

---

Market Update for Major Markets in Asia

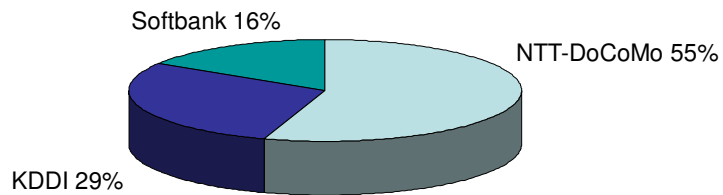
Mobile Market and Trends  
in Japan, Korea and China

Prepared by Asia Pacific Ventures



---

Japan Mobile Market Share



- The 3 major mobile phone carriers in Japan are NTT-DoCoMo, KDDI-AU and Softbank
- Softbank acquired Vodafone Japan for \$15B in March, 2006, however, they still lag behind NTT-DoCoMo and KDDI-AU
- Japanese Internet Service Provider (ISP) wholesaler eAccess plans to provide cellular-phone services in limited regions from March, 2007
- SMS is not very popular in Japan, because of the lack of SMS interconnect between operators. Mobile email is very cheap, prices are capped, and in the case of Softbank, email is free among Softbank users.

As of Dec-2006 (TCA)



## Japan Mobile Market Trends

- The Japanese mobile industry is viewed as saturated and its growth rate is falling year by year. However, it faces a turning point as value-added services are being developed based on the improvement of high-end networks, such as receiving terrestrial digital broadcasting.
- Internet access has become common and an essential mobile service in Japan. According to the Ministry of Internal Affairs and Communications (MIC), 69 million people have accessed the Internet via mobile phone while access from PCs was 66 million in 2005.
- Many Japanese mobile phones have FeliCa function built-in. FeliCa is a contact less RFID IC chip smart card system developed by Sony, primarily used in electronic money cards. FeliCa becomes an electronic wallet, door key or travel ticket. Over 10 million Japanese people have already adopted FeliCa.



As of Dec-2006 (TCA)







## Electronic Payment with DoCoMo's Felica




As of Dec-2006 (TCA)

### Japan Mobile Phone Subscription Base

---

Mobile Phone Subscribers		Mobile Data Service Subscribers	
 NTT-DOCOMO 52,218,800	 i-mode 47,207,700		
 KDDI-AU 27,225,600	 EZWeb 22,458,500		
 SOFTBANK - MOBILE 15,496,500	 Yahoo Keitai 12,920,200		
<b>Total:</b> 94,935,900 <small>Dec, 2006</small>	<b>Total:</b> 82,586,400 <small>Population of Japan (2005): 127-million</small>		



### Japan Mobile Carrier Network Standards

---

	PDC, FOMA (W-CDMA)
	PDC, cdmaOne, CDMA 1X, EV-DO
	PDC, W-CDMA

- Adoption of international standards is slow as Japanese carriers often define the leading edge of what is technically possible for their demanding customers



## Mobile Phone Handset Market Share

2006 Q1-Q2 Mobile Phone Shipments in Japan

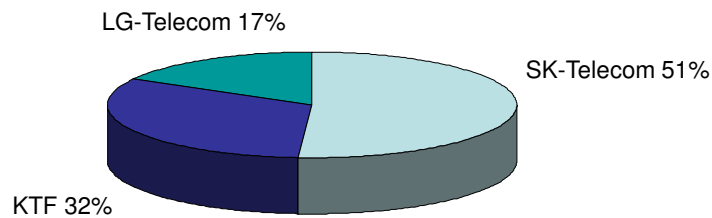
1.	Sharp:	4.3m	(19.8%)
2.	Toshiba:	2.8m	(12.4%)
3.	Panasonic:	2.4m	(11%)
4.	NEC:	2.2m	(10.1%)

Total 21.7m

- Motorola and Nokia and other Western powerhouses have very weak presence in Japan



## South Korea Mobile Market









- South Korea has three major mobile phone operators, SK Telecom, KTF, and LG Telecom .
- Operators in South Korea are not allowed to offer subsidies for their devices, unlike in Japan and the United States (operators in Europe also don't often subsidize devices). Users pay more for new phones (\$400-\$500) and upgrade less often.
- South Korean users primarily use SMS for messaging on their mobiles. Mobile e-mail to be an untapped opportunity for South Korean operators.


As of Dec-2006 (TCA)



### Korea Mobile Phone Subscribers




---

Mobile Phone Subscribers	Mobile Data Services
 20.27 million	
 12.91 million	
 7.01 million	
<b>Total:</b> 40.19 million Dec, 2006	Population of Korea (2003): 48-million




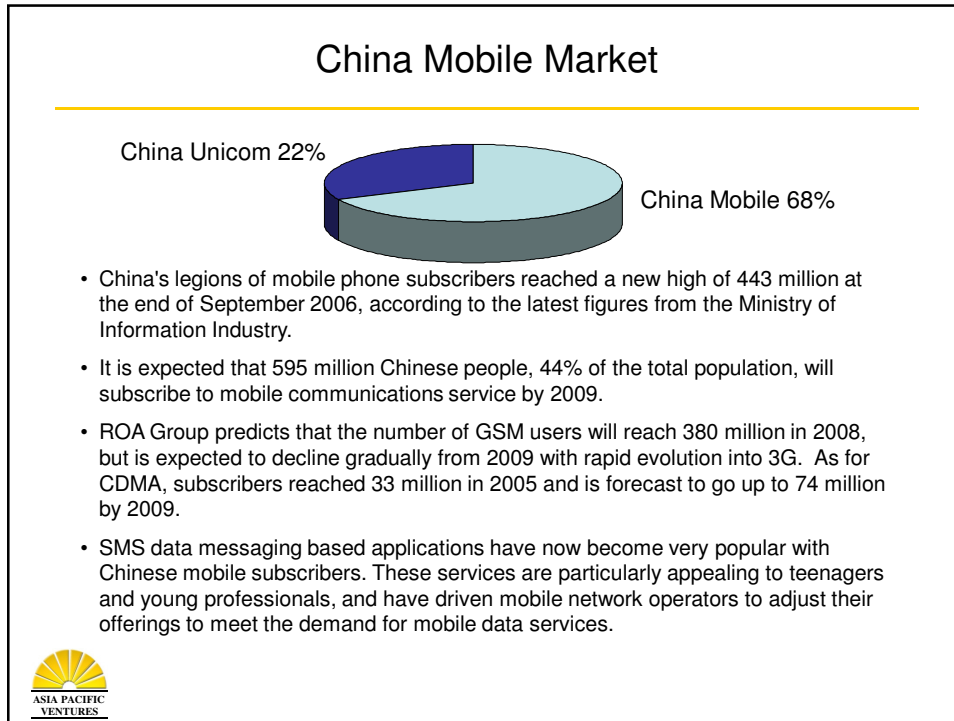
### Korea Mobile Carrier Network

---

	CDMA 1x, EVDO, WCDMA
	CDMA 1x, EVDO, WCDMA
	CDMA 1x

As of Dec-2006 (Press Release)





### China Mobile Phone Market

---

Mobile Phone Subscribers	Network
<p>中国移动通信 CHINA MOBILE 移动信息专家</p> <p style="text-align: right;">296.4 million</p>	<p>GSM, GPRS, EDGE</p>
<p>China unicom中国联通</p> <p style="text-align: right;">141.1 million</p>	<p>GSM, GPRS, CDMA, CDMA2000 1X</p>
<p><b>Total:</b></p> <p style="text-align: right;">408.9 million</p> <p style="text-align: right; font-size: small;">Nov, 2006</p>	

Population of China (2005): 1.3 billion