Facilitating Government Business On-line: The *Electronic Transactions Act 1999*

George Cho and Eugene Clark

Government business on-line as well as the generic electronic business (e-business) and electronic commerce (e-commerce) are major concerns for governments, businesses and citizens alike. In particular the common objective of all parties is to make such electronic transactions efficient, effective and acceptable. But there are barriers in achieving these objectives. While e-commerce is becoming an essential part of business developments nationally and internationally, consumer confidence is lacking. This is because of fears of insecure payments and receipt systems, legal protection and jurisdictional problems when trading in borderless cyber-space, the fear of the loss of personal privacy, the resolution of on-line disputes and the issue of taxation of electronic transactions.

This article presents an assessment of the Australian government's response in addressing these issues especially in regard to doing government business on-line. To build more confidence in e-business, the government's aim is to lead by example so that all Commonwealth agencies become fully engaged in electronic transactions by 2001. To encourage this development the government has passed relevant legislation that will create an environment in which confidence in e-commerce can prosper. However, there are problems confronting this policy and an evaluation is required of whether it may achieve a high degree of confidence in e-commerce. A background to the Internet and e-commerce in Australia is given in the first section before discussing the government's major legislation — the Electronic Transaction Act (ETA) — in the next section. The ETA's *raison d'être* is then assessed in the third section in the light of its workability, practicality and technicality before a concluding section which gives an overall evaluation of the ETA.

The Internet and E-commerce in Australia

Australia's transformation from an industrial to an information society inevitably means that more and more trade and commerce will take place in an electronic or cyber-world. Such a world includes the use of the digital phone, Intranets, electronic data interchange ((EDI), smart cards and other information communication technologies (ICT). Governments, businesses and consumers

George Cho is Associate Professor of Geographic Information Systems and the Law and Eugene Clark is Pro Vice Chancellor, Division of Science and Design and Professor of Law. Both are members of the Information Technology Law Group at the University of Canberra.

cannot ignore such developments. An obvious indicator of such transformations is the growth of business on the Internet either in the form of servers connecting to the Internet or the number of business web sites that are being established in Australia (De Zwart, 2000).

There is a perception that e-commerce is an unregulated frontier in which digital marketers are free to ride the electronic range in search of markets, customers and profits. However, an opposing view is that e-commerce can be regarded as heavily regulated in that in all commerce whatever laws that apply to paper-based commerce also applies to the electronic variety. It is at the margins where there may be no 'paper' equivalents that e-commerce may have to depend on codes and other industry-based self-regulatory mechanisms. This uncertainty in law and business practice can have a deleterious effect on overall economic performance. For the legal practitioner, a reliance on private regulatory regimes may prove unsatisfactory because there will be little available either in the form of case law for precedents or 'black letter' law for guidance and interpretation. In addition, cross-border issues abound including jurisdictional questions of what law applies, where to seek redress for disputes and consumer protection.

The government's e-commerce strategy is set out in *A Strategic Framework for the Information Economy — Identifying Priorities for Action* (NOIE, 1999a). The Framework recognises that consumer protection is an integral part of the strategy so that business to consumer e-commerce is compatible with both business to business and business to government on-line services. A priority of this strategy is the need to develop the legal and regulatory framework to facilitate e-commerce. Such a development will give greater confidence to all Australians in electronic transactions, provide consumers with protection when transacting electronically and have in place a regulatory framework that will generate certainty.

The Australian National Audit Office (ANAO) report on *Electronic Services Including Internet Use by Commonwealth Agencies* evaluates Australia's readiness for the global information economy. The study showed that 82 per cent of all responding agencies considered that they would meet the government's commitment that all appropriate government services will be Internet-deliverable by 2001. By that date at least half of the government agencies would have a website that publishes information about itself and its services, a quarter will allow Internet users to access the agency's database, a fifth will permit access including secure information and engage in transactions with the agencies and two per cent will be able to facilitate, with prior approval, a sharing of information with other relevant government agencies (ANAO, 1999-2000:14).

Yet, significant impediments remain in regard to the goal of widespread adoption of e-commerce. These are largely legal in nature including concerns about the status of electronic documents, standards and procedures in implementing government regulations such as the ETA, record retention, fraud prevention, protecting personal privacy and security and misleading and deceptive conduct and practices (National Advisory Council on Consumer Affairs, 1998; Federal Bureau of Consumer Affairs, 1997).

The Electronic Commerce Expert Group (ECEG) made up of industry, government and other experts reported on the pressing need for legislation to support the regulation of e-commerce transactions (ECEG 1998). This need also no doubt may have been triggered by international developments around the world including the US and other Asia Pacific countries. The European Union-Australia Joint Science and Technology Cooperative Committee has been conducting research into this area of regulation as is the OECD which is working on guidelines for tax on Internet business (see AO, 1997).

The ETA: What and Why?

The *Electronic Transactions Act 1999* (Cwth) is based on the recommendations of the ECEG that reported to the Attorney-General in March 1998 (ECEG, 1998). The Expert Group recommended that the Commonwealth enact legislation based on the UN Commission on International Trade Law Model Law on Electronic Commerce (UNCITRAL, 1996). The ETA received Royal Assent in December 1999 and commenced by Proclamation on 15 March 2000 (AGD, 1999). The Act aims to prevent the invalidation of transactions merely because they have been conducted electronically. Until 1 July 2001 the ETA will only apply to those Commonwealth Acts specified in regulations. At the time of writing 278 Commonwealth Acts have been specified in regulations, including the *Australian Prudential Regulation Act*, *Banking Act*, *Currency Act*, *Financial Corporations Act*, *Financial Sector (Shareholdings) Act*, *Privacy Act* (section 63 only), *Trade Practices Act* (section 170 only) and various superannuation legislation. This is sixteen less than originally anticipated. These pieces of legislation have been 'dropped' on advice of the Attorney General's Department because they contain provisions that will be difficult to satisfy in an e-commerce environment. From 1 July 2001 the ETA will apply to all Commonwealth legislation (other than those specifically excluded by the regulations).

The ETA is a tool in the Government's strategy for developing the information economy in Australia. In general the ETA allows e-commerce to fit into the same legal framework as traditional paper-based transactions. The goal is to ensure that the technological developments brought about by e-commerce can be dealt with within the existing legal system, while allowing business and consumers to determine the most effective technological choice for their purposes.

In the longer term the Commonwealth is working in collaboration with the States and Territories to develop a national uniform legislative scheme to facilitate the use of electronic transactions. The plan is for each government to enact legislation within their jurisdiction to facilitate the removal of existing legal impediments to electronic commerce. The New South Wales *Electronic Transactions Act 2000* (NSW) and the Victorian *Electronic Transactions Act 2000* (Vic) mirror the ETA. The key differences between the legislation of the two states, and the ETA, are: that the state legislations apply to the interpretation of the common law as well as legislation; they do not differentiate communications between private organisations and government bodies; and they do not provide for

a 'staged' introduction of the Act. The state legislations apply to all state law other than those exempted by regulations and the common law by proclamation.

The ETA has been built on three underlying principles; namely:

- *functional equivalence*, or the guarantee that paper and electronic documents will be on the same legal footing;
- *technology neutrality*, that is, the law will not discriminate between different forms of technology; and,
- a principled approach to electronic signatures..

With the ETA the primary objective is to enable people to use electronic communications with government agencies to satisfy their legal obligations under Commonwealth law, including the requirements to give:

- information in writing (s9);
- provide a signature (s10);
- produce a document (s11);
- record information (s12); and
- retain a document (s12).

Electronic communications can only satisfy legal requirements if they comply with specified criteria, which are designed to ensure they are accessible for future reference and are reliable, and that they maintain the integrity of the information communicated. The ETA does not refer to digital signatures specifically because by doing so it could be interpreted as being tied to a particular electronic signature technology. Instead the Act focuses on the basic requirements of a signature and this is important considering the significance of both signature and writing in many transactions.

A person must consent to receiving electronic communications from the Government. Consent can be inferred from a person's conduct. Express consent is not required. The consent provisions however do not extend to Commonwealth entities (Giles, 2000).

As the Commonwealth is excluded from the operation of the consent provisions, Agencies must accept electronic communications. However, the Commonwealth is given certain specific powers. The ability to satisfy a legal requirement electronically is conditional upon a person complying with any particular information technology requirements for communication with a particular Commonwealth agency, including any particular electronic signature technology that must be used, and any action a person must take to verify receipt of information.

The ETA also sets out default rules that apply in the absence of any contrary agreement between the parties. These include regulations that deem the time and place of dispatch and receipt of electronic communications, and the attribution of electronic communications.

The ETA also provides that any other law that deal specifically with the use of electronic communications to satisfy writing, signature, production or retention requirements will be preserved (Australian Archives, 1999). The ETA does not override any existing laws that deal specifically with these matters.

An Assessment of the ETA

The ETA has only just begun its journey in achieving its broad objectives. The hurdles along this journey may however be summarised in three words: workability, practicality and technicality.

Workability

The workability problems stem from the Commonwealth's decision to leave it to the States and Territories to adopt the model legislation. The Government rejected the option of a comprehensive (Commonwealth) legislation because of concerns that such a scheme would be open to constitutional challenge. Two issues emanate from this statement.

First, a key objective of the ETA is to place e-commerce legally on the same footing as paper-based transactions. However, one leading observer in this area and a member of the Government's ECEG has argued strongly that 'this objective simply cannot be achieved without a single piece of Federal legislation that *covers the field* [emphasis added]. Any prospect of each State doing its own thing would be unworkable. It would be as inappropriate as having each State enacting different legislation to cover air, navigation or space travel' (*Canberra Times*, 1999:13).

As well, the need to pass nine separate pieces of legislation, is likely to give rise to other problems. These were foreshadowed in the explanatory memorandum to the ETA (AGD, 1999:10) which states:

'...the aim is to increase certainty and encourage business and community confidence in electronic transactions. This aim may be hindered by a number of factors. Uniform legislation can be time consuming to negotiate and enact, which means that existing uncertainty will continue during that process. In addition, there is the possibility that some or all of the jurisdictions may choose not to be involved in the negotiation of the legislation or not to enact the agreed uniform legislation if it is perceived as not sitting their particular interests. Alternatively, jurisdictions may alter the uniform law, either in the course of enactment or subsequently, possibly by adding on provisions that deal with matters not covered by the uniform law. Any of these results would undermine the goal of national uniformity...'

Given the past difficulties of trying to pass uniform Australian Fair Trading legislation, Credit Code and Corporations Law, this issue is a genuine concern and

a real hurdle. Another problem is that courts in the different jurisdictions may adopt different approaches in their interpretations of the ETA. This is because each state and territory has a different Acts Interpretation Act and use different Evidence Codes. These regulations are not uniform in their treatment of digital documents.

The second issue is the Government's perceived lack of constitutional powers to pass legislation in this area. Considered constitutional opinion suggests that the ETA can be made to apply to all transactions in Australia affected by e-commerce. Such a law is plainly a *bona fide* law with respect to trade and commerce. Thus, the failure to propose a universal federal law may be an attempt to accommodate the wishes of the different states.

From another viewpoint, the ETA is less likely to result in a constitutional challenge given economic realities and international developments. In strategic terms Australia may now have lost the chance to play a more pro-active and leading role in the development of e-commerce and indirectly to benefit from this in economic terms. E-commerce development may have already been stunted given Australia's lack of a legal infrastructure in place. The prospect now seems that undue time and effort may need to be spent in sorting out compliance issues across the different legal jurisdictions. This is hardly being pro-active nor undertaking legislative reform. The irony is that the rapid emergence of new technologies, practices and international developments may compel Australia, whether it wishes to or not, to pass uniform legislation in order to comply with its international obligations.

The view here is that the Commonwealth has the power to deal with electronic transactions and should propose a law that is both comprehensive and uniform for all of Australia. The reality is that there are no state markets but Australian markets. Furthermore, this marketplace is increasingly becoming a 'global' one that requires laws having both the breadth and reach to deal with this new, emergent reality.

Practicality

There are in addition practical problems in the implementation of the ETA. First, all Government agencies will have to survey and determine what laws apply to them. Second, agencies must decide whether existing requirements of a 'writing' and a 'written signature' should be exempted from the legislation. Third, agencies must assess the underlying policy reasons for requiring writing and/or a signature. In retrospect, there are many policy as well as historical and practical reasons for requiring such 'formalities' (Sneddon, 2000). For example, a written signature may be required for evidentiary purposes. It may also be required for cautionary purposes — the requirement of a signature may make a person realise that the document is an important one and that it has legal consequences. The requirement that parties use a particular form in a designated order may have a channelling function to structure the transaction in a particular way. Yet, digitisation

encourages disintermediation — the middle step — and thereby may defeat the channelling function.

Formalities such as signatures serve the evidentiary function in order that these can be later used to prove a fact and be available as admissible evidence in court. This may prevent fraud, perjury and other improper conduct because the signature may be used among other things to identify the signer by name; provide evidence that the signer has agreed to be bound by the record by adopting or approving it; to prove authenticity and voluntariness of another signature; to prove originality and *prima facie* evidence that the record is a true copy of another record. Of course, there are numerous other examples why a signature may be important. The need for writing, thus discourages reliance on oral statements or agreements which are not permanently recorded by other media which may more easily be disputed and be more costly to prove when a disagreement arises.

The cautionary function encourages the signer to deliberate and reflect before putting signature to paper. This may forewarn the signer that the document brings with it legal consequences and whether or not they wish to be legally bound. Especially in consumer protection, this cautionary function is particularly important. The cautionary function may also be interpreted as a protective one because people receiving or relying on a document may now have evidence that the maker of the document has given their full attention to the document and according to the context has authored, adopted or verified the contents of the document.

The channelling function clarifies the distinction between the intent to act in a legally significant way and the intent to act otherwise. This is particularly so in the public arena where there are forms to be used mainly because of legislative requirements and information of a particular kind may be required. The government agency may have specific requirements say, in the social security area, tax, licences and so on. To a lesser extent the person lodging such forms, by writing in the answers on a physical medium provides the reassurance that the content is recorded in a durable fashion rather than captured only in memory, human or otherwise. This alone, might caution people to take care in what information they provide and on what media.

Finally, the writing and signature requirements may relate to storage and record keeping functions. Such functions and their underlying policy reasons may vary greatly depending upon whether we are talking about police records, tax files or whatever. All of these imply that agencies face the problem of developing, configuring and re-engineering their information systems and administrative standards to implement, receive, process, issue and store records in an electronic format. As a result there is the need to establish standards, processes and controls on the use, authentication, storage and retrieval of documents in electronic form. Needless to say, these tasks are neither easy nor are they 'cost neutral'.

Technicality

A third area of difficulty is the language of the ETA. Of necessity the language used in the Act is quite broad in order to cover a wide range of applications. Concepts such as 'notice', 'consent', and 'as reliable as appropriate for the purposes for which it was communicated' are likely to give rise to differing interpretations by the various State and Territory Courts. In reality, it may be of comfort to think that one may rely on 700 years or so of legal precedents for interpreting such words as 'writing', 'signature', 'verification' and 'acknowledgment'. However, one can be less sanguine where judicial decisions hinge on interpreting digital signatures given the rather vague language of the ETA.

In implementing the public key infrastructure and authentication framework (PKAF) for the information economy, the Government has put in place principles and standards by which electronic signatures may be used in electronic communications with public agencies. The concern here is the extent to which an individual may be able to have more than one digital persona — individually as a person and corporately as a company or business entity. Also, there is the issue of whether the digital signature is to be used either for security or authentication purposes or for both functions.

Digital signatures are perceived to be foolproof given the security technology in place. However, the very basis of a signature's integrity will depend on how secure is the process by which the e-signature was created. While it is true that even with hand-written signatures forgeries may be perpetrated, the public needs to be reassured of the security of e-signatures. Biometric systems such as finger print authentication, iris scans and the like are equally vulnerable to 'attack'. One should also be constantly reminded that an authentication of an e-signature is very different from its security. Indeed the very use of e-signatures in electronic communications with a public agency suggests a loss of anonymity. Compared to most other transactions between individuals such as in the marketplace, in cash-based transactions, or even in conversations with the person sharing the seat on a bus, it is possible to remain anonymous.

Also, there may appear to be undue optimism over how quickly e-signature infrastructure can be developed to provide a workable and reliable system on which businesses can rely. Much more thought and evaluation may be required on the meaning, use and implications of the concept of persona and identities whether it be personal or business. Moreover, there may be other forms of electronic authentication and manuscript methods that may be used that may offer more advantages than those proposed under the PKAF regime. Many technological issues seem to have been glossed over but which may have important legal implications when these reach the courtrooms of the future.

Some Broad Observations

In passing the ETA, the federal government has taken a lead role in facilitating e-business first with all government agencies and later for all forms of electronic transactions. In creating a 'light-handed regulatory regime for the use of e-commerce in transactions' the government hopes to encourage the development of the new (information) economy and information communication technology in Australia (NOIE, 1999b). Anyone can now choose to use electronic transactions when dealing with government agencies. The legislation has removed a number of legal impediments in such transactions where there is now a functional equivalence between paper-based and electronic transactions and is technology neutral. The ETA has clarified the legal status of electronic transactions. In this respect the government is highly supportive of innovation and its legislative framework is consistent both locally and internationally.

Yet, the devil is in the detail. Close examination of the Act suggests several areas of concern including its workability, practicality and technical imperatives. A uniform federal legislation is more desirable than separate pieces of state and territory legislation on the same subject matter. This will avoid differences in judicial interpretation and evidentiary requirements. There do not appear to be constitutional impediments that will prevent such a move. It may be wholly impractical to implement the Act in stages and more importantly deal with 'details' such as writing and written signatures that different government agencies may require. Jurisprudence suggests the different functions that these detailed requirements serve — as evidence, as a precaution, as a particular channel or process. Finally, the broad language of the ETA cuts both ways in that it may be flexibly interpreted and at the same time may make it more difficult to prosecute.

That the government has achieved its goals with the passage of the ETA is undoubted given that its intentions were simply to put in place legislation to facilitate e-commerce in the first place. However, it may be sometime yet before one can truly assess whether the ETA has worked to bring about uniformity of laws and regulations and the promotion of e-commerce. At the very least the ETA may encourage and has put in place the legal infrastructure for anyone to transact business with any government agency electronically. Moreover, the legislation may be seen to promote greater competitiveness in the brave new world of e-commerce and e-government.

As it stands, the ETA may need to undergo several iterations and amendments before it will fully achieve all the objectives the government has set itself in the area of e-commerce. However, in the further evolution of the ETA what should be avoided is the formulation of rules and regulations that become both fixed and inflexible in time. Past experience shows that information communication technology may overtake such formulations very quickly.

On a world-view Australia will have to keep pace with international developments. As technology transcends national boundaries and globalisation continues apace, Australia's experiences can contribute to the development of uniform international e-business law. In doing so, however, there is a greater need

to ensure that personal privacy is protected by preventing the misuse of technology.

Australia has adopted a light-handed approach to the regulation of e-commerce. Likewise, the US has advocated minimal regulation of on-line commerce. By contrast, the European Union has proposed a more intrusive approach that includes regulation of cross-border data transfers through to ensuring that labour, environmental and tax standards are incorporated in all e-commerce laws.

Australia has led by example in attempting to regulate and facilitate e-business with government agencies. This alone may engender greater confidence in transacting business electronically. Whether this will generate more business-to-business transactions in the private sector and in turn become more profitable for the economy as a whole only time will tell. Nevertheless, the passage of the ETA is a step in bringing order in a previously unregulated digital frontier.

References

- Australian Archives (1999), 'Electronic Commerce' (http://www.naa.gov.au/recordkeeping/tr/ecec_comm.html).
- Australian Financial Review* (1999), 'Internet and E-commerce: Special Report 1999: In Search of Planet Profit', 9 March:50.
- Australian National Audit Office (1999-2000), *Electronic Service Delivery, Including Internet Use, by Commonwealth Agencies*, Audit Report No 18, (<http://www.anao.gov.au>).
- Australian Taxation Office (1997), *Electronic Commerce Report: Tax and the Internet* (<http://www.ato.gov.au/ecp/ecp.htm>).
- Attorney-General's Department (1999), 'Draft Electronic Transactions Bill 1999: Explanatory Paper', (<http://www.search.aph.gov.au/search/ParlInfo...9>).
- Canberra Times* (1999), 'Legal Expert's Jurisdictional E-commerce Misgivings', 1 February:13.
- De Zwart, M. (2000), 'Electronic Commerce: Promises, Potential and Proposals', *UNSW Law Journal*, May, (<http://www.law.unsw.edu.au/unswlj/ecommerce/zwart.html>).
- Electronic Commerce Experts Group (1998), *Electronic Commerce: Building the Legal Framework*, (<http://www.law.gov.au/ahome/eceg/ecegreport.html>).
- Federal Bureau of Consumer Affairs (1997), *Untangling the Web: Electronic Commerce and the Consumer*, Australian Government Publishing Service, (<http://www.dist.gov.au/consumer.htm>).
- Giles, D. (2000), 'You've Got Mail ...or Have You?', *Internet Law Bulletin* 3(1):12-14.

National Advisory Council on Consumer Affairs (1998), *Consumer Protection in Electronic Commerce: Principles and Key Issues* Department of Industry, Science and Resources, Canberra (<http://www.dist.gov.au/consumer/eleccomm/princip.html>).

National Office for the Information Economy (1999a), *A Strategic Framework for the Information Economy: Identifying Priorities for Action*, Department of Communications, Information Technology and the Arts, Canberra (<http://www.noie.gov.au/nationalstrategy/index.html>).

National Office for the Information Economy (1999b), *E-commerce Beyond 2000*, Department of Communications, Information Technology and the Arts, Canberra (http://www.noie.gov.au/ecom/HOME/Policy/Ecommic_Impacts_Study/economic_impacts.html).

Sneddon, M. (2000), 'Legislating to Facilitate Electronic Signatures and Records: Exceptions, Standards and the Impact of the Statute Book', *UNSW Law Journal*, May, (<http://www.law.unsw.edu.au/unswlj/ecommerce/sneddon.html>).

UNCITRAL (1996), 'Model Law on Electronic Commerce with Guide to Enactment, General Assembly Resolution 51/162', Draft Uniform Rules on Electronic Signatures, Working Group on Economic Commerce (<http://www.uncitral.org/english/sessions/wg-ec/wp-82.pdf>) and UNCITRAL, 'Uniform Rules on Electronic Signatures — Australian Issues Paper' (<http://law.gov.au/publications/ecommerce/welcome.html>).

The authors would like to thank the two anonymous referees of this article for their constructive and useful criticisms, which considerably improved the final version of this paper. Thanks also go to our students and University of Canberra colleagues for their ideas and encouragement to keep working in this most exciting area of the law.