

Inside Asia's patent funds

There are a growing number of active patent funds in Japan, Korea, Taiwan and China. They have been established for different reasons, but all are seeking to become active global players

By **Miyuki Monroig** and **Patrick Terroir**

In recent years there has been a sea change in innovation. Although a patent grants a monopoly, it no longer guarantees the ability to exploit an invention on an industrial scale. A company cannot market a product solely on the basis of the inventions to which it holds the exclusive rights, since it cannot hope to develop all of the technology necessary to manufacture a camera or a computer screen, for example. One patent does not make a product; instead, companies must adopt an open innovation approach.

Collecting all of the patents required for an innovative product is next to impossible: market transactions are complex and expensive, particularly for small and medium-sized enterprises (SMEs), and the validity of patents is not guaranteed. As a result, a new and increasingly efficient IP market is emerging to meet the demands of open innovation.

In the United States, this new market is promoted by the private sector. However, the governments of a number of Asian countries have taken the initiative in an attempt to seize a competitive advantage. This article compares the strategies of Japan, Korea, Taiwan and China.

Japan

The first Japanese patent fund, the Life Science IP Platform Fund (LSIP), was

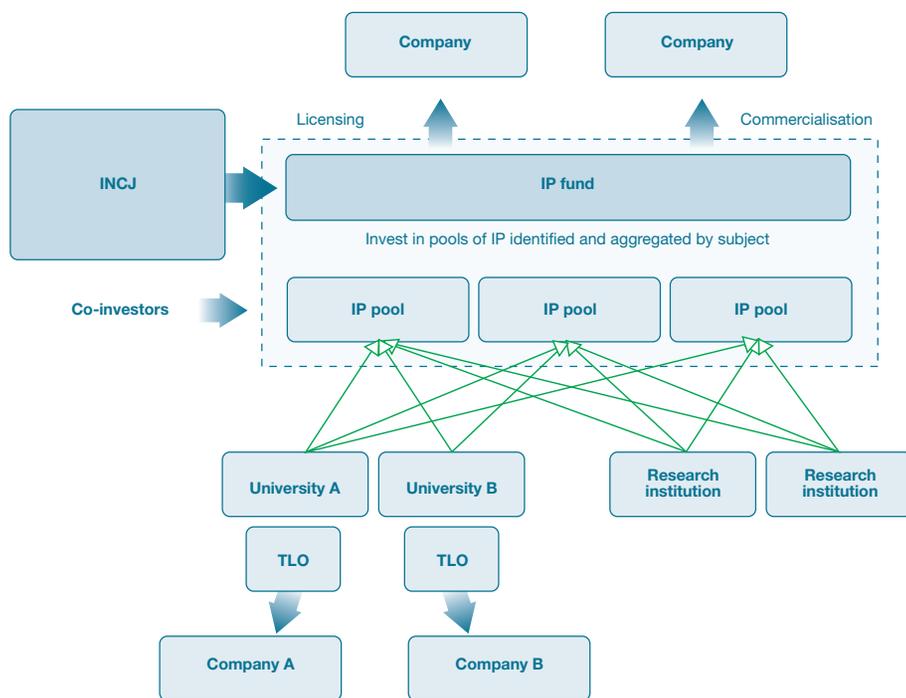
created in August 2010. Its main investor is the Innovation Network Corporation of Japan (INCJ).

Historically, several problems have stood in the way of efficient patent exploitation in Japan. Japanese universities have no global marketing strategy for patents, and although companies are typically interested in obtaining a licence for a patent group as a whole, it is common for each patent in a group to be owned by a different university. Moreover, as university-owned patents are generally the result of basic research, they may not correspond to companies' more specific needs. The same problems affect public research centres.

Although the number of patents exploited by universities has risen annually since 2003, the financial benefits of such exploitation have not kept pace - total revenue is estimated at just 1% of that earned by US universities. Many government people and academics fear that this trend will make Japan less competitive on the world markets. The trend has caused particular concern in the pharmaceuticals field, where Japan has a significant trade deficit: in 2010, total drug imports were around 13 times greater than drug exports.

One of the INCJ's senior managers has intimated that the fear of patent trolls was a major factor in creating Japan's first patent fund, although this motivation has never been officially expressed. By Japanese standards, such a step would be regarded as too aggressively critical of specific companies and would be regarded as inappropriate by investors and the public. Japanese culture - more than that of other East Asian countries - tends towards ambiguity and silence when faced with potential conflict. In contrast, Korean and Taiwanese sources have publicly stated that the main reason for the creation of their

Figure 1. Innovation Network Corporation of Japan's fund strategy



patent funds is the fear of litigation by trolls or foreign companies.

Life Science IP Platform Fund

The fund's official aims lie in the patent fund framework supported by the INCJ. The objectives of this framework are illustrated in Figure 1.

By bringing together patents from different universities and research institutions, and by licensing groups of patents to companies, the LSIP aims to provide companies with the tools to develop new products and make better use of inventions. The fund has targeted four fields of life sciences research: biomarkers, stem cells, cancer and Alzheimer's disease. The choices reflect the fact that Japan is already relatively advanced in these areas, where research reflects strong social and industrial needs.

The LSIP's management company is fully owned by IP Strategy Network Inc - a group of professionals who specialise in IP strategy, and, according to a senior manager of INCJ, in pharmaceuticals. It has five executive members and around a dozen employees. IP Strategy Network's predecessor was the IP Support Project, which was established by the Japan

Pharmaceutical Manufacturers Association in November 2008 for a one-year period. The project, which aimed to support innovative stem cell research, comprised 60 pharmaceutical companies with a strong R&D element. During the course of the project, members provided IP strategy advice to over 30 universities and public research centres - many of which advocated that the project be rolled out in additional fields.

The fund was established for a 15-year period under the Law on Special Measures for Industrial Revitalisation and Innovation. The INCJ invested US\$6 million and four large Japanese pharmaceutical companies invested US\$300,000 each. If necessary, the INCJ can inject a further US\$4 million over the next three years.

The LSIP provides two main services. First, it bundles patents from universities and research centres, assessing their potential value and in some cases combining them with patents that it has acquired on the market. Once it has created a patent cluster, the LSIP then tries to license it to a company, sharing the profits with the originators. Although not an officially recognised aim, this activity also prevents the purchase of university patents by foreign companies.

The second service is known as “IP incubation”. The LSIP obtains exclusive rights to exploit patents in return for paying the filing fee, international extensions and the costs of complementary research to reinforce existing patents. If a patent is licensed, the LSIP receives a percentage of the royalties.

The LSIP’s aims are not principally financial. Its priorities are supporting the general economic interest, promoting research and enhancing the competitiveness of the Japanese economy. In deciding whether a company should be granted a licence for a patent cluster, the LSIP assesses the would-be licensee’s capacity for innovation and its influence on the Japanese economy.

Issues

By the end of November 2011, the LSIP had acquired around 30 groups of patents and licences for bundling and had successfully supported several inventions as part of its incubation service. As of January 2012, it had offered its services to three public research centres and five universities. However, Hiroshi Akimoto, IP Strategy Network’s chief executive, has identified two urgent issues: how to assess IP value and how to generate more patents that will attract companies.

In order to facilitate agreement on the price paid for IP rights, Akimoto proposes that the LSIP pay original patent owners a percentage of its return when it successfully licenses the patent.

The problem underlying the second issue is that many Japanese universities and public research centres have tended to file patents only in Japan. However, drugs are international products and few companies are interested in acquiring a patent that has not been filed in the United States, which accounts for half of the global pharmaceuticals market. For Akimoto, this underlines the need to explain the importance of marketing and IP strategy to universities and other research centres.

Outlook

The Japanese government has prioritised IP strategy and the LSIP is considered one of the main instruments of this policy. The LSIP project will be evaluated in 2013 and more effective operational methods may be adopted. The INCJ has stated that it wishes to expand IP funds beyond the field of life sciences.

The degree to which this approach can sharpen Japan’s competitive edge will largely depend on the quality of the experts

who choose to work for, and collaborate with, such IP funds. IP Strategy Network has recognised the importance of human resources and has made development in this area its third service, alongside bundling and incubation. In February 2012 it presented the Cabinet Office with a draft paper entitled “Development Plan of IP Human Capital”, which focuses on the difficulties that universities and small and medium-sized enterprises may face in nurturing talent.

Korea

Two funds were established in Korea in 2010: IP Cube Partners and Intellectual Discovery.

Korean IT companies continue to flourish. In 2010 Samsung and LG ranked first and second respectively in the North American mobile phone market, pushing Motorola into third place. However, for several years Korean companies have attracted the attention of patent trolls. According to Patent Freedom LLC, an online community of companies that shares information about non-practising entities (NPEs), Samsung is sixth in the list of companies most attacked in these types of litigations. In 2010 it agreed to pay US\$700 million to Rambus Incorporated over claims of patent infringement.

NPEs are said to have been looking for opportunities to obtain patents from Korean universities. Although no official confirmation is available, anxiety over the threat prompted the government to persuade the public IP research centre to adopt a guideline on the abusive use of patents; moreover, it has pledged financial support for Korean companies involved in patent litigation.

Issues

The key issue for Korea is its low rate of patent exploitation. Lee Won-Il, a patent attorney at YouMe Patent & Law Firm, estimates that Korea’s rate of patent exploitation is around 36%, compared to 54% in Japan, 53% in Germany and 45% in the United States. Non-exploitable patents in Korea are often bought cheaply by foreign companies, which then use them to bring legal actions against Korean companies.

Korea’s economic boom resulted in leading companies developing ahead of their subcontractors and subsidiaries - unlike in Japan, where such development occurred simultaneously. Large companies contribute to the relative underdevelopment of Korean SMEs by including in their contracts a clause that grants them ownership of the

Figure 2. Number of litigations brought by trolls

순위	기업명	2004	2005	2006	2007	2008	2009	합계
1	Apple	4	3	3	12	13	21	56
2	Sony	4	7	5	10	12	17	55
3	Dell	4	3	8	10	8	17	50
4	Microsoft	3	5	6	12	13	10	49
5	HP	6	3	5	10	11	13	48
6	Samsung	5	4	8	14	11	6	48
7	Motorola	1	6	4	12	14	9	46
8	AT&T	2	2	6	17	10	7	44
9	Nokia	2	7	3	10	9	11	42
10	Panasonic	6	8	4	6	5	11	40

Data source: Patent Freedom

results of R&D conducted by their smaller contractual partners, preventing them from retaining ownership of their inventions. It is tempting to see this practice as a reflection of the Confucian philosophy that permeates Korean culture. Confucianism emphasises the value of loyalty to older people and superiors. Translated into an economic context, a subcontractor might feel morally compelled by devotion to a contractual “master” - even to the point of bankruptcy.

In the early 2000s, Korea’s industrial development accelerated when a number of Korean companies began to relocate production to China, attracted by cheaper labour. The country’s situation as a manufacturer is neatly summed up in the phrase “Sandwich Korea” – unable either to compete with China on labour cost or to match Japan’s technological advantage.

Samsung and LG are competing in a sector in which technologies related to electronic components are mainly owned by SMEs in Japan or the United States. The result is a significant and growing technology trade deficit for Korea (see Figure 3).

IP Cube Partners and Intellectual Discovery

In July 2009, the Korean government published a policy document entitled “A Strategy for the Realisation of a Strong Country in IP”. Two invention capital funds were created: IP Cube Partners on the initiative of the Intellectual Property Office, and Intellectual Discovery by the Ministry of Economics. The government took an openly aggressive stance, announcing its intention to mobilise public and private investment to wage what it calls “a patent war”.

Of the two funds, Intellectual Discovery is by far the larger and has the more original aims. In the words of the director of the Korean Intellectual Property Office, it was created to help Korean companies to protect themselves from “the threats of NPEs that buy patents only to claim royalties”. It has ambitious plans to develop a range of systems and tools to increase the value of intellectual property and protect corporate Korea.

Whereas the Japanese approach is to focus on areas of potential strength, Intellectual Discovery is throwing its weight behind the fields of information technology in which Korea is the leader. However, the fund has not ruled out future interventions in other sectors.

Initially, Intellectual Discovery planned to raise US\$500 million: US\$200 million from the state and the rest from the private sector. Its initial projection – US\$100 million by the end of 2010 – was revised when it failed to attract private investment in 2010 and 2011; the fund now expects to reach the US\$100 million mark in 2012.

Intellectual Discovery offers three main services. Its licensing programme protects Korean companies in international disputes, particularly litigation brought by trolls and NPEs. By buying patents before others can target them, it seeks to create a “patent umbrella” to protect Korean companies. The second service, its development programme, seeks to identify patents that will be key to industries in the near future and to bring them to maturity. It aims to support SMEs that would otherwise struggle to exploit their patents by providing them with technology transfers or complementary patent licences. A venturing programme supports start-ups in accessing the

technologies that they need for their development.

Outlook

Press reports suggest that prior to June 2011, no company had expressed an intention to invest in Intellectual Discovery. Large companies appeared sceptical of the government's initiative and doubted the capacity of an organisation such as Intellectual Discovery to identify high-value patents or hire the right specialists – there are believed to be only two or three qualified specialists among its 20 employees. Intellectual Discovery's position contrasts with that of IP Strategy Network, which was created only after Japanese universities, public research centres and private companies expressed a strong interest in the services that it could offer. Some commentators even suggested that Intellectual Discovery use foreign trolls or become a troll itself.

However, on 31st August 2011 Korean journal *Chosun Ilbo* reported that Samsung had invested US\$88 million in Intellectual Discovery, becoming its first shareholder with a 28.1% holding. Other large IT companies in Korea followed suit almost immediately: LG acquired a 20% holding, POSCO 14.7%, Hynix Semiconductor 11.4% and KT 4.3%. Recent changes in the economic role of patents had revealed how such an instrument could be useful to them. The new investment led to the successful creation of about 30 clusters of patents and the acquisition of more than 100 exclusive licences (already registered in Korea and pending in several foreign countries) filed by the Electronics and Telecommunications Research Institute, a leading government-funded research centre. Intellectual Discovery may finally have achieved take-off, but can a fund that is controlled by large companies hope to fulfil its mission to support SMEs?

Taiwan

In Taiwan, two IP funds have been created as the result of government initiatives: Taiwan Medtech Fund, created in August 2011, and the IP Bank, dating from November 2011.

The Taiwanese government has long prioritised the IT industry – an area in which the country has now begun to lose ground to Korean companies. However, Taiwan has become a leader among emerging nations in the biomedical sector.

Since 2000, the biomedical market in

Taiwan has averaged annual growth of more than 10%, and in 2008 the government announced a national plan that stressed the importance of investment in the industry. The Chinese market is central to this developing sector. Taiwan and China's Economic Cooperation Framework Agreement, concluded in June 2010, triggered a 40% increase in Taiwanese exports of biomedical products between 2010 and 2011. The two countries also signed a cooperation agreement concerning drug R&D.

In recent years, several Taiwanese companies have been sued by foreign companies for patent infringements. According to a study by the Graduate Institute of Technology Law at National Chiao Tung University, over 80% of the litigations concerning liquid crystal display screens in the United States between 2002 and 2010 involved Taiwanese companies. In 2011 Apple brought (and subsequently won) a major action against HTC alleging violation of a smartphone patent.

According to a source at the Industrial Technology Research Institute, Taiwan's largest semi-public research centre and the originator of IP Bank-Taiwan, these attacks persuaded the institute of the need for organised IP management in order to protect Taiwanese companies against international litigation.

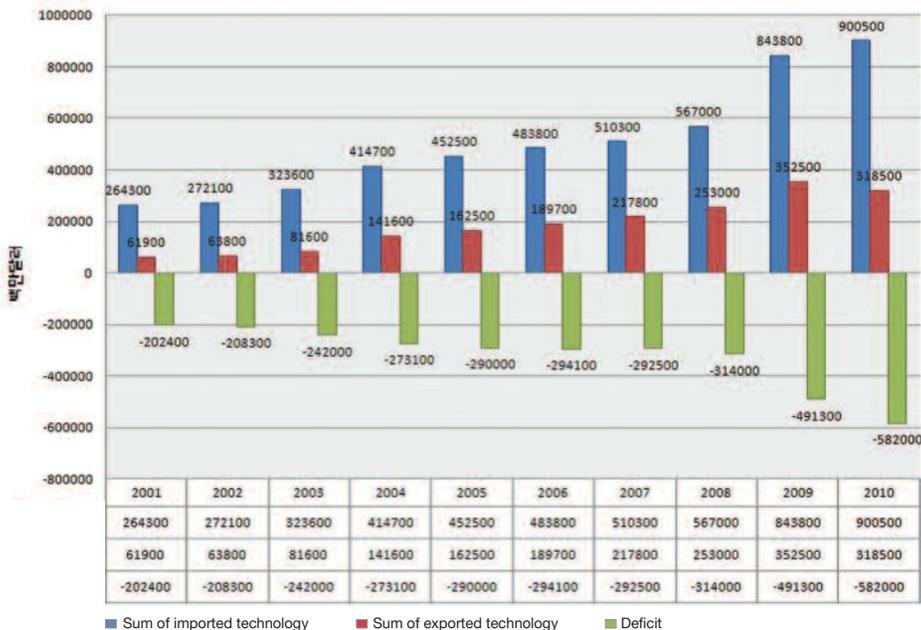
Taiwan Medtech Fund

The government created Taiwan Medtech Fund on 16th August 2011 to strengthen Taiwan's biomedical industry and to create leading companies at an international level. The fund seeks to support development in cardiovascular disease, diabetes, insomnia, obesity, peripheral neuropathy, motor neurone disease, telemedicine and care management. Taiwan, like Japan, is basing its strategy on fields in which it wishes to progress, rather than capitalising on its strongest areas.

The fund is led by You De Chang, a partner in the Venture Capital Corporation and a medical specialist. A private fund led by Stan Shih, the founder of Acer Incorporation, has become a strategic partner in order to identify technologies and companies in which to invest.

Taiwan Medtech Fund aimed to collect US\$172 million by the end of 2011: 20% from the government, 20% from semi-public companies and public banks, and 60% from private companies. It will

Figure 3. Development of the technology trade deficit in Korea



Data source: The IP Strategy of Korea, JETHRO

invest in biomedical companies, in particular spin-offs and start-ups.

IP Bank-Taiwan

In April 2011 the Ministry of the Economy announced plans to launch a national IP strategy programme in order to support Taiwanese companies in the new IP market, promote the use of intellectual property and encourage IP transactions and transfers.

IP Bank-Taiwan seeks to help private companies to obtain the patents that they need to compete internationally or develop new activities, as well as to protect themselves in international IP-related litigation. The target fields for the first step are smartphones and light-emitting diodes. Although confining its aims to information technology, the Industrial Technology Research Institute is also considering other areas that are strategically important to the government, such as biotech and environmental innovation.

IP Bank-Taiwan is intended to comprise an IP management company and an IP fund company. In the first stage, the institute will invest US\$8.28 million to create an IP management company, Industrial Technology Investment Corp, as its wholly owned entity. The institute will be the company’s sole investor and will lead its operations. Six months later, the institute will create an IP fund company with the aid

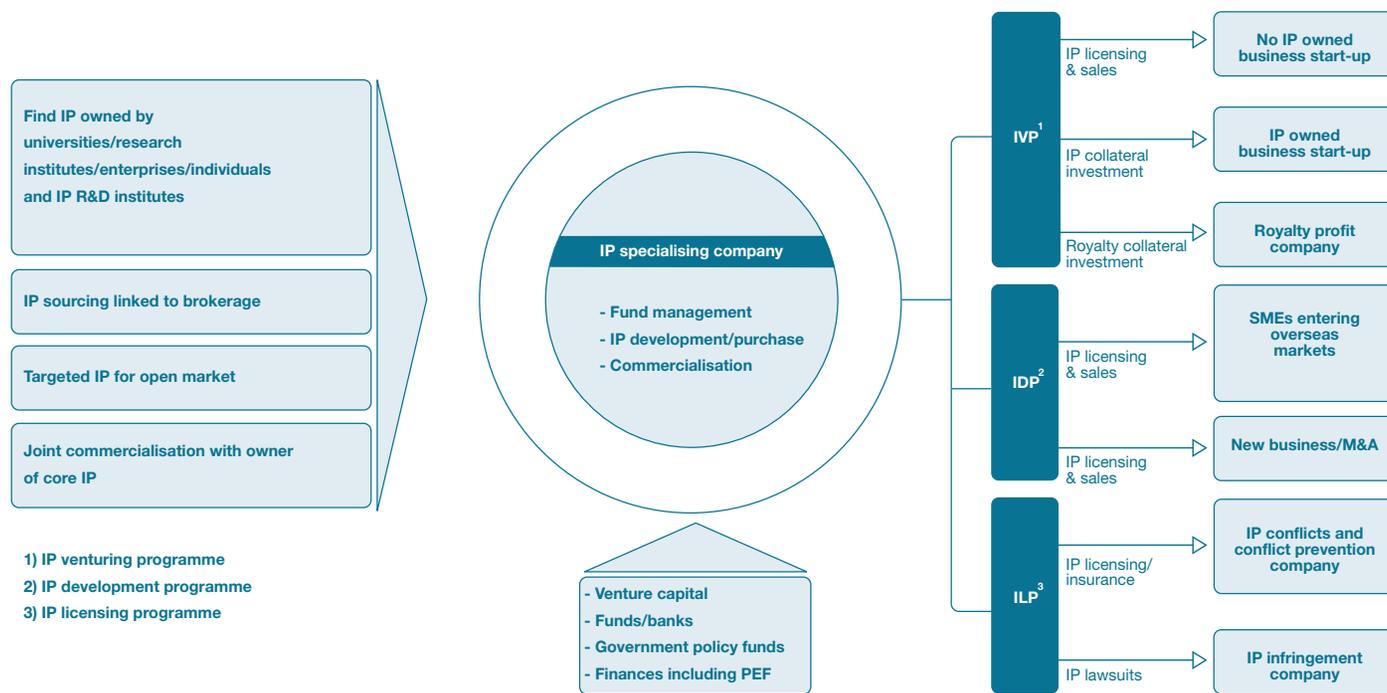
of private investors and the state.

A total investment of between US\$29.8 million and US\$49.66 million is expected and will be allocated across three funds: a counterclaim fund, a deployment fund and a virtual fund. According to Tsai Lee & Chen Patent Attorneys & Attorneys at Law, the counterclaim fund will primarily be used for the defence of domestic companies in international patent infringement cases. The deployment fund will focus on “long-term strategies for potential sectors to prevent major international companies from holding critical patent technologies”, while the virtual fund will be made available to universities and company R&D departments.

The government hopes that the fund will be privately led. According to the institute’s vice president, Johnson Sher, IP Bank-Taiwan was inspired by other Asian IP funds, but will remain more independent of government in order to operate more efficiently. Prime Minister (at that time) Wu Den-yih also emphasised that the government will not intervene in the fund’s operations. This Taiwanese policy is probably a reflection of the problems faced by Intellectual Discovery, which initially struggled to attract investors because of doubts over the effectiveness of a government-dependent organisation.

IP Bank-Taiwan is looking for investors,

Figure 4. The Intellectual Discovery business model



Data source: Intellectual Discovery

particularly private IT companies. Companies such as Acer, ASUS and HTC are considered potential partners, as their international position leaves them potentially exposed to international patent litigations.

IP Bank-Taiwan will create groups of patents derived from companies and research centres, and will advise companies with regard to their IP strategies.

China

Two IP funds have been set up in China: IP Bank-China on 14th September 2010 and the Tianjin Binhai International IP Exchange on 11th June 2011.

Among other things, the Mid-to-Long-Term Plan for National Development of Science and Technology 2006-2020 aims to accelerate the integration of science, finance and the monetisation of technological research results, in order to enhance the innovation potential of the Chinese economy and build an important revenue stream. The State Council's National Intellectual Property Strategy has since provided further details on the plan, stressing the need for enterprises to "realise the market value of their IP rights through transfer, licensing, pledging or other

means", and the need to "launch various kinds of pilot or demonstration project for intellectual property, and improve overall capacity to use intellectual property and handle competition in intellectual property".

IP Bank-China

The Infinity Group announced the creation of IP Bank-China on 14th September 2010. Infinity, a financial investor, manages around US\$700 million. It was created by the IDB group (Israel's biggest conglomerate) and the China Development Bank. In addition to the two founders, three Chinese and Israeli companies have backed the group, which invests in non-Chinese companies seeking to enter the Chinese market.

IP Bank-China aims to commercialise IP rights in various sectors, such as medical devices, agriculture, water, green energy, materials, industrial solutions, imaging, computer technology and semiconductors.

Unlike other similar organisations, IP Bank-China focuses on the international market; Infinity also has offices in the United States and Israel.

IP Bank-China has nine Chinese or Israeli professionals on its staff, each with

several years of professional experience in a specific field.

IP Bank-China also has a public element, because one of the funders - the China Development Bank - is under the direct trusteeship of the State Council. Infinity's website states that Infinity "has the support of the governments of China and Israel"; but further details in this regard have proved hard to find.

Binhai IP Exchange

The minister of science and technology and the city of Tianjin created the Northern Technology Exchange Market at the end of 2010. It played a major role in the creation of the Binhai IP Exchange in 2011, supported by Tianjin IP Service Centre, Beijing Xinzhengtai Investment and Singapore Zhongding Shengshi International Investment.

The Binhai IP Exchange is the first agency of its kind. Its main objectives are to develop new types of IP transaction, accelerate the exploitation of applied research and provide smaller companies with cheaper access to technology transfer.

According to Gong Yalin, director of the Planning and Development Department at the State Intellectual Property Office, the Binhai IP Exchange is also intended to encourage the transfer of innovation from the state sector to private ownership, thus enhancing China's potential for technological and cultural innovation.

More than 10 companies - including CityBank China and five other Chinese banks, law firms and property assessment companies - have signed strategic cooperation contracts with the Binhai IP Exchange, becoming its first investors. Private investments so far have totalled nearly US\$1.2 million. It links technical and financial resources in three ways:

- Directly buying and selling IP rights.
- Trading shares in private companies for the IP rights of another company.
- Trading IP-based equity and financial derivatives.

The Binhai IP Exchange also aims to reinforce the quality of existing intellectual property by investing in supplementary research and facilitating the commercialisation of patented technologies. Its president has announced that he is seeking to conclude partnerships with international exchange platforms, including NASDAQ. *iam*

Action plan



The government initiatives to create IP funds in Asia highlight a number of key factors:

- The Japanese and Chinese funds were born out of an awareness of the importance of intellectual property, whereas the Korean and Taiwanese funds were created for reasons specific to the economic situation or to wage a declared IP war.
- Although in each case the IP funds were initiated by the state, they have sought private investment and involvement.
- The Korean and Taiwanese funds were created to protect private companies from foreign companies, whereas the Japanese and Chinese funds were created to promote technology transfer.
- The specialised funds in Japan, Korea and Taiwan are distinct from China's non-specialised funds. All funds face a common problem: how to assemble a group of experts with sufficient insight into the quality of inventions.

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