

BEYOND THE DOTCOM FEVER:
MAPPING THE DYNAMICS OF E-COMMERCE
IN HONG KONG

NAUBAHAR SHARIF

*Department of Science and Technology Studies
Cornell University*

Introduction

This paper attempts to provide recommendations for a specific branch of public policy—electronic commerce (e-commerce) policy. It provides policy recommendations mainly by studying similar policy in other countries, primarily, Singapore and, secondarily, the United States of America. By analyzing the current status of e-commerce policy in Hong Kong as compared with the other countries, deficiencies in Hong Kong's policies can be identified. Further, based on those deficiencies, recommendations can be made for e-commerce policy in Hong Kong.¹

Electronic Commerce (E-commerce)—A Background

E-commerce refers to business transactions carried out on the Internet. E-commerce is a means of conducting transactions that, prior to the evolution of the Internet as a business tool, would have been completed in more traditional ways: by telephone, mail, facsimile, proprietary electronic data interchange systems, or face-to-face contact.

Two facets of the new, emerging economy are e-commerce (that is, business processes that shift transactions to the Internet or some

¹ In reading this paper, it is important to bear in mind the subject matter that is examined. E-commerce is in flux worldwide, not least because of the decrease in euphoria over the promises of "dotcom" companies over the past 18 to 24 months, and also because of the global economic slowdown. In and of itself, too, e-commerce is a newly developing arena where governments have only recently (within the past decade) begun to engage themselves. Therefore, many of the issues and ideas raised in this paper may change rapidly in response to a fluid social, regulatory and technological environment.

other non-proprietary, Web-based system) and the information technology (IT) industries that make e-commerce possible. Both these facets of the new economy are growing and changing at a breathtaking speed. Not only were we unable to foresee five years ago how advances in information technology would alter the manner in which we do business and create value, but the rate of change is racing ahead of estimates.

The value of e-commerce transactions, while still small relative to the size of the economy, continues to grow at a remarkable rate. More significant than the dollar amount of these transactions, however, is the new business processes e-commerce enables and the new business models it is generating. This is witnessed none other than by the growing number of IT or e-commerce companies that are being set up every day in Hong Kong, and those that are being listed on the stock market (particularly the Growth Enterprise Market or GEM). Both the new Internet-based companies and the traditional producers of goods and services are transforming their business processes into e-commerce processes in an effort to lower costs, improve customer service and increase productivity.

While individual private estimates of Internet access and size vary significantly from one another, taken together, they indicate remarkable growth. For example, *The Industry Standard* reports that from 1998 to 1999, the number of Web users worldwide increased by 55 percent; the number of Internet hosts rose by 46 percent; the number of Web servers increased by 128 percent; and the number of new Web address registrations rose by 137 percent.²

Although, it goes without saying that Internet penetration and usage is most concerted in the USA and Canada, it is also true to say that growth in Internet access has been the fastest in Asia. According to Nua, an Internet strategy firm, as of May 1999, 171 million people across the globe had access to the Internet. The Asia-Pacific region accounted for 27 million or 15.8 percent of users. In March 2000, the same source reported that there were 304 million people across the globe who had access to the Internet. In March 2000, the Asia-Pacific region accounted for 68.9 million or 22.6 percent of users. This represents an increase of 43.22 percent of peo-

ple who had access to the Internet in Asia-Pacific over a ten-month period, and is the largest increase for any region in the world.³

Internet usage for online transactions, however, is still fairly small. According to AC Nielsen, 26.2 percent of Hong Kong families regularly use the Internet. Among those users, only 13 percent—less than four percent of the six million population—had used the Internet for online transactions. The situation is far different in other nearby countries—in South Korea and Taiwan, for example, respectively 78.7 percent and 56.1 percent of Internet users buy products or services online.⁴

Present State of E-Commerce Policy in Hong Kong

In his 1997 Policy Address, the Chief Executive outlined his vision to make Hong Kong a leader in the information world of tomorrow. In his 1998 Policy Address, he further emphasized the importance of using IT to help Hong Kong retain our competitive edge and drive our overall economic expansion. To realize the Chief Executive's IT vision, the "Digital 21" IT strategy was announced in November 1998. This is a comprehensive strategy to enhance and promote Hong Kong's information infrastructure and services so as to make Hong Kong a leading digital city in the globally connected world of the twenty-first century.⁵

The government fully recognizes the strategic importance of promoting the development of electronic commerce for Hong Kong's long-term benefit. Towards this end, the government is committed to providing a favourable environment supported by a sound legal framework to foster the development of electronic commerce in Hong Kong. A certification authority has been established as part of a

³ For complete survey results, definitions, and methodology, see <http://www.nua.ie/surveys>.

⁴ SCMP, Monday, 19 November 2001.

⁵ Hong Kong's Policy Objective on IT is fully supported by the "Digital 21" IT strategy, which is built upon four enabling factors: developing a high-capacity communications infrastructure, establishing an open and common interface for the conduct of secure electronic transactions, equipping our people with the know-how to use IT widely in our everyday life, and nurturing a culture that stimulates creativity and welcomes advances in the use of IT. In the past year, Hong Kong has put in place and made significant progress in launching various initiatives in pursuit of these enabling factors.

² Thompson, Maryann Jones (1999) "My How We've Grown," *The Industry Standard*, April 26. (<http://www.thestandard.com>)

public key infrastructure to provide security and trust in the conduct of electronic transactions over open networks. Hong Kong also participates in the deliberations of international fora such as the WTO, the APEC and the OECD in order to keep in close touch with world developments in, and to put across its views on, e-commerce.

The Hong Kong SAR (HKSAR) Government's Role

The HKSAR government views the major barrier for the wider adoption of e-commerce as concerns about security and the protection of personal data when transactions are conducted over the Internet. The presence of supporting infrastructure is extremely important in addressing the identities of the parties involved, the integrity and confidentiality of the information transmitted, and the non-repudiation and legal status of the electronic transactions.

The government is building an Electronic Service Delivery (ESD) infrastructure to enable the community to obtain public services through the Internet and other electronic means.⁶ Private companies can also make use of the Infrastructure for the conduct of e-commerce. Services under the ESD scheme will be provided based on a public-oriented approach.

The ESD scheme was first launched on 9 December 2000. A wide range of services provided by 10 government departments and public agencies will be covered under this first phase of implementation. Under this phase, examples of services include the filing of tax returns, search for job vacancies, voter registration, renewal of driving licences, changing of personal information in various government departments, payment of government bills, appointment booking for registration of identity card, and investment and tourist information.

Subsequent phases will be implemented on an ongoing basis. In the long run, the government aims to include all public services that

⁶ The ESD is a key initiative under the "Digital 21" strategy for the delivery of public services through the Internet and other electronic means. It will provide seamless delivery of various types of public services under a citizen-centric approach, and will allow for an adoption of an information infrastructure with a common and open interface accessible throughout the territory. The services of the ESD will be available for use 24 hours a day and seven days a week at locations convenient to the public, and it will act as a catalyst to pump-prime the development of electronic commerce in Hong Kong.

are amenable to the electronic mode of delivery under the ESD scheme. The benefits of the ESD scheme will be: an improvement in quality and efficiency in the delivery of public services; an improvement in the accessibility of government services, and widening the reach of public services; a reduction in the cost of providing public services in the longer term; promotion of the wider use of electronic transactions within the community; and the provision of a favourable environment for electronic commerce to take hold and flourish in Hong Kong.⁷

In November 2001, the HKSAR government and 10 local business and technology associations⁸ announced an e-commerce adoption campaign to promote the use of the Internet among local businesses and the public. This campaign was set up in an effort to increase awareness and encourage the adoption of e-commerce in Hong Kong. It was launched in response to the low usage of the Internet for e-commerce purposes in Hong Kong despite the large number of Hong Kong households and businesses that are connected to the Internet. In particular, Hong Kong was said to lag behind other key Asian markets (principally Japan, South Korea and Singapore) in e-commerce adoption.⁹

Furthermore, to instil the public's confidence on the use of electronic transactions, the government has taken the lead to establish a public Certification Authority through the Hong Kong Post. The Hong Kong Post has established a Public Key Infrastructure. Through the use of digital certificates and the public/private key mechanisms, the security and integrity of transactions conducted over the Internet can be ensured (further details of the Hong Kong Post's role can be seen below).

The government is also providing a legal framework through the Electronic Transactions Ordinance to enhance certainty and security in the conduct of electronic transactions. The Ordinance seeks to give electronic records and digital signatures used in electronic transactions the same legal status as that of their paper-based counterparts.

⁷ In association with the introduction of the ESD scheme, the government will develop a common Chinese language interface to facilitate electronic transactions and information exchange in Chinese.

⁸ These organizations include the Hong Kong General Chamber of Commerce, the Hong Kong Information Technology Federation, American Chamber of Commerce, the Hong Kong Post, Hong Kong Society of Accountants, the Productivity Council and the Office of the Telecommunications Authority.

⁹ Paraphrased from: <http://www.irytonline.com.hk>

The other main objective of the Ordinance is to establish a framework that will promote and facilitate the establishment and operation of Certification Authorities in Hong Kong.

A whole series of promotion and educational programmes have been launched to enhance the awareness among public and local enterprises on the use of e-commerce. The government has been promoting ESD through roving shows, exhibitions and the launching of simulation software to provide the public with hands-on experience.

Apart from the HKSAR government, Hong Kong's e-commerce initiatives are presently pushed through three major government/quasi-governmental organizations (the first two are industry-support organizations):

1. The Hong Kong Productivity Council (HKPC)
2. The Trade Development Council (TDC)
3. The Hong Kong Post

The Hong Kong Productivity Council (HKPC)

DigitHall 21 is Hong Kong's first streamlined and integrated IT promoter and services provider. As a key initiative by HKPC's Institute of Information and Media Industries (IMI), DigitHall 21 is designed to serve the ever-increasing IT needs of various industries and the general community, thereby, enhancing the competitiveness of Hong Kong as it enters the digital age.

Designed to serve the IT needs of the key phases of business operations, DigitHall 21 comprises six IT centres built around a central arena. The six centres are:

1. E-Commerce Centre¹⁰
2. Business Intelligence Centre
3. Enterprise Resource Planning
4. E-Community Centre
5. Software Industry Information Centre (SIIC)
6. New Media Centre

¹⁰ The DigitHall 21 E-Commerce Centre is the first centre in Hong Kong that offers integrated electronic commerce solutions to local manufacturers, traders, retailers and other service providers. The E-Commerce Centre offers the following services: market intelligence information, electronic sourcing, electronic data interchange (EDI), electronic marketing, electronic payment, and electronic assisted delivery.

The Trade Development Council (TDC)

The major campaign by the Trade Development Council is the establishment of Tradelink Electronic Commerce Ltd.—a joint venture between the Hong Kong SAR government and 11 private sector shareholders,¹¹ all of who are key players in the international trade cycle in Hong Kong, either directly or as representative organizations. The government's shareholding is just under 45 percent.

Tradelink's mission is to help the local trading community enhance its efficiency and stay competitive in the global market place through greater use of electronic commerce. Since all import and export shipments involve government documentation at some stage, Tradelink is "jump-starting" the adoption of e-commerce in Hong Kong by providing electronic services for the most commonly-used government transactions, linked to a programme of migration from paper to full electronic submission.

As well as providing an electronic link to the government, Tradelink's services offer a number of value-added transaction management facilities, including message checking; matching and validation; message authentication and security; electronic billing and payments; and message archiving and audit trail services.

In order to speed up the transition from paper to electronic commerce and maximize the efficiency benefits for all parties, the Hong Kong SAR government has set a series of deadlines for migration to electronic submission.

Quota License applications were made fully electronic from 1 January 1999, following a four-stage migration programme in 1998.

Trade Declarations were made fully electronic from 1 April 2000, following a timetable for the gradual withdrawal of modes of submission of paper declarations to government counters.

For those traders who are not ready to move to electronic commerce by these deadlines, Tradelink is providing a series of special facilities for non-computerized traders.

¹¹ The private sector shareholders are: Cable & Wireless HKT, China Resources (Holdings) Ltd., The Federation of Hong Kong Industries, Hong Kong Air Cargo Terminals Ltd. (HACTL), Hong Kong Association of Freight Forwarding Agents (HAFWA), The Hong Kong General Chamber of Commerce, Hongkong International Terminals Ltd. (HITL), The Hongkong and Shanghai Banking Corporation Ltd. (HSBC), Modern Terminals Ltd. (MTL), Standard Chartered Bank, and Swire Pacific Ltd.

More than 98 percent of Hong Kong's exporters and manufacturers are classified as small- to medium-sized enterprises (SMEs), and over 87 percent have fewer than 10 staff. Tradelink recognizes the constraints that this places on investment in IT skills and resources, and has carefully designed its services and software to be as affordable, convenient and easy to use as possible.

In addition, a number of special initiatives have been introduced to help reduce the start-up cost for smaller businesses, or those that use government transactions infrequently, including:

- Low-cost packages for SMEs
- SilkNet Service Package¹²
- ValueNet Service Package¹³
- Secure Internet Gateway service
- Special facilities for non-computerized traders

¹² The SilkNet service is based on the Restrained Textiles Export Licence (also known as "quota licence", "blue licence" or RTFL), which some 5,000 Hong Kong exporters and manufacturers currently use. The Quota Licence application was the first government trade transaction in Hong Kong to be offered electronically when Tradelink introduced SilkNet in January 1997, and it was the first to go 100 percent electronic when the Trade Department's receiving counters for paper applications were closed permanently from 1 January 1999 following a four-phase migration programme in 1998. Those traders who are not yet computerized now have to submit their applications through one of the Tradelink service centres, where they can be converted to electronic format for submission to government. Currently over 94 percent of applications are submitted through SilkNet and only six percent through the service centres. Notification of licence approval to the designated sea or air carrier is also now fully electronic, while an electronic service for submitting the "visa copy" of approved licences to US Customs was introduced at the beginning of 1999. This helps to speed delivery of textile shipments by enabling many consignments to receive customs clearance prior to their actual arrival in port. Two further transactions added in the third quarter of 1999 are Production Notification, which is required to support many Quota Licence applications; and Certificate of Origin, which certifies to overseas authorities that the goods are made in Hong Kong.

¹³ ValueNet is a package of electronic commerce services designed to help Hong Kong's general importers and exporters handle their trade documentation more easily. It is built around the Import and Export Declaration, which must be submitted to the government for every import into, or export from, Hong Kong. The service offered by Tradelink enables traders to include in their declarations English or Chinese characters in those fields where current government regulations permit. With effect from 1 April 2000, the Hong Kong SAR government only accepts Import and Export Declarations received electronically. The main government collection office in Tsim Sha Tsui closes with effect from 1 October 1999 and from then until 31 March 2000, only the Hong Kong (Sheung Wan) collection office will remain open to receive paper declarations.

Hong Kong Post

The Internet is a global and faceless environment. Being able to identify and trust the other party is a challenge in any Internet transaction. A digital trust system based on the use of digital signatures and certificates, enables parties to establish one another's identities and transact safely and confidently.

Towards this end, to enable the development of e-commerce in Hong Kong, the Hong Kong Post has established a public key infrastructure (PKI) and acted as the public Certification Authority (CA) in Hong Kong since 31 January 2000. This provides a secure and trusted environment for the conduct of electronic transactions.

Accordingly, an Ordinance (CAP 553 ELECTRONIC TRANSACTIONS (ORDINANCE)) was enacted by the government of the HKSAR on 7 January 2000 for the purposes of:

- a. facilitating the use of electronic transactions for commercial and other purposes;
- b. giving electronic records and digital signatures used in electronic transactions the same legal status as that of their paper-based counterparts; and
- c. establishing a framework to promote and facilitate the operation of Certification Authorities (CAs) so as to ensure trust and security in electronic transactions.

Public Key Infrastructure (PKI) covers the use of public key cryptography and digital certificates as the accepted means of authentication and access control over unsecured networks, such as the Internet. While public key cryptography addresses issues of data integrity and transaction privacy, certificates address concerns in authentication and access control.

Public key cryptography involves the use of a pair of different, but related, keys, which enables the conduct of e-commerce securely on the open telecommunications network or the Internet. Each user has a private key and a public key. The private key is kept secret, known only to the user; the other key is made public by placing it in the Public Directory maintained by the Hong Kong Post.

A digital certificate is a digital document attesting to the binding of a public key to an individual or other entity. It allows verification of the claim that a specific public key does, in fact, belong to a specific individual. A Hong Kong Post e-Cert contains a public key, the

name of the holder, an expiration date, a certificate serial number and subscriber reference number.

Other Organizations of Note

While the above are the three main carriers of Hong Kong's e-commerce policy (in addition to the HKSAR government), there are a few other organizations of note that promote e-commerce in Hong Kong.

- *Supply Chain Management (SCM) Resource Centre (HKANCA)*

The Hong Kong Article Numbering Association (HKANNA) provides supply chain management services such as library facilities, with a collection of the latest information and publications on e-commerce, training and education. It also has a demonstration centre that displays software applications on the various supply-chain processes.

- *Internet Business Consortium on E-commerce*

The e-commerce portal site is maintained by the Internet Business Consortium (IBC), a non-profit organization led by the Cyberspace Centre of the Hong Kong University of Science and Technology. The site aims to provide help and information to small- and medium-sized enterprises in e-commerce solutions. A step-by-step guide on how to start an e-business is presented. Support personnel are available to provide technical advice to viewers through a forum.

E-Commerce Policy in Singapore

Singapore aspires to be a centre of international e-commerce activity. A good set of e-commerce services is available, including online payment services, security services and bureau services. The legal foundation for e-commerce is also in place. Electronic records can be used as evidence in court, and contracts formed electronically and electronic signatures are recognized. Furthermore, Singapore has an IT-literate and Internet savvy population. Some 40 percent of homes have Internet access, and there are more than 600,000 dial-up Internet subscribers. As at end 1999, the number of info-comm staff in Singapore was estimated to be 92,800. The info-comm manpower demand is projected to grow 10 to 12 percent per year for

the next two years. Singapore has seven tertiary institutes offering IT studies and six research and development centres. Businesses are highly computerized, due to an 18-year history of computerization in the public and private sector. More recently, the Singapore ONE initiative has also brought about a variety of multimedia and interactive services on the Internet.

The Singaporean government is committed to making Singapore a competitive place for international e-commerce. A master plan (details below) has been formed to deliver this vision, and schemes have been designed to make this an attractive proposition.

Unlike Hong Kong, therefore, Singapore has had a well-defined e-commerce policy for a couple of years. In 1998, Singapore launched an e-commerce master plan. The launch marked the start of a campaign to bring e-commerce to mainstream businesses and to the public; and to attract international e-commerce activities to Singapore.

The government launched the e-commerce plan to drive the pervasive use of e-commerce in Singapore, and to strengthen Singapore's position as an international e-commerce hub. The target is to have S\$4 billion worth of products and services transacted electronically through Singapore, and for 50 percent of businesses to use some form of e-commerce by the year 2003. This was announced by then Deputy Prime Minister BG (NS) Lee Hsien Loong at the opening of COMDEX/ASIA at Singapore Informatics '98.

Since the introduction of the Electronic Commerce Hotbed programme in August 1996, Singapore has made much progress in its e-commerce landscape. The legal framework for e-commerce is in place and the basic infrastructure services are available. There is also an increasing number of innovative and compelling e-commerce services and applications. The launch of the e-commerce plan marks the start of a campaign to bring e-commerce to mainstream businesses and the public; and to attract international e-commerce activities to Singapore. One of the main objectives of the e-commerce plan is to help businesses exploit this potential and create a strong, competitive edge for themselves.

On the national level, by developing Singapore into an international e-commerce hub, the plan aims to help create and sustain an e-commerce services sector. This will comprise business strategists, creative designers, system integrators, network operators and other e-commerce intermediaries. Another important contribution is the

additional activity that can be generated for Singapore's port, logistics, financial and telecommunications services, as a result of the multiplier effects that e-commerce has on these key sectors of the economy.

The plan has five main thrusts and various programmes and projects to drive these thrusts:

a. To develop an internationally linked e-commerce infrastructure

The purpose of this thrust is to strengthen Singapore's position as an e-commerce hub, and the financial and logistics sectors have a key role to play in driving this thrust. An efficient settlement system for Internet transactions among businesses, covering international trade payment and multi-currency payment, has been planned to be deployed. Additionally, a well-connected logistics infrastructure has been planned to support requirements for the delivery of physical goods. Singapore also aims to be positioned as a centre of e-commerce infrastructure development, where international infrastructure players in areas such as trading platforms, and trust management and rights management systems will hub to develop and deploy services there.

b. To jump-start Singapore as an e-commerce hub

This initiative focuses on the sectors in which Singapore has an inherent advantage as a hub, especially in business-to-business services. These advantages include a stable and excellent financial infrastructure, a transport and logistics infrastructure that is well known for its efficiency, and strong telecommunications connectivity and e-commerce infrastructure. Incentive schemes and other support programmes are used to attract international and local companies to base their e-commerce hub activities in Singapore. Finally, an international publicity plan is being developed, and trade shows are being used to promote Singapore as an e-commerce hub.

c. To encourage businesses to use e-commerce strategically

Under this thrust, education and other support programmes are being put in place to help businesses exploit e-commerce to enhance their productivity and competitiveness. Simple and easy to use trading platforms are being provided, and a usage promotion drive has been launched to bring about the widespread participation of SMEs. To ensure a steady supply of business and technical manpower, businesses are encouraged to invest in retraining their staff through incentive programmes.

d. To promote usage of e-commerce by the public and businesses

This thrust enables Singaporean citizens and businesses to enjoy the benefits that e-commerce can bring, and at the same time, create an e-commerce savvy culture. Mass education efforts are being used. In addition, e-commerce has started to be taught in business and professional courses in Singapore universities and polytechnics. The government itself is setting the pace to proliferate the use of e-commerce in Singapore through its electronic public services initiatives. Key public services will be delivered electronically by the year 2001.

e. To harmonize cross-border e-commerce laws and policies

This thrust is key to enabling businesses to trade confidently with overseas partners. Besides putting in place legislation that is internationally consistent, Singapore is working with its major trading partners to align their e-commerce laws. Efforts have already been initiated with Canada, Australia and Germany. Singapore also continues to participate actively at major international forums to bring about international agreements on a harmonization of e-commerce frameworks.

A key supporting programme is Singapore's efforts to be "thought leaders" in the emerging and dynamic e-commerce scene. In particular, the Department of Statistics is leading an initiative to measure the growth of the e-commerce services sector, the contribution of e-commerce to growth in GDP, and the volume of goods transacted through e-commerce. In addition, research for e-commerce would be expanded to include policy research as well as market research. Partnerships with academia and industry to jointly sponsor and contribute to research would be sought. These programmes will advance Singapore from having the basic legal and technology infrastructure to support e-commerce now (1998), to having a critical base of e-commerce services and a reliable infrastructure in 2000, and finally, to have a sizeable amount of e-commerce transactions, an e-commerce services sector and the widespread adoption of e-commerce by the industry in 2003.

In particular, Singapore has a conducive and pro-business e-commerce environment to support the implementation and deployment of online services. This environment is the foundation and infrastructure for conducting e-business on the Internet safely and reliably.

On 13 March 2000, the S\$9 million Local Enterprise Electronic Commerce Programme (LECP) began operation. The LECP aims to jump-start the mass adoption of e-commerce among local enterprises so as to exploit the full benefits of e-commerce for all industries. LECP (EC) applies only to e-commerce services and applications. Some examples are:

- The provision of online transactional functions for a business, such as order processing.
- The provision of online services, for example, Internet banking and customer care services.
- The integration of a company's web site and internal computer system.
- The use of electronic data interchange (EDI) with business partners.

Companies that meet the following criteria can apply for assistance:

1. The companies must be locally registered.
2. The companies have equity that is at least 30 percent owned by a Singaporean.

Under the programme, the assistance provided to the companies is as follows:

- The company enjoys a free service that broadcasts the company's e-commerce adoption needs to a group of IT consultants and solution providers.
- The company receives a grant of up to 50 percent of the e-commerce project cost, to be capped at S\$20,000, for each qualified local enterprise.¹⁴

Furthermore, the environment consists of the physical network, components and services. It also includes a collection of standards, support and incentives to assist the online business community.

Steps are also being taken to ensure that the infrastructure is internationally linked in order to support cross-border transactions, and that policies are harmonized with international practices.

¹⁴ Connectivity to Singapore ONE may be included. The money can be used to cover consultancy fees, cost of hardware and software, and subscription fee (up to the first 12 months).

E-Commerce Policy in the United States of America

In contrast to Singapore, the USA takes a much less interventionist view towards e-commerce policy. The US view is recognition of the fact that governments can have a profound effect on the growth of commerce on the Internet. By their actions, they can facilitate electronic trade or inhibit it. Knowing when to act and—at least as important—when not to act, will be crucial to the development of electronic commerce.

Furthermore, in addition to the Federal Government's initiatives, there are state initiatives also. These include those from the American Bar Association (ABA), Congress, the Federal Reserve Board, the Food and Drug Administration (FDA), the National Institute of Standards and Technology, the Health and Human Services, the Internal Revenue Service, the Treasury Department, and the National Conference of Commissioners on Uniform State (NCCUSL).

As for the US government, it has articulated the administration's overall vision for the emergence of the Global Information Infrastructure (GII) as a vibrant global marketplace by suggesting a set of principles, presenting a series of policies, and establishing a road map for international discussions and agreements to facilitate the growth of commerce on the Internet. The salient points of these principles have been extracted and set out below.¹⁵

Principles

1. The private sector should lead

Though government played a role in financing the initial development of the Internet, its expansion has been driven primarily by the private sector. For electronic commerce to flourish, the private sector must continue to lead. Innovation, expanded services, broader participation and lower prices will arise in a market-driven arena, not in an environment that operates as a regulated industry.

Accordingly, governments should encourage industry self-regulation wherever appropriate and support the efforts of private sector organizations to develop mechanisms to facilitate the successful operation of the Internet. Even where collective agreements or standards are

¹⁵ The full text of the report is available at <http://www.ecommerce.gov>.

necessary, private entities should, where possible, take the lead in organizing them. Where government action or intergovernmental agreements are necessary, on taxation for example, private sector participation should be a formal part of the policy-making process.

2. *Governments should avoid undue restrictions on electronic commerce*

Parties should be able to enter into legitimate agreements to buy and sell products and services across the Internet with minimal government involvement or intervention. Unnecessary regulation of commercial activities will distort the development of the electronic marketplace by decreasing the supply, and by raising the cost of products and services for consumers the world over.

Business models must evolve rapidly to keep pace with the break-neck speed of change in the technology; government attempts to regulate are likely to be outmoded by the time they are finally enacted, especially to the extent that such regulations are technology-specific. Accordingly, governments should refrain from imposing new and unnecessary regulations, bureaucratic procedures, or taxes and tariffs on commercial activities that take place via the Internet.

3. *Where governmental involvement is needed, its aim should be to support and enforce a predictable, minimalist, consistent and simple legal environment for commerce*

In some areas, government agreements may prove necessary to facilitate electronic commerce and protect consumers. In these cases, governments should establish a predictable and simple legal environment based on a decentralized, contractual model of law rather than one based on top-down regulation. This may involve states as well as national governments. Where government intervention is necessary to facilitate electronic commerce, its goal should be to ensure competition, protect intellectual property and privacy, prevent fraud, foster transparency, support commercial transactions, and facilitate dispute resolution.

4. *Governments should recognize the unique qualities of the Internet*

The genius and explosive success of the Internet can be attributed in part to its decentralized nature and to its tradition of bottom-up governance. These same characteristics pose significant logistical and technological challenges to existing regulatory models, and governments should tailor their policies accordingly.

Electronic commerce faces significant challenges where it intersects with existing regulatory schemes. We should not assume, for

example, that the regulatory frameworks established over the past 60 years for telecommunications, radio and television fit the Internet. Regulation should be imposed only as a necessary means to achieve an important goal on which there is a broad consensus. Existing laws and regulations that may hinder e-commerce should be reviewed and revised or eliminated to reflect the needs of the new electronic age.

5. *Electronic commerce over the Internet should be facilitated on a global basis*

The Internet is emerging as a global marketplace. The legal framework supporting commercial transactions on the Internet should be governed by consistent principles across state, national, and international borders that lead to predictable results, regardless of the jurisdiction in which a particular buyer or seller resides.

In summary, the USA advocates a co-ordinated strategy that views the success of e-commerce as requiring an effective partnership between the private and public sectors, with the private sector in the lead. Government participation must be coherent and cautious, avoiding the contradictions and confusions that can sometimes arise when different governmental agencies individually assert authority too vigorously and operate without co-ordination. The variety of issues raised, the interaction among them, and the disparate fora in which they are being addressed necessitates a co-ordinated, targeted governmental approach to avoid inefficiencies and duplication in developing and reviewing policy.

Private sector leadership accounts for the explosive growth of the Internet today, and the success of electronic commerce depends on continued private sector leadership. Accordingly, the US government encourages the creation of private fora to take the lead in areas requiring self-regulation, such as privacy, content ratings and consumer protection; and in areas such as standards development, commercial code and fostering interoperability.

Problems of Hong Kong's Existing Policy on E-Commerce

E-commerce is a new field. Therefore, e-commerce policy is a newly developing area that is changing day by day. Standards and trends are different depending on geographical area, degree of Internet development, political culture, etc.

Analysis of Existing E-Commerce Policy Vehicles

The three main carriers of Hong Kong's e-commerce policy are the two industry support organizations—the Hong Kong Productivity Council (HKPC), the Trade Development Council (TDC) and the government (and the Hong Kong Post, which is a direct part of the government). These entities are achieving their objectives as regards e-commerce policy with a fair degree of success.

The HKPC's DigiHall 21 is Hong Kong's first streamlined and integrated IT promoter and service provider. DigiHall's stated objective as regards e-commerce policy is to offer integrated electronic commerce solutions to local manufacturers, traders, retailers, and other service providers. The HKPC also organizes seminars, training and workshops as well as provides business and technical advisory services and e-commerce solutions. In these regards, the centre it seems is doing a fairly good job. This was substantiated from a meeting with the centre's officer responsible for e-commerce, Ms. Ada Cheng, and from a survey of the centre's services, which include helping local companies (particularly manufacturers) set up e-commerce services in their companies (through a variety of initiatives).¹⁶

As for the Trade Development Council, its focus rests much more with the local trading community (as opposed to the manufacturing organizations, which are mainly targeted by the HKPC). The TDC is similar to the HKPC in that it also promotes e-commerce (but to a different sector of the business economy in Hong Kong) by organizing seminars, training and workshops as well as providing business and technical advisory services and e-commerce solutions. The TDC's mission, through its Tradelink service, is to help the local trading community enhance its efficiency and stay competitive in the global marketplace through greater use of e-commerce. Since all import and export shipments involve government documentation at some stage, Tradelink is "jump-starting" the adoption of e-commerce in Hong Kong by providing electronic services for the most commonly-used government transactions, linked to a programme of migration from paper to full electronic submission. In this respect, Tradelink has also been achieving (and continues to achieve) its objectives. For instance, the most obvious example of this is the fact that since 1st April, import

and export declarations have become fully electronic and no paper declarations are accepted when the Customs and Excise Department closes its Hong Kong Collection Office in April. The 1 April 2000 transition date marks three years to the day since Tradelink launched its electronic lodgement service in 1997. It also marks the most important step in Hong Kong's switch from paper to electronic commerce.¹⁷

The HKSAR government's initiatives and the Hong Kong Post's initiatives can be analyzed together, as the Hong Kong Post's establishment of the public Certification Authority was directly led by the government. In summary, the government basically began the following schemes: Electronic Services Delivery, the establishment of a public Certification Authority, and the provision of a legal framework via the Electronic Transactions Ordinance. All of these policy objectives have either been met (the establishment of the CA, and the enactment of the requisite law), and the other policy objective (the ESD) is the in process of being met (the first phase of the ESD to be launched in October this year).

From the analysis provided in the preceding sections of this paper of Hong Kong's, Singapore's and the USA's e-commerce policy, however, the main problem with respect to Hong Kong is not that the existing policy does not achieve its objectives; rather, that there are *deficiencies* or *shortcomings* in the existing policies. Existing policies do not go far enough. Specifically, the shortcomings of the existing policy are:

- Hong Kong's e-commerce policy is not detailed enough (too broad), and is not based on any solid principles.
- There is simply not enough being done by the HKSAR government with respect to e-commerce on various fronts.

¹⁷ As for the non-computerized businesses or those who make only a few declarations a year, Tradelink is also providing special data processing facilities for them with a network of 27 Tradelink service centres all over the territory. Traders can also post their declarations to Tradelink for processing, or drop them into collection boxes provided at a number of Dah Sing Bank and HSBC branches. Traders, however, are reminded that with effect from 1 April, Tradelink will make an additional charge of HK\$25 on all lodgements submitted in paper format through the service centers, collection boxes or postal lodgement facility, to cover the cost of data processing. Using *tradelink-ebiz.com*, customers can make their Internet declarations directly through the "Web Form declaration" available on the web site, thus, eliminating the need to install special software; or through an Internet-enabled version of the existing ValueNet Standard software, which carries the advantage of being able to keep customized databases and access a wide range of management reporting functions.

¹⁶ These include subsidized hosting of web pages, designing of web pages, basic consultancy and education services, etc.

The fact that the HKSAR government's policies are not detailed enough and do not go far enough can be witnessed by the number of media reports that carry the same message. In March 1999, an article in *AsiatInternetNews*¹⁸ made the comment that "many Hong Kong Internet professionals believe that while the government is moving on e-commerce, it is not moving quickly enough to catch up with neighboring competitive markets, Singapore and Taiwan . . . both have . . . rapidly developing e-commerce industries". Similar sentiments of Hong Kong doing "too much talking, and too little doing" were echoed by Prof C.C. Lin, Vice President of Research and Development at The Hong Kong University of Science and Technology (HKUST).¹⁹

To briefly illustrate that Hong Kong's e-commerce policy is not detailed or broad enough, the case of intellectual property protection can be used. Hong Kong has had somewhat of a poor image in terms of software piracy, which is a form of breach of intellectual property rights. If the government is unable to curb intellectual property abuses in the wider community, it will have difficulties in persuading users of e-commerce that their intellectual property rights will indeed be protected. The solution to this problem would be greater education to all those involved in the community, particularly the younger generation, in order to form a mindset among the local community that breaches of copyrights and intellectual property rights are simply wrong and not acceptable.

Singapore's policy is one that is strongly government-led. On the other hand, the USA's policy differs from Singapore's quite substantially, in that the major driving principle is that of private industry taking the lead.

Possible Areas for Improvement of Hong Kong's E-Commerce Policy

There are several areas in which Hong Kong's e-commerce policy can be improved upon. These recommendations emanate mainly from an analyses of Singapore's and the USA's policies, in the areas in which the USA and Singapore are doing well with regards to their e-commerce policies.

The general improvement required for Hong Kong's e-commerce policy is that it should be tighter, better co-ordinated and well rounded. At present, it is ad-hoc and perfunctory. Within this framework, the three specific recommendations for Hong Kong are as follows:

1. To learn from the US model and develop guiding principles for the development of e-commerce policy

As use of the Internet expands, there are numerous issues of concern that arise. For each of these concerns, there are not necessarily easy ways out and not necessarily any single answer to solve or address the issues appropriately. Potential areas of problematic regulation include taxes and duties, restrictions on the type of information transmitted, control over standards development, licensing requirements and rate regulation of service providers. Solutions have to be negotiated by balancing various concerns of society, business, governments, etc. That is not to say, however, that in that case, governments (and the HKSAR government in particular) cannot do anything; it can. The HKSAR government can have a profound effect on the growth of commerce on the Internet. By its actions, it can facilitate electronic trade or inhibit it. Knowing when to act and—at least as important when not to act, is crucial to the development of e-commerce.

Therefore, the government should have guiding principles that oversee its specific policy development. Those guiding principles should be balanced with Hong Kong's traditional political culture (of non-interventionism) and also with the need to be the leader and aggressively promote e-commerce in society.

In particular, the HKSAR government should employ three specific principles of the USA (described in detail in the preceding sections) that are of special appropriateness:

- a. Avoid undue restrictions on e-commerce.
- b. Where governmental involvement is needed, its aim should be to support and enforce a predictable, consistent and simple legal environment for e-commerce.
- c. Recognize the unique qualities of the Internet.

¹⁸ <http://asia.internet.com/1999/3/0103-hk.htm>.

¹⁹ *South China Morning Post*, <http://www.scmp.com>.

2. *To learn from the Singapore model and develop complete e-commerce infrastructure.*²⁰

Singapore's e-commerce infrastructure is quite comprehensive, yet still continues to evolve quickly. Due to the speed at which the infrastructure evolves, Hong Kong should be able to adapt to the changes of the future, by having guiding principles (see above). The infrastructure can be illustrated as a multi-tiered pyramid, where each layer provides support for the layer above, as in the figure below.

It is a complete infrastructure that Hong Kong should aim to implement. It covers all the main issues relating to e-commerce, yet provides room for the government to work with the private sector (and not necessarily take up the responsibility of providing all the aspects of the infrastructure themselves).

The e-commerce infrastructure can be categorized as follows:

- *Electronic Commerce Environment*

These are guidelines and frameworks designed to create a conducive environment for e-commerce. The environment includes:

- *Policy Framework*

This is basically the first recommendation provided above. The framework consists of a set of guiding principles and specific policy recommendations and initiatives. The framework, which should obviously

be endorsed by the government, should set out the policy objectives of the government to work with the private sector so as to provide a conducive legal and operational environment for businesses to engage in e-commerce. It should also contain policy recommendations that are targeted to help accelerate e-commerce take-up and improve Hong Kong's competitiveness, with the view towards Hong Kong becoming a premiere e-commerce hub.

- *Technical Standards*

These include open, industry-led, technical standards in the areas of network protocols, security, e-mail and directories, electronic commerce, and information sources and exchange. The standards facilitate the interconnection and interoperability of businesses over networks.

- *Legal and Regulatory Framework*

For electronic commerce to flourish, there needs to be a conducive legal and policy environment. Businesses need to know that when they conduct business online, they enjoy the same legal protections as traditional businesses. This is particularly important for Hong Kong, keeping in mind the difficulties Hong Kong has had in protecting intellectual property rights in the software industry. Therefore, the legal and regulatory framework will not necessarily have to be aimed at e-commerce principally; rather, it may be more widespread and permeate to all areas of society (for instance, education for the protection of copyrights and intellectual property rights).

- *Various Incentive Schemes*

These include investment and tax incentives for online businesses. The incentives help organizations venturing into e-commerce to manage the costs and risks of their initiatives. Currently, the HKPC and TDC provide low-cost services to companies wishing to go online. These services include web page design, web hosting, etc.

- *Infrastructure Services*

These are services that provide specific e-commerce functions, like user authentication or credit card payment processing. Typically, one or more infrastructure service is required by an electronic commerce solution. The infrastructure services can be further categorized as network services, directory services, security services and payment services.

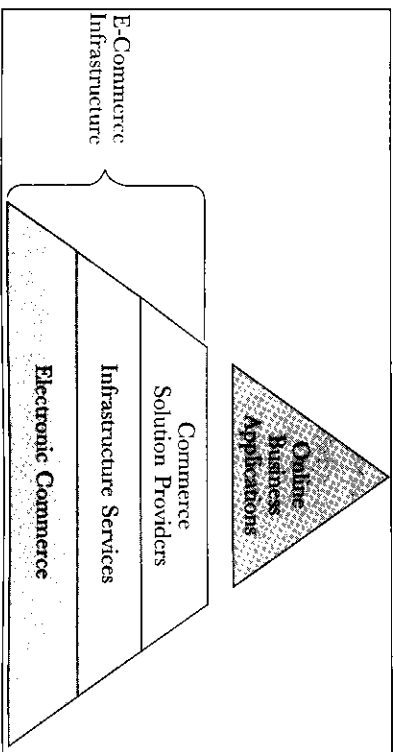


Figure 1. Guiding Principles for E-Commerce Infrastructure Development

²⁰ <http://www.ec.gov.sg/ECFramework6x.html>

• *Commerce Solution Providers*

These are organizations that offer complete end-to-end solutions, or packaged components of a solution, for businesses that choose not to implement electronic commerce systems on their own. There are two main industry-support organizations in Hong Kong that act as commerce solution providers—the HKPC and the TDG. They are doing a commendable job in light of the missions (analyzed in the preceding section). Their services are extremely widespread and broad, and include the provision of e-commerce solutions for individual companies to a more general educational role for e-commerce users and the public in general.

3. *To ensure that the basic institutions continue to perform healthily and effectively*

It is worth remembering, as a final point, that although the focus is on e-commerce policy, Internet (e-commerce) policy is just one of many in society. For government policies to be effective and able to meet their objectives, there are a whole set of basic institutions that have to be performing effectively even before the policies are considered. In this case, these institutions include the judiciary, the education system, and an efficient civil service. It is easy to forget the role that these vital institutions play. Their role is often taken for granted, particularly when new policies are being discussed, such as the case here. It is, however, crucial that for the “new” policies to be effective, the so-called “old” institutions have to continue to play their roles as well as—or in some cases (for instance, education), better than—they had been performing previously.

A case in point to illustrate this is the shortage of IT professionals or IT-literate people in Hong Kong. Without these sorts of people, it would be extremely difficult for the government to implement the policies outlined above. There simply would be insufficient numbers of qualified people able to implement the government’s policies. Therefore, in order for government policy to be successful, it is of utmost importance that the education system in Hong Kong (and, specifically, in the higher education system) continues to perform as well as it has been doing in the past, if not even better. Only then will it be possible for talented individuals to be available in Hong Kong to understand the vital issues related to e-commerce

and implement the government’s policies on e-commerce. If the basic yet important education system of Hong Kong does not continue to perform as well as it has been doing, then the implementation or indeed the drafting of new policies to meet new challenges will become infinitely more arduous.

In summary, therefore, the recommendations contained here are to ensure that the basic government institutions continue to perform efficiently, and have over-arching guiding principles for e-commerce policy; then, within that framework, they can develop a complete e-commerce infrastructure.

Analysis of Policy Recommendations

The e-commerce infrastructure policy is a flexible one that allows for a great deal of room for private participation. This fact can ensure that Hong Kong need not sacrifice its traditional political culture of positive non-interventionism when it comes to developing its e-commerce infrastructure. In fact, the policy focuses on infrastructure which is crucial. Throughout its history, Hong Kong has always been used to developing a “level playing field” and the right institutions for the pursuit of private goals. Hong Kong needs only to develop the infrastructure and from there onwards, there are plenty of non-governmental organizations, not least private firms (or indeed quasi-governmental organizations), that are (and have traditionally been) more than willing to take over the baton. This model is one that has proven its success before, and there is no reason to doubt that it will prove its success in the case of e-commerce policy.

Further evidence of the feasibility of this recommendation is given from the fact that Singapore has already adopted the strategies (policies). The Singapore government has taken a very pro-active view towards its e-commerce policy and, therefore, is a couple of years ahead of Hong Kong in this regard. Although regrettable, Hong Kong should make use of this opportunity and learn from Singapore’s experience in order to first catch up and then, later, take over the city-state. The potential for e-commerce development and usage in Hong Kong is clearly much greater than in Singapore because of Hong Kong’s strategic location as the entry point to Mainland China. Hong Kong should not let this opportunity pass it by and should, therefore,

ensure that its e-commerce policy is a conducive and well balanced one. The fact that the policy has been proven in Singapore only adds credence to the need to adopt it, and improve on it.

One of the ways in which Hong Kong can improve on Singapore's e-commerce policy is via the other recommendation given above; that is, to adopt the USA's stance of developing *over-arching* principles for the use of e-commerce. These may, at first, seem ineffectual, but it is believed their importance is far-reaching. They help "pave the road" for the government to develop specific policy recommendations. Without a "road map" (the guiding principles), a tendency to get carried away or lose sight of a country's aims may occur. This is usual, in particular, in governments because there are so many different departments and organizations within the central government, which all try and push through their visions and individual policies. In order to maintain a level of consistency, the guiding principles can prove to be invaluable. If there is one criticism of Singapore's e-commerce policy it is that the policy can become too detailed in certain areas. In order to avoid such a case from arising in Hong Kong, the guiding principles will help as they will have to be referred to each time the government or government departments wish to set up any sort of e-commerce policy.

FRENCH SCANDALS ON THE WEB AND ON THE STREETS: A SMALL EXPERIMENT IN STRETCHING THE LIMITS OF REPORTED REALITY

RICHARD ROGERS

Department of New Media Studies

University of Amsterdam

NOORJIE MARRAS

Department of Philosophy

University of Amsterdam

Methodological Dilemma

If it's not on the streets, it may be on the Web

But if it's not on the Web, and it's not on the streets . . .

Case closed?

Farmers are on the streets, but who are these farmers?

Better check the Web!

Academic Graffiti, 2000

Introduction: Newsreel

On 30 June 2000, the Dutch daily newspaper, *de Volkskrant*, published a short report on the globalization protests taking place in the French town of Milau. The report referred to a "bunch of disorganized anarchists" engaged in "activist tourism". The piece also cast doubt on the viability of this form of social criticism. Referring to the smashing of windows at "MacDo" as a case in point, the piece expressed concern about the corner that activism has been backing itself into ever since the violent encounters during the WTO meeting in Seattle in 1999.

Inevitably, the Internet had a part to play in these accounts. The advent of anti-globalization protest in its current form is closely tied to the wiring up of society. The Internet was introduced as an essential for the widespread dissemination of announcements for upcoming events, as well as for in situ logistical support for the protesters. What was surprising about the role allocated to the Internet in these accounts was its depiction as a medium of convenience. Just as the activists were portrayed as youthful, backpacking travellers, the Internet was characterized as their guidebook in this particular context. The Internet served as a kind of *Lonely Planet* edition.