

Asia-Pacific's Market Leadership in Network Convergence

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

Asia-Pacific has emerged as the worldwide leader in convergent voice, video and data services over IP networks. Demand for convenient access to convergent services via a ubiquitous and always-on infrastructure is driving Asia-Pacific's dynamic network convergence growth. Asia-Pacific's telecommunications growth is being spurred by deregulation and by government investment in state-of-the-art Internet infrastructures and IPv6 networks that cater to the burgeoning requirements of consumers, enterprises, carriers and service providers in a bid to stay one step ahead in this fast-paced marketplace.



Cindy Payne is the Founder and Managing Director of Asia-Pacific Connections. Ms Payne brings over 20 years of experience in Asia-Pacific sales, marketing and general management to the company. Located in the region since 1991, Ms Payne founded Asia-Pacific Connections in 1993 to assist IT companies expand into and across Asia-Pacific. Before launching Asia-Pacific Connections, Ms Payne managed the Asia-Pacific distribution sales for Quantum Corporation, a major hard disk drive manufacturer. She developed the business from its 1986 start-up phase to a complex business with revenues exceeding US\$90 million. Previously, Ms Payne held Asia-Pacific marketing management positions at two global distributors. Ms Payne is a frequent speaker at industry conferences and often has articles published in industry journals. In addition, Ms Payne has served on the boards of several professional women's associations. She was the founding chairperson of Singapore Women in Technology (SWIT). Ms Payne earned two Bachelor of Arts degrees from Miami University, Ohio, USA – one in International Studies and the second in Languages.

Asia-Pacific carriers and service providers are turning to convergent networks to offer integrated services to trigger revenue growth. Business models have shifted from those focussed upon offering new voice and data services in new marketplaces to models that contemplate the merging of distinct technologies and/or devices into unified solutions or services to meet customers' overarching business requirements.

The Asia-Pacific region has emerged as the worldwide leader in convergent voice, video and data services over Internet Protocol (IP) networks, with large deployments in China, Korea and India. Innovative companies like Polycom, Inc., the leader in integrated voice, video, data and web communications solutions, are deploying such systems for key Asia-Pacific enterprises and service providers; these also include Ernst&Young and China Unicom. These solutions uniquely meet client's needs by providing training and other means of communication across geographically

distributed organisations, while reducing travel costs and increasing operational efficiency. The transmission of voice, video and data traffic on the same network also enables IT departments to reduce network management needs – translating into streamlined budgets and reduced expenses.

According to IDC, the ongoing need to provide convergent services will drive the growth of the Asia-Pacific (excluding Japan) IT services industry, at a compounded annual growth rate (CAGR) of 21 per cent, to reach US\$37.8 billion by the end of 2006. Convergence is fuelling an array of integrated communications applications – including customer relationship management (CRM), call centres, e-learning and integrated messaging – all of which enhance business productivity and efficiency. Application service providers, application managers and systems infrastructure service providers are reaping the rewards of outsourced IT services and processes, both at the desktop and network levels.

Convenient access to convergent services via a ubiquitous and always-on infrastructure is driving the growth of Asia-Pacific's telecommunications services sector. Asia-Pacific is now the world's largest and most dynamic telecommunications marketplace, its 36 per cent of the world's subscribers will propel related service's revenues in the region (excluding Japan) to US\$137 billion this year. In addition, unlike telecommunications markets in the rest of the world, Asia-Pacific shows fewer signs of the malaise that has afflicted other more developed telecommunications markets. Asia-Pacific's telecommunications growth is being spurred by deregulation and previously constrained demand for telecommunications services from the less developed countries throughout the region, especially in the up-and-coming economic powerhouses of China and India.

IP telephony is a next-generation technology that is changing the way people communicates thereby reshaping the

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business landscape. Through the unification of voice and data networks, IP telephony enables all types of communications – wired and wireless voice, video and data – to run over a single network. For example, at the FIFA World Cup 2002 Korea/Japan™, where the world's largest convergent network was built, FIFA estimates that IP telephony saved the organisation more than US\$ 200,000 on telephone bills and networking costs during the month-long event. IDC reports that regional revenues from IP value-added services amounted to US\$267 million in 2002, but will grow by 34 per cent CAGR to US\$1.2 billion in 2007.

IDC reports that the convergent mobile devices market in Asia-Pacific (excluding Japan) is currently worth US\$800 million. By 2005, Asia-Pacific is expected to emerge as the largest market for convergent mobile devices. The ubiquity of PDAs, Internet-enabled mobile phones and household appliances is causing a surge in consumer usage of unique IP addresses. Home networking, video streaming and P2P applications – online gaming, file sharing and online music are also examples of how multiple devices can share a single connection, but require separate IP addresses for applications. Service providers across Asia-Pacific are facing IP address scarcity issues related to the proliferation of mobile communications in the region. The previous version of the Internet

Protocol, IPv4, provided approximately 4 billion IP addresses; thereby, limiting the number of individual devices that could connect to the Internet at one time. IPv6, on the other hand, is a new protocol that increases the pool of IP addresses and can scale to virtually limitless numbers of users and Internet appliances. Increasing demand for ubiquitous and always-on connectivity in Asia-Pacific is forcing early adoption of IPv6 networks. The governments of Japan, Korea and China have already announced plans for large-scale IPv6 deployment. In Japan, several service providers who offer commercial IPv6 services and equipment makers, such as NEC, have been shipping IPv6 products for some time.

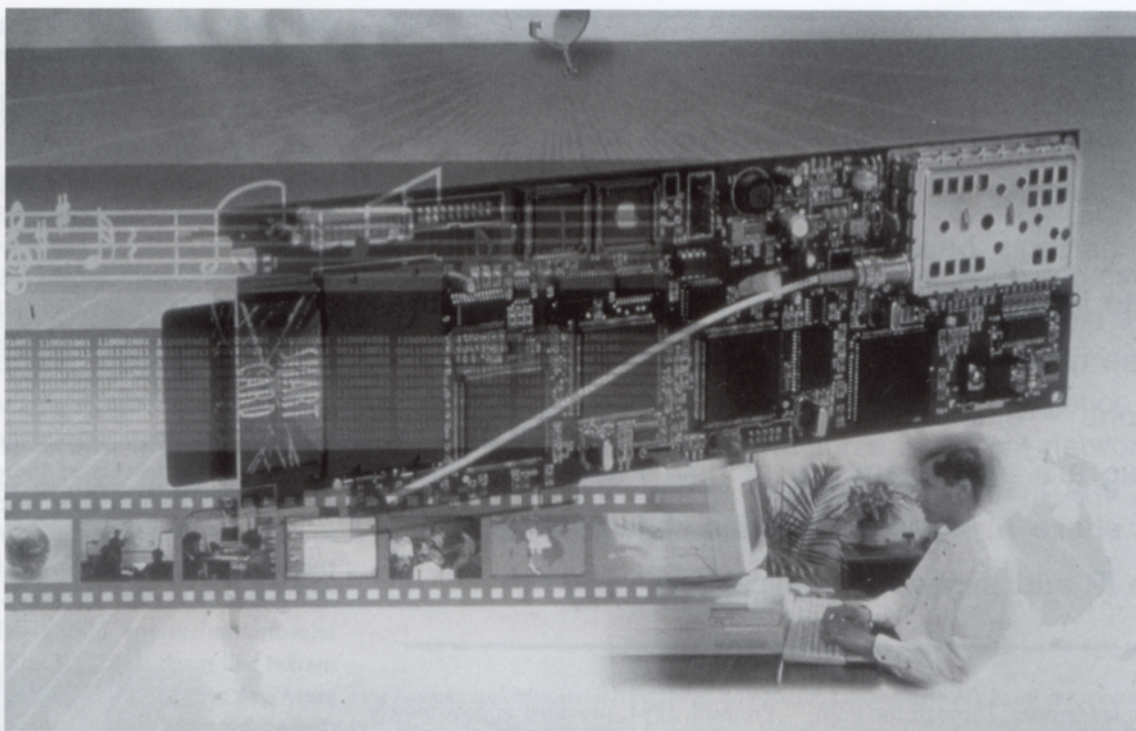
IDC estimates that the escalating need for network convergence will also increase the value of the network consulting and integration services market in Asia-Pacific (excluding Japan) to reach US\$1.28 billion by the end of 2003. This market is expected to grow at a 16 per cent CAGR to reach US\$2.3 billion by 2007. The region's largest network consulting and integration services market is China, which is currently valued at one-third of the regional market. By 2007, China will have outpaced the rest of the region, representing almost half of the region's network services market value. China's network services growth is being fuelled by the country's continuous economic expansion.

Companies entering China require a plethora of network infrastructure services as they set-up and expand across China's vast region. Meanwhile, companies already in China are feeling the squeeze to upgrade their networks to keep pace with the competition. Finally, the deregulation of the Chinese telecommunications market is allowing new players to enter the market; thereby, further driving demand for network consulting and integration services.

In order to be able to prepare their customers for the delivery of these next-generation wireless services, the carriers and service providers are demanding convergent services billing software. IDC estimates that the Asia-Pacific telecommunications billing solutions market will reach US\$527.4 million this year, with wireless billing being one of the key drivers of growth. Asia-Pacific is expected to be the world's fastest-growing wireless services market for the next five years, advancing the region's billing market to a value of US\$913.4 million by 2006. In order for service providers to deploy powerful and integrated billing and customer-care support systems, billing providers must overcome technological challenges and network bottlenecks. IDC suggests these imperatives include:

- ▶ replacing legacy 2G operations support systems (OSSs) with 3G IP OSSs
- ▶ differentiating the usage collection for voice and data services
- ▶ exploring third-party wireless content settlements and compensation
- ▶ implementing real-time and pre-order rating of content services
- ▶ ensuring service delivery validation
- ▶ understanding the billing requirement of the service providers.

Asia-Pacific solution providers are already rising to these challenges with vendors like Convergys – the leader in convergent billing solutions – working with carriers like China Unicom Guangdong, to offer software to support growing networks and overcome legacy system limitations. These innovative



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solutions provide real value to growing regional service providers and carriers, by reducing time-to-market and related expenses and improving return-on-investments on managed resources.

Governments across Asia-Pacific are pushing to further develop convergent network infrastructures in a bid to improve affordable access to Internet services and arrest the widening of the digital divide – the economic gap between those with access to computers, communications and the Internet and those without. Governments are work-

ing with carriers and service providers to meet the need for telephone and Internet access, especially in rural areas across the region. In addition, they are looking to fund and develop regional Internet exchanges, which will ultimately result in more affordable Internet bandwidth links, while promoting local content development and cross-recognition of certification authorities. According to IDC, Asia-Pacific's (excluding Japan) Internet access revenues will grow from US\$8.5 billion in 2002 to reach US\$24.4 billion by 2007. By then, Asia-Pacific is expected to have 116 million Internet

subscribers.

Since most of the markets in Asia-Pacific were late to develop their telecommunications networks, they have been able to avoid many of the pitfalls suffered by their western counterparts and leapfrog to next-generation technologies, like convergent networks, to provide innovative and compelling services and solutions at affordable prices. Mobile customer relationship management (mCRM) solutions, mobile marketing and location-based/wireless services are just a few examples of enterprising services being driven by next-generation networks in the region. However, in order for Asia-Pacific vendors and service providers to share their technological advancements with the rest of the world and become true thought-leaders in the global economy, Asia-Pacific governments must enforce global standards and rules – like the new ITU-approved H.264/AVC video compression standard – and adopt security standards and protocols to benefit enterprises, carriers and service providers alike. □

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