



## The Wireless Telecommunications Market in Japan

April 2006



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April 2006

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Prepared by the  
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and the  
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**Canada**

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## THE WIRELESS TELECOMMUNICATIONS MARKET IN JAPAN



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### EXECUTIVE SUMMARY

Japan is a global leader in the wireless telecommunications industry and is home to a large number of leading consumer electronics and telecommunications (telecoms) firms. The Japanese wireless telecoms market, including cellular phones, pagers and related wireless technology services, was valued at \$42.7 billion<sup>1</sup> in 2004, up 9.1% from 2003. The market may experience compound annual growth of 8.2% from 2004 to 2009, translating into a 2009 market value of \$63.5 billion.

While the Japanese market may appear saturated at first glance, some analysts suggest that the market is capable of sustaining wireless growth for at least the next five years. This growth is likely as new technological developments and product innovation are continuously stimulating demand. In February 2006, there were more than 95 million wireless telephone subscribers and personal handyphone system (PHS) subscribers in Japan, compared to roughly 70 million fixed-line subscribers. The sheer size of the market alongside the growing number of platforms associated with mobile phone technology has created strong demand for content.

The Japanese government is actively implementing policies aimed at integrating innovative information and communications technologies (ICT) solutions into the social fabric of Japanese society. To stimulate further innovation and growth in the domestic ICT industry, the government has formulated the ubiquitous Japan (u-Japan) strategy. U-Japan is expected to generate direct economic effects of more than \$1 trillion per year by 2010, according to the Ministry of Internal Affairs and Communication (MIC). Canadian companies with wireless applications suitable for use in the fields of health care, education, government services, food safety and Internet security will see potential for sales in the Japanese market as a result of the u-Japan policy.

Despite being a hard market for non-Japanese companies to penetrate, Japan represents excellent opportunities for industry leaders and niche players. At present, Canada's position in the Japanese wireless industry is small with ample room to grow. Canadian firms looking to establish themselves in Japan must be prepared to commit to the market for the long term and should research their decision thoroughly.

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<sup>1</sup> All monetary amounts are expressed in Canadian dollars, unless otherwise indicated. The conversion rate to Canadian dollars is based on the Bank of Canada average rate for 2004.

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### MARKET OVERVIEW

Japan is one of the most densely populated countries in the world with 127.8 million people living at a density of 335 persons per square kilometre. The country is also the tenth-most populous country in the world, with 82% of its citizens living in cities spread throughout an island chain located off the eastern coast of Asia.

Aside from being a very dense, urban population, Japan is also an ageing populous. In 2005, more than 26.7 million people in Japan were over the age of 65 while only 24.4 million were under the age of 20. As a consequence, Japan's population growth will remain relatively flat over the next decade and the populace will continue to age. By 2015, 23% of the population will comprise citizens older than 65.

Economically, the Economist Intelligence Unit (EIU) is forecasting real gross domestic product (GDP) growth of 1.9% in 2005 and 1.3% in 2006. Strong investment trends in the manufacturing sector are working to boost the economy but their effects may be mitigated by downward pressure from slowing external growth and increasing expenses relating to wages. Domestic demand was strong in 2005, due in part to gains made in full-time employment in the first quarter. The economy was also buoyed by the growth of exports, particularly to the United States and members of the Association of South-East Asian Nations (ASEAN).

In terms of international trade, Japan continues to pursue a strategy of developing bilateral free trade agreements in an attempt to weaken China's future ability to dictate regional trade patterns. To date, Japan has successfully negotiated free trade agreements with Singapore, Mexico, the Philippines and Malaysia; discussions are ongoing with Thailand. In November 2005, the governments of Canada and Japan signed the Canada-Japan Economic Framework, laying the groundwork for future co-operation and integration between the two countries in 15 key areas, including information and communications technologies (see **Canadian Position**).

**Table 1. Japanese Economic Indicators, 2003-2006**

	2003	2004	2005*	2006*
<b>GDP (2004, \$ billion)</b>	6249.8	6414.6	6532.6	6618.0
<b>Real GDP growth (%)</b>	1.4	2.6	1.9	1.3
<b>Exports (2004, \$ billion)</b>	584.4	701.4	718.9	760.6
<b>Imports (2004, \$ billion)</b>	445.9	529.5	601.3	624.6
<b>Trade balance (2004, \$ billion)</b>	138.5	171.9	117.6	136.0

\* EIU forecasts  
 Source: Economist Intelligence Unit. "Japan: Country Report." September 1, 2005

## Wireless Technologies

Japan is a leader in the global wireless technologies industry and is home to a large number of leading consumer electronics and telecoms firms. These companies offer solutions both to the Japanese and overseas markets. In January 2005, Japan alone accounted for 13% of the global market for mobile communications.

In terms of value, the Japanese wireless market is large and exhibits constant but slow growth in demand due to high levels of penetration. According to Datamonitor, the Japanese wireless telecoms market, including cellular phones, pagers and related wireless technology services, was valued at \$42.7 billion in 2004, up 9.1% from 2003. Datamonitor's forward-looking forecasts predict compound annual growth of 8.2% from 2004 to 2009, translating into a 2009 market value of \$63.5 billion.

While the Japanese market may appear saturated at first glance, Datamonitor insists that it is capable of further growth as new technological developments and product innovation, such as the launch of handsets capable of receiving television broadcasts, are continuously stimulating demand. Datamonitor is confident that Japan is capable of sustaining wireless growth for at least the next five years.

**Table 2. Japanese Wireless Market, 2000-2004**

	2000	2001	2002	2003	2004
<b>Wireless service revenues (\$ billion)</b>	29.5	32.4	35.9	39.2	42.7
<b>Number of wireless subscribers* (million)</b>	69	74	81	86	92

\*includes PHS and radio paging  
 Source: Datamonitor. "Japan: Wireless Telecommunication Services—Market Overview." July 1, 2005

## Wireless Networks

Wireless network subscriptions in Japan outnumber their fixed-line counterparts by more than 20 million. At the end of February 2006, the number of Japanese wireless telephone subscribers totalled 90 767 700—roughly 70% of the population. Personal handyphone system subscribers, meanwhile, hit 4.6 million while radio paging subscribers numbered 519 500, down 1.5% from the previous month. Together, PHS and mobile telecommunications subscribers at the end of February 2006 numbered greater than 95 million, compared to roughly 70 million fixed-line subscriptions.

The Japanese wireless telecoms market itself is dominated by three companies representing 96.5% of the market: NTT DoCoMo (Japan), KDDI (Japan) and Vodafone KK (United Kingdom)<sup>2</sup>. In large part, the market remains under the control of former state monopoly NTT DoCoMo. KDDI, however, has exhibited faster growth in 2005 than its larger rival and continues to gain ground on NTT DoCoMo. Vodafone, the only foreign telecoms carrier in Japan, is the third-largest player and has been either stagnant or losing market share over the last several years.

KDDI introduced flat-rate pricing plans in 2004 as a means of taking market share from DoCoMo. In response to the popularity of the KDDI packages, the other carriers have had to adopt similar pricing schemes. Japanese consumers are now paying less money for the same, or even more mobile services than they were in 2003. Consequently, average revenues per user (ARPU) have fallen and the carriers have had to alter their business strategies in order to retain profitability. Often this entails enacting cost-saving measures such as purchasing foreign-made handsets as opposed to expensive domestic models.

In order to retain market share in the competitive mobile market, vendors are forced to offer new features to entice Japanese consumers to subscribe to new services. Applications and features successful in drawing in new subscriptions in the 2005 wireless market included flat-rate service plans, music downloads, mobile television broadcasting and the FeliCa payment platform<sup>3</sup>. The FeliCa platform alone has seen explosive growth with more than 14 000 retailers equipped with appropriate reader technology in the first year.

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<sup>2</sup> Reports surfacing in early March 2006 indicate that Japanese ISP and recent 3G license holder, Softbank, is negotiating the purchase of Vodafone KK from its British parent. At the time of publishing, a deal had yet to be announced.

<sup>3</sup> See *Mobile Commerce*, below.

**Table 3. Market Share of Japanese Mobile Carriers in Japan, February 2006**

Mobile Carrier	# of Subscribers	% Monthly Change
NTT DoCoMo Group	50 658 500	0.3
KDDI (au Group)	22 067 000	1.3
TU-KA Group (KDDI)	2 895 700	-3.8
Vodafone	15 146 500	0.1
<b>Total</b>	<b>90 767 700</b>	<b>0.4</b>

Source: Telecommunications Carriers Association. "The Number of Subscribers." February 28, 2006. Accessed from <http://www.tca.or.jp/eng/database/daisu/yymm/0602matu.html> on March 8, 2006.

### **Second-Generation Networks**

Japan introduced its own second-generation (2G) standard, personal digital cellular (PDC), based on time division multiple access (TDMA), in 1991 to facilitate the country's transition from analogue to digital networks. The PDC operates in the 800-MHZ and 1500-MHZ bandwidths and boasts a data transfer rate of 28.8 kilobytes per second (kbps). In September 2005, users subscribing to PDC networks accounted for 56% of the Japanese mobile market, although market share is declining in favour of the newer third-generation (3G) standards wideband-code division multiple access (W-CDMA) and CDMA2000 1x. NTT DoCoMo, TuKa (a unit of KDDI) and Vodafone all offer PDC coverage. KDDI stopped offering PDC services in 2003, while NTT DoCoMo plans to discontinue its PDC services by 2012.

Japan's other 2G network standard, offered by carrier KDDI, is CDMAOne, a standard developed by U.S.-based Qualcomm (which dominated the early North American mobile phone market). CDMAOne's presence in the Japanese market is relatively insignificant, with a market share of only 1.3%, or 1.1 million subscribers.

**Table 4. Market Share of Wireless Network Standards in Japan, February 2006**

Network Type	# of Subscribers	% Monthly Change
PDC (NTT DoCoMo, TU-KA, Vodafone)	43 949 600	-2.1
CDMAOne (au Group)	907 400	-3.6
W-CDMA (NTT DoCoMo, Vodafone)	24 751 200	4.3
CDMA2000 1x (au Group)	21 159 600	1.5
<b>Total</b>	<b>90 767 700</b>	<b>0.4</b>

Source: Telecommunications Carriers Association. "The Number of Subscribers." September 30, 2005. Accessed from <http://www.tca.or.jp/eng/database/daisu/yymm/0509matu.html> on November 4, 2005

### ***Third-Generation Mobile Networks***

Japanese 3G services were launched in 2001, making Japan one of the first countries to offer 3G technologies commercially. Japan's 3G technology is capable of matching the quality of fixed-line telecommunications devices whilst providing high-speed data transmission and global roaming to all areas where 3G networks exist. By September 2005, 3G subscriptions accounted for 38 million subscribers in Japan, compared to 50 million 2G users. Between December 2004 and September 2005, 3G subscription rates rose 42.3%.

Japan is home to two separate 3G network standards. The first, based on Japanese and European technology, is the W-CDMA standard; the second is the U.S.-developed CDMA2000 1x. As with 2G services, the split between 3G offerings falls along carrier lines, with NTT DoCoMo and Vodafone KK supporting the W-CDMA standard and KDDI adopting CDMA2000 1x. DoCoMo is the world's largest W-CDMA service provider with more than 10 million subscribers on its W-CDMA FOMA service, its brand name for 3G services. KDDI's CDMA2000 1X service, meanwhile, is the leading 3G service in Japan, reporting more than 19.5 million subscribers in September 2005.

Despite initially lagging behind KDDI's CDMA2000 1x in terms of consumer adoption in Japan, W-CDMA-based services are growing quickly, up 6.0% from August to September 2005. During that period, KDDI's CDMA2000 1x subscriber base grew only 1.3%.

#### *The rise of W-CDMA in Japan*

Prior to 2003, the majority of 3G W-CDMA-based phones lacked basic elements that users had come to expect of wireless handsets during the 2G era. Furthermore, many unique and appealing features associated with the W-CDMA platform had yet to be fully supported commercially. The result was widespread dissatisfaction throughout the market towards NTT DoCoMo's 3G services.

In addition to dissatisfaction with W-CDMA services, Japanese consumers also were unimpressed by the accompanying wave of 3G handsets. Many subscribers found the preliminary W-CDMA handsets too heavy (around 150 grams) and large when compared to smaller, 2G handsets (often less than 100 grams). Other obstacles included limited coverage, when compared to 2G networks, and shorter battery life.

Growth in the popularity of W-CDMA-based handsets was first triggered in early 2003 following NTT DoCoMo's introduction of long-demanded, full-featured 3G phones, the 2051- and 2102-series, marking a significant departure from the company's existing W-CDMA-based line-up. Manufactured by NEC, Fujitsu, and Panasonic, the new handsets were lighter, offered longer battery life and combined many W-CDMA-specific

features on a single platform. Since the launch of the reinvigorated W-CDMA handsets, NTT DoCoMo's 3G coverage has grown to encompass a reported 99.9% of the populated areas of Japan.

### *New Entrants to the 3G Market*

As Japan continues to open up its telecoms industry, three new operators are expected to enter the 3G wireless market in 2006. The government hopes to break down the market dominance of the existing carriers by authorizing three licences for a 3G time division duplex (TDD or TD-CDMA) standard-based network. By operating in a single bandwidth to send and receive data, TDD has advantages over W-CDMA and CDMA2000 1x, which require separate bandwidth allocations.

Two Internet service providers (ISP), Softbank and eAccess, were granted licenses for W-CDMA standard based 3G networks in November 2005. Both companies intend to enter the mobile market using the 1.7-GHz spectrum band in 2007 with Softbank pushing forward on April 1 of that year. IP Mobile, meanwhile, intends to launch its TDD-based service in October 2006.

### *High-Speed Downlink Packet Access*

High-speed downlink packet access (HSDPA) is an upgrade to existing 3G data transmission capabilities. HSDPA allows users to download 3 MB of data in under 13 seconds, compared to 67 seconds at current transmission rates. Initially, HSDPA was expected to be rolled-out in Japan during 2005, but is now anticipated to hit Japanese markets in the summer of 2006. The delay cost Japan the lead in HSDPA roll-out as Europe launched a preliminary commercial network on the Isle of Man in November 2005.

### ***Fourth-Generation Networks***

Japan is aiming to implement an Internet protocol (IP)-based network capable of linking various equipment types, using different network standards, into a ubiquitous network environment that is accessible any time and from any location. A new transmission network will be required to accommodate the heavy traffic of voice, data and image data that will be integral to fourth-generation (4G) networks. As a consequence, Japan is replacing or re-engineering much of its transmission infrastructure, including lines leading into residential homes. The transition will be made in part using fibre-optic solutions, which are already growing in Japan with more than 2 million fibre-to-the-home (FTTH) subscribers as of May 2005 and with more than 80% of the country's non-residential lines already converted to fibre. Other last-mile solutions will likely include wireless alternatives such as Wi-MAX.

Japan is working alongside China and South Korea to create a 4G network capable of dominating East Asia and supplanting U.S.- and European-based network standards. The three countries agreed that the new services would operate in the 3400-4900 MHz band. The launch of commercial 4G applications is expected around 2010. The Ministry of Internal Affairs and Communications<sup>4</sup> is currently drafting technical specifications for 4G networks in Japan.

Handsets equipped with 4G technology are expected to be platforms for a wide variety of multimedia services and features including high-resolution television, movies, voice communications, financial services and personal identification applications. Transmission rates currently being targeted by NTT DoCoMo are in the vicinity of 1 gigabyte per second while stationary and 100 megabytes per second while moving.

In the transitional period between 3G and 4G, the carriers will gradually implement new technologies and expand necessary infrastructures. It is likely that during this period, Japanese carriers will combine several less mature, new platforms to offer competitive high-speed connection services to the user by inter-operating between Wi-MAX and HSDPA (or W-CDMA) depending on radio conditions around the user.

## Mobile Handsets

Gartner Group anticipates handsets to reach record sales levels in Japan during 2006, before slowing down in 2007 and 2008. Much of the purchasing will come off the back of allowances for mobile number portability, which takes effect in 2006. Consumers will be looking to buy new phones with new contracts while retaining their original phone numbers. Handset sales were estimated at 42-45 million units for 2005, continuing a downward trend from the record high in 2003 of 48.7 million. As it stands, the mobile phone penetration rate is around 70% in Japan, with little room to grow further. Handset companies and service providers will thus rely on consumer upgrades and number portability to drive continued growth.

In terms of demographics, future growth in handset penetration will likely come in the age cohorts of 55-and-over and 14-and-under. Penetration rates in other age groups are nearing 100%. According to Research and Markets, greatest growth will be in the 55-and-over category where 1.62 million new subscribers are expected in 2006.

As the convergence of communications technologies continues apace, the mobile phone is becoming increasingly entrenched as the centrepiece of future technology integration. Presently, mobile phones are capable of data and voice communication,

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<sup>4</sup> For contact information regarding key organizations mentioned in this report, see **Key Contacts and Support Services**.

data storage, music playback, Internet access, GPS related services, Quick Response (QR) code-reading, mobile commerce (m-commerce) and video playback.

New technologies are constantly changing the demand structure of the consumer marketplace in Japan, thus forcing handset manufacturers, carriers and service providers to capitalize on perceived trends. Presently, a number of handset manufacturers are focussing on the eventual central role of mobile phones in broadcast mediums, particularly television. Of note, mobile television broadcasting is set to begin over NTT DoCoMo's networks on April 1, 2006. Their propriety one-seg service is expected to generate roughly \$650 million in revenues by 2010.

Much as digital camera functions spurred the last surge of handset purchases in 2003, handsets capable of receiving and displaying television signals in real time are expected to create a similar spike in sales in 2006 and 2007. At present, more than 77% of all handsets are equipped with digital camera technology, the newest of which have technical specifications equivalent to mainstream stand-alone digital cameras.

Another promising technology in the Japanese market is GPS. According to a number of prominent Japanese publications, a large number of users in Japan are expressing interest in GPS-equipped phones. Many subscribers anticipate giving their children GPS equipped phones for security purposes. At present, both NTT DoCoMo and KDDI offer GPS-equipped phones targeted at small children. The units typically allow parents to remotely track their children over either the Internet or their own cellular phones.

QR code-reading handsets represent another fast-growing technology with considerable potential for growth in Japan. Handsets equipped with QR reading software can scan a two dimensional QR symbol, similar in use and design to a barcode, and automatically capture digital information contained therein. Typical applications for QR codes include on product packaging to provide product information, in magazines to tag specific URLs and on business cards to conveniently capture contact information.

Despite the positive outlook for handsets overall in 2006, Japanese handset manufacturers may lose market share and face slowing sales as the wireless carriers search for cost-cutting measures in the face of stiffer competition. Traditionally, Japanese companies have dominated handset sales in Japan due to brand loyalty, recognition and a strong tendency for carriers to do business with Japanese firms only. As of 2005, however, all three Japanese mobile carriers are sourcing Korean and/or Taiwanese handsets in order to increase their respective ARPU.

### **Wireless Value-added Services**

The wireless value-added services market in Japan will continue to expand as the role of handsets changes alongside developments in technology convergence and as

operators look to features as a means of increasing ARPU. Research by Strategy Analytics indicates that Japanese consumer spending on mobile data products will grow from \$22.1 billion in 2005 to \$36.4 billion by 2010. Particular areas of foreseen growth include flash-based content and services and music downloads. In addition, consumer expenditures are expected to rise with the advent of terrestrial television broadcasting to mobile handsets and devices, beginning in 2006. Consequently, Strategy Analytics is predicting that premium mobile content revenues will grow 100% over the next five years.

The importance of the cellular phone and its countless uses in Japan cannot be understated. Japanese workers spend an average of 90 minutes a day commuting to and from work, much of that by train. To help pass the time, many commuters turn to their 3G handsets for entertainment and information, playing games, listening to music, browsing the Internet or watching television. As a consequence, the market potential for digital content geared towards mobile networks is enormous and Canadian Trade Commissioners in Japan indicate that as 3G subscriptions continue to rise in Japan, so, too, will the demand for content.

Japan's mobile content industry is technologically advanced, largely due to early feature adoption. In addition, the success of 3G technologies in Japan has been driven by Japanese strengths in mobile data services. In February 2005, NTT DoCoMo's i-mode Internet service accounted for 25% of ARPU for DoCoMo and by August had more than 45 million subscribers. Japan is the global leader in mobile Internet access with 86% of all subscribers accessing the Internet and their e-mail accounts via handsets.

Up until 2005, mobile phone carriers dominated the market for digital content available to consumers over mobile devices. Internet firms such as Yahoo! Japan Corp. and Google Inc., however, are challenging the status quo in Japan, offering mobile device users up to 200 different types of on-line services via their phones and personal digital assistants (PDAs) and collecting fees from mobile content providers for advertising space.

### ***Wireless Application Protocol and i-mode***

While wireless application protocol (WAP) has failed to catch on internationally as the industry leading mobile Internet interface standard it was once touted to be, it has enjoyed considerable success in Japan. Both KDDI and Vodafone offer WAP solutions to their respective subscribers and jointly have been gaining ground on market leader DoCoMo which uses its proprietary system known as i-mode.

### ***Short Message Service/Wireless E-mail***

SMS usage in Japan is predominantly limited to Vodafone subscribers with the majority of text messaging performed by KDDI and NTT DoCoMo subscribers taking place via wireless E-mail. Advantages that wireless E-mail offers over SMS include:

- no limitations in character length;
- greater functionality—including the ability to add attachments and utilize address books; and
- considerably cheaper, with the average cost of a message hovering around one yen (roughly one tenth of a cent).

In 2005, Japanese handset owners sent an average of four E-mail messages over their mobile phones every day, compared to an average of 1.4 SMS messages per subscriber in the United Kingdom. Furthermore, NTT DoCoMo reported in January 2006 that an estimated 70 million E-mails were sent wirelessly during one hour on New Year's Eve 2005.

### ***Packet Data Cellular***

NTT DoCoMo utilized packet data cellular (PDC-P) to allow Internet access via its 2G PDC network, beginning with the popular i-mode service launched in 1999. The service allows consumers to access nearly 100 000 Web sites on their wireless devices and to use e-mail applications. There are more than 45 million i-mode users in Japan.

KDDI's competing service, EZweb, grew to a total user-base of 19.2 million in September 2005, while Vodafone's Vodafone Live service carries 12.8 million users. In all, 86% of Japan's 89 million wireless telephone subscribers also subscribe to one of the three mobile Internet services.

### ***Mobile Gaming***

Mobile games will likely impact sales of portable game consoles in the near future by offering more complex feature sets, much in the same way that mobile phones have taken market share away from digital cameras and PDAs. With a \$54.7-billion electronic games market globally, it seems logical that the next step for mobile handset producers and carriers would be to tap that market, especially given their access to 1.7 billion current subscribers world wide. At present, annual revenues from mobile games are estimated at more than \$1.3 billion globally, with almost 50% of sales made in the Republic of Korea and Japan alone.

According to a survey of 8984 Japanese i-mode subscribers, conducted by market research firm Info Plant in November 2005, approximately 38.4% of those questioned

played mobile games daily and 70% played at least once a week. In terms of game types by source, free downloads were the most popular at 69.4%, while embedded games were played by 42.3% of subscribers and purchased games by 42.0%.

DoCoMo has adopted flat-rate subscription fees for game downloads as opposed to pay-per-download. Through i-mode, subscribers with game-enabled handsets have access to unlimited downloads and content via subscription.

### **Mobile Commerce**

Mobile shopping is a key method of encouraging ARPU growth in the competitive Japanese mobile market. Purchases made by mobile handsets from July 2004 through July 2005 totalled \$11.7 billion, a 25% increase year-on-year. In the past, wireless handset-initiated purchases have been primarily limited to ringtone and screensaver/background downloads, but the current trend shows rising sales of consumer goods presently popular in Internet purchases. Clothing and related accessories sales grew 80% in the 2004/2005 period, particularly in the younger female demographic.

Mobile portal providers in Japan are capitalizing on the upswing in mobile sales. Yahoo! Japan Corporation launched its first foray into mobile shopping in July 2005 with a mobile version of its Internet-based Web portal that allows access to more than 2000 on-line stores and 2 million products. Rakuten Inc., meanwhile, has operated an on-line portal accessible to wireless phone users since 2000 and saw sales in the 2004/2005 period reach \$144 million.

All three of Japan's major carriers introduced m-commerce-enabled handsets, known as wallet phones, in 2004 and 2005. The mobile units come equipped with an integrated circuit (IC) developed by Sony and known by the trade name FeliCa. The chip allows users to process financial transactions, such as purchasing public transportation tickets, with their handset. The IC essentially allows the handset to operate as a rechargeable, prepaid cash card. Approximately 15 million Japanese subscribers were using wallet phones—that is, e-cash—by the end of 2005.

In addition to Felica, NTT DoCoMo launched wallet phones with the capability to be linked to an iD credit card in November 2005. These phones allow customers to make purchases with either their plastic iD credit card or via their handset by way of waving the phone in front of a dedicated reader at a retail outlet.

According to a study by Impress Corporation released in November 2005, more than 46% of Japanese consumers reported spending less money through traditional retail channels because of the rising popularity of on-line shopping.

## Mobile Advertising

The 2004 market for mobile advertising in Japan was \$216 million, translating into a very large untapped potential for future development. By comparison, more than \$1.9 billion was spent on advertising targeted at personal computer (PC) users during the same time period. By February 2005, only 55% of Japanese households accessed the Internet through PCs.

Currently, mobile advertising is relegated to e-mail messaging. This is problematic for advertisers because consumers are often charged for each message they open, and will thus avoid opening most marketing-based e-mail messages. At the same time, it is difficult for advertisers to acquire e-mail address databases in the first place.

NTT DoCoMo is anticipating significant growth in advertising sales in conjunction with the growing popularity of the FeliCa platform. The company expects that it will move 10 million FeliCa-equipped units by the end of 2005, which will allow retailers to track detailed, real-time consumer behaviour. As a result, retailers will be able to tailor their messaging to meet the specific needs of various consumer groups.

With the introduction of digital video broadcasting over mobile networks expected in 2006, it can be anticipated that retailers will seek to use advertising through mobile handsets as a key means of attracting potential consumers.

### **Wi-Fi**

Wi-Fi certified products are increasingly popular for both home and office applications in Japan. Hot spots exist in major railway stations, airport terminals and hotels. NTT DoCoMo, in particular, provides hot spot services to more than 2200 locations around the country.

### **WiMAX**

While not yet commercially available in Japan, several Japanese firms are looking to bring WiMAX certified technologies to market, particularly as the deployment of 4G technologies edges closer. Yozan Incorporated, a PHS service provider, intends to implement a fixed-rate, public, wireless local area network service based partly on the WiMAX wireless communication standard IEEE 802.16. The company began testing a WiMAX certified network in December 2005 at the Kyoto Medical Center and will end the trial in September 2006.

Yozan is also rolling out a hybrid WiFi-WiMax service, based on technology developed by WiMax certified, U.S.-owned, Airspan Networks, in Tokyo with intent to be fully deployed across the city by June 2006. The company will then pursue similar city-wide

roll-outs in Osaka and Nagoya while simultaneously working with Airspan to launch a mobile WiMax service in 2007.

### ***Push-to-talk***

NTT DoCoMo introduced push-to-talk (PTT)-enabled 3G handsets to the Japanese market in October 2005. Users are able to communicate with up to four other handsets simultaneously. In 2006, the company will launch expanded PTT services, giving subscribers the ability to communicate with a maximum of 19 other users simultaneously. According to the industry publication *Wireless Week*, competitors KDDI and Vodafone will announce the launch of PTT handsets of their own in the near future.

### **Personal Handyphone Systems**

Japan was the first country to introduce PHS services, a system capable of providing some of the benefits of cellular technologies but using existing fixed-line infrastructure. Essentially, PHS handsets are cordless phones operating at a 1.9 GHz frequency that can be used as home, business or mobile phones. The only limitation of PHS is its restriction to pedestrian use only, as data transmission rates are unacceptable for transmitting while the user is in fast motion. The latest generation of PHS handsets are equipped with many of the same features as current cellular competitors, including Internet access, text messaging and digital camera—only at a much reduced cost.

First launched in Japan in 1995, PHS popularity waned as cellular networks became dominant after the introduction of 2.5 and 3G technologies. However, PHS in Japan has undergone a resurgence in popularity after the introduction of new flat-rate subscription plans and improved feature sets. In September 2005, there were nearly 4.5 million PHS subscribers, up 0.1% from the previous month.

WILLCOM—a joint venture among KDDI, Kyocera Corporation (Japan) and U.S.-based Carlyle Group—is the nation’s PHS market leader, followed by NTT DoCoMo and ASTEL.

**Table 5. Market Share of PHS Carriers in Japan, September 2005**

<b>PHS subscribers</b>	<b># of Subscribers</b>	<b>% Monthly Change</b>
WILLCOM Group	3 437 400	1
NTT DoCoMo Group	986 700	-5.2
ASTEL Group	61 700	-17.6
<b>Total</b>	<b>4 485 800</b>	<b>0.1</b>

Source: Telecommunications Carriers Association. “The Number of Subscribers.” September 30, 2005. Accessed from <http://www.tca.or.jp/eng/database/daisu/yymm/0509matu.html> on November 4, 2005

Jupiter Telecommunications Co., the leading cable television provider in Japan, plans to launch a PHS system in co-operation with Willcom, offering the same handsets and services but branded under the Jupiter moniker. The company hopes to achieve a customer base of 100 000 households by 2007, largely by bundling services with its existing cable television, mobile and fixed-line communications products.

### ***Wireless Voice Over Internet Protocol***

According to Paul Budde Communications, wireless IP voice services are expected to hit the Japanese market by 2008 with staggering results. Analysts anticipate an impact on the profitability of mobile carriers much in the same way that fixed-line carriers were hit after the introduction of mobile technologies. The Japanese government plans to begin introducing wireless voice over Internet protocol (VoIP) services in 2007. The service will likely allow nationwide connectivity through overlapping Wi-Fi hot spots.

In the meantime, a Canadian company, Namzak Japan, has launched a Java-based downloadable wireless application service (Arrowfone) that enables packet-based wireless VoIP service in Japan for corporate subscribers using Vodafone's proprietary network.

### **Regional Linkages**

Japan's position within the larger Northeast Asian ICT value chain makes it an excellent vantage point to access opportunities throughout the region. Due to existing linkages in consumer demand, production capacities and investment, Canadian companies interested in Japan should also be aware of wider opportunities in the regional marketplace. In many cases, companies are able to manufacture their products in Taiwan or China due to low production costs and then ship them to markets in Korea, Japan, Hong Kong and North America where consumer demand is high.

Regional linkages in Northeast Asia are allowing for more cost-effective manufacturing and development practices and an increased scope in terms of the number of consumers. Largely, regional linkages are forged by technological innovation, domestic demand, domestic competition and cost structure (see **Table 6**).

Japan is an attractive target market for companies in the region due the high level of technology take-up and consumer demand, in addition to its capabilities in research and development. Of all the wireless markets in North Asia, Japan is the most likely to see sustained growth due to its ability to constantly support new technologies and services.

**Table 6. Regional Linkages in North Asia**

<b>Country</b>	<b>Technology Level</b>	<b>Domestic Demand</b>	<b>Domestic Competition</b>	<b>Cost Effectiveness</b>
<b>China</b>	Medium	Very High	High	Very High
<b>Taiwan</b>	High	Low	Medium	High
<b>Hong Kong</b>	Medium	Low	Medium	Medium
<b>South Korea</b>	Very High	Medium	High	Medium
<b>Japan</b>	<i>Very High</i>	<i>High</i>	<i>High</i>	<i>Low</i>

Source: BDA China. "NEA ICT Market Analysis." April 11, 2005

Japan's consumer demand is very high when compared to other Northeast Asian markets, based both on the size of its population and the average purchasing power of consumers. Furthermore, Japanese consumers are technologically savvy and trend-conscious, with a large appetite for innovative products. At the same time, the Japanese market is extremely competitive and can be difficult for Canadian companies to enter. Consequently, Canadian companies seeking opportunities to bring their products to Japan may wish to explore establishing operations or partnerships in Mainland China, South Korea and Taiwan as a means of entering the regional market with an eye to eventually marketing to Japan.

Presently, linkages in North Asia are aligned with the strengths and weaknesses of the various internal markets. Japan and Korea, with their mature and innovative ICT industries, are streamlining their operations, shifting production and research and development elements to lower-cost centres such as China—with its potential for massive consumer demand—and Taiwan. As costs rise in Taiwan, Mainland China has become an attractive alternative for production facilities, even for Taiwanese companies.

Furthermore, companies throughout North Asia are positioning themselves to capture market share in the growing Chinese marketplace. As such, interregional investment is expected to increase alongside the movement of companies from Japan, Korea, Hong Kong and Taiwan.

Prospects over the longer term will be partially reliant on the behaviour of governments throughout the region in relation to the ICT industry and, more broadly, the commoditization of the global ICT industry. Greater linkage opportunities will rely on the implementation of harmonized standards in North Asia, particularly as 4G networks begin to roll out.

## Opportunities

Beginning in 2000 with its e-Japan strategy, the Japanese government has aggressively pursued policy adoption aimed at integrating innovative ICT solutions into the country's social fabric. By encouraging technology adoption, the Japanese government has helped the industry thrive and changed the way that Japanese citizens interact with one another and their environment. In order to stimulate further innovation and growth in the domestic ICT industry, the government is now focussing on the implementation of the ubiquitous Japan strategy. U-Japan is expected to generate direct economic effects of more than \$1 trillion by 2010, according to MIC.

The goals of the u-Japan policy are threefold, namely:

- to develop a seamless wired (digital subscriber line and fibre optics) infrastructure, eventually moving to a wireless system;
- to encourage the adoption of ICT solutions for applicable social issues involving education, health care, public safety and the environment; and
- to secure the safety and integrity of the Japanese digital environment.

Although development is already proceeding apace on many of these issues, there will undoubtedly be opportunities for Canadian companies to assist in the creation of a ubiquitous network for Japan, especially as it moves to wireless. Canadian companies with applications suitable for use in the fields of health care, education, government services, food safety and Internet security will see potential for sales in the Japanese market as a result of the u-Japan policy.

Changing business paradigms in the Japanese market may create new opportunities for Canadian companies as competition increases and local operators look for ways to increase profitability. Players in the Japanese telecoms market are considering the value of mobile virtual network operators (MVNO) as a means of attracting subscribers to use new 3G-enabled products. MVNOs offer wholesale phone time to consumers by purchasing blocks of time from the major carriers and utilizing their existing networks for communication. While this system has worked to great success in European markets, its applicability in the Japanese marketplace is unclear. In particular, due to the already saturated nature of the Japanese mobile telecoms market, most carriers offer extremely competitive pricing contracts for loyal subscribers and new entrant wholesalers would be hard-pressed to compete. Still, MVNOs may be used by carriers to increase traffic on their networks and thus increase their chances of securing a larger spectrum from regulatory authorities.

Opportunities exist for foreign firms to supply the Japanese market with carrier/enterprise products, wireless products and network security solutions, according to the United States Commercial Service. Of particular interest to Canadian exporters

may be the rising growth of fibre-to-the-home, which should present opportunities for related equipment and service providers over the next five years as Japan positions itself for the roll-out of 4G services in 2010.

As profit margins for the major wireless carriers in Japan become tighter, they are searching for alternative ways to maximize ARPU. Consequently, mobile operators are exploring other avenues of revenue generation, particularly in the fields of complementary technologies and services such as mobile television and VoIP. At present, the most-profitable feature segments of the Japanese wireless industry are ring-tone downloads and text messaging. Ring-tone downloads of music performed by original artists generated revenues of \$241.9 million in 2004, a sevenfold increase year-on-year. In Japan, the practice of using real songs for ring tones is known as Chaku-Uta. Conventional ringtone downloads were up 5% from the previous year, but the pace of growth is declining.

Additionally, opportunities will continue to emerge to supply products suited to Japan's ageing population. By 2015, there will be one person in the 65 and older cohort for every two working-age individuals. Consequently, cellular carriers are attempting to capture a larger share of the senior citizen market by offering targeted services and technologies; examples include low-cost handsets with simplified feature sets, larger display screens, and larger characters. DoCoMo presently offers a handset with a battery recharging base station that also acts as a monitoring service. The units sends a text message to family members that the user is okay every time the handset is placed on the station.

Another technology already offered to seniors slows down the output of speech at the receiving end of a telephone by 30% to make comprehension easier for those with hearing impediments. Also, DoCoMo has employed rate discounts for subscribers older than 50 to capture more of the elderly market. KDDI, meanwhile, offers elderly subscribers a screenless phone with memory slots for three preprogrammed numbers that can be dialed with the press of a single button.

In terms of telecoms equipment, demand is expected to remain stable from 2006 to 2009, rising only \$1.3 billion in that period (see **Table 7**).

**Table 7. Telecommunication Equipment Market in Japan, 2006-2009 (\$ billion)**

	2006	2007	2008	2009
<b>Domestic demand</b>	47.8	48.9	49	49.1

Source: Communications and Information Network Association of Japan (CIAJ). "Yearbook 2005." July 2005. Accessed from <http://www.ciaj.or.jp/e/yearbook/pdf/yb2005.pdf> on November 4, 2005

According to the Japan Electronics and Information Technology Industry Association (JEITA), Japan imported \$1.2 billion in equipment for telecoms systems and \$790.8 million for radio communication systems in the first six months of 2005. Significant barriers to market entry exist, and competition is fierce.

Capital expenditures on telecoms infrastructure in Japan, meanwhile, has remained flat since 2001 at roughly \$32.5 billion. Capital expenditures will likely remain steady over the next several years as telecoms carriers are not investing in the construction or upgrading of fixed-line networks but are focussing on offering improved services and feature sets at reduced costs.

Canadian companies targeting the Japanese market may wish to exploit existing linkages between various markets in North Asia. Given Japan's role as a leading innovator and its position as a key supplier to China, Canadian companies could examine opportunities in integrating their products or solutions with Japanese products destined for the Chinese marketplace.

## **COMPETITIVE ENVIRONMENT**

### **Local Capabilities**

#### ***Wireless Equipment***

The Japanese wireless equipment market is relatively open with a fairly heavy international presence already established. Consequently, Japan has a competent local manufacturing capacity that will aggressively compete with foreign firms for business, using lower prices as a means of outbidding rivals. Consolidation and restructuring trends will continue to affect the Japanese ICT landscape, but future growth will be characterized by intense domestic competition.

The national association of telecoms manufacturers, the Communications and Information Network Association of Japan (CIAJ), has more than 200 Japanese member companies. According to the CIAJ, domestic equipment production decreased 11.4% in 2004 over 2003 figures. Demand for network equipment on behalf of telecoms carriers and corporations remained strong but was countermanded by a drop in consumer demand for cellular handsets, a fall in demand for base stations in China and the continuing movement of equipment manufacturing to other countries in the region.

Positive growth is expected in the Japanese equipment industry for 2005, with optic and IP-related network equipment leading the way.

In 2004, revenue growth came from central office switching systems, private branch exchanges (PBXs), routers/hubs and intercom systems. Negative growth came from cellular handsets, base station equipment, terrestrial communications equipment and general-use PHS.

### ***Wireless Operators***

DoCoMo is Japan's largest mobile carrier with a 61.6% share of the Japanese wireless market. KDDI and Vodafone make up most of the remainder with shares of 17.6% and 17.0%, respectively.

All Japanese wireless operators have launched 3G services. The market is open to foreign investment as evidenced by Vodafone, the number three carrier in the market.

Vodafone recently lost market share to DoCoMo and KDDI due to handset supply problems and poor service coverage. The company's supply problems were the result of a global strategy to launch 3G services using the same handsets in every market worldwide. Japanese consumers, however, were not receptive to the Nokia and Motorola handsets, preferring smaller and comparatively more interesting phones from Japanese and other Asian vendors. The rebuke was a substantial setback for Vodafone's 3G operations in Japan. The company hopes to make up its losses in 2006 by introducing 10 new 3G handsets from Japanese and Korean suppliers.

Datamonitor analysis suggests that the four major wireless services providers—NTT, KDDI, Vodafone and Softbank—are positioned well for the near term and will not face severe declines. It is Datamonitor's position that despite many claims that the Japanese mobile communications market is saturated, constant innovation in the market will always drive new growth. The rapid uptake of devices offering services such as e-wallet m-commerce, bar-code readers and mobile television technologies are key indicators that the mobile telecoms market in Japan will remain healthy for some time to come, according to Datamonitor.

**Table 8. Key Local Players in the Japanese Market, 2005**

<b>Wireless Service Providers</b>
NTT DoCoMo
KDDI Corp.
Vodafone KK
Softbank Corporation
eAccess (eMobile)
IP Mobile Incorporated
<b>Handset Vendors</b>
NEC
Panasonic
Sharp
Toshiba
Sony Ericcson
Fujitsu
Kyocera
Mitsubishi
Sanyo-Nokia
<b>Wireless Content Providers</b>
Index Corp.
For-side.com
Dwango
MTI
Cybird

### **International Competition**

Key players in the Japanese mobile network equipment market include U.S.-based firms Cisco Systems, 3Com Corporation and the Acterna Corporation. China is expected to dominate the future networking equipment industry because of its ability to offer low-cost alternatives to North American, European and Japanese products. The success of Chinese companies will be based on the continued commoditization of the networking equipment industry, whereby prices have eroded to a point where brand loyalty is defeated by cost-savings. If cost is the sole determining purchasing factor, Chinese companies will undoubtedly outperform other international players once they are capable of meeting the technological standards established by their competitors.

In the global market, the major players will likely continue to consolidate as evidenced by Cisco's recent acquisition of Airespace (U.S.) and Siemens' pick-up of Chantry Networks (U.S.). Companies are attempting to position themselves with broad interests in niche segments in order to mitigate the effects of potential market fluctuations brought about by future movement, particularly the entrance of Chinese competitors.

## **Canadian Position**

Canada's presence in the Japanese marketplace for wireless technologies is expanding but has much greater capacity for growth. Many Canadian firms use Japan not only as an export market but also as a stepping stone to the rest of the Asian market.

Nortel (Ottawa) has been active in Japan since 1984, when it became the first foreign supplier of the national carrier, NTT. In June 2005, Nortel and BB Mobile, a subsidiary of Softbank, completed the first successful trial of HSDPA wireless broadband data transmission.

In order for Canadian companies to continue to succeed in the Japanese market, they need to target areas where there is the need and demand for value-added services and products. Furthermore, Canadian companies should focus on areas where competition from Japanese firms is weaker and where they can demonstrate market leadership.

## ***Canada-Japan Economic Framework***

On November 19, 2005, the governments of Canada and Japan announced the joint signing of the Canada-Japan Economic Framework. In specific relation to the ICT sector, the two governments agreed to exchange information on their respective ICT strategies with a particular focus on future plans for the implementation of ubiquitous networks. Pre-existing forums for information exchange, such as the Canada-Japan Telecommunications Policy Consultations, will continue co-operating on telecoms policy issues and emerging technologies. For more information on the Framework, visit <http://www.dfait-maeci.gc.ca/tna-nac/RB/japan-intro-en.asp>.

## **Competitive Advantage through Canadian Government Policies and Initiatives**

### ***Canadian Commercial Corporation***

The Canadian Commercial Corporation (CCC) gives Canadian companies access to financing and better payment terms under the Progress Payment Program (PPP). The PPP concept was developed as a partnership between major Canadian financial institutions and the CCC. It enables the exporter's bank to open a project line of credit for the exporter's benefit, based on CCC approval of the project and the exporter's ability to perform. The CCC will also act as a prime contractor on behalf of Canadian small and medium-sized enterprises (SMEs), giving those businesses increased credibility and competitive advantage.

### ***International Business Opportunities Centre***

The International Business Opportunities Centre (IBOC) connects Canadian companies, particularly SMEs, with foreign buyers through its unique company matching service. In providing its business lead service, IBOC works closely with the Canadian Trade Commissioner Service, which consists of trade officers located in Canadian embassies and consulates around the world. The business opportunities are handled on a case-by-case basis, spanning all markets and all sectors.

The Centre searches the Trade Commissioner Service database and Industry Canada's Canadian Company Capabilities database, as well as the vast resources of the Internet. In addition, IBOC taps into an impressive Canada-wide network of industry-sector experts at Industry Canada, Agriculture and Agri-Food Canada, and other federal Team Canada Inc departments and agencies. The organization also consults regularly with industry associations and provincial trade offices.

IBOC communicates business leads in two different ways: through direct personal contact with individual suppliers or electronically through e-mails sent to appropriate Canadian suppliers. These electronic leads are delivered through the Virtual Trade Commissioner (VTC). For more information or to register for the VTC, visit <http://www.infoexport.gc.ca>.

### ***Export Development Canada***

Export Development Canada (EDC) offers export financing and insurance to Canadian exporters. Additionally, insurance can be provided for larger transactions that are subject to the terms and conditions established by the buyer. EDC prefers to work through letters of credit, bank credits or bank guarantees. Approval for financing is considered on a case-by-case basis.

### ***Virtual Trade Commissioner***

The Virtual Trade Commissioner (VTC) is an on-line service offered by Canada's Trade Commissioner Service of International Trade Canada. Through a personalized and password-protected Web page, VTC-registered Canadian exporters will receive timely and relevant information on contacts and business opportunities in targeted foreign markets. The VTC offers registered users direct on-line access to market information, including market reports, business news, events and business leads related to the companies' industry sectors and markets of interest. Users can request services on line from a trade commissioner responsible for their industry sector in their target markets. They will also automatically receive new information as it becomes available. Canadian exporters can register for a Virtual Trade Commissioner at <http://www.infoexport.gc.ca>.

## **PRIVATE-SECTOR CUSTOMERS**

Canadian companies seeking to do business in Japan will have to establish themselves as proven leaders in their respective niche. Customers for Canadian SMEs will likely be similar-sized firms in Japan, many of which will sell in turn to the larger Japanese technology firms and the carriers themselves. Potential customers will avoid any purchase they view as high risk, especially when the product or service is not from a Japanese company. It is thus unlikely that Japanese companies will take a chance on unproven or unfamiliar Canadian solutions.

Establishing partnerships, joint ventures, subsidiaries or offices in Japan can help overcome possible Japanese reluctance to do business by giving Canadian firms greater visibility and credibility within the local marketplace. Also, using local agents or representatives can be an effective means of introducing new products to the market.

## **PUBLIC-SECTOR CUSTOMERS**

The Japanese government has established voluntary procurement standards that expand on those set forth by the World Trade Organization (WTO). For more information relating to Japanese government procurement standards and on where to find tenders, visit <http://www.jetro.go.jp/en/matching/procurement>.

## **MARKET LOGISTICS**

The most-effective way to enter the Japanese wireless technologies market is through joint ventures. Canadian firms can benefit from establishing partnerships with Japan-based companies as a means of gaining access to the Japanese marketplace. In some cases, local firms are partnering with, or outsourcing to, smaller research companies in order to diversify their product lines and available services. This provides opportunities to Canadian firms, particularly in the early research stage.

Other methods of entry include strategic alliances, technology licensing agreements, joint research projects, partnerships, share exchanges, equity investments, acquisitions and research contracts.

Exporters are advised to register with the VTC, so that they can be contacted directly about potential business opportunities in Japan.

## **Channels of Distribution**

The Japanese distribution system features multiple layers of distributors and importers, many of whom specialize in certain products and have developed close relationships with manufacturers and retailers. Specialized distributors typically handle competing product lines and some or all promotional activities. Depending on the specific agreement, distributors may also oversee customer support.

Choosing the appropriate distributor is a crucial step in accessing the Japanese market. Working closely with a Japanese partner helps to ensure that a product meets all regulations, standards and quality marks, which is essential to operating successfully in Japan. Producers are expected to communicate frequently with their distributor; this generally includes making one or more trips a year to Japan. A lack of correspondence is generally interpreted as of a lack of commitment. Good communication often determines the efforts that distributors make to promote a producer's products.

When seeking the services of a distributor, exporters should consider the relationship that these individuals have with local governments, buyers and banks, the condition of their facilities, and their willingness and ability to keep inventory. Canadian producers are advised to review the provisions of Japanese law with a qualified lawyer before entering into an agreement with a prospective partner.

## ***Agents and Sales Representatives***

Agents are excellent channels through whom to introduce new products into the Japanese market. While agents solicit business and enter into agreements on behalf of the exporter they represent, they do not take ownership over the products they sell.

Most Japanese agents and sales representatives are located and concentrate their marketing efforts in Tokyo, Osaka and Nagoya, although there are agents representing most regions. As with distributors, agents tend to specialize by product category. Agents frequently act as intermediaries between suppliers and distributors, and can provide additional advice to foreign firms, such as how to tailor products to the specific demands of Japanese customers. An exporter must weigh a number of factors when selecting an agent, including the agent's:

- region(s) covered;
- reputation;
- product knowledge;
- experience in handling the exported product;
- commission to be paid;
- ability to provide after-sales service, if required;
- track record; and

- staff size and quality.

These attributes can best be assessed during a visit to Japan. Manufacturers should also ensure that responsibilities are clearly defined before entering into a long-term relationship.

### **Market-entry Considerations**

The Japanese market can be difficult for foreign companies to enter due to firmly entrenched local preferences and suppliers. It is, therefore, recommended that Canadian companies seek out potential partners or establish a physical presence of their own in the Japanese market through a branch office or subsidiary. Also, Canadian firms should be aware that the Japanese marketplace is unforgiving and will prove difficult to navigate without the support of a proven business track record.

Japan maintains two technical standards to govern telecoms equipment, namely, the Telecommunications Business Law (TBL) and the Radio Law. TBL standards enforce stability and reliability in telecoms services and related equipment. The Radio Law, meanwhile, governs the use of Japan's radio frequencies and the equipment which use them.

All cellular and radio signal equipment must obtain certification from Japan's Telecom Engineering Center (TELEC), ensuring that signals will not conflict or interfere with existing infrastructure.

Regulations exist restricting foreign ownership of assets or properties belonging to NTT Corporation.

The Japan External Trade Organization (JETRO), the Manufactured Imports Promotion Organization (MIPRO) and Japan's Ministry of Economy, Trade and Industry (METI) administer a variety of assistance programs to facilitate trade with Japan. These include low-interest loans to encourage imports, assistance in finding Japanese business partners, market research, export study programs, and the provision of free temporary office space in six Japanese cities.

The Japanese wireless technologies market is highly competitive. Japanese buyers demand high-quality products that have proven to be effective and cost-efficient. Accordingly, special attention must be paid to marketing activities undertaken in Japan. A clear understanding of the target market and appropriate methods of product distribution are essential.

## ***Suggested Business Practices***

Doing business in Japan can be challenging for foreign companies due to cultural differences, both socially and in business. However, it can also be a rewarding experience, especially once an exporter has established a solid reputation with its Japanese customers. In general, the success of a Canadian company in Japan will rely heavily on its long-term commitment to the market. By investing time and money in developing relationships with prospective customers in Japan through regular visits, making careful partnering choices and thoroughly researching customer needs, Canadian companies can build a strong and loyal customer base.

Advice from exporters already successful in the market centres around the notion of long-term commitment and the projection of a strong individualistic image. Japanese companies, many of whom are industry leaders, are looking to purchase from, and form partnerships with Canadian companies that can demonstrate leadership in a particular industry segment.

Japanese companies and businesspeople are extremely efficient and expect their foreign business associates to operate in the same way. Late arrival for meetings is deemed to be unacceptable and can taint an otherwise positive relationship.

The use of interpreters is strongly recommended for business meetings. Interpreters allow Japanese business associates, even those who speak English, to feel more relaxed and perhaps provide more details than they could while speaking English. Interpreters should be briefed, before the meeting, about both companies involved, specific products and the objectives of the meeting. Following the meeting, Canadians should be debriefed by the interpreters about the tone and any non-verbal exchange that may have taken place among the Japanese business associates.

Participation in some of Japan's many specialized trade shows and exhibitions is an excellent method for potential exporters to both assess the market and make contacts. Due to the extensive preparatory requirements of these events, combined with the need to communicate in Japanese, selection of a local agent or distributor before attending the show is usually a prerequisite to effective participation.

Another important factor for Canadian exporters to remember is that most Japanese business initiatives start at the bottom of a company and "work their way up." Foreign companies often bypass lower levels of administration in an attempt to appeal to senior personnel. More often than not, alienation of key decision makers is the only result of this type of approach.

### ***Import Regulations***

With regard to wireless technologies related goods and services, software as such is not subject to specific regulations. The importation of hardware and wireless equipment is covered by regulations pertaining to electrical appliances and the like (primarily, the Electrical Appliance and Material Safety Law of Japan Technical Requirement), which are available at <http://www.jetro.go.jp/en/market/regulations>.

### ***Local Standards, Certificates or Registrations***

Documents required for customs clearance in Japan include standard shipping documents such as a commercial invoice, packing list, and an original and signed bill of lading, or, if shipped by air, an air waybill. Air shipments of values greater than JPY100,000 (\$1 380) must also include a commercial invoice.

Commercial invoices for each item should be as descriptive as possible. The packing list should include the exact contents of each container, the gross and net weights of each package, and all container measurements using metric units.

There are no legal requirements for labelling audio or video software. There are, however, specific markings that can be used to prove that a product is a legitimate one sold with the consent of the copyright holder.

Detailed information on local standards is available from the JETRO Web site at <http://www.jetro.go.jp/en/market/regulations/>.

### ***Intellectual Property Protection***

Japan is a signatory to the Trade-related Intellectual Property Rights (TRIPS) agreement. Japan has also agreed to the Berne, Paris and Universal Copyright conventions and Patent Co-operation Treaty, and is a member of the World Intellectual Property Organization (WIPO). Accordingly, the country adheres to internationally accepted regulations governing patent protection. Canadian exporters should contact the Japan Patent Office (JPO) for further information and an application package when warranted.

### ***Technology Transfer***

For years, technology transfer within Japan's private sector had been generally carried out among individuals directly negotiating with one another or by researchers who performed joint research with the private sector. In 1998, the Japanese government established the University Technology Transfer Promotion Law to promote greater technology transfer from universities. That year, the first technology licensing

organizations (TLOs) were established. As the importance of industry-university collaboration increased, so, too has the role of a TLO in acting as a liaison between universities and companies. The range of services that a TLO can provide has increased tremendously, up to and including overall planning and drafting of contracted and joint projects up to the stage of commercialization.

For a complete overview, as well as a list of TLOs in Japan, refer to International Trade Canada's "Technology Licensing Organizations in Japan" at <http://www.infoexport.gc.ca/ie-en/DisplayDocument.jsp?did=41689>.

### ***Export Credit Risks, Restrictions on Letters of Credit, Currency Controls***

Japan implements no restrictions on letters of credit or currency control. Generally, the method of payment is a matter for negotiation between the individual supplier and importer. The usual practice is for payment to be made by terms of a letter of credit for 30-60 days. In cases where distribution arrangements are concluded, exporters are advised to prepare a contract detailing all major points of agreement, including the rights and responsibilities of all signatories.

## PROMOTIONAL EVENTS

Event/Description	Organizer
<b>5th International KEITAI Forum</b> March 14-16, 2006 (Annual) Kyoto, Japan  Internet: <a href="http://www.itbazaar-kyoto.com/forum/index_e.html">http://www.itbazaar-kyoto.com/forum/index_e.html</a>	International KEITAI Forum Executive Committee 04-0862 5th Floor Kyoto Chamber of Commerce & Industry Building. Ebisugawa-agaru, Karasuma-dori, Nakagyo-ku Kyoto, Japan Tel.: (81-7) 5253-6234 Fax: (81-7) 5211-9334 E-mail: <a href="mailto:office@itbazaar-kyoto.com">office@itbazaar-kyoto.com</a>
<b>Wireless Network Technology 2006</b> April 19-21, 2006 (Annual) Tokyo, Japan  Internet: <a href="http://www.jma.or.jp/TF/en/ex/networktech/">http://www.jma.or.jp/TF/en/ex/networktech/</a>	Japan Management Association (JMA) 3-1-22, Shibakoen Minato-ku, Tokyo 105, Japan Tel.: (81-3) 3434 0093 Fax: (81-3) 3434 8076 E-mail: <a href="mailto:convention@jma.or.jp">convention@jma.or.jp</a> Internet: <a href="http://www.jma.or.jp">http://www.jma.or.jp</a>
<b>Interop 2006</b> June 5-9, 2006 (Annual) Tokyo, Japan  Internet: <a href="http://www.interop.jp/call.html">http://www.interop.jp/call.html</a>	MediaLive Japan Inc. Tel.: (81-3) 5772-0612 Fax: (81-3) 5772-0270 E-mail: <a href="mailto:sales-info@medialive.jp">sales-info@medialive.jp</a> Internet: <a href="http://www.medialive.jp">http://www.medialive.jp</a>
<b>Expo Comm Wireless Japan 2006</b> July 19-21, 2006 (Annual) Tokyo, Japan  Internet: <a href="http://www.expocomm.com/wirelessjapan">http://www.expocomm.com/wirelessjapan</a>	E.J. Krause & Associates, Inc. 6550 Rock Spring Drive, Suite 500 Bethesda, MD 20817 Tel.: (301) 493-5500 Fax: (301) 493-5705 E-mail: <a href="mailto:ejkinfo@ejkrause.com">ejkinfo@ejkrause.com</a> Internet: <a href="http://www.ejkrause.com">http://www.ejkrause.com</a>
<b>CEATEC (Combined Exhibition of Advanced Technologies) 2006</b> October 3-7, 2006 (Annual) Makuhari Messe  Internet: <a href="http://www.ceatec.com/en/2006">http://www.ceatec.com/en/2006</a>	CEATEC JAPAN Organizing Committee Communications and Information network Association of Japan (CIAJ) Japan Electronics and Information Technology Industries Association (JEITA) Japan Personal Computer Software Association (JPSA) Tel.: (81-3) 5402-7603 Fax: (81-3) 5402-7606 E-mail: <a href="mailto:contact@ceatec.com">contact@ceatec.com</a>

## KEY CONTACTS AND SUPPORT SERVICES

### Canadian Government Contacts

#### **Canadian Embassy in Tokyo**

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Tokyo 107-8503 Japan  
Contacts: Kimihiro Iwao, Trade Commissioner,  
and Stéphane Beaulieu, Trade Commissioner.  
Tel.: (81-3) 5412-6200  
Fax: (81-3) 5412-6474  
E-mail: [jpn.commerce@international.gc.ca](mailto:jpn.commerce@international.gc.ca)  
Internet:  
<http://www.infoexport.gc.ca/ie-en/OfficeSelection.jsp?cid=515>

#### *Consulate General of Canada in Osaka*

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151 O'Connor St.  
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#### **Industry Canada (IC)**

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### **Canadian Wireless Telecommunications Association (CWTA)**

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### **Japan External Trade Organization (JETRO)**

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## Japanese Industry Associations

### **Communications and Information Network Association of Japan (CIAJ)**

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### **Information Technology Promotion Agency (IPA) Japan**

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### **Japan Information Technology Services Industry Association (JISA)**

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## **OTHER REFERENCE MATERIAL**

### **Useful Internet Sites**

Asia Wall Street Journal: <http://www.awsj.com>

ExportSource: <http://exportsource.ca>

Foreign Affairs Canada (FAC): <http://www.fac-aec.gc.ca>

InfoExport: <http://www.infoexport.gc.ca>

International Telecommunication Union (ITU). Japan: <http://www.ituaj.jp>

International Trade Canada (ITCan): <http://www.itcan-cican.gc.ca>

Japan Electronics and Information Technology Industry Association (JEITA): <http://www.jeita.or.jp>

Mobile Content Forum (MCF): <http://www.mobilecontentforum.org>

Ni-Ka Online: <http://www.dfait-maeci.gc.ca/ni-ka>

NetSource Asia: <http://www.netsource-asia.com>

The Mobile Media Japan: <http://mobilemediajapan.com/default.asp> (for Japanese wireless industry news)

Telecommunication Carriers Association (Japan): <http://www.tca.or.jp/index-e.html>

South China Morning Post: <http://www.scmp.com/news> (By subscription, only)

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