

Technology Market Scan

ASIA-PACIFIC

Drug discovery outsourcing

Fuelled by the advancing Asian market, the rapidly growing market for drug discovery outsourcing services will increase 15 per cent to reach \$ 7bn (• 5.5bn) by 2009, according to a new study by the Kalorama Information, publishing division of MarketResearch.com.

Outsourcing drug discovery services, including chemistry, biology, screening and lead-optimisation are all a part of doing business in today's pharma industry, as the trend for outsourcing becomes more widely accepted by companies, both large and small, needing to supplement their own internal drug discovery efforts and/or utilise technologies they can't afford to do in-house.

The growth is also being fuelled in part by impressive advances in the Asian market, where drug discovery services cost only a fraction of what they do in the West – a very attractive prospect for many pharma companies who are seeking outside assistance for traditional in-house services in order to reduce the huge burden of drug discovery and development, which is increasing by nearly 50 per cent every five to seven years.

Upon discovering the benefits of outsourcing in Asia, many of the top pharma and contract research organizations (CROs) have opened their own operations there, leading also to improvements in quality of infrastructure and services.

"The upgraded quality of CROs and pharma firms in India, China and Eastern Europe makes outsourcing a cost-effective and timely business decision which can translate into drugs coming to market faster and revenues increasing," said Jack Gardner, the report's author.

However, concerns of IP protection, trust, honesty, and transparency, particularly in Asia, still remain large obstacles in the global drug discovery outsourcing marketplace, said the report, titled *Outsourcing in Drug Discovery, 2nd Edition*.

Although China has strengthened its commitment to intellectual property by agreeing to adhere to the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement as part of its entry into the World Trade Organization (WTO), many drug companies are still weary of how much this adherence will protect them.

In particular, a new "one drug, one patent" policy interpretation means that in China patent protection will only apply to the original use of a drug, as stated in the patent. This will be of great disadvantage to multinational companies, which increasingly seek to develop and market new uses for their existing drugs.

More than 70 per cent of pharma executives said that threats to intellectual property pose a business risk in China, with 62 per cent considering patent protection in India an issue, a recent survey by Ernst & Young revealed. India also now adheres to the TRIPS agreement and has enacted the Patent Protection Act in 2005 to protect intellectual property. But at this stage, no one knows how long it will take for the benefits of the new law to take effect and many multinational companies were not completely satisfied with the scope of the law and are continuing to work with the government to address ongoing concerns.

<http://www.outsourcing-pharma.com>

Patents quality study

Singapore's patents emerged tops in terms of quality in the Asia-Pacific region followed by Japan and Taiwan, a study released at an intellectual property (IP) forum. The study examined 17 countries using figures from the US Patent and Trademark Office database. It was conducted by the National University of Singapore (NUS) Entrepreneurship Centre.

The city-state was top in the region with a relative citation index score of 0.94 for patents granted between 1994 and 2004. The index is used to judge the quality of a country's inventions. Japan came in at 0.91 and Taiwan at 0.79, according to the study presented at the

global forum which has attracted 300 delegates. Singapore's strong showing was attributed to the fact that many patents are linked with multinational companies and the city-state's strength in electronics.

The Philippines was ranked first in the region based on a technological impact index, which measured the proportion of patents that are "high-impact" or among the top 5 percent of the most highly-cited patents in their respective technology class. Taiwan placed first with 269.6 patents per million. Japan came second with 253.1 and Singapore third with 105.3.

<http://www.chinapost.com.tw>

CHINA Patent applications increase

China has received over 13,000 patent applications from US patentees in the first half of this year, a large increase compared with the same period in 2005, said the State Intellectual Property Office (SIPO). "Patent applications from the United States have been increasing by over 20 per cent for three consecutive years, and now account for over 20 per cent of the total applications made by foreign patentees," said Mao Jinsheng, deputy director of the SIPO's development planning department. US company IBM is among the top 10 foreign firms in terms of patent applications, he said.

Most of the patents are for inventions, according to the SIPO. SIPO statistics showed that 18,000 applications were submitted from the United States for patents in China last year, 23.6 per cent more than 2004. The nation ranked second among all foreign countries in terms of applications, behind Japan.

But Mao pointed out that, in terms of applications, firms from Japan and South Korea have been more active than their US counterparts. And among the top 10 foreign firms in terms of patents in China, there is only one from the United States, but five are from Japan and three from South Korea.

"In order to relieve the pressure from the quick growth in patent applications, the SIPO has been working hard in the patent-examination process," said Mao. "Last year, China was listed among the top 10 countries for patent applications for the first time."

The fast growth in patent applications can be attributed to the nation's policy of encouraging innovation, said SIPO official Sun Pingping. Over the past few years, the Chinese Government has made IPR protection a top priority. The nation has set up a national system for IPR protection with the establishment of 50 IPR service centres in 31 provincial areas and some booming cities with many foreign-funded enterprises.

The centres are responsible for receiving and handling complaints about IPR infringements and offering consulting services, with the latest opening in Yiwu, a coastal city in East China's Zhejiang Province. In the first half of this year, the nation prosecuted 1,076 cases of IPR infringement, said China's General Administration of Customs.

The State Office of Intellectual Property Protection of the Ministry of Commerce and several other departments this year issued China's Action Plan on IPR Protection 2006, the first comprehensive annual action plan formulated by the government.

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

S&T incubators

As of 2005, there have been 534 S&T business incubator facilities in China (not including 50 national campus S&T parks), with 39,491 businesses under incubation, and 15,815 S&T businesses graduated on a combined basis. Of the 534 S&T business incubators, 135 are the facilities at the national level. Statistics marks a new breakthrough landed by S&T incubators in both quantity and quality, with most S&T business incubator facilities entering a sound development track.

- Further enhanced capacity and fast development of national incubator facilities. Statistics show that 15,815 S&T businesses have been incu-

bated out on a combined basis, or 35.5% more compared with 2004. According to incomplete figures, in 2005 the business revenue derived from the graduated enterprises amounted to RMB 143.33 billion, with an industrial output worth RMB126.18 billion.

As of the end of 2005, there are 135 national incubator facilities, with 23,343 businesses under incubation, or 59.1% of the total businesses under incubation. These incubator facilities have produced a revenue worth RMB 95.54 billion, or 58.8% of the total, and created 425,000 jobs, or 59.3% of the total. They absorbed an investment amounting to RMB 1.92billion, or 55.2% of the total, and produced 11,406 S&T enterprises, or 72.1% of the total.

- Noticeably raised R&D capability of the enterprises under incubation, supported by a variety of national projects. In 2005, the enterprises at 534 incubator facilities have been contracted to 846 S&T projects under a range of national S&T programs, including National 863 Program, National Key Technologies Program, and National Innovation Foundation, with a financing arrangement worth RMB 600 million. Small and medium-sized S&T enterprises are the happiest beneficiaries of the support, enjoying 445 projects, and a financial favour worth RMB 236 million.
- Noticeably enhanced intellectual properties. Statistics on 534 S&T business incubator facilities show that in 2005, 17,128 patent applications have been filed, or 4,994 more compared with 2004, with a growth of 41.2%. Of them, 6,222 are invention applications, or 2,674 up compared with 2004, with a growth of 75%. Among 10,809 grants, invention takes up 3,962 in number, or 1,755 more compared with 2004, with a growth of 80%.
- Improved quality of human resources, with an increasing number of overseas talents. In 2005, the 534 incubator facilities have a staff population of 720,000. Of the employ-

ees, 64.4% has an education background at the college level or above. Thanks to the agreeable environment created by the incubator facilities, more and more overseas Chinese students have been attracted to create their own businesses there. In 2005, the incubator facilities have absorbed 12,000 overseas Chinese students, who came from the United States, Japan, European countries, Russia, Australia, New Zealand, and South-east Asian countries and regions.

<http://www.most.gov.cn>

Biotechnology industry

A leading Chinese life scientist estimated that the output of China's biotechnology industry will hit two trillion yuan (250 billion U.S. dollars), or 5 percent of GDP, in 2020. China would enter the top five countries in the world in terms of biotechnology industry scale, Zhang Yaping, a member of the Chinese Academy of Sciences (CAS), said in a speech at the ongoing Nobel Laureates Beijing Forum 2006. Zhang, also director of the CAS Kunming Animal Research Institute, said China had made significant progress in life sciences and biotechnology.

Biotechnology industry has listed as one of the key areas for China's science and technology development in the next 15 years, according to the guidelines on national medium and long-term programs for science and technology development (2006-2020), issued by the State Council earlier this year. By 2020, China is set to develop its own frontier technologies, such as pharmaceutical elements, genetic operations and protein engineering, dry cell-based human tissue engineering, and new-generation industrial biotechnology.

China has established five large biotechnology research and development centers in Beijing, Shanghai, Xi'an, Tianjin and Nanjing, and has successfully developed more than 200 kinds of bio-chip products.

Wang Hongguang, director in charge of the China Biotechnology Development Center, said on another occasion that

biotechnology, a major research and development focus in many developed countries, could one day create revenues ten times that from information technology. China has already set up a coordination group for biotechnological research and development, which is chaired by a vice premier-level official.

<http://news.xinhuanet.com>

INDIA Patent applications in 2004-05

Maharashtra topped the nation with 1,093 patent applications in 2004-05 followed closely by Delhi, Tamil Nadu, Andhra Pradesh and Gujarat. However, India's patent applications at 3,630 contributed around 21 per cent to the total 17,466 applications filed worldwide during 2004-05.

The total number of patent applications filed globally during this period stood at 17,466, representing a 28 per cent growth in filing as against 12,613 applications filed in 2003-2004, an Intellectual Property India Annual Report 2004-05 said. Following Maharashtra were Delhi at a close 935, Tamil Nadu (397), Andhra Pradesh (254), Karnataka (216), Gujarat (179), West Bengal (131), Kerala (79) and Uttar Pradesh (72).

A strong patent regime is a key driver for foreign investment in India, particularly when other competing countries in South East Asia, including China offer better investment climate. The revival of the Indian economy and globalisation of markets have thrown open new opportunities in the Intellectual Property Rights (IPR) field, which post the TRIPs era of World Trade Organisation (WTO), have been redefined as 'business', the study said.

"As technological innovation is facilitated by healthy IPR protection, the onus is on the policy for correct balance between 'industrial development goals' and 'protection of national interest,'" the report said.

India joined the Patent Cooperation Treaty (PCT) on December 7, 1998, and

there has been an increasing trend in the international PCT filings over the years.

During 2004-05, the total filing of international PCT applications were 456, including 351 from companies and 105 from individuals, as compared to 430 in 2003-04, with 328 from companies and 102 from individuals, representing a growth of 6 per cent. Major contributors for these applications during 2005 were CSIR, Sun Pharmaceuticals, Jubilant Organosys Ltd, Hewlett Packard, Panacea Biotech, Matrix Laboratories, Biocon India Ltd, etc.

In the Exclusive Marketing Rights (EMR) space, upto the end of 2005, altogether 14 EMR applications were filed since the provision came into force in March 1999, including two applications in 2005. Out of the total, only four EMR have been granted till last year, while four have been refused. Six applications are still pending.

The number of applications for patents received from Indian nationals, foreigners resident in India and from abroad during the period 1995-96 and 2004-2005 are 6,795. Out of the total number of applications for patents, which originated abroad, contributions from the USA were the largest, with 1,169 applications.

<http://www.hindu.com>

Intec to supply Intec convergent billing to MTNL

Intec, a leading software vendor to carriers operating fixed, mobile and next-generation networks, announced that Mahanagar Telephone Nigam Ltd (MTNL), a full service telecoms provider and one of the largest internet service providers in India, has selected Intec to supply its convergent billing systems in a multi-million dollar deal. Intec Convergent Billing (SingleView) will form a key part of the carrier's convergence strategy for rapid penetration and growth via innovative, next generation communications services in India. MTNL, which was set up on 1st April,

1986, is a government owned incumbent communications provider, with a subscriber base of over 5 million in India, one of the world's fastest growing telecom markets.

"Subscriber numbers, particularly in developing economies like India, continue to rise rapidly. Many operators are faced with the challenge of finding the right billing technology to handle both substantial subscriber numbers and complex new services," said Intec CEO, Kevin Adams. "Intec Convergent Billing is a proven solution in many of the world's largest wireless, fixed, cable and IP carriers, supporting many millions of subscribers in our largest accounts. We're proud to be selected by MTNL for this important project, in a very competitive tender, and we look forward to supporting its growth and development plans in the Indian market."

Intec's products, solutions and services have been chosen by over 60 per cent of the world's top 100 carriers. Intec invests heavily in both its core technology and its customer service capabilities on a global basis, including, for example, its expanding technical facilities in India which are delivering and supporting successful OSS/BSS projects to operators in India as well as across the world.

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INDONESIA 3G firms hope to start services

Five companies who won licences to operate third-generation (3G) mobile telecommunications services in Indonesia are upbeat about their ability to meet the government's deadline to begin commercial operations next year. "We have conducted several technical preparations to meet the target. Currently, we have established our Base

Transceiver Stations for 3G in Greater Jakarta and East Java," vice president for public relations at PT Indosat Adita Irawati told *The Jakarta Post*.

Adita said that with the completion of the two transceiver stations, Indosat would be able to provide high-speed mobile telecommunication services in major business areas in both Jakarta and Surabaya. She said Indosat would carry out trial operations in the next month so that the commercial operation could be launched in the fourth quarter of the year.

Besides Indosat, the government also awarded high-speed 3G service operating rights to PT Telkomsel, PT Excelcomindo Pratama, PT Natrindo Telepon Seluler and PT Hutchison CP Telecommunications. They are required to provide services to at least 10 per cent of their coverage capacity in two provinces. To be able to begin commercial operations, they have to conduct a trial operation under the supervision of the government.

If the operational tests fail, they will not be allowed to launch their commercial services, and if, by the end of the year, they are still unable to work, the government will take over the Rp 5 billion (US\$ 549,903.7) guarantee given as part of their bidding requirement. They will have to pay the same amount again if they want to regain the permit.

3G technology enables cellular subscribers to enjoy video streaming and video conferencing through cellular phones, in addition to a much faster data transfer rate. The Communication and Information Ministry's post and telecommunications director general, Basuki Yusuf Iskandar, said that the trial would last about two weeks to ensure all the systems operated in line with the government's standards. He said operators could launch their services a month after passing the trial operation, adding that only Hutchinson had so far succeeded.

<http://www.asiamedia.ucla.edu>

KOREA R&D spending more than triples in 10 years

Korea's state spending on research and development (R&D) more than tripled over the past 10 years, boosted by government efforts to improve the competitiveness of the nation's science industry, a report by the Ministry of Science and Technology showed. According to the report, the government's R&D spending surged to 5.88 trillion won (\$ 6.13 billion) last year from 1.78 trillion won in 1995. "The R&D figure is a broad measure of how intent the government is to nurture the nation's science and technology industries," a ministry official said.

Over the stated period, the number of researchers working at local universities and research institutes also jumped to 234,702 last year from 128,315 in 1995, the report showed. Korean researchers published a total of 18,787 papers in 2003 in international science magazines registered with the "Science Citation Index (SCI)," compared with 5,379 in 1995, it said. The SCI, published annually by the U.S. Institute for Science Information, is widely used as a yardstick for a country's level of research in the natural sciences and technology.

<http://www.korea.net>

R&D for hi-tech sector

Korea plans to spend 943.6 billion won (\$ 978.8 million) next year to boost research and development (R&D) activities in the nation's hi-tech sectors, government officials said. The investment plan came from a meeting held by the Ministry of Information and Communication to set the agendas for next year's IT policies. The ministry said that it will consult with the Ministry of Science and Technology, the Ministry of Planning and Budget and parliament to finalize the investment initiative.

Of the envisioned investment, 684.9 billion won will go toward nurturing new growth engines and developing

core technologies in software. It will also be invested in developing components and convergence businesses in such cutting-edge industries as biotechnology, nano technology and IT, the ministry said.

The ministry added that it set aside a total of 108.8 billion won to produce talented workers, who are badly needed in those sectors, in cooperation with colleges and private research institutes. With the remainder of the money, the ministry plans to provide support for efforts to enhance cooperation with Japan and China to set standards for new technologies, while consolidating the infrastructure of the industries.

<http://www.korea.net>

Incubating the biotech industry

Few will deny that the biotechnology industry could produce the next key growth engine for the Korean economy. Fully aware of this potential, the Korean government has been strengthening the nation's science and high technology power since the 1980s.

One of the government's well-known human resources projects such as "Brain Korea 21", launched in 1999, has also contributed to the nation's effort to develop the high-technology industries. Despite such efforts, analysts say Korea has a long way to go before achieving its biotech superpower ambitions, since it lacks a sufficient biotechnology infrastructure and high-tech base. However, a few early gains on the research front signal that Korea is heading in the right direction.

Berberine is one of the early discoveries pointing toward future success. Researchers from the state-backed Korea Research Institute of Bioscience and Biotechnology (KRIBB), a Seoul National University professor, and other scientists from China and Australia reported discovering the substance that may help combat obesity and diabetes. Found in several Korean herbs, the scientists said the alkaloid could help

insulin lower blood sugar more efficiently.

Diabetics cannot produce sufficient amounts of insulin, the hormone responsible for sugar metabolism, and hence suffer from increased sugar levels in their blood. For centuries, Oriental medicine doctors have prescribed extracts from berberine-rich herbs for diabetes and a variety of other ailments, but it has never been commercialized.

Another KRIBB discovery could help in the fight against cancer. According to the KRIBB, the E2-EPF ubiquitin carrier protein (UCP) it has isolated may extend treatment methods by identifying the process in which cancer grows and spreads inside the body. New York-based Nature Medicine published this finding in its online edition in July 2006. Although it still needs more time, their finding could produce plenty of cancer breakthroughs if the KRIBB research team succeeds in finding an effective UCP suppressor before April 2010, when the 10-year funding project expires.

Though limited in terms of scale and speed, Korean biotech firms are also making progress. The recent biochip technology of Digital Bio Technology (DBT) Co. Ltd, a Korean biotech start-up, has made promising headway. The firm won the right to carry the Ministry of Health and Welfare (MHW)'s HT mark for its somatic cell enumeration, done with plastic microchip technology. The MHW established the mark to designate promising new technologies with high earnings potential in the health and medial industries since 2003.

This new technology helps upgrade the taste of milk by analyzing somatic cells in raw milk through a computerized system. DBT has already commercialized this technology for use in the Korean dairy industry to replace less-efficient microscope somatic cell count technology. A DBT researcher said the firm plans to export the technology in the near future.

However, biotech experts say Korea has to remove major obstacles that hamper promising biotech growth. This

is because small biotech firms often lack access to financial support and the necessary infrastructure to develop new technology despite the strong export potential a tie-up with pharmaceutical firms could bring.

According to a Hana Institute of Finance report in August 2006, biotech startups' average annual profit growth from sales over the past five years was 0.7 per cent, much lower than the comparable figures for general manufacturing fields (3.1-12.6 per cent). The report concluded that the main obstacles hindering young biotech firms' development are insufficient R&D funding and the relatively long time needed to make technical breakthrough. It will take many years of support, according to the report, to build the necessary financing and equipment infrastructure.

In 2004, the lack of leading-edge biotechnology breakthroughs left Korea's pharmaceutical market with 10 trillion won in sales, only 2 per cent of the global biotechnology industry, according to a Ministry of Science and Technology official. A September 2005 Samsung Economic Research Institute (SERI) report said Korea's biotech industry is in the beginning-to-introductory stage, compared to the growth stage of the U.S. biotech market. This report pointed out that high-tech firms account for only half of Korea's total biotechnology industry while 80 per cent of U.S. biotech firms are high-tech related.

To help biotech research and provide funding assistance, Korea's Ministry of Commerce, Industry and Energy (MOCIE) has been concentrating on creating biotech clusters, composed of private research bodies, university institutes and biotech companies. According to its 2006 policy roadmap, which built on the 53.9 billion won injected into 84 technology development projects in 2005, the clusters will foster a pro-business environment by encouraging corporate R&D activities and enhancing efforts to attract foreign investment.

In June this year, Korean President Roh Moo-hyun also highlighted the government's commitment to fostering biotechnology. Roh said science and technology are essential to national competitiveness and declared Korea's goal of

becoming one of the top seven biotech superpowers by 2016.

In line with the government's efforts, the Jeju High-tech Industry Development Institute plans to position itself as the centre of the biotechnology industry by forming four biotech clusters at the recently built Jeju Bio Science Park. The institute is banking on its 1.5 trillion won, 10-year project attracting and fostering 100 domestic biotech firms projected to generate 10,000 new jobs and a three trillion-won biotechnology market on the island by 2013.

<http://www.korea.net>

R&D technology royalty standarization

The standardization of royalty collection from enterprises for technology from government R&D has been at a standstill for one year now. The Science & Technology Innovation Headquarters, Ministry of Science & Technology, had tried to put in place a systematic royalty management system but was unsuccessful.

According to the Ministry, government had stipulated that a certain amount of money based on sales should be collected either in a lumpsum or in instalments, within 5 years from the date on which the public-sector R&D had contracted out a technology for implementation or from the time sales began to be generated. This principle, however, does not seem to have been implemented.

In particular, when an R&D institution uses its output for internal application, the head of the corresponding central administrative institute is entitled to modify payment deadlines. Thus, while the policy was originally intended to ensure that royalty collections exceeded the public funds invested, such provisions for reduction or extension of payback periods with approval from the central administrative institute head negate the effect.

Indeed, different Ministries seem to follow different practices. These include the Ministry of Science & Technology, the Ministry of Commerce, Industry and

Energy, the Ministry of Information and Communication, the Ministry of Maritime Affairs and Fisheries, and the Ministry of Environment. In reality, only the Ministry of Science & Technology is anywhere close to the stipulated principles. On the other hand, the Ministry of Commerce, Industry and Energy issues an evaluation output only on sales actually achieved, before collecting royalties of 20 per cent for small firms and 40 per cent for corporate firms, in periods ranging from 30 days to five years.

The Ministry of Information and Communication uses a two-part system: it first collects 10 per cent of the contribution as a basic deposit, and then demands 2.5 per cent of net sales for payment as a running royalty, within 10 years from the assignment termination.

A Science & Technology Innovation Headquarter official said, "It is difficult to reconcile different opinions because of the different types of contribution and sales setting methods, and it needs more time to see a common management system establish."

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

MALAYSIA Biotechnology research

Malaysia opened a modern facility to make medicines using biotechnology, and offered millions of dollars to promote research. Prime Minister Abdullah Ahmad Badawi officiated the opening of a 200 million ringgit (US\$ 56 million; • 44 million) complex in the Nilai industrial district, about 70 kilometres south of Kuala Lumpur. The plant is part of the government's efforts to become a regional biotechnology hub - competing in a sector which is currently dominated by Europe and the United States.

Abdullah also launched a 720 million ringgit (US\$ 200 million; • 156 million) fund to help firms conduct new initiatives in wide-ranging biotechnology fields such as health care, agriculture and industrial production. The fund will

provide grants and loans to new companies, especially those that require complicated patent registration and approval procedures to break into the international market.

Biotechnology refers to the use of living organisms or cellular matter, including DNA, to manufacture organic products like beer and dairy products as well as medicines such as insulin or antibiotics. Biotechnology can also be used in agriculture, for example in designing plants to make them grow under specific environmental conditions, and in industries to produce useful chemicals cheaply, through designer organisms.

The new plant will be operated by Inno Biologics, a government-owned company involved in medical biotechnology, a relatively young sector that the government has aggressively promoted over the past two years, through a string of tax incentives and infrastructure support.

Malaysia has an estimated 100 biotech firms in a sector that the government hopes will constitute 5 per cent of gross domestic products by 2020. One of Malaysia's biotech priorities is bio-diesel, touted as a cheap gasoline substitute. Malaysia is the world's main producer of palm oil, which can be used as a main ingredient of bio-diesel.

<http://thestar.com.my>

THE PHILIPPINES Hardware and services top IT growth areas

The next three years will be lucrative for IT vendors and service providers in the Philippines, with IT spending expected to grow by a compounded rate of 10.4 per cent annually through to 2010, according to the latest study by IDC Market Research Sdn Bhd (Malaysia), a wholly owned subsidiary of the US-based global IT intelligence firm International Data Group.

In a statement, IDC Market Research said that its study showed that hardware centrality was one area with large growth potential in the country, "owing

to the fact that a large proportion of the population has yet to adopt or fully implement IT."

The hardware segment will account for 67 per cent of the total sales in the Philippine IT market this year; and PCs, networking hardware, printers, and smart handheld devices will likely be at the top of the demand list, it said. According to the same study, services will be the second-largest growth area, as it is expected to account for 22 per cent of the total market. The software segment is expected to garner 11 per cent, the study said.

Spending on these segments will be driven by the rapidly growing IT infrastructure requirement for information and data security and for more complex IT management processes, IDC Market Research said. It said 2005 saw major shifts in the IT spending level in the Philippines, with the industry growing by 20 per cent to \$ 1.4 billion after reaching \$ 1.0 billion in 2004.

Commenting on the IDC Market Research report, IDC Philippines senior analyst Jubert Daniel Alberto said in a statement, "The relative under-penetration of the country bodes well for IT vendors and service providers in the Philippines ... over the next five years, providing room for business growth and addressable opportunity."

IDC Market Research said companies wanted to achieve a higher level of business efficiency so they could offer product innovations and remain competitive. Demand from the communications and media, banking and hi-tech manufacturing industries will still heavily shape the IT spending landscape in the country, it added.

<http://business.inq7.net>

THAILAND Government moves to secure worldwide protection

The Intellectual Property Department plans to apply to join the Patent Cooperation Treaty (PCT) and Madrid Protocol in an attempt to ensure global

protection for the country's intellectual property worldwide. Kanissorn Navanugraha, director-general of the department, said Thailand plans to create integrated protection for Thai copyrights, trademarks and patents. He said the country would apply for membership next year.

Facing rights violations in overseas markets has prompted the government to seek a way to provide global property protection. Many Thai products, including Hom Mali rice (jasmine rice), silks and herbs, massage techniques and other locally derived treatments, are being violated in many forms. Recently, the department set up a "patent watch" taskforce to protect Thai inventions from violation abroad.

As a member of the PCT, Thai inventions and intellectual property would be automatically protected in several countries under a single international patent application. The Kingdom would also be able to update new patent registrations, he said. In addition, the Madrid Protocol is a system whereby a single trademark application may be filed to obtain trademark protection in more than 50 countries. Thailand is already a member of the Berne Convention, which focuses on the protection of literary and artistic works.

Kanissorn said the department is studying how Thai intellectual property laws compare with those of the World Intellectual Property Organization and also the treaties' conditions. "We want to open the door for Thai intellectual property to be protected abroad. We don't mind if foreigners benefit also by registering their rights in Thailand," he said.

The department is also encouraging more Thais to register their intellectual property. As part of a wider scheme, laws are being amended in accordance with international standards. This will help facilitate the Kingdom's right to registration on the international market. In addition, it will also strengthen protection rights for foreigners who want to register in Thailand.

The department has also set up other activities to encourage Thai inventors

to create and register more innovative products. "We need to develop these plans together. We will move towards clearer practice in each plan for increasing Thailand's intellectual property protection," Kanissorn said.

The department wants to see an increased number of patents and trademark registrations from Thai enterprises, particularly from small and medium-sized firms. To help give people a better understanding of intellectual-property right protection, the department has set up a special course for undergraduate students, in cooperation with universities in Thailand.

According to the department, more than 60 per cent of patents and trademarks are registered by foreigners. On average, 10,000 patent registrations are issued in Thailand each year, while 38,000 trademark registrations are also issued. Our concern for intellectual property has developed slower than in Singapore and Malaysia, Kanissorn said. As part of the plan, the department will establish a database system for collecting intellectual-property registrations worldwide. Kanissorn hopes Thailand will be the centre for an intellectual-property database collected in Asia.

The department is currently studying database systems developed by other countries. "We need time and a budget for establishing the system. If the project is a success, Thailand will have a more organized system for registrations," said Kanissorn. The United States, Europe, South Korea, Japan and China have already set up database systems. China reportedly spent about Bt 1 billion on its database project.

Currently there are more than 50 million intellectual-property registrations worldwide. Kanissorn said the database system would be a central library for students and other researchers who wish to develop their knowledge of intellectual-property products. In addition, to ensure the infringement of Thai copyright, patent and trademark decreases annually, the department will aggressively promote its campaign to make people aware of their rights.

The ministry last year reported 7,682 cases of intellectual-property infringement and seized 2.09 million items. The number of infringement cases was up 7.8 per cent on 2004, while the number of items seized was down 10 per cent. Copyright infringements were the most common, followed by patent and trademark violations.

<http://nationmultimedia.com>

VIET NAM Enterprises' spending on technology

Vietnamese enterprises only spend 0.2-0.3 per cent of their turnover on technology renovation - a figure that is making many people start. The figure is well below India and South Korea, which spend 5 per cent and 10 per cent respectively on technology research and development. The percentage of renovated equipment in Viet Nam is 8-10 per cent every year, while the figures are between 15-20 per cent in other regional countries.

This explains why Viet Nam-made products have a higher manual-work content than an intellectual content. Most of Viet Nam's export products are raw materials, while the products all have low added value. Viet Nam ranks 64th among the 104 nations in the World Economic Forum's report. Its knowledge-based economy development index was 2.9 per cent last year, a modest figure.

Le Quoc An, Chairman of the Viet Nam Textile and Apparel Association, acknowledged that most apparel exports were outsourced products. Vietnamese garment enterprises simply make the final product for foreign partners, and so do other industries.

Experts have attributed unsuitable policies relating to science and technology to the underdevelopment of industries, saying that these policies do not encourage creativeness. Meanwhile, the technology market has not been developed yet, though Viet Nam has enacted the Technology Transfer Law and Intellectual Property Law.

<http://www.vneconomy.com.vn>