

CHAPTER4

The Internet and Greater South China

Greater South China includes the Republic of China (Taiwan), Hong Kong, and China's southern provinces of Guangdong and Fujian. Though all four share a Chinese heritage, their similarities diverge in terms of public policies, degree of interaction with the West, and economic capacity. The Internet has the potential to change the character of each economy and the South China economic network that links them together, tying them into the global market. The Internet in Hong Kong is booming. Broadband access is less so with Asynchronous Digital Subscriber Loop (ADSL) access available only through Hong Kong Telecom IMS and cable access stifled. Guangdong has the highest number of Internet users of any province in China. China Telecom's Guangdong Data Communication Bureau (GDCB) dominates the commercial Internet market, providing more than 90% of the users.¹ Taiwanese businesses have invested heavily in manufacturing facilities in Fujian. Common linguistic ties have allowed Taiwanese business in Fujian to build relationships with business and local government leaders. With 85% of the economy generated by services, Hong Kong is a leader in many different sectors such as financial, textiles, and international trade. Hong Kong's exchanges are 100% digital. According to the Steven Yen, Managing director of the branch office in Singapore, from the trade company "Longshine Technology Co.Ltd" comparing with the last 10

¹The Internet and E-Commerce in Greater South China (Taiwan, Hong Kong, Fujian and Guangdong)
http://www.isoc.org/inet2000/cdproceedings/7c/7c_1.htm#s3

years the situation with Internet in China is changing. It becomes more open, especially for business.²

4.1 The Internet dimensions of Hong Kong

Pacific Internet (Hong Kong) Limited ("Pacific Internet")³ -listed Pacific Internet Limited (PCNTF), the largest Telco-independent Internet Communications Service Provider by geographic reach in the Asia Pacific region, spanning seven countries, Hong Kong, Singapore, the Philippines, Australia, India, Thailand and Malaysia. Pacific Internet offers broadband and Internet access, security solution, communication solution, web hosting and a series of value-added services to provide a total solution for both corporate and consumer customers in Hong Kong. Founded in 1993, Pacific Internet has grown into one of the country's leading Internet service providers, and has built a solid reputation on superior customer service, backed by a strong financial position and proven success. In early 2005, the company renamed itself from Pacific Supernet Limited to Pacific Internet (Hong Kong) Limited to realign its brand to the parent company. With nearly 90% representation on the web, the Hong Kong government is using the web to make government more transparent and interactive. The business sector is another heavy user with continuous requests for new communications infrastructure to meet its bandwidth demands. The Information Technology and Broadcasting Bureau (ITBB) in conjunction with the Information Infrastructure

² Interview with the Steven Yen, Managing director of the branch office in Singapore, from the trade company: "Longshine Technology Co.Ltd." (Interview in Apendix 1)

³ <http://www.pacific.net.hk>.

Advisory Committee (IIAC) has formed a package of initiatives called *Digital 21* to position Hong Kong as the leader in the digital world of tomorrow.

Table 3. *Digital 21* Initiatives in Hong Kong

Telecommunications Infrastructure	to enhance Hong Kong as a place for investment in telecommunications, to encourage competition and innovation under an open, fair and predictable regulatory framework, and to maintain Hong Kong's position as the pre – eminent telecommunications center in Asia
Asia Pacific Internet Traffic Hub	to establish Hong Kong as a gateway in the Asia-Pacific region with regard to Internet traffic ad electronic commerce information flow
Chinese language application	to encourage the development of close working ties with the Mainland to promote Chinese language software application
Regulation and Legislation:	to develop a regulatory and legislative framework, this will support and encourage the development of electronic

	commerce.
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Source: Hong Kong information Technology Strategy
http://www.info.gov.hk/itbb/it_ps/indexdigital21.htm (August, 1999)

The proposals include strategies for using a series of top-down initiatives to spur informatization while encouraging market forces to drive bottom-up development. The other major government body that has a major impact on the Internet in Hong Kong is the Office of the Telecommunications Authority (OFTA). OFTA, established in 1993, is responsible for regulating the rapidly developing and increasingly competitive telecommunications industry in Hong Kong. The Cyberport, a private public venture masterminded by Richard Li of the Pacific Century Group, has caught the imagination of Hong Kong as a strategy for helping Hong Kong leverage its capabilities as a transportation and financial center into becoming a center for the development of cyberspace.

The Cyberport's goal is to provide the office and residential space for high tech ventures and their employees, creating a synergistic environment. The government has provided one of the last undeveloped parcels of land on the Hong Kong for the Cyberport in return for a share in the venture. Major high tech companies such as IBM have expressed an interest in relocating to the Cyberport. Though some have dismissed the venture as primarily a property deal, there are others who believe that the Cyberport will stimulate the development of a new generation of electronic intermediaries in Hong Kong. For almost any global business

there are logistical and operational reasons for having an Asian electronic "hub." The question is whether that hub should be in Tokyo, Sydney, or Singapore or in one of the new emerging centers, such as Malaysia's Multimedia Super Corridor or Shanghai's Pudong District. With its redundant broadband infrastructure connected to key exchange points on the planet, the Cyberport will be an attractive, if expensive, center for running servers to support electronic services.

With strong ties to its British heritage, Hong Kong is a bilingual (English and Chinese) society. English can be used to communicate digitally to most of the world. Conversing with neighboring communities in Chinese can bridge the language gap between China and the rest of the world. Hong Kong is the major intermediary between Taiwan and the Mainland in terms of trade and investment. No direct trade or other direct forms of commercial or official contact have been allowed between Taiwan and the Mainland since the Communist victory in 1949. Though Taipei allowed the resumption of direct trade in the 1980s, no direct shipping is allowed. Over 3,000 Taiwan-controlled companies operate in Hong Kong, and an estimated 50, 0000 Taiwan nationals work in Hong Kong. These companies account for the bulk of the estimated U.S\$25 billion that Taiwan invests in mainland China and are the principal conduit for U.S\$20 billion in trade. As Taiwan integrates Internet-enabled inter-enterprise information technology, the technology may diffuse through some of these companies to Hong Kong firms. To provide sponsorship for the e-government programme at the most senior level, an E-government Steering Committee (EGSC) was set up in September 2004. Chaired by the Financial Secretary (FS), the EGSC steers the

further development of the e-government programme and approves measures to facilitate the implementation of the programme. The vision of e-government is to: use information technology to provide customer-centric services that promote an accessible, accountable and efficient government and contribute to Hong Kong's achievement as a leading digital city.⁴ It is noted that the emerging global trend is to provide e-services based on a clustered approach centering on the needs of customer segments, and make better and more flexible use of the private sector's experience, expertise and resources to develop and provide e-services.

E-business strategy seek to achieve three overall objectives: 1) to enhance the quality of e-government services and boost their utilization through introducing customer segmentation and end-to-end processing; 2) to allow more private sector participation so that the Government can better leverage on their expertise and experience 3) to promote the adoption of e-commerce and e-business in Hong Kong through closer integration of public and commercial e-services/transactions, thereby increasing the utility and convenience for the users. The Center for Communication Research⁵ aims to develop an internationally and regionally recognized program of research and publications at City University of Hong Kong, in the cutting-edge issues facing communication under the forces of technological convergence and media

⁴ Next wave of E-government <http://www.info.gov.hk/eindex.htm>

⁵ Center for Communication Research
http://enweb.cityu.edu.hk/ccr/publications_8.html

globalization in the Asian context. Hong Kong is nowadays one of the most important institutional and cultural bases for studying the whole Greater China region and the process and phenomenon of globalization at large.

4.2 The Internet dimensions of Guangdong

Though the provincial government has easily adopted information technology, Guangdong's rapid absorption of the Internet relative to the other provinces can primarily be attributed to its economic growth as a result of the open door policy. In 1979, the State Council gave Guangdong permission to implement special economic policies. As a result, three cities from Guangdong -- Shenzhen, Zhuhai, and Shantou -- were designed as special economic zones. In 1988, the central government allowed Guangdong to experiment with economic reform province-wide. Guangdong has developed into an export-oriented economy and is regarded as China's frontier to the outside world. The relative prosperity of the province has allowed people to purchase Internet services.

Table 4. Internet dimensions of Guangdong

Dimension	Level	Explanation
Organizational infrastructure	Controlled	China Telecom is the primary provider of Internet access and controls international circuits. There are many Internet content providers, some of whom provide access. Golden Bridge network and CERNET provide commercial and educational access.
Connectivity infrastructure		ATM backbone is being constructed. Supports Frame Relay and IP. There is an Internet Exchange and connectivity to Hong Kong and the world.
Sophistication of use	conventional	Internet is primarily being used as a substitute for voice and fax. E-mail is very popular. There are some top-down efforts to change business processes, such as the Golden Projects.

Source: The Internet and E-Commerce in Greater South China (Taiwan, Hong Kong, Fujian and Guangdong) http://www.isoc.org/inet2000/cdproceedings/7c/7c_1.htm#s3

In addition, the Internet represents a significant opportunity for time and cost savings for those individuals and companies involved in

international trade and, through the Web, opens up access to highly valuable information.

4.3 The Internet dimensions of Fujian

There are over 8 million overseas Chinese of Fujian origin. Many reside in Southeast Asia in countries such as Malaysia and have done very well, some extraordinarily so. There are over 800,000 Chinese of Fujian origin in Hong Kong and Maccao. Eighty percent of the residents of Taiwan have ancestors who come from Fujian. These overseas Chinese, however, have been willing to invest in their homeland. Though there is no evidence that Fujian's state-of-the-art communication network is being financed by overseas Chinese, it can be assumed that it is being built under the "build it and they will come" assumption. As with Guangdong, the central government sees information technology as an essential tool for keeping track of the Fujian government and its export-oriented businesses. As Taiwan integrates more and more information technology into its manufacturing facilities in Taiwan, Taiwanese investors in Fujian will have to choose between the payoff of closer inter-enterprise integration through information technology and the risks that enterprise information systems, which enable that integration, could be used by the central government to collect more taxes and limit undocumented trade. Guangdong is ahead of Fujian because it was the first province in China to build a province-wide IP network.

Now both are moving to provincial ATM backbones, which will quickly move them into Level 3 for connectivity infrastructure and for

Fujian into a possible Level 4 for geographic dispersion. Fujian and Guangdong continue to use the Internet as a substitute for conventional communications and have yet to begin to substantially reengineer business processes to leverage it.

4.4 The Internet dimensions of Taiwan

The Internet penetration rate among the total population in Taiwan is approximately 73%, of which 71% consists of those connect to the Internet through broadband network.⁶ The Internet in Taiwan originally developed in the TANET (Taiwan Academic Network) and gradually extended to home. The Internet allowed communities with different interests and persons belonging to different social groups to communicate and exchange opinions and information in the least expensive and most convenient way. One of the unique elements of the Taiwanese Internet culture is the Telnet-based BBS. As the Windows interface and World Wide Web (www) gradually developed technologies such as IRC (internet daily chat).

Table 5. Determinants of Internet Diffusion in Taiwan

⁶ Kenichi Ishii, Wu Chyi-In (2006), "A comparative study of media cultures among Taiwanese and Japanese youth." *Telematics and Informatics* 23, p.98

Determinant	Dimension Impacted
NII Plan	Potential to influence all six dimensions
Telecommunication Policy	Impact organizational infrastructure and through that all five other dimensions
Computer/Electronics Industry strength	Increases sophistication of use and sectoral diffusion
Telecommunication Infrastructure	Increases pervasiveness and connectivity infrastructure
Ties to Global Silicon Network in terms of flows of technology, money, people and ideas	Increases sophistication of use
Competition between Hong Kong and Taiwan to be Internet hub	Increase investments in connectivity infrastructure
Relationship between Taiwan and Fujian	By impacting economy can influence all six dimensions

Source: The Internet and E-Commerce in Greater South China (Taiwan, Hong Kong, Fujian and Guangdong) http://www.isoc.org/inet2000/cdproceedings/7c/7c_1.htm#s3

Though there are 50 Internet access providers, the 3 government owned ISPs dominate the marketplace. HiNet, the arm of state owned Chungwa, has over a million users, 50% of the dial-up commercial users, over 2000 dedicated connections, and 63,000 dial up ports. All Universities in Taiwan are connected through the TANet. Taiwan's cable TV industry has more than 80 percent penetration, making Taiwan one of the most heavily cabled markets in the world. Two groups dominate

Taiwan's cable TV industry: the United Communications arm of Koo's Group and China Rebar Corporation's Eastern Multimedia.

Business-to business e-commerce in Asia to date is being spearheaded mainly by multinational corporations, such as Intel and Cisco. They are pushing their customers and suppliers in the region to embrace the Internet for order taking. Microprocessor giant Intel, for example, is already doing over 80% of its sales to Taiwan over the Web. The government has sought to drive information technology through the National Information Infrastructure project, a supra-ministry endeavor that has been able to drive investment and decision making through many different ministries. The government has had five goals (The NII plan):

1. Promoting the use of Internet with the target of reaching three million Internet users in three years from 1997
2. Putting every middle school and every primary school on Internet
3. Developing Taiwan as an Asian-Pacific regional hub for Internet
4. Establishing a "Global Chinese Content Center"
5. Developing new industries of network and multimedia.

Of 196 nations worldwide, Taiwan offers the most e-government services as 65% of its websites offer more than just information. Taiwan, unlike Hong Kong, still has a manufacturing base. In the case of the electronics industry, Taiwan has been much quicker to adopt both electronic interchange and the enterprise systems to support that interchange. The managers of companies in this industry have often worked in Silicon Valley and have the willingness and the ability to

reengineer their companies to leverage the power of the Internet and business-to-business e-commerce. Taiwan is not only a node in the Global Silicon Network; it has the potential of being one of the best and fastest nodes on the planet for producing complex electronic products. The use of inter-enterprise information technology combined with the power of their business networks will be the key to their success.

Both Guangdong and Fujian have been slow to enter enterprise and inter-enterprise resource planning technology. There are two different drivers of B2B e-commerce in China. One is the drive for the central government to informatize the economy. The second is the bottom-up desire to use e-commerce to open up new markets and improve the efficiency of doing businesses with old ones. The challenge that the whole region faces is how to combine the speed and flexibility of Chinese business networks with the power of computer network technology. Taiwan businesses and Web-based ordering are taking the lead.

Hong Kong is further ahead of Taiwan in terms of opening up international links to competition. Also, the different sectors of Hong Kong are slightly ahead of Taiwan in terms of hooking up organizations, but not by much. Taiwan does have more hosts (424,209) under its top-level domain than does Hong Kong (98,183). Though this difference may at first be dismissed based on the popularity of registering under the ".com" domain, it may point to significantly greater interest in Taiwan on the part of SME's of having a Web presence.