

Technology Market Scan

ASIA-PACIFIC

CHINA

Inventive financing, novel loan model

Many small companies find it hard to get funding when their businesses are still in the initial stages. Two years back, when a few commercial banks in China began accepting intellectual property rights (IPR) as collateral for loans for small and medium-sized enterprises (SMEs), many thought it might be too risky a move. The new model, however, is slowly proving to be an effective financing channel for capital-strapped SMEs as well as a profit-making business for commercial banks. Combining tangible and intangible assets, bank loans have reached 650 million yuan (US\$95 million), with 71 invention and utility patents as guarantees.

IPR mortgage loan is a great help to innovative SMEs that possess advanced technologies in certain areas. Bank of Communications (BoCom), one of the first to try the new financing model, says that up to August 2008, it had lent 402.75 million yuan (US\$ 58.92 million) to 37 enterprises in IPR mortgage loans, all of which were repaid on time. According to BoCom's IPR mortgage regulations, enterprises with good credit standing and with total assets of no more than 40 million yuan (US\$5.85 million) and annual sales of no more than 30 million yuan (US\$4.39 million) could use the patents, utility patents or profitable trademark they own as guarantees to apply for the loan. A company could seek a maximum of 10 million yuan (US\$1.46 million) with a maturity period of three years.

As of the end of last year, more than 300 IPR mortgage contracts involving more than 700 patents with a total value of 6 billion yuan (US\$878 million) were registered with the State Intellectual Property Office. Although the business has a rosy picture for further development, it still has risks as IPRs are not as stable as tangible assets, people related to the business say.

Bank of Beijing has decided to make a foray into the IPR loan business, and provinces such as Hunan and Anhui have also made progress in trying the new loan model. In Changsha, the capital of Hunan, the local Intellectual Property Office recently signed an agreement with Changsha Commercial Bank to provide IPR mortgage loans to SMEs in the province. More than 10 enterprises have applied for the loans. In Anhui province, the local Science and Technology Department recently recommended 35 projects promoted by 31 enterprises to the Industrial and Commercial Bank of China.

<http://news.rednet.cn>

Progress made in IPR protection

China has made great progress in intellectual property rights (IPR) protection in the past 30 years, stated officials attending a recent forum in Beijing that marked three decades of the country's IPR protection, economic reforms and opening up.

Mr. Yang Tiejun, Deputy Director of the State Intellectual Property Office, told the forum that the country had been doing well in IPR system building in the past three decades, developing from the earlier state of lacking a special law or government body for IPR to the current state with comprehensive IPR legal and management systems. The country has begun to voluntarily use IPR rules to safeguard national interests, in contrast with its past passive response to external pressure, he said. As of October 2008, the country had received 4.66 million patent applications and 6.25 million trademark applications, he added.

IPR cases received by the courts have been steadily going up in the past 30 years, especially since the country's accession to the World Trade Organization in 2001, said Mr. Kong Xiangjun, working with the IPR court under the Supreme People's Court. According to Mr. Kong, between 2001 and 2007, local courts nationwide settled 74,200 IPR cases, an increase of 22.92 per cent per annum.

China has been increasingly severe in cracking down on IPR infringement and pirating, said Ms. Zhai Lifeng from the National Copyright Administration. She added that local offices of the administration dealt with 66,000 IPR infringement cases and confiscated 478 million pirated products during 2002-2007.

<http://www.chinadaily.com.cn>

INDIA

Biotechnology Industry Partnership Programme

India's Cabinet Committee on Economic Affairs has approved the launch of Biotechnology Industry Partnership Programme (BIPP), a new Advanced Technology Science Scheme envisaged as a government programme of partnership with industries on cost sharing support for high-risk discovery and innovation and accelerated technology development, especially for futuristic areas. Rs 3.5 billion (US\$ 68.2 million) has been earmarked for the scheme in the 11th Five-Year Plan.

The Scheme is aimed at addressing the following goals:

- To increase the global competitiveness of Indian industry in new and futuristic technologies, and enhance ownership of IP in these areas by Indian companies and scientists;
- To address major national unmet technological needs in agriculture, human health, animal productivity, energy and environment where expected social and economic impact is high; and
- To achieve the biotech strategy objectives of 30 per cent of DBT's R&D investment in partnership with industry under BIPP support would be in four main categories.

The new scheme will be one of the enabling mechanisms to promote biotech industry R&D and public private partnership programmes. It provides for a government contribution of 30-50 per cent to the industry for discovery-linked innovation.

<http://pib.nic.in>

Trade Marks (Amendment) Bill

The Union Cabinet has given its approval for modifying the Trade Marks (Amendment) Bill, 2007, with certain consequential changes on the basis of recommendations contained in the Report of the Department Related Parliamentary Standing Committee on Commerce, and for introducing the modified Bill in the Parliament.

The amended Bill will provide better protection to Indian trade marks in designated member countries and offer reciprocal protection to trade marks from other member countries of the Madrid Protocol. It will thus encourage transfer of technology through trade mark licensing and franchising, and generally promote overall business confidence in Indian IPR system globally.

The Cabinet had approved introduction of the Bill on 8 February 2007. Accordingly, it was introduced in the Lok Sabha (the Lower House) on 23 August 2007. The Bill was referred to the Department Related Parliamentary Standing Committee on Commerce on 1 October 2007. The Committee presented its report, endorsing the proposal and objectives of the Bill in general and agreeing with most of the provisions of the Bill, to both Houses of Parliament on 19 March 2008.

<http://pib.nic.in>

IT-ITeS revenue up

India's information technology and information technology-enabled service (IT-ITeS) industry has shown notable resilience in the year 2007-2008, says the Ministry of Communications and Information Technology. The overall Indian IT-ITeS revenue aggregate is estimated to have grown by over 33 per cent to reach US\$64 billion in fiscal year (FY) 2007-2008 as compared with US\$48.1 billion in FY 2006-2007. The total software and services exports are estimated at US\$40.4 billion in 2007-2008, compared with US\$31.4 billion in 2006-2007, an increase of 28.3 per cent. ITeS-business process outsourcing (BPO) exports are

estimated to grow from US\$8.4 billion in 2006-2007 to US\$10.9 billion in 2007-2008, a year-on-year growth of more than 29.8 per cent.

The United States and the United Kingdom remain the key markets for Indian IT-BPO exports, excluding hardware, accounting for nearly 80 per cent of the total. Markets across Continental Europe and the Asia-Pacific are also registering significant year-on-year growth. The trend towards a broader geographic market exposure is positive for the industry, not only as a step to reduce risks but also as a means of increasing the rate of growth by exploiting new markets, according to the Ministry.

A statement from the Ministry says that though the IT-BPO sector is export-driven, the domestic market is also significant. The revenue from the domestic market is estimated at US\$11.7 billion in 2007-2008 compared with US\$8.2 billion in 2006-2007, a growth of about 42.7 per cent. BPO demand in the domestic market has witnessed noticeable growth over the past few years.

The total IT software and services employment is estimated to touch 2 million in 2007-08 as against 1.63 million in 2006-2007, a growth of 22.7 per cent. This represents a net addition of 375,000 professionals to the industry employee base in 2007-2008. The indirect employment attributed to the sector is estimated at about 8 million in 2007-2008. This translates to the creation of about 10 million job opportunities attributed to the growth of this sector. The industry has set a target of US\$60 billion in export revenues, and US\$73-US\$75 billion in overall software and services turnover by 2010.

<http://www.itexaminer.com>

INDONESIA Drug firms required to build plants

The Minister for Health of Indonesia is confident that foreign pharmaceutical companies will comply with new rules requiring them to build local factories,

as they would not risk being locked out of the nation's US\$2 billion drug market. "I don't think they would dare leave," said Ms. Siti Fadilah Supari, adding, "But if they do, it is their loss."

The decree, which was issued in early November, is designed to encourage transfer of technology and to create jobs in the nation of 235 million. It says foreign drug makers will be allowed to sell products only if they build local production facilities. Critics say the rules could prevent some life-saving medicine from being sold here. But Ms. Supari said she was not worried, as local and international drug companies that already have factories in Indonesia can import some medicine with "special access" licences, ensuring that all domestic needs are met.

Foreign companies cannot act just like retailers, opening tiny storefront offices to sell hundreds of thousands of dollars worth of drugs and then give nothing back, Ms. Supari said. "They have to invest, so that our people can benefit too." Currently, 13 foreign companies import and sell drugs through subsidiaries in Indonesia, but do not have factories in the country. These include: Eli Lilly & Co. and Wyeth of the United States; Astra-Zeneca PLC of the United Kingdom; and Servier and Sanofi-Aventis of France.

<http://www.iht.com>

ICT market value forecast

The market value of information and telecommunication technologies (ICT) in Indonesia is forecast to reach US\$16.7 billion this year, up 14 per cent from the last year. The telecommunications industry is the main contributor to the increase in the sale of the technologies, the Indonesian software association said. Association Chairman Mr. Djarot Subianto stated that telecommunications contribute about US\$11 billion, or more than 60 per cent, to the ICT market with hardware and software accounting for US\$4.9 billion and US\$793 million, respectively. Indonesia is the third largest telecommunications market in Asia after China and India.

<http://asia.news.yahoo.com>

MALAYSIA**R&D pact in information technology**

In Malaysia, Telekom Malaysia Bhd (TM) and Mimos Bhd have signed a three-year collaboration agreement that would enable both companies to work on research and development (R&D) activities, commercialization and potential technology transfer of grid computing, semantic, wireless access and Internet Protocol Version 6 (IPv6).

Under the agreement, TM will further develop Mimos' technology platforms for commercialization in line with TM's customer demands. For example, for grid computing, TM will provide its IP Virtual Private Network service over the one gigabit Metro.e infrastructure, which connects to Knowledge Grid Malaysia. Metro.e is an existing TM service for business customers based on the high-speed, fibre-based metropolitan area network (MAN).

For semantic technology, Mimos will provide semantic search (search by meaning) to improve TM's productivity. As for wireless access, TM and Mimos will explore the integration of TM's Streamyx Zone wireless connectivity with Mimos' WiWi Gen 1.5, a hybrid solution that combines WiMAX and WiFi, to extend Streamyx zone coverage. Both companies will also push for the adoption of homegrown IPv6 technologies by local industries.

<http://star-techcentral.com>

THE PHILIPPINES**Tax perks to innovative businesses**

Hoping to draw more investments in technology, the Board of Investments (BOI) has decided to give tax holidays and other perks to businesses that offer innovative products and services. Board member Mr. Francisco Ferrer said that this is "in line with our goal of regenerating the innovation environment." He added that the government is also banking on this move to regenerate the decreasing economic activity in the economic zones result-

ing from the slowdown in key markets worldwide. "Volumes are going down by as much as 25 per cent in some products" from the zones, according to Mr. Ferrer. "Hopefully, through these incentives, we can arrest that slide."

The six-year income-tax holiday (ITH) for companies introducing innovative products and applications must have Philippine patents or be certified innovative by the Department of Science and Technology. Companies that seek to enhance existing products by adding functions will get a four-year ITH, but firms that go into research and development to reduce the cost of an existing product will not be qualified for the incentives. "All these must be manufactured or produced in the Philippines," said Mr. Ferrer, who added that those qualified for the incentives need no longer put up a facility inside an economic zone.

Other incentives include tax and duty exemption on imported equipment, wharfage, export tax and the 12 per cent value-added tax, as well as the unrestricted use of consigned equipment and employment of foreigners. Regeneration of the innovation environment is part of the National Innovation Strategy that the government adopted in its attempt to scale up the production capacity of local industries.

<http://businessmirror.com.ph>

DOST to spur more innovation

The Department of Science and Technology (DOST) hopes to spur more innovation in the Philippines through partnerships with private firms, academic institutions and government offices under "Filipinnovation," a brand name for a multi-sectoral Philippine national innovation programme. The programme, started a year ago, aims to: build the human resource capital of the country; support business incubation; revive environment for innovation policies; and upgrade Filipino mindset on innovation.

DOST Undersecretary Mr. Fortunato De La Peña said that the Filipinnovation strategy has signed up about

30 institutions in the fields of technology development, economic and industrial development, education and policy making. "There are more institutions that are interested to partner with Filipinnovation. It really is very important that we involve as many institutions as possible because we want to improve the mindset of Filipinos about innovation because we have a lot to offer," Mr. De La Peña said. He cited several achievements during the first year of the Filipinnovation, including the creation of programmes for specific areas.

The Undersecretary said these programmes, which are currently being implemented, were developed with the partnership of University of the Philippines, Mindanao State University, Department of Agriculture, Board of Investments, the Intellectual Property Office of the Philippines, Asian Institute of Management, IBM Philippines, Ateneo De Manila University, Mapua Institute of Technology, among others. Under IBM's service science, the management and engineering (SSME) programme rolled out in five schools, the institutions integrate skills-specific learning for students. The skills cover research, operations, industrial engineering, business strategy, management, social and cognitive sciences, and legal sciences.

<http://technology.inquirer.net>

Mega-biotech activity

Bt corn (maize) plantings in the Philippines has now crossed 300,000 ha, elevating the country to tenth rank among the 13 so-called biotech mega countries, which are growing 50,000 ha or more of biotech crops. The borer-resistant, genetically modified (GM) corn was first commercially planted in 2002. It is now planted in more than 300,000 ha by about 125,000 Filipino farmers, according to the International Service for the Acquisition of Agricultural Biotech Applications (ISAAA) that made the ranking.

ISAAA admits that, like every novel technology, "There are potential risks which regulatory institutions are reviewing." These include the danger

of unwittingly introducing allergens, carcinogens and other anti-nutrition factors in food detrimental to health. There is also the likelihood that GM products will escape from cultivated crops to mix with other close and wild relatives. There is the potential that pests evolve resistance to the toxins produced by GM crops and the risk of these toxins affecting non-target organisms.

ISAAA supports biotech projects like the Papaya Biotechnology Network of Southeast Asia that groups Indonesia, Malaysia, the Philippines, Thailand and Viet Nam. It facilitated an agreement with Monsanto to donate its GM technology that provides resistance to the papaya ring spot virus. It also brokered an agreement with Zeneca (now Syngenta Seeds) and the University of Nottingham to share their delayed-ripening technology with the Philippines. Monsanto's donation of virus-resistance technology to the University of the Philippines at Los Baños and the Leyte State University, to develop local sweet potato varieties resistant to the feathery mottle virus, was also brokered by ISAAA.

<http://www.manilatimes.net>

Notable progress claimed in fight against piracy

Despite being elevated in the United States priority watch list in 2008, the Intellectual Property Office of the Philippines (IPO Philippines) maintained the country has made notable inroads in the fight against piracy. "We continue to make significant inroads in our fight against piracy and other forms of violations against intellectual property in all fronts, and all critical areas of the campaign," said Mr. Adrian S. Cristobal, the Director General of IPO Philippines.

In a report by the United States Trade Representative, the Philippines was elevated to the priority watch list after three years in the ordinary list, as the piracy in the country had "worsened in 2008". It likewise criticized the Philippine court system, saying that judicial corruption has become an increasingly serious concern and that reforms

were needed. However, Mr. Cristobal claimed there were marked improvements in 2008 because of the continued partnership of government and the private sector. "Definitely enforcement is sustainable," he said.

A priority in 2009 is to further galvanize the judiciary into moving intellectual property (IP) cases in the courts. Judicial reforms in support of a stronger IP regime, started in 2008, are expected to be in full swing in 2009. In 2008, eight universities established their IP policies to foster research among its students and faculty. Mr. Cristobal also revealed that awareness, knowledge and understanding of IP and related issues has also improved, with the creation of the Intellectual Property Research & Training Institute (IPRTI). The Institute has already trained some 200 scientists, researchers, lawyers, business executives and patent examiners, 13 of whom were from ASEAN countries.

<http://www.philstar.com>

REPUBLIC OF KOREA S&T reaches 72.8 per cent of the world

Science and technology level of the Republic of Korea reached 72.8 per cent that of the world's top level, and the current technical gap is 6.8 years. The Ministry of Education, Science and Technology recently announced the result of the 2008 technical level assessment by evaluating the technical level of 90 items of science and technology that it had designated as a part of its basic plan for the development of science and technology during 2008-2012. The technical level assessment consists of two ways – the absolute evaluation by comparing technology of each country to the ideal technology, and the relevant evaluation of comparing a country to the top country.

The result showed that the world's top technology reached 77.5 per cent of the ideal technology and the Republic of Korea reached 56.4 per cent. In the comparison between the top level country and the Republic of Korea, the latter reached 72.8 per cent of the

top level country with a 6.8 year gap. Among items, the level of technology in information, electronics and communications reached 62.3 per cent of the ideal technology and 81.4 per cent of the top level country with a 3.8 year gap.

The technology level in biotechnology and energy resources in the country reached 52.4 per cent and 53 per cent of the ideal technology, respectively, and 68.6 per cent and 76.1 per cent of the top level country, respectively. The widest gap between the Republic of Korea and the top country was in disaster, biotechnology and medicine with a gap of 9.1 years, 7.3 years and 8.1 years, respectively.

In the prediction of technical level in 5 years, the top level technology was predicted to reach 81.6 per cent of the ideal technology and the Republic of Korea would reach 63.5 per cent of the ideal technology. In the comparison with the top country in 5 years, the Republic of Korea will improve to 77.8 per cent with a gap of 6.3 years. The results of the evaluation will be used as a reference for the government and relevant agencies to develop strategies to chase technology development.

<http://english.etnews.co.kr>

Strides in GM organisms

In anticipation of food shortages and global food price inflation, the biotech industry is being viewed as one of the next industrial and scientific powerhouses that will give the world the environmental and economic answers it needs. For example, the so-called "Golden Rice" is one of 84 genetically modified (GM) farm products that are being developed in the Republic of Korea.

Genetic engineering of Korean chilli peppers allowed researchers to get more beta-carotene into the grain, rendering it rich in vitamin A. Dr. Ha Sun-hwa of the National Academy of Agricultural Science led the team that developed the grain. "So far, genetically modified organisms that are easy to grow, resistant to diseases and adaptive to harsh climates have been the main concerns in the field, but we

are now expanding the biotechnology by adding extra nutrients, producing edible vaccines and producing vegetable proteins that have a curative effect," Dr. Ha said.

Also in development in the country are anti-drought potatoes, vitamin E-enhanced lettuce and virus-resistant cacti. Researchers also hope to make products that are tolerant to pests, salty soil, hot or dry climates and have higher yields without using much insecticide. However, at present, there are no farms in the Republic of Korea that grow GM crops for commercial purposes, and resistance by environmental and consumer groups that question the safety of biotech crops has hindered progress.

<http://english.chosun.com>

SINGAPORE

Vestas opens R&D hub

Vestas Wind Systems A/S, Denmark, has opened its regional R&D hub for Asia at Fusionopolis, Singapore, one of Vestas' largest R&D centres outside Denmark. This marks the first milestone of the company's 10-year plan to invest up to S\$500 million (US\$ 332 million) in Singapore to advance research in wind power technologies.

Vestas' regional R&D hub will cover high quality technology research, new component and sub-system development, as well as innovation in product development to maximize wind turbine performance, product reliability, and reduction in wind energy cost. By December 2008, the R&D facility will house over 100 researchers and engineers of 16 nationalities. In 2009, the facility will continue to grow and exceed its target of 150 engineers, and double this community to over 300 R&D engineers by 2012.

<http://www.renewableenergyfocus.com>

THAILAND

WiMax and 3G licences to be operational soon

The Information and Communications Technology (ICT) Ministry says WiMax

and third-generation (3G) mobile network licences would be allocated to operators by mid-2009. It intends to table before the Cabinet a proposed merger of the National Telecommunications Commission (NTC) and the National Broadcasting Commission (NBC), which will be jointly mandated to award licences.

ICT Minister Mr. Mun Patanotai said he was confident the Ministry would be able to submit the plan to Parliament in January 2009. The announcement, however, follows a series of broken deadlines on issuing 3G operating licences. A long delay in issuing new frequency licences to telecom operators was due to the absence of an NBC. The Frequency Allocation Act stipulates that the NTC and NBC are to jointly award new frequency licences and prescribe their use.

The local wireless broadband market is projected to be worth US\$406 million in 2009, fuelled by stiff competition between fixed and mobile operators. Worldwide, 260 operators in 110 countries offer WiMax technology and the number of subscribers is tipped to reach 113 million by 2012.

<http://www.bangkokpost.com>

Innovation promotion

The National Innovation Agency (NIA) plans to spend 400 million baht (US\$ 11.12 million) next year to help Thai companies apply knowledge management to achieve innovation, says Director Dr. Supachai Lorlowhakarn. About 350 million baht (US\$9.77 million) would be spent to promote the development of bio-related businesses, focusing on products with high market potential such as food, as well as eco-industry and design. The rest will be needed to develop technology, seek venture capital, assistance with intellectual property management and market access, with a target to help 99 companies expand.

The state-run agency has supported 350 companies in the past five years, but they are still small with a capitalization of only 1 million baht (about US\$28,000) each. Therefore, NIA will urge them to increase investment by

10-20 times. This budget is part of a three-year outlay of 316 million baht (US\$8.79 million) that the agency has earmarked for the establishment of an innovation park as a focal point for business incubation.

Dr. Supachai said the agency is planning to sign a memorandum of understanding with Bayern Innovative GmbH of Germany to be better equipped to support Thai business in upgrading and transferring technology. Bayern Innovative is a private research company with technologies in many fields to support industries ranging from automotive to environment, energy, food and bio-based businesses. It is also looking for investment opportunities globally in industries to which it can transfer technology.

NIA is preparing to stage "InnoAsia 2009: Food in the Future", during 20-22 August 2009. Dr. Supachai said the country has high potential to support and contribute to the food industry and the capability to serve as a regional hub for nutraceutical and functional food production. Other NIA initiatives include eco-industry, emphasising advanced eco-friendly technologies in three areas: clean energy, bio-based materials and organic agriculture. It will also have activities to support design and branding that have a rising role in successfully commercializing innovative products.

<http://www.bangkokpost.com>

VIET NAM

GM crops

Viet Nam plans to test genetically modified (GM) agricultural crops until 2010 and then grow them on a large scale, said Agriculture Minister Mr. Cao Duc Phat in a recent National Assembly session. Under the government plan, Viet Nam would from 2011 plant GM species of maize, cotton and soybean, said the online news site VietNamNet quoting experts attending a recent biotechnology workshop. The Ho Chi Minh City Biotechnology Centre plans to grow a GM maize variety from the Philippines on a trial basis, the report said.

<http://afp.google.com>