

ExchangeAsia

Volume 16 Issue 36

ISSN 1320 – 2669

21 September 2008

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OECD reports on Chinese innovation

The OECD has issued its review of China's National Innovation System, saying that China has the potential to become a major innovation player in the not-too-distant future.

The review says that, while China still lags in innovation capability and performance compared to OECD countries with a similar level of R&D investment, it has the potential to become a major innovation player in the not-too-distant future, if it reforms its policies to boost and promote innovation.

According to the OECD, such a development "should benefit both China and the rest of the world, as stronger innovation in China will contribute to the global knowledge economy and to addressing global challenges."

The OECD says that, "To manage its smooth integration into the global knowledge economy, China and OECD countries need to maintain a spirit of dialogue and co-operation, notably over issues such as IPR, technology transfer and technology standards.

The report is a revised and updated version of the summary report released in August 2007. Among its findings are that:

- At \$US73.5 billion in purchasing power parity (PPPs; revised and updated from the 2007 report), China's gross domestic spending on R&D was the third largest worldwide in 2006, after the United States and Japan.
- The R&D intensity – the ratio of GERD to gross domestic product (GDP) – of China's economy has increased spectacularly. It reached 1.43 percent of GDP in 2006, up from 0.6 percent in 1995.
- China's spending on R&D remains heavily focused on experimental development; only 5.2 percent of all R&D in 2006 was aimed at basic research, compared to 10-20 percent in OECD countries.
- Although rising rapidly, only 11 percent of patents by Chinese firms in 2006 were considered inventive (invention patents), compared with 74 percent of patents by foreign firms patenting in China.
- Foreign-owned companies (including joint ventures and wholly owned), including those controlled from Hong Kong and Macao, China, and Chinese Taipei, account for an ever-growing share of total high-technology exports, which have increased from 73 percent in 1998 to 88 percent in 2005. These trends continued in 2006.

Comba supplies passenger comms for Beijing-Tianjin railroad

Comba Telecom Systems Holdings, a wireless enhancement solutions provider, has installed a system for China's Beijing-Tianjin Intercity Rail, providing on-train wireless voice and data services for passengers.

Trains on the a 120 kilometre line run at an operational speed of up to 350 kilometres per hour, making it the fastest train service in the world.

However according to Comba the high speed poses challenges in the provision of ubiquitous mobile communication coverage. To overcome this, Comba's system divides the line into a number of sections and sets up more than 120 service spots along the route. Comba's fibre transport remote radio system then boosts and enhances wireless reception whilst minimising signal interference and extending reach.

According to Tony TL Fok, chairman and president of Comba, "Comba's solution is easily scalable and upgradeable to 3G standards should it be required."

Comba has also supplied systems for the Tibet-Qinghai railroad and Shenzhen subway. The company is primarily engaged in the R&D and manufacturing of wireless enhancement products including repeaters, base station subsystems & antennas, and digital microwave systems. It also provides complete turnkey solutions and services to global customers.

The company is headquartered in Hong Kong and has manufacturing facilities in China, R&D centres in China and the US and 35 offices worldwide.

China eases foreign investment restrictions

According to an Associated Press report, China has relaxed access for foreign investors to its booming telecommunications industry.

AP reports that the Government has cut minimum required investments, but retained a ban on foreign majority ownership of ventures. It claims that the change could help new, small Chinese businesses by giving them easier access to foreign financing, increasing competition and speeding innovation.

The Government has cut the minimum required capital for a foreign-financed company offering basic services at a national level to 1 billion yuan (\$US145m) and at a local level to 100 million yuan (\$US14.5m).

India

C&W and BSNL to share network infrastructure

Cable&Wireless India has signed a MoU with Bharat Sanchar Nigam Ltd (BSNL) to share networks and other telecom infrastructure.

Cable&Wireless India will support BSNL to expand its global network and provide better services to its customers expanding their global footprint; BSNL in return, will enable Cable&Wireless India to leverage its extensive network reach throughout the country.

The companies will also offer each other a full suite of telecom services including basic, leased line and local lead services, MPLS, VPN services, Internet, VSAT, mobile and broadband services on a preferred client basis.

"BSNL is focussing on broadband, network monitoring and managing MPLS networks for big corporates as the next big growth area. We have plans to invest roughly \$US10-billion on network expansion over the next three years," said Sh Kuldeep Goyal, chairman & managing director, BSNL. "It is therefore important for us to partner with a leading and trusted telecom provider such as Cable&Wireless, who have one of the most resilient network infrastructures available. I am confident they will support us to serve customers who are going global."

BSNL's deputy director general for enterprise business, Sh Sunil Kumar, added: "IT and telecom needs of enterprises are huge. Our aim is to become a one-stop shop for all their requirements in terms of voice, data, networks, security and applications besides others."

Tata Comms partners with Bharti Telesoft

Tata Communications has formed a partnership with value added service provider, Bharti Telesoft, to launch its intelligent CAMEL eXchange (ICX).

ICX is billed as a value-added service that enables mobile operators to significantly reduce the time frame, cost of implementing and maintaining CAMEL roaming relationships.

CAMEL (Customised Applications for Mobile networks Enhanced Logic) is a set of ETSI standards designed to work on either a GSM core network or UMTS network that

allow mobile operators to define services over and above standard GSM services/UMTS services.

The CAMEL architecture is based on the intelligent network (IN) standards, and uses the CAP protocol. CAMEL is particularly effective in allowing services to be offered when a subscriber is roaming, for example no-prefix dialling (the number the user dials is the same no matter the country where the call is placed) or seamless MMS message access for subscribers outside their home country.

In August 2008, Tata Communications offered its ICX service on a limited-availability basis to four of the world's largest mobile network operators, allowing them to open up CAMEL-based roaming to one of China's largest mobile phone operators in time for the Beijing Olympic Games.

It says that "Based on the vastly successful outcome of Beijing, the ICX service is now available to support live traffic to other destinations, opening the floodgates to destinations outside of China."

With ten operators already connected to the ICX platform, Tata Communications currently offers CAMEL roaming and connectivity to China, the United Kingdom, Romania, Malaysia, Indonesia, and Sweden. And it claims to have more than 30 additional operators committed to using the service globally.

According to Tata Comms, "Directly confronting the interoperability challenges operators face when expanding into developing markets with highly complex networks, the Intelligent CAMEL eXchange facilitates the implementation of CAMEL roaming agreements through intelligent signalling, monitoring, and normalisation.

"The innovative technology solution, which was developed in partnership with Bharti Telesoft, enables mobile operators to increase efficiency in implementing CAMEL Roaming relationships."

With a global reach to more than 630 mobile network operators (MNOs), including over 170 on-net customers, Tata Communications claims to be uniquely positioned to offer MNOs the unconditional signalling reach and connectivity that CAMEL roaming demands. It says that, in addition, "ICX integrates the CAMEL normalisation and Virtual Home Environment (VHE) capabilities, which are provided by Bharti Telesoft. VHE services increase ICX call completion rates dramatically, while improving the customer's experience."

"While we are known in the mobile market for our numerous platforms to mobile network operators, this collaboration with Tata Communications marks our entry in the Managed Services area", says Mao Mohapatra, CEO of Bharti Telesoft.

Foreign telcos can bid alone for 3G spectrum

According to India's Economic Times newspaper the Indian government has said that it will allow foreign telcos to bid without a domestic partner for 3G spectrum, but they have to find a local player before starting services.

Under Indian law, foreign companies can own up to 74 percent stake in Indian companies. However, according to the Economic Times, foreign players want DoT to allow them to bid as 100 percent foreign entities or give them a minimum of six to seven months after announcement of bidding details to enable them form JVs with Indian firms before the spectrum is auctioned.

Amendments made by DoT to the guidelines on companies that can offer 3G mobile-phone services said that new entrants will have to pay an additional Rs16.5 billion (\$US0.38b) to acquire a basic licence in addition to the money they bid for spectrum needed to offer 3G services.

According to the Economic Times, foreign telecom operators who are interested in entering India's market to provide 3G telecom services have to shell out Rs37 billion (\$US0.82b) more than the existing licence holders.

IAHGames uses Tata Comm's content delivery network

IAHGames has become the first named customer of Tata Communications; global content delivery network, announced last week.

Tata Communications' Global CDN will enable IAHGames to deliver a range of online games, including the award-winning Granado Espada and an upcoming title EA Sports FIFA Online 2 which has just been made available for closed beta testing.

Tata Communications, claims that, with more than 300 points of presence worldwide, it offers "the first truly global CDN service on a state of the art, single ASN global IP network...[that] enables large gaming files to download six times faster than conventional networks."

According to Genius Wong, Tata Communications' senior vice president of global IP and VPN services, "Supporting IAHGames to deliver its suite of game contents to the APAC gaming community reduces the need for expensive infrastructure build-outs by the gaming industry and extends content delivery worldwide instantly."

Pakistan

Ericsson opens global service centre in Pakistan

Ericsson has opened a new global service delivery centre (GSDC) in Pakistan as part of its global service delivery strategy.

According to Ericsson, the centre, in Lahore, will support its global managed services offerings and form a regional base for offerings in consulting and education for emerging markets.

The opening of the centre follows the opening of similar centres in Lebanon and Romania and, according to Ericsson, "is another evolutionary step in Ericsson's strategy for developing global and local service and delivery capabilities...GSDCs are designed to ensure business readiness for the global market with increasing focus on emerging markets, where most subscriber growth will take place in the next five years."

According to Fredrik Strand, vice president and general manager service delivery and operations, of Ericsson's global services business unit, "Ericsson has a global organisation of over 29,500 service professionals all working efficiently with the same processes, methods and tools to ensure that we deliver high quality services to our customers.

"The telecoms market has seen rapid development throughout this fast growing region over the last few years. The establishment of the Lahore centre recognizes the competences and capabilities that Ericsson has developed in building and operating large, complex telecom environments."

Zibber Mohiuddin, president and country manager, Ericsson Pakistan, added:

"Pakistan has the sixth largest population in the world. The opening of the GSDC will further develop our service delivery capabilities in this region. This expertise centre will not only reinforce Ericsson's commitment to the country but will also be the first of its kind in Pakistan."

Australia

FCC clears Pipe submarine cable to land in Guam

Pipe Networks has cleared one of the last major hurdles in its plan to build an optic fibre network between Sydney, Guam and Papua New Guinea with the US Federal Communications Commission (FCC) granting it landing rights in Guam.

The cable, PPC 1, will consist of two segments: the Australia-Guam trunk, connecting Sydney with Piti, Guam; and the PNG spur connecting Madang in PNG with a branching unit on the Australia-Guam Trunk. There will be an additional branching unit allowing for a future connection to Popondetta in PNG. The project is scheduled for completion in the second quarter of 2009.

The Australia-Guam trunk will consist of two fibre pairs with a design capacity of 96 wavelengths each carrying 10Gbps, a total of 1.92Tbps. Initially it will be configured with 140Gbps of capacity and the PNG Spur will provide a total of 20Gbps of capacity, 10Gbps on the PNG-Guam route and 10Gbps on the PNG-Australia route.

The PPC 1 system will use the existing cable station at Piti, Guam, which is owned by VSNL International where it will interconnect with other cables for onward connection to the US and Asia.

According to the FCC's notice, Pipe Networks' founders, Stephen Baxter and Bevan Slattery, hold respectively 18 percent and 14 percent the shares in publicly-listed Pipe Networks (ASX: PWK) and are the only shareholders with more than 10 percent equity in the company.

Singapore

SingTel and Chunghwa form satellite TV

Singapore Telecom and Chunghwa Telecom have formed a joint venture to build the ST-2 satellite to replace the ST-1 satellite.

ST-2 is scheduled for delivery in 2010. St-1 will be retired in 2011. SingTel will have approximately 62 percent of the joint venture and Chunghwa the remaining 38 percent.

Bill Chang, SingTel's executive vice president for business, said: "The ST-2 satellite will offer significantly greater capacity than ST-1 and wider coverage to also include emerging markets such as the Middle East. We are well placed to meet the strong demand for fixed and mobile satellite services, including our innovative IP-based solutions, which are transforming the way our customers do business."

He added that about two-thirds of ST-2's capacity has already been pre-booked.

New Zealand

Demon drink downs telecommunications commissioner

New Zealand's telecommunications commissioner, Dr Ross Paterson, is to take leave of absence for "alcohol-related" health problems.

In a joint announcement, the minister of commerce and the minister of communications and information technology, David Cunliffe, said they had "agreed that Dr Ross Patterson will be taking a leave of absence from the Commerce Commission for health reasons."

The Telecommunications Commissioner is appointed by the Governor General on the recommendation of the minister for communications and information technology. The Telecommunications Act specifies that, in the event of the commissioner's absence

the chair of the Commerce Commission - Paula Rebstock - assumes the functions of the Telecommunications Commissioner.

"I want to express my confidence that the telecommunications team will continue to maintain the high workload in this area," said Ms Rebstock. "The Commission's role in regulating and monitoring the telecommunications industry is vital to delivering improved quality, prices and choice to consumers and we will continue to deliver on this work programme in Dr Patterson's absence."

She added that: "The Commission will provide Dr Patterson with the support it would give to any staff member in similar circumstances. Dr Patterson has asked me to convey that his health issue is alcohol related and that he is seeking the appropriate treatment."

Telecom NZ International upgrades with Juniper

Telecom New Zealand International (TNZI) has upgraded the capacity and security of its international network throughout the US, UK, Singapore, Australia and New Zealand with Juniper Networks M-series routers and Integrated Security Gateways (ISG).

Charles Jarvie, head of international technology and operations, TNZI, said: "We have built a service-enabling network infrastructure that will reduce and simplify the changes needed to accelerate the deployment of new revenue generating services."

TNZI is deploying the M320 and M120 multi-service edge routers, which rely on the single source-code based Junos software and the ISG 2000 integrated security gateway that provides firewall and IPSec VPN. According to Juniper, TNZI selected the ISG 2000 for its flexibility and reliability, and upgradeability to include full intrusion detection and prevention (IDP) capabilities through an optional integrated security module.

Pan Asia

Web's inventor, Tim Berners-Lee, aims to make it truly world wide

The inventor of the World Wide Web, Sir Tim Berners-Lee, is looking for supporters to back his vision of bringing the Web's benefits to the entire world population, and has been given a flying start with a \$US5 million donation from a US charitable foundation.

Berners-Lee has unveiled the World Wide Web Foundation <http://www.webfoundation.org/> to fulfil his vision of the Web as humanity connected by technology. Its mission is: "to advance One Web that is free and open, to expand the Web's capability and robustness, and to extend the Web's benefits to all people on the planet."

"Through this new initiative, we hope to develop an international ecosystem that will help shape the future Web. A more inclusive Web will benefit us all," Berners-Lee said.

"The Web is a tremendous platform for innovation, but we face a number of challenges to making it more useful, in particular to people in underserved communities," said Berners-Lee, who is presently a director of the World Wide Web Consortium (W3C), and co-director of the Web Science Research Initiative (WSRI). Both these organisation have helped put together the World Wide Web Foundation.

The foundation hopes to "enable all people to share knowledge, access services, conduct commerce, participate in good governance, and communicate in creative ways...through research, technology development and the application of the Web for the benefit of underserved communities." It will raise funds through a multifaceted

strategy, beginning with a \$US5 million seed grant over five years from the John S and James L Knight Foundation.

This organisation was founded in the US by the newspaper-owning Knight brothers. It promotes journalism excellence worldwide and invests in the vitality of communities in the United States. Since 1950, it has made more than \$US1 billion in grants, including more than \$US400 million to support journalism excellence and free speech.

The Knight Foundation's initial \$US5 million will be used to cover initial costs of establishing the World Wide Web Foundation, starting a capital campaign, and developing strategic plans for the Foundation's programs. It aims to raise up to \$US100 million "to fund projects that will have significant impact in the identified programs."

According to Berners-Lee, the Foundation is in the unique position of being able to improve the Web by bringing together existing communities, governments, NGOs, and other stakeholders who see the Web as an instrument of creativity, collaboration, and communication. It will pursue its objectives by funding projects around the world in three strategically integrated programs related to research, technology, and social development.

Social development efforts will focus initially on underserved populations. The Web Foundation will identify benefits of the Web for these communities, and issues of access to (and availability of) relevant, usable, and useful content. It will do so "through support of ongoing and new efforts to develop critical services related to better health care, nutrition, education, and emergency relief."

The foundation is in the initial planning phase. It has named Steve Bratt, presently CEO of W3C as its CEO and plans to launch in early 2009 when it will take "the first concrete steps toward fulfilling its mission," according to Bratt. He expects step down from his position as CEO of W3C by mid-2009 to focus entirely on the work of the Web Foundation. He has invited those who share the foundation's vision for the Web to become founding donors. Expressions of interest to donations@webfoundation.org.

comScore shows Baidu search approaching Google in popularity ***comScore has released its ranking of the top search properties in the Asia-Pacific region based on data from the comScore qSearch 2.0 service.***

The results reveal that Google sites continue to lead in the region with 33.5 percent of the more than 27 billion searches conducted in July.

Chinese search site, Baidu.com, ranked second with 27.4 percent search share, followed by Yahoo! sites with 19.7 percent share. Korea's NHN Corporation was in fourth position with 1.2 billion searches (4.6 percent), while China's Alibaba.com ranked fifth with 823 million searches (three percent).

"Although Google leads the Asia-Pacific search market, powerhouse Chinese search engine Baidu.com follows closely on its heels with only a six-percent difference separating the two," said Will Hodgman, comScore executive vice president for the Asia-Pacific region. "It will be interesting to watch Google and Baidu compete for the top spot in the region and the loyalty of the growing Asian population."

According to comScore, China hosts more searchers than any other country in the Asia-Pacific region, with 143.5 million searchers conducting 11 billion search queries in July. Japan ranks second in both metrics, with 61 million searchers conducting nearly 6.2 billion searches. Searchers in Korea exhibited the heaviest search intensity with an average of 102.8 searches per searcher during the month, followed by Australia (102 searches per searcher) and Japan (100.8 searches per searcher).

Technology

The great firewall of Juniper

Juniper Networks has announced new multifunction security devices combining firewall, routing, intrusion detection and prevention and with a firewall throughput claimed to be six times that of its nearest competitor.

They are also claimed to use 50 percent less power and take up 75 percent less real estate than its nearest competitor. The products, the SRX 5600 and 5800 dynamic services gateways are the first built on Juniper's new Dynamic Services Architecture.

According to Matt Miller, lead systems engineer for Juniper Australia and New Zealand, "With this new Dynamic Services Architecture we have built a multifunctioned security device that incorporates security, routing and switching with QoS, NAT, IPSEC all into the one operating system, Junos."

Miller told *Exchange* that the new architecture represented the culmination of four years work integrating the ScreenOS of Juniper's 2004 acquisition of security technology company, NetScreen, with its own Junos OS, the modular operating system that is used across every Juniper product - a level of consistency that the company claims gives its significant advantages over competitors.

"When we bought NetScreen in 2004 we saw a lot of promise in their technology and while we have been integrating it with Junos in lower end products for some time, finally in 2008 we have achieved the ultimate goal of combining a high end routing platform with the strength and security of the NetScreen acquisition," Miller said.

According to Miller the new products will appeal to large enterprises, government and service provider customers. "Large enterprise are looking to consolidate their data centres and are very conscious of power and space requirements. Government is also looking to consolidate into larger data centres, and service providers will love it because at the end of the day their data centre is their profit centre."

Juniper has named Hitachi Systems and Services and the University of Frankfurt as initial customers, and Miller said the product was on trial with financial services companies and service providers in Australia. According to Juniper, the Dynamic Services Architecture is "an extensible design that...enables fast, reliable and secure access to applications and services from a single network architecture that runs on a single operating system managed by a single management framework, which can reduce the total cost of ownership."

Modular expansion

Miller explained that the power of the basic hardware chassis can be increased by adding new line cards for throughput and for processing power, increasing the power of the one device. "You add new cards to add more processing as you need it, so you build the box out over time. It is very different to how our competitors do it. They add new line cards to add new instances of firewalls, we add new cards to make the one firewall bigger and faster."

Juniper claims that as businesses continue to massively scale their networks to support advanced applications and services, they can no longer afford the service integration and performance tradeoffs associated with administering and managing legacy network infrastructure. It quotes Abner Germanow, director, enterprise networks for IDC, saying "Racks of service specific appliances and blades along with a multitude of operating systems and management interfaces create a level of network complexity that introduces latency and inhibits new service deployments. A service architecture that enables businesses to scale in all dimensions dynamically with virtually 'any' service will quickly meet the business requirements and streamline investment decisions."

Cisco & VMware combine network management

Cisco and VMware have teamed up to embed Cisco networking software into VMware's server virtualisation software to enable the management of multiple virtual servers running on one, or several, physical servers to be integrated into the overall management of a data network.

The software, the Cisco Nexus 1000V, will, according to Cisco, simplify the operations of both physical and virtual networking infrastructures by extending Cisco's security, policy enforcement, automated provisioning and diagnostics features into VMware environments that could have "thousands of live virtual machines."

Cisco and VMware (in which Cisco has a 1.6 percent equity stake) say the integration will enable IT managers "to set and enforce connection policies for each virtual machine across a data centre [and apply] the same policy-based configuration and operation of network services traditionally available in Cisco physical hardware switches...to each virtual machine."

IT managers will be able to "more easily manage virtual machines as they migrate them across physical servers during routine hardware maintenance or to balance server workloads for optimised application performance and availability."

To support the joint offering, Cisco and VMware will introduce a set of professional services and reseller certification training in virtualisation that will be based on their combined expertise in networking and virtualisation.

New Cisco Virtual Network Link (VN-Link) technology in the Nexus 1000V will integrate with VMware's vNetwork Distributed Switch framework "to create a logical network infrastructure that will provide full visibility, control and consistency of the network." Cisco and VMware claim that it will help network, virtualisation and server teams to gain efficiency in virtual environments and obtain accurate, real-time data for stronger collaboration in troubleshooting.

They will jointly propose VN-Link to the IEEE as a new protocol called 'Network Interface Virtualisation' and say that acceptance would enable its adoption by other vendors and create the scale and certainty to enable it to be implemented in hardware.

The two companies say they have a number of beta customers, including some in Australia, and quote one customer, Theresa Regan, director of operations and infrastructure services for the Massachusetts Institute of Technology, saying: "What is cool about Cisco working together with VMware is that the service, security and operational ease of management policies in Cisco networking will be assignable across each virtual machine in VMware infrastructure. This kind of innovation will help drive more use of virtualisation in our campus."

The Nexus 1000V software is expected to be available in the first half of 2009 and to be available as an option with a future release of VMware.

Accelerating access to VMware virtual desktops

In a separate joint initiative Cisco's products for optimising the delivery of applications across wide area networks are being made 'VMware aware' to improve the performance of VMware Virtual Desktops across wide-area networks. With VMware Virtual Desktops a desktop OS and applications are centrally hosted, but dedicated to a single user, and accessed over a wide or local area network.