adapt and tackle some of the emerging legal issues thrown up by electronic commerce. This is done through the process of drawing from precedents and on reasoning by analogy.^v

There is, unfortunately and perhaps understandably, a limit to the ability of the law to adapt itself to emerging technologies: timely legislative intervention to supplant the existing law and to fill in the existing lacunae is often needed to ensure that the law remains current and relevant.

3. Legislative Initiatives

Frenetic activity in the past few years have ensured that lawyers and policy makers specializing in information technology law are kept busy monitoring developments that are taking place in many parts of Asia as well as in other parts of the world. Examples of legislation passed or sought to be passed in Asia include Australia's Electronic Transactions Act 1999, Broadcasting Services Amendment (On-Line Services) Act 1999, Privacy (Private Sector) Bill and the Copyright Amendment (Digital Agenda) Bill 1999; South Korea's Electronic Transaction Basic Act; Singapore's Electronic Transaction Act 1998; Hong Kong Electronic Transactions Ordinance 2000; Japan's Draft Bill Concerning Electronic Signatures and Certification Authorities and the Law Partially Amending the Trade Mark Law; Malaysia's Malaysian Communications and Multimedia Commission Act 1998, Communications and Multimedia Act 1998, Digital Signature Act 1997, Computer Crimes Act 1997 and Telemedicine Act 1997; the Philippines' Electronic Commerce Act; and India's Information Technology Act 2000.

Many governments and regulatory bodies in Asia are starting, or have started to, recognize the economic potential of electronic commerce and are considering a number of policy initiatives designed to encourage the development of electronic commerce. These initiatives include attempts to overhaul or effect amendments to existing laws to deal with the emerging legal issues that electronic commerce raises.

In China, for instance, efforts are being made to regulate electronic commerce in a more integrated fashion.^{vi} In this respect a set of draft guidelines governing the development of electronic commerce in China has already been prepared by the Ministry

of Information Industry and submitted to the State Informization Leading Group. According to the report, the guidelines include a discussion of comprehensive changes needed to China's legal system in order to support the development of electronic commerce.

In Singapore, various amendments to existing legislation and subsidiary legislation have been put in place rationalizing the existing law to cope with moves in various industries towards the electronic framework.^{vii} The amendments have collectively dealt with computer and electronic evidence, copyright, income tax concessions for cyber-trading, electronic dealings in securities and futures, electronic prospectuses and deregulation of the telecommunications industry.

In New Zealand, attempts are being made to update the applicable laws and these have been identified in the New Zealand Commission's reports: Electronic Commerce Part One – a guide for the legal and business community and Electronic Commerce Part Two – a basic legal framework.^{viii}

In Malaysia, the Multimedia Development Corporation has been working on a National Electronic Commerce Masterplan which is designed to facilitate the creation of a conducive environment for the development of electronic commerce in Malaysia.^{ix} The four key elements in this Masterplan are to boost confidence in on-line trading, prepare a regulatory framework, build a critical mass of Internet users and introduce an electronic payment system.

In the Philippines, the passage of the Electronic Commerce Act underpins the Philippine government's resolve to create an environment of trust, predictability and certainty in the Philippine system so as to enable electronic commerce to flourish.^x

In India, there have been feverish attempts to update the Indian legal and regulatory framework to make them more relevant in the face of rapid developments in information technology and communications.^{xi} The internet service provider and gateway markets have been liberalized and the national long distance sector has been opened up. In addition, discussions are ongoing for the liberalization of the international long distance sector and India's uplinking policies are slated to become more liberal.

A closer examination of the legislative activity in this area, however, leaves one with the uncomfortable feeling that what is taking place across a large part of Asia (with the possible exception of the ASEAN member countries in so far as its current and future collaborative plans are concerned)^{xii} is probably more a knee jerk reaction to perceived legal problems presented by electronic commerce rather than a careful and considered response to the *actual* issues that this new method of doing business raises. As will become clearer in the ensuing discussion, the primary focus of most of these laws and regulations is to update the substantive *territorial* laws of the jurisdictions concerned. This, as we will see shortly, will prove to be ineffective unless concurrent steps are taken to harmonize the laws amongst the different countries as well.

4. The e-ASEAN Task Force

At this stage, it is also instructive to note that the ASEAN Economic Ministers recently created a high-level public-private sector advisory body to develop a broad-based and comprehensive action plan towards evolving an ASEAN e-community or ASEAN e-

space. The action plan will cover the necessary physical, legal, logistical, social and economic infrastructure for such an endeavor. Each ASEAN Leader is required to name two members to the Task Force, one being a private sector individual and the other being a public official.

Hopefully, the e-ASEAN Task Force will have the effect of ensuring that the electronic commerce laws of the various ASEAN member states develop in a unified manner and takes due account of developments taking place in other parts of the world. This common front and unified stance would also give the ASEAN grouping further leverage in situations where proposals for reforms are made at an international level.

5. Followers and Not Leaders?

One discernible trend in the development of electronic commerce laws of Asia (although there are some notable exceptions)^{xiii} is that the passing of appropriate legislation tends to lag behind similar action taken by countries in the West. For example, we see that Japan's Draft Bill Concerning Electronic Signatures and Certification Authorities was passed only on 14 April 2000 and will come into effect only on 1 April 2001. In similar vein, Malaysia's Digital Signature Act 1997, which is based on the Utah Digital Signature Act,^{xiv} was passed two year after the latter was passed.

A question this raises is whether Asia is destined to be a mere follower in the field of electronic commerce law, policy and regulation and is merely rubber-stamping similar initiatives taken in the West as opposed to actively dictating the development of international electronic commerce laws. It must be noted, however, that caution in the field of electronic commerce law is not necessarily a bad thing as it enables a country to critically assess similar initiatives undertaken by other countries in the past and implement a model that suits its specific needs and aspirations. In the field of electronic commerce law, the need for uniformity is as important as - if not more important - than the substance of those laws. Viewed from this perspective, wholesale replication of existing laws that have found a degree of acceptance in the major trading nations of the world is not only an acceptable practice but also a desirable and necessary act to ensure harmonization in the field.

6. Regulating Electronic Commerce

The pervasive growth in electronic commerce in recent years has raised concerns that existing legal and regulatory regimes are too inconsistent or inadequate in dealing with the issues that electronic commerce raises. Most commentators have, however, noted that ironically it is the lack of substantial legal or regulatory infrastructure that has made the unbridled growth of electronic commerce possible and this has caused some to worry that the application of too much traditional regulation will stifle growth.^{xv} Some other commentators have taken the point further and argue that modern information markets should largely be defined by agreements and other manifestations of market choice rather than by regulation.^{xvi}

At various stages during the development of the Internet, several commentators have also lamented the inadequacy of domestic legal systems in dealing with issues in cyberspace. This is hardly surprising as the principles developed to deal with legal issues in the physical world are sometimes inadequate in dealing with the emerging legal conundrums thrown up by the Internet.

Most countries have sought to respond to the novel legal problems that crop up in cyberspace by enacting new legislation whilst others have sought to extend the ambit of their current laws to cover the novel scenarios occurring in cyberspace. In this flurry of activity, it is not surprising that most countries have not addressed the fundamental issue of whether it would be wise or desirable to apply existing national laws, which have evolved mainly to deal with ‘territorial-based’ concepts and rights, to the realm of cyberspace.

Accordingly, there have been calls to treat cyberspace as a separate jurisdiction for the purposes of legal analysis. Some commentators have suggested that a separate law of cyberspace, akin to the law of the high seas, should be devised. Others have proposed that the norms and practices of the users of the Internet could be relied upon in determining the applicable and appropriate legal principles that should apply to transactions conducted via the medium of the Internet.^{xvii} This would include “Netiquette”, which has the potential to constitute the foundation pillars of a workable uniform cyberspace law^{xviii} (at least uniform in the sense that the laws are uniform across jurisdictions: there is still adequate scope for formulating differing levels of “netiquette” to apply to different activities in cyberspace and to various different communities^{xix} that exist in cyberspace).^{xx} There would, doubtless, be specialized fields of activity^{xxi} where complete uniformity of laws will not be possible but for most types of transactions uniformity is not only achievable but increasingly desirable to avoid needless confusion in cyberspace.

In the same way that early legal precepts drew upon the customs of commercial parties^{xxii} for its evolution, the information technology era presents us with the opportunity of observing the customs and practices of persons in cyberspace in formulating appropriate rules to apply to parties engaged in activities in cyberspace.

This exercise would have the added benefit of allowing the laws of cyberspace to develop in a textured manner that takes into account the vagaries, idiosyncrasies, complexities and nuances of cyberspace. In this manner, the law will hopefully be able to encompass the unique norms and customs^{xxiii} that have developed in cyberspace and provide a regime that is practical, real and familiar to persons engaged in activities in cyberspace. This is, no doubt, a much more attractive proposition than ramming clearly inapplicable rules and principles developed for a physical world into a setting that is alien and vastly different.^{xxiv}

This approach also has the added benefit of allowing a ‘universal’ Internet law to eventually develop free from the shackles of domestic laws.^{xxv} Different national legal systems provide different answers and responses to legal problems and this creates enormous difficulty whenever an individual participates in an activity which potentially subjects him to the overreaching arms of multiple jurisdictions. A uniform law^{xxvi} that applies equally to all jurisdictions would help to introduce a degree of sanity to the conduct of activities in cyberspace. In addition, the emergence of a uniform cyberspace law may go some way in minimizing the prospects of a decision, given in one jurisdiction, being unenforceable in another jurisdiction on the grounds that the decision fails to adhere to minimum standards of law.

7. Regulation of Electronic Transactions

The sheer size of the number of electronic transactions taking place worldwide has inspired a plethora of proposals for its regulation. In addition to the patchwork of national laws that already govern electronic transactions, regulatory bodies worldwide are constantly promulgating new proposals for laws and conventions intended to facilitate electronic commerce.

Essentially, there are two key approaches that could be adopted to the regulation of electronic transacting. The approach more commonly utilized is the ‘functional equivalency’ approach. This entails an examination of the role currently played by a particular legal rule in the non-digital commercial world, identification of the way in which the same function can be achieved in electronic transactions and extending the existing rule by analogy to electronic transactions. As can be seen, this approach attempts to fit cyberspace within the ambit of familiar legal rules.

A second approach to the regulation of electronic transacting would be to move away from a preoccupation with picking out the best rules devised in a non-digital context and importing them into cyberspace and towards a reassessment of starting with the identification and application of first principles.^{xxvii} This approach stresses the need to identify the fundamental principles that inspired the rules governing non-digital transactions and to look afresh at how those principles could be best served in the uniquely different realm of cyberspace. This approach conceivably has the merit of leading to a much more healthy development of the law in the long term. This is because engaging in a deeper consideration of principles would probably lead to the discovery of *sui generis* rules for electronic transacting that takes into account the unique features and potential of computer-based communications systems.

Whilst both approaches have been used in developing regulatory regimes for cyberbased transactions, it is noteworthy that the functional equivalency approach has dominated proposals for regulating electronic commerce. One familiar example is the model law prepared by the United Nations Commission on International Trade Law (UNCITRAL), adopted by a United Nations resolution in 1996.^{xxviii} Another example is the draft Electronic Commerce Directive published by the Council of the European Union.^{xxix} This directive seeks to address the issue of how electronic communications can complement existing modes of worldwide commercial activity rather than developing a new system of regulation that could respond more flexibly to new and unanticipated practices that might emerge with technological advances. The functional equivalency approach is also employed in the United Kingdom’s Electronic Communications Bill^{xxx} which embodies the principle that electronic documents should be treated the same as paper-based equivalents although this is to be accomplished in stages rather than through a single act.

8. *The Model Law on Electronic Commerce*

The UNCITRAL Model Law on Electronic Commerce (‘Model Law’) is a generic law which can be extended and enhanced by individual countries should they so wish. In devising the Model Law, UNCITRAL had set out to develop rules that could be used in all countries regardless of their technological proficiency or the legal framework under which these countries operated. This automatically preempted the possibility of developing *sui generis* rules that are sensitive to the full possibilities of digital technology. The Model Law provides generally that electronic communications should be

given equivalent legal effect to paper-based communications^{xxxii} and specifically addresses how certain types of electronic communications could substitute for existing paper-based means of satisfying requirements of writing, signatures and contract formation.^{xxxiii} The Model Law has received a mixed reception in Asia. As of 30 August 2000, the countries in Asia that have adopted the Model Law are Australia, Hong Kong, Republic of Korea, Singapore and the Philippines.^{xxxiii} The e-ASEAN task force also recently announced that there has been agreement among the various ASEAN member states to base their respective national electronic commerce laws on UNCITRAL's Model Law by 2003.^{xxxiv}

It must be noted, however, that the Model Law is not without its fair share of detractors. One commentator, for instance, has rightly noted that it is damning that the Model Law does not deal with the question of when a message is effective, but instead it concentrates on the issue of when the message is received. This approach may suit the contract regimes in civil jurisdictions but it makes little sense in those based upon the common law. This is because the common law focuses on when a message takes effect and not so much on when a message is received. A classic example of this focus is seen in the postal rule which does not depend on the receipt of a message at all for the message to take effect. The rule simply provides that a message takes effect once it has been sent irrespective of actual receipt. The Model Law appears to have simply attempted to clarify certain issues of message communication and has failed to address the tenuous and difficult issues associated with the postal rule. It would therefore be prudent for parties that are subject to the Model Law to continue to take steps to avoid the application of the rule or, alternatively, adopt the arduous process of analyzing the communications topography to determine if the rule applies.

In this respect, it can be seen that the approach adopted in the Draft Revision of the Uniform Commercial Code^{xxxv} is better suited in dealing with the difficulties highlighted above. The Draft Revision of the Uniform Commercial Code stipulates that messages take effect when they are received, even if no individual is aware of its receipt.^{xxxvi} It then goes on to state that contracts may be formed by electronic transactions,^{xxxvii} or by the use of electronic agents.^{xxxviii}

In the specialized area of digital signatures, some commentators are of the opinion that the written signature requirements pose the greatest stumbling block to the development of electronic commerce^{xxxix} and advocate a unified global regulatory scheme for digital signatures. It must be noted that different countries or, in some cases, different states within the same country have considered or proposed digital signature statutes. These statutes address digital signatures from different approaches and may have the unintended effect of hampering international electronic commerce transactions.

9. Some Tough Questions Ahead

(a) Cyberspace – A Separate Legal Arena?

As the above commentary suggests, it may be timely for there to be a concerted global effort to deal with some excruciatingly difficult questions which may require a complete reorientation of hitherto held opinions of how law should operate. In particular, a pertinent question is whether the unique characteristics of the Internet should create a

separate legal jurisdiction. An ancillary question that may be asked is whether a separate jurisdiction would be beneficial to the development of the Internet.

At this juncture, one could rightly query whether the global nature of the Internet naturally forms a separate legal arena. This leads us to another question. If there is an inherent and separate jurisdiction that can be “reserved” for Internet based activities, should special laws be enacted to govern the Internet? In this vein, an important issue is whether a convention of cyberspace should be drafted similar to the separate international conventions governing the law of the sea and admiralty law.

The answers to these questions lie, in part, on whether we accept the Internet as a community and self-regulating body and on our understanding of and perception towards the scientific traditions and philosophies that govern such technology.

(b) New Property Rights?

Another important issue is whether electronic commerce will trigger the creation of new forms of property. An important sub-issue is whether these forms of property can be adequately protected by existing legal systems or will businesses have to resort to self-help to adequately protect their rights.^{xli} Some commentators argue that property in cyberspace is no different from that which exist in the real world and that existing doctrines are well equipped to deal with any legal dispute that arises. The practical reality, however, appears to be that new forms of property are emerging with their own unique legal frameworks. The field of domain names and the accompanying registration systems provides a good illustration. The controversy over the domain name system^{xlii} has resulted in unique laws being developed, such as the Anticybersquatting Consumer Protection Act in the United States, a governing body being set up, namely the Internet Corporation for Assigned Names and Numbers (‘ICANN’), and the creation of distinct dispute resolution mechanisms such as ICANN’s Uniform Domain Name Dispute Resolution Policy.^{xliii}

The Internet also poses a viable threat to the protection hitherto afforded by intellectual property rights. In the past, where production and distribution channels were visible and capable of being regulated, intellectual property rights could be enforced through legal remedies. With the instant transmission and global distribution enabled by the Internet, legal protections for intellectual property owners appear to be inadequate.^{xliiii}

Electronic commerce also requires us to ask some fairly hard-hitting questions in relation to intellectual property rights that may have been taken for granted all along. One such question would be the position the law should take in relation to applications for patents for online business methods.^{xliiv} The recent furore in the United States over the issuance of patents for some online business methods^{xliiv} is probably indicative of the expected debate that will ensue when other patent registries in other parts of the world are similarly inundated with claims of this nature.

(c) Changes to Political and Legal Institutions?

Technological change transforms not only substantive rights and obligations but also the political and legal institutions involved in the creation, development and enforcement of these rights. It is envisaged that in the coming years, we will see greater institutional changes in legislatures, courts, regulatory bodies, and law enforcement agencies. It is noteworthy that some countries in Asia have taken strident steps in ensuring that the judicial system and problems such as delayed court dates due to backlog of cases does not

act as a damper on parties' willingness to engage in electronic commerce. Singapore, for instance, recently launched [e@dr](#), a new electronic alternative dispute resolution system where the subordinate courts will provide mediation and settlement conferences for e-commerce transactions via the Internet.^{xlvi}

The very real problems posed by technological development to the work done by legislatures cannot be underestimated. The social repercussions of many recent technological developments would inevitably trigger quick and broad legislative responses. The relentless pace of technological change, however, sometimes has the effect of undermining legislative formulations. Legislatures around the world must therefore ensure that their appreciation of the ramifications of technology remain relevant and that they endeavor to predict future trends in technology or enact technology-neutral legislation.^{xlvii}

In the future, legislatures may also have to seriously rethink their roles and contemplate the possibility of delegating large chunks of their rule-making authority to specialized administrative agencies that typically have the added benefits of being more nimble and flexible in devising solutions to the problems that may arise.

Increasingly, many governments must also give due weight to the clarion calls from certain quarters of society for a hands-off regulatory approach to electronic commerce. It must be appreciated that sometimes this appears to be the best course of action to adopt especially when viewed against the backdrop of scenarios where regulatory agencies have blindly enacted legislation only to find that these efforts serve to frustrate technological advancement.^{xlviii} Regulatory agencies must also increasingly seek to engage industry and other stakeholder groups in formulating their policies and, in appropriate cases, promote industry self-regulation as a first-step response to the issues that crop up before implementing legislation. There are, however, limits to industry self-regulation and, in appropriate instances, governments must have the courage to make hard decisions and formulate suitable responses.

Courts also face similar difficulties in meeting up to the challenges of the information era. As one commentator so aptly notes, “[t]raditional rule-based, categorical reasoning, one of the hallmarks of the judicial decision-making process, is ill-suited to address areas of dynamic change”^{xlix} and that “[j]urisprudence in an era of dynamic change may well proceed on an increasingly case-by-case basis.”^l Earlier, we have already observed that courts will increasingly face tricky issues in relation to the reach of their authority. With the proliferation of electronic commerce, courts will increasingly be asked to deal with disputes involving international dimensions or, in some cases, involving no clear geographical dimensions at all. At the same time, the effectiveness of orders given by a judge may be circumscribed by enterprising defaulters or their supporters through postings via servers hosted or the use of internet service providers located in other countries.^{li}

The transnational and inherently anonymous nature of the Internet present serious challenges to law enforcement agencies as well.^{lii}

(d) Increased awareness of privacy concerns

Electronic commerce activities often lead to several ways of processing personal data. To protect the privacy of the persons involved, it is important that these personal data are

used with care, required for legitimate purposes, not disclosed to the wrong persons and not processed without the knowledge of the persons concerned. Therefore, the processing of personal data has to meet certain conditions. These conditions derive from the principles of privacy, which are laid down in the laws of some jurisdictions and international treaties. Even parties from countries with lax privacy laws should be mindful of these requirements and ensure that they comply with them if they intend to do business with parties in jurisdictions with strong privacy laws.^{liii}

It is also perhaps timely for the ASEAN member countries to give serious thought to developing a common charter on privacy and, where necessary, implement appropriate privacy legislation. This would serve the dual purposes of providing a sense of comfort to potential investors as well as ensuring that the privacy laws of the ASEAN member countries are in line with international norms in the area. It is useful to note that some countries in Asia are already starting to conduct bilateral discussions for the purposes of streamlining their privacy laws.

10. The Future

It is expected that, in the coming months, the flurry of legislative activity in the field of electronic commerce law and other related areas of law will continue unabated. Hopefully, this will be followed by a period of reflection and consolidation where deeper questions on the suitability of these regulations as well as the effectiveness of enforcing these laws will be asked.

The Internet is a fluid medium with no national boundaries in place. From the discussion above, it can be noted that regulation of rights and liabilities in such an environment requires a consolidated global approach. As one commentator aptly notes, “[o]nly when jurisdictions around the world converge towards a generally accepted standard of legal rights and liabilities that all parties in the digital environment may then enjoy true and meaningful protection.”^{liv}

In the next few years, we will probably see greater concerted global action in formulating international solutions and conventions to deal with the emerging legal issues in the field of electronic commerce. In the meantime, organizations such as the Internet Corporation for Assigned Names and Numbers (ICANN), the World Intellectual Property Organization (WIPO) and the World Trade Organization will continue to play an important role in bringing about uniform practices in their niche areas of focus. An example would be ICANN’s current work on administration, best practice and registration and delegation guidelines in relation to the domain name system and its implementation of a uniform dispute resolution process^{lv} to govern certain domain name disputes. Another example is WIPO’s recent recommendations and guidelines for trademark and domain name disputes.^{lvi}

During the coming years, we may also see the development of a World Electronic Commerce Organization, an idea proposed at the 1999 meeting of the World E-Commerce Forum in Perth, Western Australia. If this materializes, it may pave the way towards a more consolidated approach in solving legal issues that arise from electronic commerce and would, in all probability, give an added impetus to harmonization efforts in this field.

ⁱ This study, conducted by Professor Steve Burdon, Visiting Professor of Electronic Commerce at Sydney's University of Technology, will be presented at the World E-Commerce Forum, which will be held in London in October this year, "Study: Asia Emerging as E-Commerce Powerhouse", Vol 6 Issue 44 (September 1 – 7, 2000) *Computerworld* 4.

ⁱⁱ Somasekhar Sundaresan, "Plotting India's Online Future", February 2000 *International Internet Law Review* 16 and Safir Anand and Himanshu Goswami, "The Indian Stock Market Prepares for Take-Off", May 2000 *International Internet Law Review* 32.

ⁱⁱⁱ See, generally, Peter G W Keen, Walid Mougayar and Tracy Torregrossa, *The Business Internet and Intranets: A Manager's Guide to Key Terms and Concepts* (1998).

^{iv} See Electronic Commerce Law country report at (2000) 27 *Asia Business Law Review* 38.

^v The authors of the *Asia Business Law Review* report on India, for example, remark on the ingenuity of the Indian judiciary in applying existing laws, such as copyright laws and obscenity laws, to deal with Internet related issues: see Electronic Commerce Law country report (forthcoming in the October 2000 issue of the *Asia Business Law Review*).

^{vi} See Electronic Commerce Law country report at (2000) 29 *Asia Business Law Review* 32.

^{vii} See Electronic Commerce Law country report at (2000) 29 *Asia Business Law Review* 37.

^{viii} See Electronic Commerce Law country report at (2000) 28 *Asia Business Law Review* 42.

^{ix} See Electronic Commerce Law country report (forthcoming in the October 2000 issue of the *Asia Business Law Review*).

^x See Electronic Commerce Law country report (October 2000 issue of the *Asia Business Law Review*).

^{xi} See Electronic Commerce Law country report (October 2000 issue of the *Asia Business Law Review*).

^{xii} See the discussion below on the e-ASEAN Task Force.

^{xiii} One example would be Singapore's early embrace of UNCITRAL's Model Law via its Electronic Transactions Act 1998.

^{xiv} This model has been criticized for entailing significant governmental licensing and state involvement in digital signature regulation: see Sanu K Thomas, "The Protection and Promotion of E-Commerce: Should There be a Global Regulatory Scheme for Digital Signatures?", (1999) 22 *Fordham International Law Journal* 1002.

^{xv} Aileen A Pisciotta, Heather M Wilson and John A Wenzel "European E-Commerce Directive Will Have Controversial and Far-Reaching Impact", July 2000, Vol 2, No 7 *Global eCommerce Law and Business Report* 1.

^{xvi} Raymond T Nimmer, "International Information Transactions: An Essay on Law in An Information Society", 26 *Brooklyn Journal of International Law* 5.

^{xvii} See note 16.

^{xviii} There should, also, be harmonization of the private international laws of the different jurisdictions so that parties are better able to determine the countries that could legitimately exert jurisdiction over their activities. It should be noted that there continues to be considerable controversy on the appropriate approach to adopt in determining issues relating to the scope of personal jurisdiction. The difficulty is further compounded by the different conceptual approaches, such as the realist, representational, post-modern and liberal-constructivist approaches, that could be employed when dealing with jurisdictional issues.

^{xix} As can be easily appreciated, there are various different types of communities that exist. These communities also evolve over time. Of particular significance is the current popularity of communities that deal in less interactive and more commercial exchanges as contrasted to the popularity of the interactive and noncommercial communities that dominated the Internet in the past. It should also be appreciated that the Internet allows a single individual or corporate entity to take on various different roles depending on the context and circumstances and one could be a member of different communities in cyberspace. See, generally, Shapiro, A "The Disappearance of Cyberspace and the Rise of Code" (1998) 8 *Seton Hall Constitutional Law Journal* 703 and Lessig, L "The Zones of Cyberspace" (1996) 48 *Stanford Law Review* 1403.

^{xx} Some commentators have rightly suggested that it is not apt to apply the traditional, territorial and geographical conception of community in the physical world to cyberspace, where an alternative 'experiential' conception of community seems to exist: see Falk, J "The Meaning of the Web" (1998) *Information Society* 285 and Giordano, P "Invoking Law as a Basis for Identity in Cyberspace" (1998) *Stanford Law Review* 1.

^{xxi} Such as securities regulation and activities impinging on issues pertaining to civil and constitutional liberties.

^{xxii} In fact, the better part of English commercial law owes its legacy to the *lex mercatoria*, otherwise known as the law merchant. *Lex mercatoria* refers to a body of law that had its source in the trading fairs and merchant communities of medieval Europe and the Middle East. As trading fairs evolved in the late 7th century, merchants developed sets of commercial customs to regulate their activities. These customs followed the merchants when they traveled to other cities and gradually over time, these customs gained the force of law as governments recognized that merchants should be able to resolve their disputes by their own rules.

^{xxiii} These include norms such as open participation, consensus-building, a prioritization of freedom of speech and grassroots organization that have become identifiable with the Internet.

^{xxiv} As one commentator aptly puts it, 'advanced computer technology undermines the assumptions of older categories [of the law]. For example, interactive networked hyperlinked media eviscerates the idea of authorship, and with it one of the fundamental concepts of ... copyright law ... Second ... advanced computer technology conflates distinctions that made much sense under older regimes and which informed law that grew up in the older regimes. New technology eviscerates the distinctions between public and private, the telephone and mail, the written and spoken word, broadcasting and point-to-point communications, and between the publication, consumption, and distribution of information ... Third, increased automation, with a concomitant reduction in the role of effective human oversight, creates difficulties in the assignment of liability or legal blame ... The legal system is inhibited in its use of traditional metaphors and analogies for a fourth reason. The pace of technological change is not only rapid, it is, more importantly, highly uneven. Whereas we may have a relatively coherent and congruent set of assumptions about the way the physical world works, we do not have that common basis in the fabricated world of the computer, in what we might call the *electroverse*.'; see Karnow, C E A, *Future Codes: Essays in Advanced Computer Technology and the Law* (United States, Artech House, 1997).

^{xxv} It has been argued that complete harmonization of the law pertaining to cyberspace may be difficult to achieve because of the lack of an emerging consensus on some key issues and areas of the law such as formality requirements, joint liability of intermediaries and the law of conflicts: see Reed, C "Internet Contracting" (1999) February/March *Computers and Law* 36. It is suggested that these problems are not insurmountable and, as an appreciation of the importance of having uniform laws apply to transactions in cyberspace develops, countries will come under increasing pressure to resolve these differences in their laws. It is noteworthy that we are already starting to see some strains of convergence in hitherto controversial areas of the law, such as the effect of an offer and acceptance in the formation of contracts, copyright issues in relation to hyper-text linking and framing and the liabilities of network service providers.

^{xxvi} Judges and other adjudication bodies may, of course, adopt differing perceptions of what this 'universal' law is and therein lies some potential for the law to develop in divergent paths in different jurisdictions. In order to overcome this difficulty, it is suggested that the practice of courts when interpreting the provisions in multilateral treaties or conventions be followed. In this regard, it should be noted that the principle of good faith imposes on every court that is hearing a dispute involving the provisions of a multilateral treaty the obligation to harmonize its decision with those of other courts and, where there are conflicting precedents, to harmonize the precedents.

^{xxvii} For a detailed analysis of this approach and a comparative analysis of the two approaches, see Andrew D Murray, Douglas W Vick and Scott Wortley, "Back to Basics: First Principles in the Law of Electronic Transactions", Vol 5, Issue 3, June 2000 *Intellectual Property & Information Technology Law* 2.

^{xxviii} The full text of the Model Law is available at <http://www.un.or.at/uncitral/english/texts/electcom/ml-ec.htm>.

^{xxix} Council of the European Union, Draft Directive on Electronic Commerce 98/0325 (COD), 28/02/2000.

^{xxx} The full text of this Bill can be viewed at <http://www.publications.parliament.uk/pa/pabills.htm>.

^{xxxi} See Art 5.

^{xxxii} See, in particular, Arts 6, 7, 11, 12, 13, 14 and 15.

^{xxxiii} Information obtained from UNCITRAL's website at <http://www.uncitral.org/en-index.htm>.

^{xxxiv} "Asean countries agree on e-commerce laws", Vol 6 Issue No 43 (August 25-31, 2000) *Computer World* 11.

^{xxxv} The American Law Institute (ALI) and the National Conference of Commissioners on Uniform State Laws (NCCUSL), the two organizations jointly responsible for drafting, updating, and promulgating the Uniform Commercial Code (UCC), in August 1999 announced the formation of a new Drafting Committee to continue the effort to revise Articles 2 (Sales) and 2A (Leases) of the UCC. The UCC has achieved substantial uniformity of commercial law throughout the United States through enactment in whole or in part in all 50 states as well as in the District of Columbia, the Virgin Islands, and Puerto Rico. The present revision of Articles 2 and 2A is part of an ongoing undertaking by the ALI and NCCUSL to modernize the UCC, originally promulgated in 1952, and keep it responsive to contemporary commercial realities: see ALI and NCCUSL's joint press release dated 18 August 1999 which can be viewed at <http://www.nccusl.org/pressrel/ucc2a2.htm>.

^{xxxvi} See Arts 2, 2A and 2B.

^{xxxvii} See s 2B-102(18).

^{xxxviii} See s 2B-102(16).

^{xxxix} Judith Y Gliniecki and Ceda G Ogada, "The Legal Acceptance of Electronic Documents, Writings, Signatures, and Notices in International Transportation Conventions: A Challenge in the Age of Global Electronic Commerce", (1992) 13 *Journal of International Law & Business* 117.

^{xl} See generally Lawrence Lessig, *Code and Other Laws of Cyberspace* (1999).

^{xli} See generally Jessica Litman, "The DNS Wars: Trademarks and the Internet Domain Name System", 4 *The Journal of Small and Emerging Business Law* 149.

^{xlii} See generally Olivia Maria Baratta and Dana L Hanaman, "A Global Update on the Domain Name System and the Law: Alternative Dispute Resolution for Increasing Internet Competition – Oh, the Times They Are a-Changin'!", 8 *Tulane Journal of International and Comparative Law* 325.

^{xliii} See generally Alan Heinrich, Karl Manheim and David J Steele, "At the Crossroads of Law and Technology", 33 *Loyola of Los Angeles Law Review* 1035.

^{xliv} See generally William D Wiese, "Death of a Myth: The Patenting of Internet Business Models After State Street Bank", 4 *Marquette Intellectual Property Law Review* 17.

^{xlv} See Michael North, "The US Expansion of Patentable Subject Matter: Creating a Competitive Advantage for Foreign Multinational Companies?", (2000) 18 *Boston University International Law Journal* 111; and Christopher S Cantzler, "State Street: Leading the Way to Consistency for Patentability of Computer Software", (2000) 71 *Colorado Law Review* 423.

^{xlvi} According to Chief Justice Yong Pung How, e@dr is "[a] first of its kind in the region and the world for a judiciary" and that "[i]n addition, our partners, namely the Singapore Mediation Centre and the Singapore International Arbitration Centre will offer services in mediation and arbitration respectively, for such disputes": see Julia Ng, 'Singapore Judiciary Launches E-Commerce Dispute Resolution Hub', 16 September 2000 accessible at <http://www.channelnewsasia.com/articles/2000/09/16/singaporenews16926.htm>. The e@dr service may be accessed at <http://www.e-dr.gov.sg>.

^{xlvii} In some cases, the latter course of action may, however, defeat the purpose of enacting legislation in the first place.

^{xlviii} Some commentators have argued that the United States' Digital Millennium Copyright Act is one such example: see Pamela Samuelson, "Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised", (1999) 14 *Berkeley Technology Law Journal* 519.

^{xlix} Alan Heinrich, Karl Manheim and David J Steele, "At the Crossroads of Law and Technology", 33 *Loyola of Los Angeles Law Review* 1035 at 1045.

^l See note 55 at 1045.

^{li} In the DVD DeCSS case, for example, the court issued a preliminary injunction prohibiting the posting of the DeCSS code anywhere on the Internet, even as it recognized the likelihood that its order would be disobeyed. In fact, the DeCSS code has recently been embedded within a Domain Names System (DNS) record and continues to spread across the Internet, despite the court's injunction. See also William Sloan Coats, Vickie L Feeman, John G Given and Heather D Rafter, "Legal and Business Issues in the Digital Distribution of Music: Streaming into the Future: Music and Video Online", (2000) 20 *Loyola of Los Angeles Entertainment Law Journal* 285.

^{lii} A good overview of the problems that exist is provided in Frank J Cilluffo, Paul Byron Pattak and George Charles Salmoiraghi, "Bad Guys and Good Stuff: When and Where Will the Cyber Threats Converge?", (1999/2000) 12 *DePaul Business Law Journal* 131.

^{liii} In the European Union, for instance, governments have moved aggressively to regulate the use of personal data. In the United States, on the other hand, the government has largely refrained from such regulation, instead allowing companies and associations to regulate themselves, save for a small number of narrowly drawn regulations targeting specific industries. These divergent responses can best be explained by different cultural mores and the different legal approaches to privacy in general. The EU's aggressive regulation of the use of personal data originating in its fifteen member countries is embodied in its Directive on the Privacy of Personal Data 95/46/EC ("the Directive"), which took effect on 25 October 1998. The Directive embodies the principle that privacy is a fundamental human right. It also serves the purpose of equalizing the level of data privacy protection guaranteed in each EU member country so as to decrease transaction costs for entities that operate across national borders. The Directive provides a high level of protection for the privacy of personal data, and it extends that protection beyond the EU by prohibiting the transfer of data to third countries unless

those countries can guarantee a vaguely defined "adequate" level of data protection. See also Julia M Fromholz, "The European Union Data Privacy Directive", (2000) 15 *Berkeley Technology Law Journal* 461.

^{liv} Susanna H S Leong, "Internet Copyright – Singapore", Vol 16, No 3, (2000) *Computer Law & Security Report* 180.

^{lv} For details of this policy, see Luke A Walker, "ICANN's Uniform Domain Name Dispute Resolution Policy", (2000) 15 *Berkeley Technology Law Journal* 289.

^{lvi} See note 48.