

ELECTRONIC
COMMERCE

**THE 'FREEZER SHIP' OF
THE 21st CENTURY**



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MINISTRY OF COMMERCE
Te Manatū Tauhokohoko

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Foreword

Over a century ago a breakthrough in technology brought increased wealth and prosperity to New Zealand when the *SS Dunedin* transported the first shipment of frozen meat to our major market in Britain. This brought about far-reaching improvements to our economy and standard of living.

Today, digital communications technology has the same potential. To most of us digital communications technology means one thing: the Internet. Its phenomenal global growth has driven the development of cost-effective electronic commerce applications that are opening up a vast range of opportunities for New Zealand business. These allow individuals, small businesses and large firms alike to more easily engage in international commercial trade.

As a nation we have some great advantages in this new environment. We have a natural inclination towards new and innovative technologies, we are producers of the kind of products that are suited to electronic commerce – software, tourism, and high value niche market goods – and our English language is the common language of the Internet. Furthermore, what has often been one of our great disadvantages – the distance and time from our major markets – is immaterial in the instant world of global digital networks.

This document brings together for the first time a range of policy issues under the one umbrella of electronic commerce, rather than treating them in separate policy compartments. It reflects the fact that electronic commerce is a major area of involvement for the recently announced Enterprise and Innovation Group of Ministers.

The Government is keen to encourage all New Zealand businesses to identify and take the opportunities electronic commerce has to offer. For the Government's part, we believe that the best way we can help is by ensuring that our policies and legislation do not impede private sector initiatives. Our focus is on removing barriers to the development of electronic commerce and we are keen to engage the business community in that pursuit.

Maurice Williamson
Minister for Information Technology

Executive summary

Electronic commerce refers to all commercial transactions based on the electronic processing and transmission of data, including text, sound and image. This includes Electronic Data Interchange (EDI), Eftpos, electronic banking, digital cash and other electronic payment systems, but particularly refers to commerce transacted over the Internet.

The emergence of electronic commerce is a critical issue facing the New Zealand economy. It offers significant potential benefits for both businesses and consumers and will be an important driver of economic growth. The World Trade Organisation (WTO) estimates that global electronic commerce will grow to US\$300 billion by 2001. Benefits for New Zealand include (but are not limited to) minimisation of the barriers of time and distance to world markets and efficiency gains in the business supply chain.

Electronic commerce mirrors existing issues that come with traditional paper-based commercial transactions. But as a new medium for doing business, it also throws up significant new issues including security (cryptography), privacy and the legal status of electronic documentation. The potential scale of electronic commerce also has significant implications for issues such as tax collection, adequate monitoring through official statistics, cross-border jurisdiction and consumer protection.

To date, the private sector has taken the lead in the development of electronic commerce initiatives, and this should be extended to industry self-regulation. The government's role is to ensure a legislative and regulatory environment where electronic commerce can flourish. Government intervention will only be considered if it is necessary to address clearly identified market failures or in order to maintain certainty and protection for business and consumers. Any such intervention should consist of simple and predictable regulation that is technology-neutral and able to respond to the pace of change in the electronic environment.

Government Statement on Electronic Commerce

Introduction

It is imperative that New Zealand meets the challenges of electronic commerce

1.1 The global emergence of electronic commerce will have a major impact on the New Zealand economy. It is imperative that New Zealand meets the challenges and takes advantage of the opportunities presented by this new mode of business.

1.2 The purpose of this statement on electronic commerce is to provide a framework for ongoing initiatives by bringing existing policy together and outlining the Government's overall policy approach. It is not intended to provide detail on every individual issue. Instead, it provides some background information on electronic commerce and its benefits, and outlines in broad terms both the issues that need to be addressed and the initiatives that have already been undertaken to secure the greatest economic advantage for New Zealand.

New Zealand Government intervention in electronic commerce will be minimal and self-regulation will be encouraged

1.3 It also signals that the role of the New Zealand Government will be one of minimal intervention and encouragement of self-regulation, consistent with the Government's overall policy framework. Government intervention will only be considered if it is necessary to address clearly identified market failures, or in order to maintain certainty for business and protection for consumers. Any intervention should consist of simple, predictable regulation that is technology-neutral (that is, not specific to any particular technology) and able to respond to the pace of change in the electronic environment.

2. The need for a Government statement

A Government statement on electronic commerce is needed to ensure consistency and avoid duplication

2.1 Electronic commerce cuts across the whole economy and is an area of considerable international activity. In New Zealand, electronic commerce issues have tended to be considered in isolation by a number of different government agencies and in the absence of an across the board policy framework.

2.2 Hence, a broad statement of the Government's overall policy on electronic commerce is needed to ensure consistency across all policy sectors, avoid duplication of effort, ensure comprehensive consideration of electronic commerce issues and deliver certainty to business and consumers.

2.3 Because of their accordence with our policy goals of reduced government and free trade, New Zealand has supported Australian and United States' electronic commerce initiatives in a range of international fora. However, this Government statement should assist New Zealand's international efforts by outlining a clear policy framework and by signalling our position to our major trading partners.

Background

Electronic commerce is more than shopping on the Internet

3.1 Electronic commerce is more than the popular image of shopping on the Internet. The term encompasses all commercial transactions based on the electronic processing and transmission of data, text, sound and image. This includes many established technologies such as Eftpos, Electronic Data Interchange (EDI), 0800 numbers and fax machines, as well as digital cash and smart or stored value cards. Particularly it refers to commerce transacted over the Internet, whether business to consumer, business to business or intra-business.

While mirroring paper-based transactions, electronic commerce presents new issues such as security and privacy

3.2 Electronic commerce mirrors existing issues that come with traditional paper-based commercial transactions. But as a new medium for doing business it also throws up significant new issues including security (cryptography), privacy and the legal status of electronic documentation. The potential scale of electronic commerce also has significant implications for issues such as tax collection, adequate monitoring through official statistics, cross-border jurisdiction and consumer protection.

3.3 The new issues are triggered by the unique characteristics of the electronic medium, including:

- the borderless nature of global digital networks such as the Internet
- very fast and easy transaction processing
- the ease with which digital documents can be altered, copied or deleted without trace, with the subsequent difficulty of establishing audit trails
- the scope for electronic products (software for instance) to cross physical borders without the knowledge of the state.

4. The impact of the Internet

4.1 Until recently most electronic commercial applications, such as EDI, ran on closed proprietary networks that were expensive to install and often required strictly compatible equipment. Hence, the main users of these systems have been large businesses and their first-tier suppliers.

4.2 However, the current drive towards electronic commerce is fuelled by the rapid global uptake of the Internet as a means of popular and business communication and as a platform for running commercial applications. The difference with the Internet is that it is an open computer network that has been implemented on virtually all operating systems and designed to run over any telecommunications medium.

The Internet goes beyond previous electronic commercial applications: growth is huge, and available to businesses large and small, and to individuals

4.3 The democratic nature of the Internet has allowed individuals, small and medium businesses and large corporations alike to easily participate in electronic commerce. The WTO estimates that electronic commerce conducted via the Internet is poised to boom over the next three years with the value of transactions set to reach US\$300 billion by the year 2001.

4.4 With the entry of a number of major players into the Internet service provider market, coupled with continued rapid technological development, New Zealand has seen a dramatic reduction in the cost of Internet access. These lowered costs, together with extensive publicity, have encouraged a high uptake of Internet access among New Zealanders. The number of individuals and businesses with Internet access is now reaching a critical mass. Just as with fax machines in the late 1980s, in the late 1990s an email address has become an essential business tool.

4.5 The latest available survey conducted by Network Wizards¹ in July 1998 indicates a total of 36,739,000 Internet host computers in the world at that time – that is, computers permanently and directly connected to the Internet and having their own Internet address. This compares with 19,540,000 in July 1997. According to a monthly survey carried out by Mark Davies² of Victoria University of Wellington in October 1998, there were 174,436 hosts in New Zealand, making Internet penetration in New Zealand one of the highest per capita in the world.

Internet penetration in New Zealand is one of the highest per capita in the world

4.6 The number of commercial domain names registered for use on the Internet is also growing quickly (domain names are the unique identifiers allocated to organisations on the Internet). By October 1998, 23,573 New Zealand organisations had been allocated a domain name (up from 3078 in February 1996). Of these, 20,496 (87 percent) were commercial organisations.

¹ The survey is conducted twice a year and is available on the web site <http://www.nw.com>

² Mark Davies, <http://webpages.netlink.co.nz/~mark/netsites.html>

- 4.7 Email, with its elimination of 'telephone tag' and its facility for sharing electronic documents, is the Internet application most commonly used for commercial purposes. However, more sophisticated applications are also becoming prevalent. The World Wide Web is being used as a marketing tool to disseminate product information, deliver support services, or as a vehicle for direct selling. Other advanced applications – such as using Internet technology to give customers direct access to a vendor's inventory and ordering systems – are also emerging.

5 Benefits of Internet-based electronic commerce

Given our geographical isolation, the easy and cheap access to world markets provided by the Internet should be of benefit to New Zealand

- 5.1 Because of the phenomenal growth of the Internet and the increasingly rapid development of technology, the likely impacts of electronic commerce are difficult to quantify.
- 5.2 Easy and cost-effective access to the global market for both producers and consumers is one immediate benefit of Internet-based electronic commerce. Assuming that the other requirements for running a business are in place, anyone can become a merchant on the Internet for a few thousand dollars. Moreover, anyone with a computer, a connection to the Internet and a credit card can become a global consumer. It has yet to be established that a marketing strategy based entirely around the Internet, excluding other media, can be successful. However, the usefulness of the Internet as an adjunct that greatly increases the effectiveness of conventional marketing is clear, especially when used as a means of delivering services and support.
- 5.3 Aside from greater accessibility to distant markets, companies that have adopted electronic commerce report other benefits such as significantly reduced supply times, shortened product cycles, simplified ordering processes and reduction in inventory. Producers and consumers are brought closer together by allowing them to communicate directly, without the intervention of traditional intermediaries such as importers, exporters, wholesalers and retailers.
- 5.4 With low transaction costs, low barriers to entry and improved access to information for the consumer, electronic commerce reduces some of the frictions of the marketplace, and moves economic activity closer to the ideal of perfect competition.

5.5 Because of New Zealand's geographical isolation from major markets, the benefits of electronic commerce are particularly significant. By minimising the barriers of time and distance, electronic commerce presents opportunities for the economy similar in importance to the introduction of the freezer ship in the 1880s.

5.6 Additionally, New Zealand producers are increasingly moving toward products that are typical of a 'knowledge' economy and hence well suited to electronic commerce. These products include financial and other services, software, travel, entertainment and high value niche market goods. An example is the Internet based and New Zealand owned and operated *7am News* (<http://7am.com>). This service is accessed over 800,000 times a day and is the world's most widely syndicated web-based news service. Easy access to the global market will make the development of many such products more economically viable – for both individuals and small and medium-sized enterprises.

5.7 Electronic commerce also has immense potential to benefit our traditional commodity industries like meat, wool and dairy products. One significant benefit (and one which is consistent with the move to a 'knowledge' economy) will be a greatly enhanced ability to move from mass production of lower value products to the production of higher value 'customised' products developed in direct consultation with the final customer. As an example, it will be possible for the final buyers of high value Merino wool to communicate, without mediation, with individual growers. There is potential for the Internet to be used for purposes such as trading livestock or as a medium for delivering a range of information to farmers, such as MAF standards. Significant initiatives in these areas exist in New Zealand already.

5.8 This is not to say that electronic commerce is without pitfalls. New Zealand consumer access to overseas products may impact on local producers. Electronic commerce transactions often cut across national boundaries making law enforcement difficult and denying consumer, and in many situations business, access to the usual forms of redress offered by national law and industry self-regulation. As yet there is no coherent framework for ethical business conduct or effective industry self-regulation for electronic commerce in a global market-

New high value 'knowledge' products are well suited to electronic commerce; New Zealand's traditional commodity industries will also benefit

There are drawbacks to electronic commerce: there is as yet no coherent framework of industry self-regulation for the global electronic marketplace

place. The creation of such a framework is a significant challenge, and will involve consumer rights (for example) being defined and protected in new and innovative ways.

6. Areas of growth

6.1 In the popular imagination, electronic commerce is associated with business-to-consumer transactions, that is, Internet shopping. In this market the big online sellers are books, compact disks and computers, together with intangibles such as travel and ticketing services, software, financial services, and entertainment (especially gambling, pornography and interactive games). While the size of this online consumer market is growing, it is still only a fraction of the overall consumer market.

The most rapid growth in electronic commerce is business to business

6.2 Contrary to the popular view, the area of most rapid growth in electronic commerce – and the area with the most immediate potential – is in business-to-business transactions. There are several reasons for this.

- Business-to-business electronic transactions are usually a continuation of existing business relationships already underpinned by a high degree of trust and supported by established contracts.
- Shifting an established relationship to the electronic medium is perceived as a means of making significant efficiency gains through the pragmatic application of technology, rather than a move into electronic commerce.
- Due to larger volumes, business-to-business transactions are the area where electronic commerce can most easily and visibly deliver efficiency gains. This is particularly through supply-chain integration, automating the buying process, and in better delivery of support services.

Issues Raised by Electronic Commerce

7.1 Moving from a paper-based system of commercial transactions to an electronic system raises a number of issues for businesses and consumers that may require consideration by government. These include:

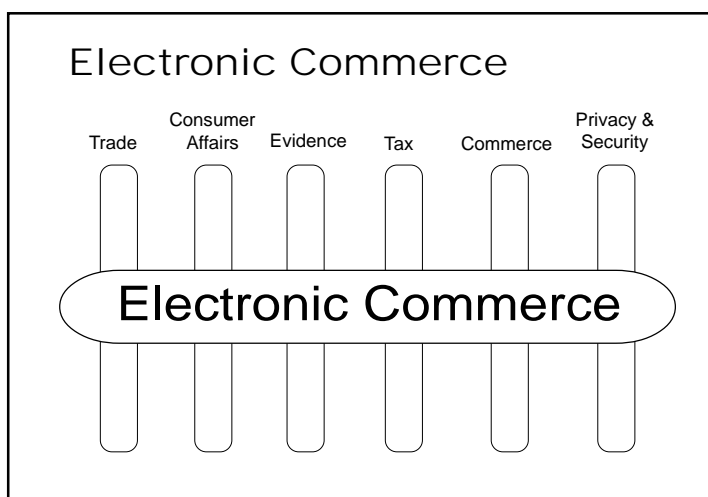
- Issues relating to taxation and tariffs
- Legal questions relating to the formation of contracts electronically, for example (but not limited to) time and place of receipt and dispatch of electronic communications
- Questions of applicable law, that is jurisdiction, selection of forum and choice of law
- The application to electronic communications of statutory provisions which mandate paper or paper-based concepts such as original, writing and signature.
- The admissibility in court of electronic evidence
- Security issues such as
 - authentication of electronic communications, that is, verification of a correspondent's identity
 - the commercial confidentiality of business transactions
 - security (integrity) of electronic communications, particularly against interception or alteration by unauthorised third parties
- Transaction and other record retention and management
- Consumer protection and privacy
- Issues relating to the protection of intellectual property rights in an environment where intellectual goods can be easily copied
- Issues relating to the collection of official statistics which accurately reflect the activity of the electronic marketplace
- Technology considerations, particularly the ability of New Zealand to absorb rapid developments in electronic commerce technology
- Law enforcement and redress.

Issues of concern for government include tax and tariffs, and several legal / contractual questions

Several government agencies are already addressing the issues presented by electronic commerce

7.2 A number of government agencies are already addressing many of these issues. For instance, the Ministry of Consumer Affairs is examining consumer policy issues, and the Law Commission is undertaking an extensive project to look at a whole range of legal issues (see below). The Government Communications Security Bureau has developed the information systems security standards necessary to support government's use of electronic commerce. Within international organisations, the Ministry of Foreign Affairs and Trade has coordinated New Zealand participation and policy.

7.3 However, as well as these sector specific projects, the impact of electronic commerce cuts across the entire economy (see diagram).



The Ministry of Commerce will coordinate government work on electronic commerce

7.4 As a reflection of this, the Ministry of Commerce is developing a coordinated work programme on electronic commerce issues. The Ministry envisages its role as:

- Ascertaining what work is already being carried out
- Ensuring that all the issues are identified and are being addressed by appropriate agencies
- Liaising between government agencies to ensure that effort is not duplicated, that there are no gaps, and that all interests are covered
- Drawing up indicative time-frames.

7.5 The overall purpose of such a programme is to ensure that regulatory barriers hindering the growth of electronic commerce (and hence economic activity) are minimised, and that other issues of concern such as privacy, consumer protection, security and social implications are appropriately addressed.

Potential Barriers and the Current New Zealand Situation

8.1 There are several broad areas in which barriers to the growth of electronic commerce occur. These are outlined below, together with a brief analysis of the New Zealand situation.

9. Infrastructure

9.1 The first is the development and spread of a modern telecommunications infrastructure that can support the high bandwidth needs of electronic commerce applications. The lack of such an infrastructure is of particular concern in developing countries.

9.2 New Zealand's minimal regulatory environment, however, has resulted in substantial investment in this area, so that today New Zealand has one of the most highly developed telecommunications infrastructures in the world. The continued entry of new players into the market and resulting competition should ensure that there is ample bandwidth available. A number of companies are also rolling out a range of technologies such as microwave, XDSL and ISDN.

New Zealand's minimal regulatory environment has encouraged investment in modern telecommunications which has fostered electronic commerce

9.3 As is the case in similar countries, New Zealand's well developed telecommunications infrastructure is a major factor in the rapid growth of the Internet. It is now technically straightforward to conduct electronic commerce on a local or international basis, and indeed many companies and individuals are already doing so. It is clear that in New Zealand, telecommunications infrastructure per se is not a barrier to the development of electronic commerce. There is, however, some concern over the relatively high cost in New Zealand of high-speed data lines compared, for example, to the United States. This high cost may disadvantage New Zealand electronic commercial operators.

9.4 It is assumed that the technology underpinning the development of Internet based electronic commerce will continue to be readily available from both overseas sources and local developers.

10. Trust, security and privacy

10.1 The second area where barriers might occur is in the awareness and acceptance among consumers, businesses and governments of electronic commerce as a legitimate and trustworthy method for doing business. Associated issues are those of security and privacy.

10.2 Without the use of appropriate encryption technology the environment in which electronic commerce operates is insecure. In choosing electronic transactions, businesses and consumers demand the same level of confidence they enjoy with traditional transactions. This means they need to be able to rely on the confidentiality, authentication, integrity, and non-repudiation of their transactions. Such reliance will develop through the establishment of an appropriate framework of security product approvals, which incorporates an acceptable level of consumer and business protection. Further work is required to determine the best method for implementing such security mechanisms.

Fears that electronic commerce transactions are insecure may hinder development

10.3 Part of the problem, however, is simply the newness of the medium. For example, consumers are willing to give their credit card numbers to complete strangers when completing a purchase by telephone, yet hesitate to send their credit card details over the Internet to a well established Web based vendor such as Amazon.Com. Secure Internet based transactions are technically possible, but wide deployment of this technology, and the common Internet user's understanding of its use and safety, is yet to occur. It is clear that the establishment of adequate security infrastructures at the national level is a prerequisite to the growth of electronic commerce.

New Zealand's comprehensive privacy legislation should ensure that privacy questions should not hinder electronic commerce

10.4 With regard to privacy, the speed and sophistication of technology has made it much easier to collect, analyse and use personal information without the knowledge or authorisation of individuals. It is notable that globalisation and the rapid development of electronic commerce have forced many jurisdictions to start developing broadly based privacy laws.

10.5 New Zealand is fortunate in that the 1993 Privacy Act already provides a broadly based privacy law that covers both the private and public sectors and is technology-neutral (that is, the Act applies irrespective of the technologies used). Hence, the issue of privacy should not pose an obstacle to the development of electronic commerce within New Zealand.

10.6 The Privacy Act implements directly the 1980 OECD Guidelines on the Protection of Privacy and Transborder Flows of Personal Data. It also means that New Zealand is well placed to meet the demands for adequate privacy protection placed on 'third countries' by the EU Directive on Data Protection. The New Zealand Privacy Law is seen by many overseas jurisdictions as a model solution to privacy protection issues.

10.7 The New Zealand Privacy Act protects New Zealanders from the unauthorised collection and use of personal data by New Zealand entities. However, anyone who uses the Internet to access information or purchase goods and services internationally is vulnerable to the unauthorised collection and use of their personal data by non-New Zealand entities. The role of government is to support initiatives in international fora such as the OECD to ensure the application of privacy principles in the online environment and to encourage the private sector to implement appropriate technological solutions and self-regulation.

International initiatives to resolve issues of unauthorised collection and use of personal data should be supported

11. Consumer protection

11.1 The third area is that of consumer protection. In New Zealand consumer protection laws and self-regulatory frameworks are technology-neutral. Current consumer protection laws are therefore generally adequate to cover New Zealand consumers in the online environment where both trader and consumer are based in New Zealand, or where the trader is based outside New Zealand and has agreed to comply with the provisions of New Zealand consumer protection legislation.

11.2 The real issue is effective redress for New Zealand consumers where goods or services purchased from overseas traders fail to meet the guarantees or standards available within New Zealand. Other issues include the potential for consumers to be exposed to unfair marketing practices and fraud.

Priorities for action on electronic commerce resulted from an international conference in Wellington in 1997

11.3 As a response to these concerns, the Ministry of Consumer Affairs convened an international conference on consumer issues in Wellington in March 1997. From this the Ministry produced a discussion paper outlining its priorities for action³. These include:

- Educating and informing consumers
- Networking internationally
- Facilitating business self-regulation
- Monitoring national and international markets

11.4 The Ministry has worked closely with its Australian counterparts to initiate action on a range of projects aimed at improving general understanding of consumer problems associated with electronic commerce. Activities include an international Internet Sweep Day to target 'make money fast' schemes and a national awareness project on electronic shopping. Meanwhile, other cooperative work is continuing with the OECD Consumer Policy Committee on a range of electronic commerce issues.

12. Regulatory framework

12.1 The current legislative and regulatory framework is the fourth area in which barriers may occur.

In 1997 APEC leaders called for a predictable and consistent regulatory environment for electronic commerce

12.2 Addressing this issue at the summit of the Group of Eight in June 1997, the leaders of the major industrial countries underlined the importance of a predictable and stable regulatory environment for the growth of electronic commerce⁴. The APEC leaders meeting in Vancouver in November 1997 also emphasised this by calling for 'a predictable and consistent legal and regulatory environment that enables all APEC economies to reap the benefits of electronic commerce.'⁵

12.3 There is a growing international consensus that poorly designed regulations or over-regulation will impede the growth of electronic commerce and result in the loss of economic activity. New Zealand is keen to ensure that economic activity and tax revenues are not lost to other countries with more suitable regulatory environments.

³ Ministry of Consumer Affairs: Electronic Commerce and the New Zealand Consumer. Issues, and Strategies for the Future, August 1997, Wellington

⁴ OECD Observer, No. 208 October/November 1997 p4

⁵ APEC: Leader's Declaration, Vancouver, November 25th, 1997. Available at <http://www.apecsec.org.sg/econlead/vancouver.html>

12.4 It is notable that electronic commerce has already developed substantially without needing fundamental legal reforms. Indeed, electronic commerce does not change fundamental trading principles. However, the existing legal framework evolved to facilitate a commercial model that was paper-based and where nations and borders were key concepts, for example, in the levying of tariffs and duties and in the general regulation of trade flows.

12.5 Contrary to this model, electronic commerce is electronically based and is largely borderless in nature. This reduces the scope for government controls and creates a number of legal grey areas including aspects of the law of contract and torts, evidence law, the law relating to authentication and signature, and issues to do with jurisdiction. If electronic commerce is to command the same level of confidence among businesses as traditional commerce these issues need to be addressed.

12.6 In recognition of this the New Zealand Law Commission is undertaking a review to determine whether existing commercial laws are sufficient to accommodate the needs of those engaged in electronic commerce. The Commission's work is underpinned by four guiding principles:

- To ensure business people can choose whether to do business through the use of paper documentation or by electronic means without any avoidable uncertainty arising out of the use of electronic means of communication
- To ensure that fundamental principles underlying the law of contract and tort remain untouched save to the extent that adaptation is required to meet the needs of electronic commerce
- To ensure that any laws which are enacted to adapt the law of contract or the law of torts to the use of electronic commerce are expressed in a technologically-neutral manner so that changes to the law are not restricted to existing technology and can apply equally to technology yet to be invented
- To ensure compatibility between principles of domestic and private international law as applied in New Zealand and those applied by our major trading partners.

Legal frameworks, which have evolved to facilitate paper-based commerce, are oriented to nations and borders – electronic commerce is essentially borderless

The Law Commission is reviewing commercial law in the light of electronic commerce

- 12.7 Most of the potential obstacles to electronic commerce exist largely because the technology has developed ahead of the law. In many cases it will not be difficult to determine the functional concern of the law and provide an equivalent technology-neutral alternative, which should not involve significant or fundamental policy changes.
- Minor legislative changes are envisaged** 12.8 The principle of technological neutrality is important. In view of the rapid development of new technologies, the private sector will have an increasingly important role in developing market or technical solutions. As a result, governments should take a technology-neutral approach to regulation.
- 12.9 To summarise, it is not envisaged that fundamental legislative reform will be needed to accommodate electronic commerce, but a series of minor legislative changes including harmonisation with our major trading partners is likely.

13. Intellectual Property Rights

- 13.1 Businesses wishing to set up a presence on the Internet for electronic commerce purposes will wish to register a domain name (that is, a unique Internet address) which incorporates as a key component the company name or trade mark. Conflicts have arisen where an entity other than the trade mark owner has registered a trade mark as a domain name, either for their own purposes, or to sell the domain name back to the trade mark owner. The Ministry of Commerce is presently completing a review of the Trade Marks Act, 1953, and the issue of trade marks and domain names is being considered in that review. It is noted that to date, however, the courts have been able to appropriately deal with conflicts in this area in New Zealand and that it may not be necessary to change the law.
- Intellectual property rights may be threatened by the Internet: the Ministry of Commerce is reviewing copyright and assessing WIPO treaties** 13.2 The open nature of the Internet and the ease with which material in electronic form may be copied poses significant challenges for the protection of intellectual property rights. The Ministry of Commerce's intellectual property rights work programme includes the development of a strategic overview of copyright, especially taking into account the impact of new technology. Assessment is also being made of the two World Intellectual Property Organisation (WIPO) treaties concluded in December 1996 on copyright, and performances and phonograms. Both these treaties address the copyright issue in the context of digital technology.

14. Taxation

14.1 In October 1998, at the conference *A Borderless World – Realising the Potential of Global Electronic Commerce*, organised by the OECD, Ministers endorsed a ‘taxation framework conditions’ paper prepared by the OECD committee of fiscal affairs. This paper was incorporated within ‘ground rules for the digital market place’, the key aspects of which are:

- Revenue administrators and business affirmed that widely accepted general tax principles should apply to the taxation of electronic commerce.
- The taxation framework for electronic commerce should be guided by the same taxation principles that guide governments in relation to conventional commerce.
- Countries should use electronic commerce to develop taxation framework conditions for taxpayer service, tax administration, consumption taxes and international tax norms.
- Business, particularly small and medium-sized enterprises, and non-member countries, should be involved.

14.2 The conference, particularly the ‘tax framework conditions’ paper confirmed that electronic commerce raises both tax policy and administration issues for international authorities, particularly in respect to GST and international tax. It was noted, however, that electronic commerce is not new business but rather a new way of doing business. Many of the issues posed by electronic commerce are extensions of existing problems created by international trade in goods and services.

14.3 While policy and administrative issues will be addressed and monitored at a domestic level, it is important, given the global nature of electronic commerce, that international cooperation on taxation continues. The government supports New Zealand’s continued involvement in international forums such as OECD and APEC.

14.4 Finally, electronic commerce provides revenue authorities with the opportunity to improve service delivery, reduce compliance costs and build on tax simplification and voluntary compliance policies.

International cooperation is important in taxation issues

15. Statistics

15.1 Given the increasing importance of electronic commerce as part of gross domestic product and international trade, and the need for government to monitor the competitive market environment, the issue of appropriate and adequate information sources must be addressed.

16. Other Issues

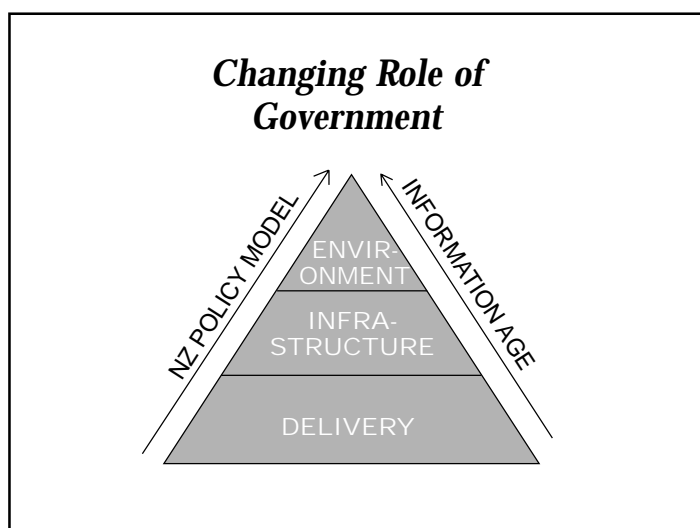
16.1 There are a number of other issues which may pose barriers to the development of electronic commerce, but over which government may have little or no control. These include:

- The banking system's ability to easily process transactions for electronic commercial vendors, particularly transactions that involve currency transfer where a New Zealand vendor is selling in US dollars
- The ability of New Zealand businesses to comprehend and act on the opportunities electronic commerce represents
- Availability of the skills and knowledge required for a successful electronic commerce initiative, especially in the areas of web site design, content creation, technical skills and Internet marketing skills.

The Role of Government

- 17.1 The development of electronic commerce has been successfully led by the private sector. Any government intervention should be, as far as possible, technology-neutral and purely facilitative in nature. A need for government intervention should not automatically arise simply because commerce is being undertaken via a new technology.
- 17.2 The role of government should be to create a stable and certain environment in which commercial activity can take place (see diagram). Traditionally, governments have concerned themselves with the development of infrastructures and the delivery of services to their citizens such as the building of airports and operation of airlines. While governments still deliver a range of services, particularly in the health, education and welfare sectors, recent trends indicate that increasingly their role is one of setting a consistent and certain environment in which the private sector can operate. In this environment, industries are treated equally and the government's role is related to allowing fair competition and markets to develop, while ensuring consumers are protected. This environment is characterised by broad regulatory rules for economic activity, which facilitate the constructive participation of private interests, rather than narrowly focused or command and control regulation.

Government's role is changing from owning and controlling industrial-age infrastructures to intervening only when market failures demand it



- 17.3 This move away from ownership and close control of industrial age infrastructures also fits in with the trends of the information age – towards the development of less tangible assets such as intellectual property and knowledge.

17.4 In creating an environment in which competitive markets can flourish, governments monitor market failures and step in where the benefit of government intervention clearly outweighs the costs and will lead to an improved outcome.

17.5 In order to facilitate monitoring, to support effective intervention and to ascertain outcomes, the collection of appropriate official statistics will be essential. The lack of such statistics could impact on the confidence in the New Zealand economy of significant market players.

Government's role is to provide certainty for business by resolving issues arising out of growth of electronic commerce

17.6 The issues arising from the growth of electronic commerce listed earlier in this paper (such as cross-border jurisdiction, security, privacy, legal status of electronic documentation and consumer protection) raise a number of potential obstacles or market failures with respect to electronic commerce. The government's role will be to ensure consistent and timely resolution of these issues, providing a level of certainty for businesses and consumers, either through direct intervention, or through alternatives arising out of new market and technical developments.

17.7 Based on these ideals the role of government in the development of electronic commerce will be underpinned by the following principles:

Private sector to lead the development of electronic commerce

- Because the private sector is faster moving and more flexible than governments, the private sector should continue to lead the development of electronic commerce hastening the trend towards self-regulation
- The expansion of electronic commerce should be market and technology driven

Government to enforce a competitive, consistent and technology-neutral legal and regulatory environment

- Governments should support and enforce a competitive, predictable, minimalist, consistent and technology-neutral legal and regulatory environment for electronic commerce that protects consumers and enables genuine entities to protect their commercial reputations
- Given the international dimension, issues relating to jurisdiction and electronic commerce will need to be the subject of international agreements.

18. Self-regulation

18.1 The move away from sector specific regulation means the role of government will be increasingly focused on setting higher

level or more general rules and monitoring compliance. In this environment, the private sector will be left to get on with doing business within those higher level rules. In turn, where they think their competitors are not following the rules, they must be able to seek redress through the courts. This process is moving closer to self-regulation. It is becoming increasingly apparent that in such an environment the private sector and the market will have a significant part in driving the development of electronic commerce.

Government sets general rather than specific rules and monitors compliance

18.2 In New Zealand, the role of government has changed over recent years from being highly regulated to one of setting the environmental framework within which private sector organisations can compete fairly. This reflects what private sector organisations are asking of governments, namely the provision of a commercial environment that includes a competitive and fair market unfettered by inappropriate regulation and associated compliance costs. Increasingly, business is also asking for the ability to protect their reputations and intellectual assets through, for example, copyright and trademark legislation with appropriate enforcement and penalty provisions.

18.3 At the global level the achievement of legal consistency internationally involves complex, time consuming negotiations between countries. Such broad high level consistency is without doubt desirable in the longer term. On the other hand, international electronic commerce is already well established and growing rapidly. It is likely therefore that on-line enterprises will quickly develop self-regulation simply as a result of competition for business, for example in the area of consumer protection policies, as has happened with the international use of credit cards.

Self-regulation amongst on-line enterprises should develop quickly as the result of competition

18.4 This self-regulation may be an attractive solution for genuine electronic businesses as an expression of their self-interest in building trust and confidence in doing business on-line. Effective self-regulation is likely to become a competitive asset for businesses, as reputation in an electronic environment is critical. The ongoing development of the Internet is an excellent example of how well self-regulation can work combined with entrepreneurial ingenuity and technology.

18.5 Intermediaries such as banks and credit card companies may also act to build business and consumer trust in electronic commerce by acting as guarantors as they do now to a great

extent. Such intermediaries may also arbitrate in cross-border disputes between buyers and sellers, given the difficulties in resolving problems through the courts. However, for systematic fraudulent and misleading conduct, cooperation between national law enforcement agencies will be required.

- 18.6 This emphasises the underlying principle that if government intervention is required in order to maintain certainty for business and consumers, it should consist of simple and predictable regulation that is technology-neutral and is able to respond to the pace of change in the electronic environment.

19. Government as role model

Government use of new technologies will raise community awareness of electronic commerce

- 19.1 By ensuring that its own activities, and any businesses that it continues to own, use new technologies as fully and efficiently as is appropriate, government can play a major role in developing community awareness and acceptance of electronic commerce. A growing number of government agencies are already exploring options for delivering information and services to New Zealanders electronically. The ability to file tax returns, process Customs' import/export entries and register companies electronically on the Internet are three examples.

20. Conclusion

- 20.1 It is clear that the electronic or digital age poses significant challenges to government, the private sector and to consumers, and these challenges must be met if the full benefits of electronic commerce are to be realised. The pace of new technological developments will mean the private sector has a greater role in resolving some of the potential obstacles or market failures that electronic commerce raises. It is desirable that coordination of such solutions be achieved by industry self-regulation.
- 20.2 However, if government input is required it should consist of simple and predictable legal tools that are sensitive to the technology and to the pace of change. The speed of changes in technology makes it important to ensure that regulation, where required, neither falls behind nor unnecessarily interferes with the development of electronic commerce.