



## The Mobile Revolution Transforms Asia-Pacific

by Cindy Payne, Founder and Managing Director, Asia-Pacific Connections

Telephone services in Asia-Pacific gain one new user every second. Analysts believe the market will reach US\$137 billion by yearend 2003. Today, mobile data services are consumer-focused, but future growth will come from organisations with dispersed workforces. Outstanding issues include security, equipment reliability, and the frequencies used for wireless transactions and mCommerce. As with any new medium of communication and commerce, the wireless industry is at odds with itself – promoting competing communication standards, security standards, protocols, and bandwidths.



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Asia-Pacific emerged as the epicentre of the telecommunications industry in 2001 when the region advanced to become the world's largest telecommunications marketplace. Today, the region is home to more than one-third of all telephone subscribers, and is the only telecommunications market to have grown significantly in the last decade – adding more than one new telephone user every second. According to industry analyst, International Data Corporation (IDC), the Asia-Pacific telecommunications services market will be valued at US\$137 billion by the end of 2003. \*

The emergence of mobile communications has dramatically improved telephone coverage across Asia-Pacific. Mobile penetration significantly raised total teledensity, especially in developing countries that might have otherwise retained low access levels. By the end of 2002, more than 20 countries in the region had more mobile users than

fixed-line subscribers. According to the International Telecommunication Union (ITU), many developing countries – including Cambodia, Indonesia and the Philippines – have reached 90 per cent mobile penetration rates. Only the development of some Pacific Island countries is still thwarted by the lack of cellular systems or by out-of-date cellular systems. Today, 82 per cent of Asia-Pacific's population has telephone access – either by way of household fixed-line phones, fixed-line or mobile payphones, or individually owned cellular phones.

By far, India is experiencing the fastest mobile phone adoption rate; the Gartner Group forecasts that subscribers will soar some ten times from a mere 3.1 million at the end of 2000 to 30 million by 2005. Sensing the opportunity, dozens of companies – from multinational corporations, like AT&T, to state-owned companies, like Mahanagar Telephone Nigam Ltd, to

local operators, like Spice Telecom – are entering the Indian mobile market. However, the ITU confirms that China still leads the world in the number of mobile users, adding more than 100 million mobile subscribers between 1999 and 2001 alone.

Across the region, the rural areas are benefiting the most from the mobile revolution; in these areas there is no fixed-line service and long waiting lists for new service are still common. In India, with the cellular infrastructure on the rise now, affordability of the services is the main barrier to access. Wireless companies such as Hutchison Essar, a partnership between Hutchison Telecom and the Essar Group of India, acknowledge this and have slashed prices to attract new users. For the time being, mobile operators are focused on growth – expanding their markets and signing up new customers – hoping that short-term losses can be recovered over time.





The convenience of being able to access services via the ubiquitous and always-on infrastructure allows people to transcend barriers of space and time. Japan has the highest total number of mobile Internet users – totalling about 75 percent of Japan's 76 million mobile users by mid-2002. Thanks to 3G licenses and services, plus 3G multimedia services (CDMA platform), Japan also leads the region in the always-on mobile Internet services. Growth across the region will be driven by the increasing use of mobile data and wireless services, powered by high-speed Internet access. Asia-Pacific leads the world in advanced Internet technologies – such as broadband access and mobile data services – with South Korea and Hong Kong boasting the world's highest broadband Internet penetration rates. In addition, South Korea leads the pack in commercial high-speed 3G cellular networks and mobile Internet service offerings.

IDC estimates that by 2004, the region will have 550 million wireless subscribers. By 2007, China is expected to overtake Japan and Korea, and dominate the region in wireless local area network (WLAN) installations, representing 45 percent of the market, followed by South Korea (21 per cent), Australia (8 per cent) and Taiwan (7 per cent). While desktops, notebooks and personal digital assistants (PDAs) have been the obvious hardware choices for exploiting WLAN technologies, mobile phones are beginning to have WLAN chips embedded in them.

Meanwhile, in the other Asia-Pacific countries, telecommunications operators are gearing up to expand WLAN or hotspots. IDC estimates that WLAN hotspots will grow to US\$800 million by 2007. In this area, South Korea will continue to lead, followed by Japan, Australia, Taiwan and Hong Kong. IDC also believes that WLAN and high-speed mobile data services will complement each other, with cellular operators being particularly aggressive to push the use of 2.5/2.7G services to their subscriber bases.

Though the mobile data services offered today are primarily consumer-

focused, international research firm, Gartner Dataquest, suggests enterprise customers – businesses, governments and other organisations – may be the real drivers behind the future growth of mobile data services. The greatest potential market for these services is organisations with geographically dispersed workforces needing access to critical information to make decisions, or provide real-time customer service, in the field. Mobile customer relationship management (mCRM) solutions are being delivered via wireless-enabled mobile devices already. Early adopters of these solutions include the telecommunications, fast-moving consumer goods and insurance sectors, where mobile data services are being employed to improve business processes, reduce costs and increase revenues. Though wireless-enabled CRM applications are still in their infancy, growth is expected with the advent of Bluetooth / GPRS enablement, increased PDA capabilities, and the decreasing cost of wireless LAN products. Gartner predicts that regional enterprise WLAN spending will more than double between 2001 and 2005 to reach US\$625 million.

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IDC estimates that the Asia-Pacific mobile commerce market will grow from US\$400 million in 2001 to reach US\$7.5 billion in 2004. For telecommunications operators, the opportunities in the mCommerce sector are endless; but the onus will be on them to morph their existing business structures to take advantage of these emerging technologies and services. In the wireless world, operators own the most important asset – the relationship with the customer. In order for operators to maximise their share of the mCommerce pie, they will need to offer products and services that encourage enterprises and customers

to use more bandwidth. However, selling bandwidth alone will not be enough, so next-generation telecommunications operators will increasingly need to rely on specialist service providers to develop value-added applications, devices and content. Within Asia-Pacific, operators such as Telstra and SK Telecom were among the first to partner with service providers to offer compelling services.

Location-based wireless services will also be a core driver of mobile services growth. According to industry analyst, Strategis Group, the worldwide location-based wireless services market will exceed US\$4 billion by 2004, with as many as 1 billion Internet-enabled handsets in use. In November 2002, Japan's NTT DoCoMo was the first Asia-Pacific carrier to launch location-based wireless services – providing location data to mobile users for navigational purposes. Other carriers in the region are not far behind, trying to take advantage of the confluence of wireless and GPS technologies. Meanwhile, location-based wireless services may offer customers a compelling reason to upgrade to the next-generation of mobile networks.

While the mobile lifestyle being promoted by operators and service providers is alluring, mass adoption of wireless services will only happen once operators, service providers and governments in the region addresses key issues – including security, equipment reliability and the frequencies used to conduct wireless transactions and mCommerce. As with any new medium of communication and commerce, the wireless industry is at odds with itself – promoting competing communication standards, security standards, protocols, and bandwidths. In order to deliver sophisticated, high-value services and increase their revenue, operators, service providers and Asia-Pacific governments will have to form a mobile ecosystem where their ultimate goals are uniform, intellectual property rights are respected and the rule of law – as laid down by the governments – is clearly understood and adhered to by all.

\* All IDC statistics in this article reflect Asia-Pacific, excluding Japan. □