PART I

General Overview of Items (A) – (F)

COUNTRY: THAILAND

A. COMMERCIALIZATION OF PATENT AND INVENTION RELATED

Thailand passed its first patent law in 1979 although the first draft law was in existence before the First World War. The latest patent law was passed in 1999[20] to comply with the provisions of the TRIPS Agreement and to facilitate acceding to regional and international agreements on patents as well as to stimulate innovation at grass-roots level through the introduction of the petty patent which requires only novelty and industrial applicability, omitting the requirement for innovative steps. This protection of petty patent was based on the premise that easy registration of inventions should be protected as well to give encouragement to local inventors who might not be able to fulfill the three criteria of invention patents, namely, novelty, innovative step, and industrial applicability. To make the granting of petty patent even faster, the patent law does not impose opposition before grant so the proof of novelty and industrial applicability is sufficient to allow the granting of a petty patent which will run for six years renewable twice for a term of two years each. This new feature of the law has been successful since the number of applications[21] in 1999 was 1,886 local applications and 5,011 from abroad compared to the year 2004 in which the number of applications stood at 3,428 local applications and 5,148 from abroad. During the six-year period the number of Thai applications has risen by 81% whereas in the same period the number of foreign applications has risen by a mere 2.7%. However, if the number of filed petty patents is removed, it can be seen that the number of local ones in 1999 was only 185 and the figure for 2004 was 1,390. Thus, the increase is even more dramatic when the figures for local petty patents alone are given, showing an increase of 651%!

According to Professor Sanjaya Lall in his study[22] as part of a UNCTAD/ICTSD Capacity Building Project on Intellectual Property Rights, the Technology Effort Index (1997-98) based on the figures for productive enterprise R&D per capita (US$) and patents per 1,000 people, Thailand was ranked 52nd with a total of 0.0005 compared with 0.8649 in Japan (No. 1). The number of patents per 1,000 people in the case of Thailand in 1997-98, was 0.002, and Thailand was ranked 47. This is a big contrast when compared with the figure per 1,000 people in the U.S. (No. 1), which stood at 3.297. The figures show a huge gap between a developing country such as Thailand and developed countries like Japan and the U.S. in terms of technology. The introduction of petty patent has evidently increased the number of patent applications in Thailand but no gain made could be used to improve the ranking given by Professor Sanjana Lall as he used the number of patents taken out internationally (in the U.S.) as the basis of his calculations, excluding petty patent. However, if the total number of

[20] See the English text of the Patent Act at http://www.ipthailand.org/Static/IPSystem/PATENT_ACT.doc

[21] See the filing and registration statistics at the Statistics index on the Thai home page of www.ipthailand.org

[22] Indicators of the relative Importance of IPRs in developing countries by Sanjaya Lall, Professor of Development Economics, Oxford University with the collaboration of Manuel Albaladejo, Queen Elizabeth House, Oxford University

local patents (inventions, processes, and petty patents) granted by the Thai Department of Intellectual Property is used to arrive at the figure of patents per 1000 people, the total for 2004 would be 0.01376. In any case it is still insignificant when measured against the figures achieved by the leading industrialized countries. It is not clear whether the degree of innovation could be measured by the number of filed and granted patents alone. The Thai Government is aware of this fact and that there is a high degree of innovation at the grass-roots level involving traditional knowledge. Traditional knowledge should be given due value. But how? The Thai Government set up the Assets Capitalization Bureau[23] on April 22, 2003 based on two basic assumptions Firstly, while the poor do have assets, there are limited operational channels for them to access capital, secondly, creating access to capital can be a modality for unleashing the productive capacity of the poor thereby helping them to escape the poverty trap. The Assets Capitalization Bureau split the assets into five categories, namely, land, rental right, public land, intellectual property, and machinery. The Department of Intellectual Property (DIP) has been assigned to turn intellectual property assets into capital: the so-called intellectual property capitalization. The DIP has been promoting this policy vigorously for intellectual property works with official registration certificates, namely, patents, petty patents, trademarks, layout designs and geographical indications and those without official registration certificates, namely, copyright, trade secrets, and traditional knowledge. In the case of copyright, there is already a system of voluntary notification to the DIP. Likewise, in the case of traditional knowledge, not given any legal protection so far by any *sui generis* law in Thailand, the DIP issued a regulation on November 7, 2002 allowing for the notification of traditional knowledge and the setting-up of a database[24] of Thai traditional knowledge. Traditional knowledge notifiable to the DIP is divided into two categories, namely, community knowledge and folklore. There have been around 3800 notifications to date. In addition to implementing the policy of turning intellectual property assets into capital, the publicity campaign and promotion of traditional knowledge has also served to unleash the innovative power at the grass-roots level, putting intellectual property within easy reach of the population especially in rural areas, for, although this knowledge has been part of their life and heritage it has rarely been commercially or systematically exploited. It awakens a sense of pride in the community and its heritage and also promotes recognition of the talent existing at the grass-roots that will further promote innovation and increase the number of patent applications filed in the country. The DIP set up a specialized unit, the IP Capitalization Administration Office to deal with this issue and especially for giving advice to the public. Activities were organized to raise awareness on IP capitalization such as the IPC Fair (IP Capitalization Fair), the most recent of which was held from September 30, to October 2, 2005 with a wealth of entertaining activities for adults and children.

In order to boost innovation and its commercialization, the Thai government also established the National Innovation Agency (NIA) under the Ministry of Science and Technology on October 1, 2003 to support systematic development of innovation in order to help adjust the economic infrastructure and competitiveness of the country, in particular through developing innovation as a strategic tool in order to accelerate the realization of the national innovation system. The NIA has a central role in coordinating and creating networks and linkages among the academic, technological,

[23] See http://www.plansinsap.or.th/format1/en_index.php

[24] Search the traditional knowledge notifications data base at http://www.ipthailand.org/ipthai/sql/locality/sear.asp

production, financial, investment, and management bodies in order to ensure innovation. In 2004-2005 the NIA focused its plan of action in three key areas, namely, raising the level of innovation, promoting innovation culture, and building innovation bodies. In its plan to promote innovation culture, it organized the National Innovation Awards 2005 in which 208 works were submitted, out of which 158 were economic innovations and 50 were social innovations. The winner[25] of the top prize in economic innovation was the production of agglomerated rice starch as a filler for direct compression tablets. This product has been granted patents in Thailand, the U.S. and Europe. It also received the innovation prize from the National Research Council and Brussels Eureka 2000. Its sale figures are expected to reach 50 million Bahts in a year. The winner of the top prize in social innovation was an artificial leg made from recycled stockings costing about 75 Bahts per leg compared with those made with imported materials and costing about 1,350 Bahts per leg.

There have been efforts at different levels to spur innovation in the country from the grass-roots level up. The number of local petty patents granted and traditional knowledge products notified are rising exponentially although the number of local invention patents is not rising at the same rate. In 1999, the total number of Thai invention patent filings was 738 whereas in 2004, the number stood at 819, not forgetting when a few years after 1999 Thai invention patent filings actually decreased, that is, 561 in 2000, 534 in 2001, 615 in 2001. So it is essential to pay attention also to promoting breakthrough and incremental innovations which could be granted invention patents, although they are more difficult to obtain than petty patents or traditional knowledge protection. There must be clear recognition that to gain international protection, retain monopolistic rights and competitive advantage and prevent market entry of competitors more effectively, patents for inventions are important..

B. INDUSTRIAL DESIGN RELATED

Industrial design has been part of Thai patent law since the first Patent Act was promulgated in 1979. In that year, there were 25 applications. The number of applications broke the double-digit barrier in 1982 with 187. In recent years, starting from 1998, the number of Thai applications always outdid those of foreign applicants. For example, in 2002, there were 2,415 Thai applications and 822 from abroad, in 2003, there were 2,624 Thai applications and 1,007 from abroad, and in 2004, 2,609 Thai applications and 960 from abroad. The number of Thai industrial design applications is in stark contrast to that for Thai invention patent applications. For example, in 2004 the figure for Thai industrial design applications was 2,609 while that for Thai invention patents was 819. This clearly shows the popularity of industrial design registration in Thailand. Perhaps industrial design is easier to register as it involves drawings rather than technical claims. There has been no active promotion of the use of industrial designs as people seem to be aware of its use. Since the passing of the first patent law in 1979 up to the end of 2004, there were 29,794 industrial design applications, out of which 18,577 were Thai applications. This indicates that the number of Thai industrial design applications constitutes about 62% and those for foreign applications 38% of the total number of applications made. The gap between Thai and foreign applications on

[25] See Top Thai Innovations by National Innovation Agency

industrial design is narrow compared with the gap between Thai invention patent applications and foreign applications over the same period, namely, 24,918 Thai applications against 73,620 foreign ones.

C. TRADEMARK RELATED

People understand that logos or brands are synonymous with trademarks. However, the DIP has been conducting public awareness campaigns stressing the need for a trademark to be registered if the trademark owner wants to make use of all the remedies available under the Trademark Act[26]. The latest Thai trademark law as revised in 2000 incorporates the acceptance of trademark application forms completed pursuant to an international or regional agreement on trademark to which Thailand is a party. This has been influenced by ASEAN cooperation on intellectual property, working on the system of ASEAN's regional filing on trademarks leading the way to the establishment of the ASEAN Trademark. These efforts are now stalled as other issues came up and occupied the attention of member states. However the latest Trademark Act expressly contains a provision for any international filing such as in the Madrid Protocol or the ASEAN regional filing in its Article 11[27].

The affirmation of the concept of universal exhaustion of rights has been made through a series of judicial decisions on this issue. In the case of trademarks, the practice of the so-called parallel import has been evident for a very long time due to the presence of the 'gray' importers who import legitimate products into the country, bypassing the official exclusive distributor or the trademark holder. Several cases were brought before the Thai court before the inception of the Central Intellectual Property and International Trade Court and they were decided in favor of the gray importers as the court deemed that the gray importer did not infringe the trademark of the rights holder as he purchased a legitimate product overseas and that the rights holder himself should refer to his agreement with the distributor who sold that product to the Thai gray importer.

The concept of a well-known product has been well-established in Thailand as can be seen from a number of judicial decisions even before the establishment of the Central Intellectual Property and International Trade Court. The underlying rationale for the decisions of the Thai court seems to be that trademark applications must be filed in good faith. The deliberate misappropriation of someone's mark is not tolerated. The authorities took action to revoke certain misappropriated marks on the grounds of public order or public policy[28] as in the case of the marks of famous European football clubs such as Juventus, AC Milan and Manchester United.

[26] Although there are also limited remedies for unregistered marks under Sections 271-275 of the Penal Code against imitation of marks.

[27] Para 2 of Article 11:" "In the event that Thailand becomes a party to an international agreement or cooperation on trademark, if such trademark application form is done in according with the provisions of the said international agreement or cooperation, such application shall be deemed the trademark application form under this Act." This is the paraphrase of the last paragraph of Article 17 of the Patent Act.

[28] Article 62 of the 2000 Trademark Act: "Any person who deems that any trademark conflicts with the public order, morality, or public policy, may request the Trademark Committee to order the revocation of such mark."

Since the inception of the Central Intellectual Property and International Trade Court on December 1, 1997, statistics[29] show that cases of trademark infringement far outnumber civil cases on trademarks. For example, in 2004, there were 48 civil cases concerning trademark infringement, the sum in dispute being around 3.2 billion Bahts, 104 appeals against decisions of the Trademark Board, and 36 cases concerning cancellation of trademark registrations, whereas there was a total of 2470 criminal cases[30]. (It should be noted that the number of cases involving appeals against decisions of the Trademark Board have risen dramatically probably reflecting the heightened awareness of the public regarding their rights and remedies under the trademark law and the increasing reputation of the Intellectual Property and International Trade Court as the official arbiter on the matter. This is derived from the fact that in 2000, appeals against decisions of the Trademark Board numbered only 16 whereas in 2004 they went up to 104. Even in the first 10 months of 2005, the appeals against decisions of the Trademark Board have reached 89.) In most cases, the accused pleaded guilty, giving grounds for leniency. The punishment for trademark counterfeiting is severe as it provides for a term of imprisonment not exceeding four years and/or a fine of not more than 400,000 Bahts[31].

D. COPYRIGHT RELATED

Thailand acceded to the Paris Act of the Berne Convention and passed the latest copyright act before the coming into force of the TRIPS Agreement. The rights granted are more comprehensive than the minimum standards stipulated in the TRIPS Agreement. There are several instances of these higher standards, some of which have given rise to unexpected results.

The case of criminal penalties under the Thai copyright law is one obvious example. There are two levels of criminal penalties regarding copyright infringement. One concerns direct infringement[32], the other concerns indirect infringement[33]. Both types

[29] See http://www.cipitc.or.th

[30] This could be divided into 196 cases under Sections 271-275 of the Penal Code and 2470 cases under the Trademark Act. Out of the 2470 cases under the Trademark Act, only 3 cases involve counterfeiting, while the rest involve the importing, selling, and offering for sale of counterfeited goods under Sections 108 and 109.

[31] See Article 108 of the 1999 Trademark Act.

[32] Article 61 of the Copyright Act 1994: "Any person who infringes copyright or performer's right according to Articles 27, 28, 29, 30, or 52 is liable to a fine of between twenty thousand Bahts to two hundred thousand Bahts.

If the commission of an offense as set out in paragraph 1 is carried out for a commercial purpose, the wrongdoer shall be liable to either imprisonment of between six months to four years or a fine of between one hundred thousand Bahts to eight hundred thousand Bahts, or both.

[33] Article 70 of the Copyright Act 1994: "Any person who infringes copyright under Article 31 is liable to a fine of between ten thousand Bahts to one hundred thousand Bahts.

If the commission of an offense under paragraph 1 is carried out for a commercial purpose, the wrongdoer shall be liable to either imprisonment of between three months to two years or a fine of between fifty thousand Bahts to four hundred thousand Bahts, or both.

of infringement can incur fines if the acts were not carried out for a commercial purpose. If carried out for commercial reasons, both incur imprisonment and/or fines. As far as direct infringement is concerned, Thai law does not distinguish between unauthorized acts of reproduction or adaptation, communication of the work to the public, rental of the original or copy of a computer program, audiovisual work, cinema, or sound recording. Infringement of these rights carries a minimum fine and/or imprisonment. Other infringements are treated on a par with copyright piracy without distinguishing the different levels of moral outrage associated with different offenses. The ready availability of criminal sanctions for all types of copyright infringement has led to the nearly exclusive use of criminal procedures to stop the infringement and obtain compensation although the Thai copyright law allows the injured party to resort to civil remedies including the Maleeva type injunction. The statistics of the Central Intellectual Property and International Trade Court clearly show that in 2004, there were 66 civil cases concerning copyright infringement and the amount in dispute was around 3.7 billion Bahts, whereas the number of criminal cases concerning offenses under the Copyright Act was 3,076. In the case of copyright, the emphasis on criminal sanctions could have originated from semantic confusion. Under Thai copyright law, copyright piracy like any other kind of copyright infringement is termed copyright infringement. The special meaning of "copyright piracy" as defined in Footnote no. 14 (b)[34] of the TRIPS Agreement is not recognized as such under Thai copyright law. The term used under Thai copyright law is "copyright infringement". This means that the use of criminal sanctions under the Thai copyright system is wider than the minimum TRIPS requirement in Article 61[35]. However, most of the criminal cases are not of the direct infringement type, but that of indirect infringement as stipulated in Article 31[36] of the Thai Copyright Act. Out of a total of 3,076 criminal cases in 2004 concerning copyright infringement, 3,075 were offenses under Article 31. Most of the accused in these cases entered guilty pleas.

The categorization of the offense of unauthorized communication of a work to the public as a criminal offense[37] coupled with the fact that all the offenses under Thai copyright law are compoundable has led to a curious result as far as sound recording works are concerned. Since sound recordings are copyright works under Thai copyright law, there are three groups of possible rights owners, namely, creators of musical works (copyright), performers (performers' right), producers of sound recordings (copyright). None of the groups except the producers of sound recordings has managed to enforce its rights. The right of communication of the work to the public has never been enforced

[34] "pirated copyright goods" shall mean any goods which are copies made without the consent of the rights holder or person duly authorized by the rights holder in the country of production and which are made directly or indirectly from an article where the making of that copy would have constituted an infringement of a copyright or related right under the law of the country of importation.

[35] "Members shall provide for criminal procedures and penalties to be applied at least in cases of willful trademark counterfeiting or copyright piracy on a commercial scale……"

[36] "Any person who, knowing or having reason to believe that any work has been made in violation of the copyright of another person, acts on such work to gain profit shall be deemed to infringe copyright if his act consists of any of the following: (1) sale, possession for sale, offer for sale, lease, or offer for lease (2) communication of the work to the public (3) distribution in a manner that may cause prejudice to the copyright owner (4) importation or order for importation.

[37] Article 27 of the 1994 Copyright Act: "Any act done to a copyrighted work under this Act without authorization according to article 15(5) is deemed copyright infringement if it consists of any of the following: (1) reproduction or adaptation (2) communication of the work to the public.

against major broadcasting organizations or even major entertainment venues. This right has been enforced by producers of sound recordings mainly against karaoke bars and restaurants. This led to protests by karaoke bar owners and restaurants as representatives of the rights owners would arrive incognito, request a certain song and when that song was played, the establishment owner would be arrested and his equipment confiscated. As the Thai copyright law[38] allows the infringer and the rights holders to come to a settlement, many cases did not reach the Central Intellectual Property and International Trade Court as they were settled earlier. There have been attempts to draft a law on collecting societies but without any concrete result so far. The problem has been somewhat complicated since owners of many Thai musical works have assigned their rights to sound recording producers who in many cases are the copyright owners of both the musical works and sound recordings. As far as performers are concerned, they are not in a position to enforce their rights as allowed for in the Rome Convention (to which Thailand is not a signatory), namely, the right to equitable remuneration upon communication of the sound recording of their performance to the public.[39] There has only been one case of infringement of performers' right brought before the court and it is still pending. It should be noted that the penalty for infringement of performers' right is the same as that for other kinds of infringement of copyrighted works. However this is not of much help to the performers because of their weak bargaining power vis-à-vis broadcasting organizations and sound recording producers.

E. BUSINESS RELATED

The IP capitalization program has borne little fruit as far as commercial loans are concerned since only a sum of 38.44 million Bahts has been extended to holders of patents, trademarks, and copyright. At present, the DIP has cooperation arrangements with the Small and Medium Enterprises Bank, the Government Savings Bank, and Bangkok Bank on loans to owners of intellectual property and which are confined to only patents, trademarks and copyright. It should be noted that traditional knowledge is not the type of product accepted by the participating banks. This is obvious as traditional knowledge products are by their very essence a community right so it would be difficult for banks to extend loans to individuals who rely on traditional knowledge. This is not the case with patents, trademarks, and copyright where there are clearly-defined proprietary rights. Bank borrowing procedures have to be followed regardless of whether the borrowers are grass-roots entrepreneurs or savvy enterprises. The problem is very much compounded by the lack of a venture capital culture in Thailand where financial institutions deal with fixed assets as collaterals and are unsure of how to treat intellectual property which is intangible. Therefore the process of IP capitalization will be arduous unless there is a massive injection of funds to provide the necessary equity for deserving innovations and other IPR on a joint-venture basis rather than a commercial one.

[38] Article 66 of the 1994 Copyright Act: "The offense under this Act could be settled by the parties."

[39] See Article 55 of the 1994 Copyright Act.

F. FINANCIAL GRANTS

There is no direct financial grant for commercial activities involving IPR. The most visible help is the IP capitalization program conducted by the DIP in the context of the more important assets capitalization scheme of the Thai government although that involves loans not grants. However, there are grants for R&D through the use of research funds via the National Research Council. The money is used to fund important research in various fields whether related to or resulting in IPR. Recently, the establishment of the National Innovation Agency[40] to promote innovation in a systematic way to create an innovation culture in Thai enterprises and increase national competitiveness is obviously a step in the right direction as it helps to fund projects on innovation with commercial potential.

In addition, the Government has been trying to encourage enterprises to spend more on R&D by allowing them to earn tax-deductible sums amounting to twice that which they spend on R&D. However, where there has not for a long time been for a systematic approach to promoting innovation in a sustainable manner, financial grants in a direct or indirect way will take some time to bear fruit as enterprises have to prepare their work force to contribute to the innovation culture and make the best use of the tax incentives on offer.

[40] See http://nia.or.th

PART II: SUCCESS STORIES
Country - Thailand

Case Study 1

The Siam Pulp and Paper Public Company Limited

The Siam Pulp and Paper Public Company Limited is part of the Siam Cement Group known under the famous elephant trademark, which is the associate mark of all the companies in the Group, and is the holding company for the paper and packaging arm. In this study, it will be referred to as 'the Company'. The story of the Company started in 1979 when it was set up as the first Thai company to manufacture pulp from bagasse. Since then, the Company has gone from strength to strength, with Siam Pulp and Paper Public Company Limited as the holding company and winner of many distinctions, awards and prizes as well as the front runner in the promotion and use of innovation. The development of the Company from just a manufacturer of pulp into the command center of the integrated pulp, paper and packaging business has been remarkable and has resulted in the largest integrated pulp, paper and packaging enterprise in Thailand.

About the Company

The Company was established by Siam Cement Group in 1979 although the involvement of the Group in the paper business actually started in 1965 with the setting up of Thai Paper Industry Co., Ltd., producing kraft paper used for cement bags. Siam Cement Group became more active in 1975 when it became the provisional administration of Thai Paper Industry Co., Ltd., whose name was changed in 1976 to Siam Craft Industry Co., Ltd. Siam Cement Group became a major shareholder and administrator of the kraft paper company in 1976. The paper company was given promotional investment privileges in 1966 and the product went on sale in 1969. In 1977, it was the first company in Thailand to receive the industrial standard mark of the Ministry of Industry.

The Thai Pulp and Paper Public Company Limited, the first bagasse pulp manufacturer to receive promotional privileges from the Board of Investment, was established in 1979. In the same year, it was listed in the Security Exchange of Thailand. The business was also expanded to cover packaging. In 1983, the Company ventured into printing and writing paper business under the name of Thai Paper Co., Ltd. Printing and writing paper started to come off the production line in 1984 through the Alkaline Sizing Process, the first in the country. In 1991, this product was awarded the TISI Standard, making Thai Paper Co., Ltd. the first Thai manufacturer to receive such recognition. In 1992, the Company expanded its pulp capacity to 120,000 tons per year.

The Company went regional in 1996 in its kraft paper business by signing a joint-venture contract with UPPC (United Pulp and Paper Co., Ltd.), the largest kraft paper manufacturer in the Philippines, in order to build a special paper mill there.

Since its inception, the income of the Company has grown exponentially due to expansion, diversification, and improvement of productivity. The Company has relied on massive investment, the latest technology, continuous improvement of management efficiency and human resources development to become the largest integrated producer of paper products in Thailand with over 2,000,000 tons of products per year. The enlarged business consists of pulp, printing and writing paper, packaging paper and corrugated containers.

The business of pulp, printing and writing paper consists of The Siam Forestry Co., Ltd., The Siam Pulp and Paper Public Company Limited., Siam Cellulose Co., Ltd., Phoenix Pulp and Paper Public Company Limited, Thai Paper Co., Ltd., and Thai Union Paper Public Company Limited.

The business of packaging paper consists of Siam Kraft industry Co., Ltd., Thai Kraft Paper Industry Co., Ltd., Thai Union Paper Industry Co., Ltd., United Pulp and Paper Co., Inc. (Philippines), and Thai Cane Paper Public Company Limited.

The business of corrugated containers consists of Thai Containers Group Co., Ltd., Thai Containers Ltd., Thai Containers Industry Co., Ltd., Thai Containers Ratchaburi (1989) Co., Ltd., Thai Containers Songkhla (1994) Co., Ltd., Thai Containers Chonburi (1995) Co., Ltd., Citipack Co., Ltd., Nippon Hi-pack (Thailand) Co., Ltd., and Thai Containers V&S Co., Ltd.

Apart from the subsidiaries in the holding Company, there are also two associated companies, namely, Siam Toppan Packaging Co., Ltd. and Thai British Security Printing Public Company Limited.

In 2005 the number of employees in business stands at 4,340, an increase of only 60 employees over that of 2004 and 110 employees over that of 2003. It can be seen that the business is technology-intensive rather than labor-intensive as it relies heavily on state-of-the-art technology requiring massive investment.

The Company and its subsidiairies have over 30 registered trademarks for their various products, although they all also use the elephant mark of the Siam Cement Group. The Company holds one patent granted in 1999 by the Department of Intellectual Property of Thailand. It is a patent on a process involving the storage of bagasse with the use of lacto-bacillus. In addition, the Company has applied for and obtained industrial design protection for eight cargo pallet designs.

Records of distinctions and accolades from at home and abroad are a clear indicator of the performance of the enterprises and their work force. The Company and its subsidiaries have done remarkably well in this regard, reflecting a forward-thinking management and the importance of improving productivity and competitiveness in its integrated businesses.

The search for excellence has brought accolades for the Company in the form of the Prime Minister's Industry Awards and an Honorable Mention from the Ministry of Industry. In 1998, 1999 and 2003 it received the Prime Minister's industry Award for quality management, environmental management and productivity respectively. Other companies in the group such as Siam Kraft Industry Co. Ltd. with the Prime Minister's Industry Awards for environmental management (2000) also received similar accolades.

Thai Containers Ltd. received the Prime Minister's Industry Awards for quality management (2000), productivity (2002), and safety management (2005), Thai Paper Co., Ltd. received the Prime Minister's Industry Awards for safety management (2000), and environmental management (2001). It could therefore be said that from 1998 to 2005 the subsidiaries of the Company managed to win the Prime Minister's Industry Awards and Honorable Mentions from the Ministry of Industry in one or more categories every year.

Improvements through encouragement of participation by employees has paid dividends not only in terms of local commendations but foreign ones as well. In 2003 Thai Paper Co., Ltd. was the first company in the printing and writing paper industry to be awarded the Deming Application Prize from the Union of Japanese Scientists and Engineers. In 2004 Thai Containers Ltd. and Thai Containers Ratchaburi (1989) Co., Ltd. received the Award for TPM Excellence- First Category from Japan Institute of Plant Maintenance (JIPM).

The Company has laid emphasis not only on safety, quality and productivity but also on the environment, reflecting its social responsibility to the public at large. This can be seen from the Commendation for Manufacturer Promoting Good Environmental Conservation in Thailand from the Siam Environment Club awarded to Siam Cellulose Co., Ltd. and Thai Union Public Company Limited in 1992-1993. Thai Union Paper Public Company Limited received the Outstanding Water Environmental Protection Award from the Environmental Engineers Association of Thailand and the Environment and Community Development Association in 1994- 1995. In 1998 Thai Union Paper Public Company and Thai Union Paper Industry Co., Ltd. received the Green Label award for quality products promoting environmental awareness from the Thai Industrial Standards Institute (TISI) and Thailand Environmental Institute. Siam Kraft Industry Co., Ltd. was granted Asia Waste Management Excellence Award 2001 from the Regional Institute of Environmental Technology (RIET).

The Company has paid much attention to one of its most important assets, namely its employees by providing them with welfare benefits and care in an admirable way, resulting in several awards from the relevant authorities such as the Outstanding Awards for Safety, Occupational Health and Environment from the Ministry of Labor and Social Welfare received by Thai Paper Co., Ltd. (2000), Thai Paper Co., Ltd. and Siam Kraft Industry Co., Ltd. (2002), Thai Union Paper Industry Co., Ltd. (2004). The importance of employee welfare has been evidenced through the winning of Outstanding Awards for Employee Welfare from the Ministry of Labor and Social Welfare by Siam Cellulose Co., Ltd. and The Siam Forestry Co., Ltd. (1996), the Siam Pulp and Paper Public Company Limited, Siam Cellulose Co., Ltd., the Siam Forestry Co., Ltd., and Thai Paper Co., Ltd. (1997), and the Siam Pulp and Paper Company Limited (2003).

In an atmosphere where improvement is encouraged, together with maintenance of a very high standard of welfare and care in all the companies in the group, it is not surprising that creativity has really thrived since several companies have been winning foreign design awards, in particular the packaging business, awards such as those presented by the Flexographic Technology Association (FTA) to Thai Containers Ltd., Thai Containers Group Co., Ltd. from 1999 to 2005, Asia Star Award- Outstanding Packaging Design Award in the Asian Region from the Asian Packaging Federation (APF) given to Thai Containers Ltd. (1998), and Thai Containers Group Co., Ltd. (2003)

Commercialization of IP Products

The Company and its subsidiaries carry a comprehensive range of products ranging from pulp to various forms of paper, and corrugated containers. They have also gone into the production of raw materials, namely, wood for pulp making. The factories in the group have been innovating for several years to solve technical problems and have gone further in making use of innovation for increasing productivity and opening new lines of business or products.

The Company has been using its own resources in commercializing products protected by IPR by manufacturing them themselves and through joint ventures with other domestic and foreign companies.

The Company has placed much importance on IP in enhancing its competitiveness as it has given a higher priority to improving its products and designs than cutting prices. It is also highly committed to using IPR to prevent imitation by competitors and restrict competition by potential rivals. It views the use of patent applications as a very important strategic means to pre-empt patent infringement by its competitors. More importantly, the Company is convinced that its corporate image will be greatly enhanced through its pro-active use of patents, designs, and technology. It is therefore not surprising to see the Company actively and enthusiastically involved in the drive for innovation.

However, the actual commercialization of IP products through licensing seems to be a problem for the Company as it has not made any income through assigning or licensing its IP products. This is not a problem faced only by the Company but by Thai industry as a whole. (The Department of Intellectual Property has been launching a campaign to turn IP works into commercial assets. This has resulted in commercial loans of only around 40 million Bahts by the participating commercial banks for the owners of IP works. The amount of finance involved is insignificant.) The Company does not find it easy to attract outside investment for its IP works either.

In 2004 the Company set up a special committee to encourage the production of IP products and has engaged outside experts to promote innovation and creativity in its paper and packaging business especially through the training of its personnel to be more knowledgeable in producing IP products.

In the commercialization of its IP products, the Company has been relying on commercial bank loans. This is possible because of the performance record of the companies in the group as can be seen from its 2004 income of about 3.8 billion Bahts. It should be noted that the Company has not received any venture capital investment at all. This could well be the explanation as to why it has not placed too much importance on the attraction of its IP products to outside investors.

The fact that the Company has to rely on its own resources or its access to commercial bank loans can be seen from the lack of Government grants for developing a prototype or pilot plants or commercialization of the results of its R&D efforts. However, the Company has benefited from tax exemptions.

The Company has found partners in its R&D sector from the universities and higher education institutions and Government research institutes, as well as through collaboration with other companies.

The Company has made use of patent information in its R&D but does not rate it very highly. Patent information was only given average marks.

As far as patent application is concerned, the Company is of the view that the costs of application are too high and that the process takes too long. The lengthy period is understandable considering the backlog due to an insufficient number of patent examiners at the Department of Intellectual Property.

Innovation has clearly played a big part in product development and IP has an important role in the vision and strategy of the Company as can be seen by its product "Mira Board".

This product is the result of the collaboration between the marketing team of Siam Kraft Industry Co., Ltd. and the production team of Thai Union Paper Industry Co., Ltd. It is a duplex for foil which has been laminated with foil or MPET (Metalize poly ethylene Terethalate film). Mira Board has been used as packaging material for several years without much success because it was mainly used for expensive products or those with anti-imitation features. The cost of Mira Board was high as the paper used was high-quality, made from chemically-treated white pulp that was laminated and polished. Some printing factories tried to cut down on costs by using duplex board (100% recycled paper) but this was not popular since the paper was laminated on a sheet-by-sheet basis.

The motivation for coming up with a new product came from the marketing team which was convinced that it would be possible to develop a market for this kind of product. It therefore felt that the costs would be lower if foil-laminated duplex paper was produced. The team members believed that they could create market demand for this type of product because it looks appealing, as well as creating value-added for the goods wrapped in it. They consulted with the production team of Thai Union Paper Industry Co., Ltd. and it was agreed that the main objective of their cooperation should be to create a demand by developing low- cost foil-laminated duplex that could be used as distinctive packaging by customers, thus introducing a new product in line with the Company's increase in production capacity and creating opportunities for better sales and profits. They considered that they could discover the requirements of their clients and make use of their technical know-how to produce something with eye appeal, moderately priced and with immediate application. They carried out a study on current market needs and the potential for creating demand for Mira Board. They experimented by using 100% recycled paper which was foil-laminated. They discovered that by using rolls of paper in the lamination process, the cost would be much lower than using sheets of paper. They then started to sell the paper to processing and printing factories which would laminate the foil themselves. This type of paper is known as duplex for foil. As Siam Kraft Industry Co., Ltd. maintains a database of the packaging plants and end users, it contacted them directly to introduce the foil-laminated paper. It hired K-Laser Technology to do the foil lamination of the paper roll and sold the finished product under the name "Mira Board". This product was well received by clients as they did not have to do the lamination themselves. Several important users such as Colgate, Unilever, Lion, Kimberly-Clark have changed their packaging from duplex paper to Mira Board. This is

a clear example of innovation concerning the choice of raw materials and the technological process that creates the added value.

Promotion and Use of Innovation

The Company has been actively promoting innovation within its subsidiaries. This was in response to problems that arose during the production process, when the search was on for improvements. Management encouraged this development by offering small prizes and cash rewards in token sums. At this early stage, innovation was initiated purely on the shop floor. The incentive was in the form of recognition of efforts by the management and its peers. It could be said that at the early stage innovation was not a direct result of promotion by the Company or strong emphasis on intellectual property. However, it seemed to take on a life of its own and thrived in the Company. Employees enjoyed collaborating to solve problems and make improvements to their way of working. There seemed to be a latent culture of innovation in the paper and packaging business. Management also realized that encouragement of innovation helped create solidarity among employees, not only among those from the same section but among staff from other sections or even different factories in the paper and packaging business. They felt that it was important to promote innovation in an organized, systematic and dynamic way to increase the productivity and competitiveness of the Company. This feeling is shared by the Siam Cement Group as a whole since it has identified innovation as a key factor on its business agenda. Its aim is to become an innovative organization and to achieve competitive supremacy in 2007. Siam Cement Group announced the country-wide competition to promote innovation in all the subsidiaries in the group with great fanfare in August 2004 and allowed its six business groups[41] to implement their own "innovation plan". The name of the scheme for the whole Siam Cement Group is ‘ The Power of Innovation Award[42]’ and each business group was asked to organize a competition in its own sphere of business to determine the two best teams to compete for the first prize of 1 million Bahts. The Company decided to organize the Paper and Packaging Business's Power of Innovation Award[43] by involving staff at all levels and in all the subsidiaries.

The Siam Cement Group defines innovation as creating something new, be it a product, process, or business model, which the Group can use. Innovation could be either a breakthrough or incremental innovation, giving rise to changes which are value-added and effective. It is the result of the use of knowledge, creativity, technology and management in conjunction with the promotion of the innovation culture. In the eyes of the Group, this is a culture which facilitates positive change by encouraging employees at every level to think in a

[1] Siam Cement Industry, Cementhai Building Products, Cementhai Distribution, Siam Pulp and Paper, Cementhai Chemicals, and Cementhai Holding

[2] The term "Power of Innovation Award" was coined by Mr. Veera Prechawuthi, administrative manager of the procurement section of Siam Cement Industry of Siam Cement Group. He won a prize of 25,000 Bahts for coming up with the term. He said he tried to think of words that demonstrate dedication and real power and to combine them with innovation. So he came up with "Power of Innovation".

[3] The work plan of the Company is firstly to get up a momentum for creating common understanding, demonstrating a real business need and gain acceptance from top management, identifying obstacles and key areas for innovative culture by undertaking the matching activities of the issue of Inno passport and road shows, organizing managers' workshops, and participating in the Siam Cement Group-wide survey by Accenture; and also to develop infrastructure and enhance capabilities to promote an atmosphere for innovation, to recognize innovation in business and to enhance capabilities through matching activities of introducing 'empowerment" and 360 assessments for managers, organizing the PPB Power of Innovation Award, setting innovation targets in medium- and long-term action plans, and gaining knowledge in terms of product and process innovation and business models as well as restructuring its R&D function.

novel way, break old patterns, keep an open mind and be assertive and ready to venture into new fields, to be committed to the search for excellence. In this way management must organize a system to recognize success, however small, and reward employees who have contributed to innovations in its business.

The Company decided to organize the PPB's Power of Innovation Award by involving personnel at all levels and in all its subsidiaries. It defines the objectives of the competition as encouraging employees to think in a different way with praise and recognition for employees who contribute to new ideas in the organization. The innovation award competition was intended to promote an atmosphere supportive of innovation by offering praise and recognition to the winners. This in turn would stimulate others to work for the benefit of their team or their business as a whole. The Company management fully understood that while its competitions would pick up the best and most distinctive innovations, to capture the interest and attention of the employees and to demonstrate the benefits from such innovation, another equally important objective would be to demystify innovation. This could be done by giving commendatory prizes for less distinctive innovations to show employees that innovation is important to everyone and that everyone can innovate. The Company thus decided to offer rewards on two levels, namely, for the group and for the individual businesses. The Platinum Award of up to 500,000 Bahts would be presented to the winner in the group, and at the individual business level, there would be three Gold Awards of 100,000 Bahts each, three Silver Awards of 50,000 Bahts each and Bronze Awards of 25,000 Bahts each.

Mr. Chaovalit Ekabut,[44] Executive Vice President and the architect of PPB's Power of Innovation Award, said that the Company considered the competition as part of the process not an end in itself. This process is termed the Innovation Journey undertaken by the Company and all its staff members. It is going to be a long journey starting from the PPB's Power of Innovation Award 2005. He considered it imperative to get everyone on board from the very outset. Mr. Chaovalit Ekabut himself and the top management of the Company set off on the Innovation Road Show by visiting all the subsidiary companies to explain the rationale behind the innovation push and the objectives of the competition so that all the employees could understand what the Company expected from them. This aim of this Show was to demonstrate to the staff that the Company was serious in its idea to promote innovation in a sustained and dynamic way, that it was crucial to the success of the Company now and in the future, and that the most important players in the process were the employees themselves. Top management was also involved in the managers' workshops in all the subsidiaries to ensure support for the Paper's Power of Innovation. Mr. Chaovalit Ekabut emphasized that he wanted to capture the interest of employees and spark their imagination in the search for excellence. He felt that while the Innovation Journey should be moving forward, it should also be fun for everyone. The management expected that bonds would be forged among employees as well as an eagerness to search for excellence through innovation. The Company issued Inno Passports to all its employees to create a common understanding and encourage lateral thinking. Mr. Chaovalit explained that instead of circulating brochures or leaflets the Company considered the information in the form of a passport would be more useful as the passport holders could participate in the year-round activities organized in support of the competition.

The Company laid down clear guidelines for the competition to select the two best projects for competition at national level. Projects were divided into three fields, namely, pulp and writing and printing paper, packaging paper, and packaging containers. Each project submitted had to

[4] Interview during the PPB's Power of Innovation Award Year 2005 at Impact Muangthong Thani on 15 October 2005.

be completed before August 2004 and already in commercial use. The winners in the three fields would receive the awards with the cash prizes of 100,000 Bahts each (about 2,500 USD). A total of 173 projects was submitted in the specific fields of pulp and paper (73 projects), packaging paper (54 projects), and packaging (54 projects). The decision on the three gold award winners was made in-house. However, the Company set up a special committee of five members comprising Mr. Chaovalit Ekabut and four outside experts to select the winner of the Platinum Award and the runner-up for entry into the nationwide competition. The special committee met on September 24, 2005 to consider the winning projects.

The first project was in the field of pulp and writing and printing paper and was about the hydroponic culture of eucalyptus saplings. This project was carried out by a team from Siam Forestry Co., Ltd. who found that the two varieties of eucalyptus tree, namely, CT76 and CT236 with a high pulp yield showed poor survival rate when grown through tissue culture or rooted culture. The team, aware that the survival of the plants grown from rooted cuttings depended on the strength of the saplings, thought that the hydroponic system could be used to produce healthy saplings. The team invented appropriate containers for the hydroponic culture of the saplings, developed suitable nutrients for the two varieties, and recycled the used nutrient solution to prevent pollution. This hydroponic method over a period of nine months produced a total of 819,351 saplings at a cost of 0.38 Baht per sapling compared with the cost of 1.03 Baht per sapling for the tissue culture. It also reduced the production time for root cutting from six months to two. The nutrient solution was used to water the saplings grown in the soil. Nothing was wasted and the environment was not harmed. The survival rate went up to 88.66% compared with the rate of less than 40% for the rooted cuttings.

The second project was in the field of packaging paper and was the invention of the zero speed detector for the low speed machine at Stoker Power boiler No.8 at Ban Pong mill. This project was carried out by a combined team of engineers and technicians from Siam Kraft Industry Co., Ltd. and Thai Kraft Paper Industry Co., Ltd. Before submitting this project, the team members faced the problem of damage to the stoker due to the continued spraying of lignite by the spreader resulting in the piling of burning lignite on the stoker, and the shear pin had already snapped due to high torque. Damage was done to the stoker as the operator did not realize that the stoker had stopped moving since he lacked the detection equipment. The team realized that there was no suitable detection equipment because the stoker shaft rotated very slowly (66 minutes per rotation) so even the available zero speed detector was not able to detect speed until it was too late. The team was aware that the movement of the stoker created an electric current and that it would have to design the circuit which could detect zero speed on the stoker shaft. It experimented with the adding of the gear set at the stoker shaft to increase the number of rotations to allow detection by a speed guard sensor. This method was found to be problematic as it consumed too much space as well as being expensive and making it difficult to disassemble the stoker shaft. The team also tried to use the electric current distributed to the motor to determine whether the shear pin had already broken. However, this idea was dropped because, when the current was at 0.8- 1.5A, it could not detect damage to the shear pin. The team decided to build its own zero speed detector by converting the movement of the stoker shaft to electric current. The team installed the proximity switch in front of the target so it could detect the signal and determine whether the shear pin had broken or not, regardless of whether the target teeth stopped opposite the proximity switch. The detector was able to detect the broken shear pin three times in one year, thus pre-empting damage similar to that which occurred in 2004 incurring a cost of 1.84 million Bahts.

The third project was in the field of packaging containers and concerned the manufacture of twin flute corrugated board by using one single facer machine requiring a low level of investment in order to introduce a new product, reducing risk in market development, and increasing competitiveness due to lower manufacturing costs. The team submitting this project was made up of employees of Thai Containers Group Co., Ltd. and Nippon Hi-Pack (Thailand) Co., Ltd. They realized that Thailand needed more of the twin flute corrugated boards to make containers for auto parts and equipment as well as chemicals and plastics for export. The type of corrugated board stronger than the one normally used is the twin flute with the AA flute and AAA type flute. The team felt that if it could produce the twin flute corrugated board then their company could enlarge its product range to include bulk packs, produce packaging and industrial packaging. The team members thought of alternative means ranging from installing another A flute single facer to add to the existing one, to installing a new dual flute. They cost 50m Bahts and 40m Bahts respectively and would occupy too much space. So the team decided to increase the capability of the existing single facer by building and installing the single face splicer and sandwich belt. The modified machine could produce five layered AA flute corrugated boards. The investment was minimal compared with the price of 40m Bahts for the new dual-flute machine. There are several patentable features such as the movement of the single face splicer and the cutting blade, the shape of the blade and the design of the single face splicer. This new AA twin flute corrugated board is expected to bring in an additional income of about 27 million Bahts a year.

The committee unanimously chose the Platinum Award winner, the first runner-up, and the second runner-up (which would not participate in the nationwide competition) but did not announce the result scheduled to be declared on October 15 at Impact Muangthong Thani. The committee awarded points according to the following criteria: innovative idea, implementation effort required, benefit and impact, and patentability.

In determining the points for each project, the committee was given clear guidelines.

Under the criterion of innovative ideas, high marks were given to that which results in a new industry or business, average marks for an innovation which changes the basis of competition as well as creating new opportunities in an existing industry, low marks for an innovation which is a product-line extension or process modification resulting in improved income or greater efficiency.

For implementation effort, top marks were awarded for an innovation developed through multidisciplinary efforts, cross-functional cooperation, or a new business model, average marks for an innovation mainly developed by the participant himself or derived from a change in work practices, the lowest marks being for innovation as a result of the purchase of new or improvement of existing technology.

Regarding benefit and impact, the emphasis was on concrete benefits to the company so top marks were awarded to an innovation yielding great benefits, average marks for an innovation yielding average benefits and low marks for innovation yielding little benefit.

On patentability, importance was given to an innovation which is a registrable work of IP in the sense that high marks were awarded to an innovation which could be patented comprehensively, namely product and process, average marks to an innovation which could be

partly registrable as either a product or process, and low marks for an innovation which is not registrable as a work of IP.

The ceremony to award the Platinum Prize to the winning team was staged to resemble boarding a plane to the sites of the three teams. This was to reflect the fact that innovation is like a journey. It was symbolic of the Innovation Journey by the Inno Airways. Participants seemed to enjoy and take pride in the event. The atmosphere was like a beauty pageant, not physical beauty but intellectual beauty. The winner was the hydroponic culture team who looked into various aspects of innovation ranging from containers, nutrients and their environmental impact as well as the ability to overcome obstacles with the process that could be applied to trees other than eucalyptus.

The Company achieved its aim of maximum employee participation in the cultivation of an innovation culture. The judges unanimously awarded the Platinum Prize winning team the sum of 500,000 Bahts. The winner and the runner-up will enter to the Siam Cement Group-wide competition to compete for the top prize of 1 million Bahts. It should be noted that the Company and the whole Siam Cement Group has worked on the Award process without receiving any grant or help from the Government and will continue to do so.

The judges unanimously selected the team submitting the project on the hydroponic culture of eucalyptus as the Platinum Prize winner for the team's ability to adjust and improve the existing technology with good research of prior art and innovative ideas in improving on the various aspects of the culture to suit the eucalyptus varieties needed as well as the attention paid to environmental effects. Furthermore, the team has demonstrated its ongoing efforts to improve and adjust the techniques for other plants and purposes, reaffirming the fact that innovation is an ongoing process. The team submitting the project on the twin-flute corrugated board came second as it demonstrated technical excellence in making use of limited resources and space to add value to the existing machine. Both teams will go forward to the competition at the Siam Cement Group-level where the winner will receive 1 million Bahts.

Mr. Chaovalit Ekabut, Senior Vice President in charge of the Paper and Packaging Business of the Siam Cement Group emphasized the importance of communications and public relations. He said that a major factor in ensuring the success of this project was the dissemination of information to employees at every level so as to create awareness. According to him, awareness helped to create both the foundation and atmosphere in which recognition and praise for the innovators could be appreciated and motivation increased by having role models. He said that in addition to organizing the competition a comprehensive public relations campaign had to be in place. Awards alone would not be sufficient. Mr. Chaovalit Ekabut felt that there had to be a public relations operation in other fields so that innovation could be linked to the business culture, improvement of personnel management, performance assessment and the systems of incentives and rewards.

The Company has been embarking on a very exciting journey using the power of innovation to move forward with its own initiatives and the wholehearted participation of its employees at all levels to compete more efficiently due to trade liberalization measures and a series of regional free trade arrangements.

Conclusions

1. The innovation process in the Company has been developed from within and has received a major endorsement by the management's commitment to the power of innovation.

2. Participation by employees at every level has been a major factor contributing to the Company’s campaign for promoting innovation in a sustainable and dynamic way.

3. The Company has managed to create an atmosphere of friendly competition in the paper and packaging business, making innovation a fun process for everyone. This is a very concrete example of the demystification of intellectual property.

4. The Company has put as much emphasis on recognition as on awards. This dual approach will help develop the innovation culture in the Company.

5. Public relations are a major contributor to the success of the innovation campaign as they help to create awareness and enthusiasm across the board.

6. The initiative of the Siam Cement Group as a whole and the active involvement of the Company in promoting innovation is a good example for the rest of the private sector showing that it can be an enjoyable way of cementing bonds of friendship and understanding among employees and not just a mere technical endeavor.

7. Greater awareness and enthusiasm in innovation could be a major springboard for the study of prior art from millions of pieces of patent information available free of charge. This would speed up the innovation process.

8. The innovation campaign as carried out by the Company in a comprehensive manner could be a model for other private sector companies in Thailand regardless of their type of business or size.

9. Every aspect of a Company can be improved through the process of creating an innovation culture.

10. The search for excellence has to be maintained at all times through the use of constant innovation.

Case Study 2

Beauty Gems Group Co. Ltd.

Beauty Gems Group has contributed much to the Thai gem and jewelry export business over the past 40 years due to its role not only in opening up new export markets for Thai gems and jewelry but also raising the overall standard of the industry through the use of innovative technology and protection of intellectual property rights. In this study, Beauty Gems Group will be referred to as Beauty Gems.

From a humble beginning as a small family-run business in 1964, the business of the Sriorathaikul family has grown over the past four decades into one of the leading manufacturers of gems and jewelry with an annual turnover of about 5500 million Bahts in 2004 and a staff of over 3,500 in 2005. Its success seems to have stemmed from total dedication to perfection and an unwavering commitment to the protection and use of intellectual property rights in a creative and laudable manner.

About Beauty Gems

Beauty Gems is the manufacturer of gems and jewelry for export, mainly in gold, platinum, and silver. The business started in 1964 with the husband and wife team of Mr. Pornsit Sriorathaikul and Dr. Sunee Sriorathaikul at the helm. Beauty Gems Group Co., Ltd. was established in 1992 as the headquarters of all the companies in the group. Its success seems to have run in parallel with the emergence of the Thai gem and jewelry industry to its present position as a center for gems and jewelry and Asia's biggest exporter in this field. Beauty Gems has also grown to become a global player in the gem and jewelry business and a member of all the major domestic and international trade associations.[45] It has attracted clients from all over the world with its high quality, superior craftsmanship and competitive prices. Mr. Pornsit Sriorathaikul and Dr. Sunee Sriorathaikul have been elected as President of the Thai Gem and Jewelry Traders Association several times and during their respective tenures helped to put the Bangkok Gems and Jewelry Fair on the agenda of international traders of gem and jewelry.

Beauty Gems is famous for producing a full range of gem and jewelry products ranging from mass-market pieces to high-end custom-made ones. It is a one-stop subcontractor who can meet all clients' needs in jewelry sourcing, design and manufacture in accordance with the exacting specifications laid down by its talented employees, thereby upholding the tradition of Thai craftsmanship and making the best use of state-of-the-art technology.

Beauty Gems has adopted a well-defined management policy, namely, determination, honesty, service, and respect for customers. This policy has been the guiding principle for all its companies and the foundation of its success. It defines its mission as follows:

"Our mission is a quest that has remained unchanged since the first day we opened our doors. It is simply a commitment to produce beautiful, high quality, competitively-priced merchandise for a global market. We also contribute to the development of Thailand's gem and jewelry

[1] Board of Trade of Thailand, the Federation of Thai Industries, Thai Gem and Jewelry Traders Association, the Gem and Jewelry Institute of Thailand, Tourism Council of Thailand, the Jewelers Board of Trade, USA, International Colored Gemstone Association

industry by working together with both private and government sectors. As a pioneer in seamless operations, integration and constant reliability, we proudly maintain our legacy of finely-honed craftsmanship, through the use of the most modern technology in Southeast Asia. Continuous training, research, dedication to quality, honesty and integrity will remain the jewels in our crown."

The family established Beauty Gems Factory Co., Ltd. on June 5, 1973 with a registered capital of 3 million Bahts. It has been the jewel in the crown of Beauty Gems ever since. It started with a staff of more than 300, manufacturing jewelry settings in 14k, 18k and Platinum 900, 950 set with high quality precious stones and diamonds. As its business was export-oriented, it was granted Board of Investment privileges in 1976. It gained the approval of the Customs Department for operating a bonded warehouse to stock gold, platinum, and diamonds imported for the manufacture of fine jewelry for export. This reduced expenses and complications which could have arisen if the bonded warehouse had not existed.

Ten years after its establishment, Beauty Gems increased its staff to 600 and its registered capital to 13.5 million Bahts to cope with the growing demand from markets in the U.S., Japan, France, Switzerland, Germany, Saudi Arabia, Hong Kong, Singapore, and many other countries. It seems that the emphasis of Beauty Gems on quality standards, and unique, beautiful designs have fully satisfied the demands of its international customers.

Just eight years after its establishment, Beauty Gems won the International Asia Award Singapore-Bangkok in 1981. This was followed by the First Prize in All Five Categories at the Bangkok Gems & Jewelry Fair 1985, a premier gems and jewelry exhibition in the region, organized by the Department of Export Promotion of the Ministry of Commerce. Another international milestone was reached through the Diamond International Award 1986 for diamonds and necklaces from De Beers in Italy and the America Award 1986 from the U.S.A. Several awards were also won in 1988. These included the Diamonds International Award for Diamond and Onyx Earrings from De Beers as well as the International Europe Award II in France. The performance of Beauty Gems stood out not only in its own field but also in the entire Thai private sector as seen from the Outstanding Thai Manufacturer Award 1988, Thailand's leading Export Executives 1988 and the Top Companies in Thailand 1988.

Beauty Gems scored success after success as seen from the awards received at the Bangkok Gems & Jewelry Fair from 1991 to 2004. Its total commitment to quality seemed to have borne fruit not only in terms of an expanded consumer base but also in its commitment to quality.

Beauty Gems also excelled in the design and production of diamond jewelry as seen from the winning of the Hong Kong Diamond Design Award 1990 and Hong Kong Diamond Design Award 1993. The exquisite craftsmanship of the work force and the total commitment to quality of the management have also brought international recognition for the Company’s gold jewelry in the form of the Grand Prize of Unique Gold Objects "Tree of 2000 Millennium" by the World Gold Council, Millennium Gold for Eternity, three awards at the Gold Jewelry Design Award of the Year, organized by the Department of Industrial Promotion and the World Gold Council in 2001, and in 2002 the Finals of Design Excellence Gold Jewellery of Finest Quality, 2nd Gold Virtuosi the World Gold Council International Jewellery Design Awards, Italy.

The gem and jewelry business in Thailand directly and indirectly employs around 4 million people. It constitutes a major foreign exchange earner for Thailand. Beauty Gems geared itself to export from the outset and scored much success as can be seen from the Export Products Award 1986 from the Ministry of Industry, the Top Exporter of the Year Award 1987 presented by the then Prime Minister General Prem Tinsulanonda, Thailand's Leading Export Executives 1988 presented by the then Prime Minister Chatichai Chonhavan, the Prime Minister's Export Award 1992 from the then Prime Minister Anand Panyarachun, and the Prime Minister's Export Award in the Best Exporter Category in 2004. At the present time, the Company exports 97% of its products while 3% are for domestic sale.

Recognition of the role and commitment of the two founders, Mr. Pornsit and Dr. Sunee Sriorathaikul, to producing beautiful, high quality, competitively-priced merchandise for a global market and their devotion to the development of the Thai gem and jewelry business by working with both the private and public sectors was acknowledged in the form of the Working Woman of the Year 1995, the Life Award in 1997, the Gem and Jewelry Businessman of the Year 1998, Businesswoman devoted to Society of the Year in 1998, the Outstanding Awards of Business Woman of the Year 2001 on the International Woman's Day, the Leading Women Entrepreneurs of the World 2003,and the Leading Women Entrepreneurs of the World 2004.

Designs have been one of the important factors underpinning the success of the Company and its subsidiaries. It makes use of the latest technology in the gem and jewelry industry. Beauty Gems has in-house designers for settings and finished products. It has become a popular and sought-after place of apprenticeship for budding designers. It has laid much emphasis on originality of designs as well as appealing to the tastes of foreign customers, even those as discerning as the Japanese. Beauty Gems was one of the first Thai companies to penetrate the Japanese gem and jewelry market. It has now become the top gem and jewelry exporter to Japan.

Many prizes and awards to Beauty Gems over the years speak volumes about its business practices vis-à-vis its customers, work force, and the public, not to mention fellow traders in the gem and jewelry market. It is therefore not surprising that Beauty Gems received an ISO 9001 on July 9, 2002. This is a clear testimony to the commitment of the company to go for the finest quality by using an international quality management system.[46] This was made possible with the concerted efforts and dedication of all its employees who took only six months to win this certification for the company. Dr. Sunee Sriorathaikul, the President of Beauty Gems Group,[47] emphasized that it was crucial to keep the employees happy and satisfied as this would be reflected in the quality of the products. She further stated that the philosophy of Beauty Gems was to be successful in business in the long run by relying on providing an honest and superior service to its customers. She thinks that customer satisfaction

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[2] Dr. Adisai Bodharamik, the then Minister of Commerce, stated in his congratulatory message to Beauty Gems Factory that ".…….To gear up the recovery process of Thailand's economy, the Government has taken the initiative to find new overseas markets and help the private sector build a competitive edge for exporting. These days, stiff competition on an international scale and demanding requirements from importing countries have forced exporters to become more competitive than ever. It is by developing product quality and design as per market requirements, on a par with international standards, that such competitiveness can be acquired. Also, keeping pace with the world's business environment by constantly upgrading the Company's management system promises to be a successful business solution……."

[3] Interview on 11 October 2005

is the first priority of Beauty Gems. A visit to its 10-storey, emerald-shaped tower, the most advanced jewelry manufacturing plant in Asia, would convince any visitor that the finest gems and jewelry are produced there with state-of-the art technology able to satisfy the most discerning customers.

The emphasis of Beauty Gems from the outset was on quality, not only in terms of its products of but also the overall standard of the Thai gem and jewelry industry. Even 10 years ago, it was realized that there had to be a reliable body for awarding benchmarks and certification to gold and silver products. Beauty Gems helped set up the Bangkok Assay Office in 1985 to provide an efficient, professional and personalized service as well as conducting studies to keep abreast of the latest technologies. Bangkok Assay Office also undertakes the development of suitable alloys to meet the needs of manufacturers of precious metal jewelry. To increase synergy within the group, Bangkok Assay Office is located in the same building as Beauty Gems of Bangkok Co., Ltd. Beauty Gems of Bangkok was set up to produce high-quality products for discerning markets through the use of exquisite craftsmanship and creative designs. The Gemopolis Industrial Estate is one of the most integrated and complete gem and jewelry manufacturing facilities in the world and has received investment promotion privileges from the Board of Investment and special industrial estate status from the Industrial Estates Authority of Thailand. Beauty Gems saw an opportunity to diversify into diamond cutting as there was a huge rise in demand for custom-cut diamonds in 1989 and 1990. It set up Royal Diamond Polishing Works and Royal Diamond Cutting Co., Ltd. to provide top-quality cut diamonds to its subsidiaries and other companies in Thailand. This diversification and proliferation of subsidiaries necessitated the founding of Beauty Gems Group Co., Ltd. as the administrative headquarters of the group. In anticipation of the rising demand for gems and jewelry in the U.S., Beauty Gems of the U.S.A Co., Ltd. was set up in 1994. With its business interests at home and abroad, Beauty Gems set up Beauty Gems Holding Co., Ltd. in 1996. This new holding company also enables Beauty Gems to diversify the group's portfolio beyond the gem and jewelry business.

It can be seen that the development of Beauty Gems has been carefully planned in response to the need for higher standards, greater reliability, and anticipation of promising business opportunities while trying to achieve maximum synergy.

Commercialization of IP Products

Beauty Gems has promoted the its brand name so that it is synonymous with high quality and perfection. It is meticulous at every stage of the production process, from the selection of the finest materials to outstanding craftsmanship in polishing and assembly. Beauty Gems products are renowned for their perfection in the world's leading markets.

In 1999, Beauty Gems received the Certificate "Thailand's Brand" presented by the then Prime Minister Chuan Leekpai. This was a clear recognition of the efforts and success of Beauty Gems in portraying itself as a purveyor of quality. This has been achieved in the major markets for Thai gems and jewelry, as a high percentage of the sale of Beauty Gems products is to overseas customers accounting for 97% of its total revenue in contrast to 3% for sales to the domestic market.

This success of the Beauty Gems brand has been built not only on the company's total commitment to quality and perfection but also on its determination to support the Thai government's policy of promoting the reputation of Thai products by attaching the tag "Made in Thailand" to every piece of its jewelry products. This has helped to raise appreciation of the excellence of Thai craftsmanship overseas. The increased appreciation in turn helps to cement the reputation of Beauty Gems on quality and perfection. Beauty Gems has benefited from this symbiotic relationship not only for its designs but also its belief that products made in Thailand have to be promoted as vigorously as possible by the private sector in conjunction with the public sector.

Beauty Gems has made and exported quality products under its brand name to overseas markets and called this line of product "Les Jardins de Venus" in the U.S. and another line called "Lien d' Amour" in Japan. However, this is not the whole story as many of Beauty Gems' products are not retailed overseas under the Beauty Gems label but that of its customers. This means that for the past 40 years Beauty Gems has managed to build unwavering trust and confidence even during the Thai financial crisis of 1997. The secret of this success in both good and bad economic climates domestically and abroad is based on its ability to keep customers' trade secrets. Dr. Sunee Sriorathaikul, President of Beauty Gems and associate judge of the Intellectual Property and International Trade Court of Thailand, has revealed that it was essential to safeguard not only the company's intellectual property rights but also those of its customers. She is convinced that the fact that the company did its best to protect customers' trade secrets was a key factor in establishing the reputation of Beauty Gems. She admitted that the Company supplies world-famous jewelry houses and international brands but declined to mention any names. According to her, when the Company is commissioned to create a jewelry product for a customer, it will never reveal the identity of the buyer in order to gain publicity. As jewelry products depend very much on design as well as craftsmanship, it is the policy of Beauty Gems never to disclose the designs made for or by the customers either directly or indirectly. Dr. Sunee said that since Beauty Gems attaches great importance to its own designs, it has attached even greater importance to designs made by clients. Beauty Gems recognizes the copyright protection of designs made by the clients. It understands that a new product line for any client must be kept secret and not disclosed before the client launches that particular line in his desired market. Dr. Sunee also said that a new product line was deemed by Beauty Gems to be a trade secret before it was officially launched. According to Dr. Sunee, Beauty Gems also looks at this policy of keeping clients' designs confidential as not only necessary to protect intellectual property rights, but also as part of its code of honor. Throughout its 40 years of business, Beauty Gems has never made an overrun of any design entrusted to it by the client or created by it for the client since such an act would not only infringe intellectual property in the form of design but also the betray trust. The honesty of the company and its fierce determination to protect the interests of the clients have been strongly reciprocated by their loyalty. Many orders are repeats by long-time customers. Word of mouth has spread information on the honesty, loyalty and integrity of Beauty Gems. (This has in some small way helped to deflect and soften the blow of a bad image in the Thai gem and jewelry business caused by certain unscrupulous local traders and merchants who prey on gullible foreign customers.)

It can therefore be seen that the commercialization of intellectual property products in the case of Beauty Gems is carried out in a novel way in the sense that it is the producer who protects the perceived trade secrets of the clients. There is a moral to be drawn from this and that is protecting someone else's intellectual property could be more rewarding than protecting one's

own. Export sales of around 5330 million Bahts in 2004 offer concrete evidence of such a practice.

Beauty Gems has also been attaching much importance to its own intellectual property works particularly trademarks, designs, and copyright. Mr. Surasit Sriorathaikul, the Managing Director, stated that during the period 1999 to 2005 the company filed for protection of trademarks and designs and notified the Department of Intellectual Property of its copyright works. Beauty Gems manufactures its gem and jewelry products in its four factories without forming partnerships or seeking licensing from others. Products for sale under its own brand or trademarks are designed in-house. In rating the importance of IP, Mr. Surasit singled out patents, new designs and technology to enhance the corporate image of the company as very important. This is backed by the adoption of a state-of-the-art microscope technology for the employees to enable them to carry out quality control of finished products with the least risk to their eyesight.. He concurred that owning a patent or other IPR would make it easier to attract a financier. He rated the role of IPR as important. The same degree of importance was attached to the importance of product improvement and new design over price competition, the function of IPR in eliminating potential competitors as well as preventing imitation, capitalizing on investment through selling or licensing IPR to others, and the role of strategic patenting in protection from prosecution for patent infringement.

Beauty Gems has been using its own financial resources and commercial bank loans to fund commercialization of its IP products. This is done without any Government support, incentives, or grants in any form, be they grants for commercialization of R&D, grants for developing prototypes or pilot plants, tax exemption, grants for patent applications.

Promotion of Innovation and Creativity

R&D has always occupied a special place in the corporate culture of Beauty Gems as it thrives on creativity. It cooperates with universities and higher education institutions as well as Government research institutes. Beauty Gems believes that the money spent on R&D is well spent as can be seen from its sponsorship of the Office of Thailand Research Fund without receiving any special privileges or tax exemption from the Government.

In its R&D efforts, Beauty Gems makes use of patent information and deems it highly important. This has a bearing on the technology and equipment employed as well as the process used in the selection of raw materials and the manufacturing of finished products.

The R&D capability stems from the knowledge and skills existing within the organization. So it is understandable that Beauty Gems has placed emphasis on in-house training to pass on the skills and craftsmanship of one generation of employees to another. This has helped to ensure the continuing presence of a highly-talented work force with superb work ethics, be they designers, administrators, or customer service representatives.

Beauty Gems does not stop at training its own employees. It has helped to develop human resources in the Thai gem and jewelry industry as a whole by providing "introduction to craftsmanship" courses under bilateral cooperation schemes with Government agencies such as the Department of Vocational Education, Ministry of Education, the Golden Jubilee Royal Goldsmith College, Bangkok, Bangkok Arts and Craft College, Thonburi Vocational College,

Kanchanapisek Technical College Mahanakorn, and other schools offering programs in silversmithing under the royal patronage of H.R.H. Princess Maha Chakri Sirindhorn.

It has also cooperated with the universities in providing textbooks for students such as gemology textbooks for Srinakharinwirot University Prasanmit Campus.

Beauty Gems, fully aware that education must be an ongoing process, has encouraged and assigned employees to attend training courses to increase their efficiency and productivity at the Institute of Supporting Technology and Thailand Productivity Institute of Supporting Technology and the Thailand Productivity Institute. This is supplemented by training programs organized by international experts and specialists.

The Company has introduced an incentive system by providing cash rewards, job promotion and special awards as well as recognition. The Company's management is committed to give credit where credit is due.

Another way of promoting innovation and creativity in the group is encouraging employees to take part in design and production contests.

This dedication to achieving excellence through the promotion of creativity has paid dividends in the production of unique works of art such as the model of the Royal Barge "Suphannahong" (Golden Swan) decorated with precious stones and a golden swan figurehead. It took 40 skilled craftsmen 10 months to finish the work which has been exhibited all over the world.

Another important project by Beauty Gems was the Royal Barge Naraisonsuban which was created to pay the most humble respect to His Majesty the King Bhumipol at the Golden Jubilee Celebrations for His Majesty's accession to the throne. This model of the Royal Barge Naraisongsuban was painstakingly made with gold and precious stones.

In addition, Beauty Gems has educated its work force on the importance of IPR through designated IP personnel. This is intended to supplement the fruits of their creativity by making employees aware of the legal protection available.

Conclusions

1. The major asset of Beauty Gems is its human resources capable of ensuring quality and timely delivery.

2. Employee training programs are crucial for the sustainable success of the company in order to pass its know-how and expertise on from one generation to the next.

3. Management standards have to be on a par with or better than international ones.

4. There is a need for perfection in the whole production process from sourcing raw materials to turning out the finished products.

5. Creative designs are a must in meeting the requirements and tastes of the domestic and overseas markets.

6. Honesty and loyalty to customers contributes much to the good reputation of the company and helps to maintain customer loyalty.

7. Discretion is a virtue that has to be practised at all costs as improper disclosure could be highly damaging to customers.

8. There should be a new adage that protecting the customers' IPR could be more rewarding to the manufacturer than protecting his own.

9. The work force should be educated on the importance of IPR and the need to protect and enforce them.

10. There is a need to improve the overall standard and efficiency of the gem and jewelry industry as a whole since it will provide a positive environment for every manufacturer and trader in the industry to improve its practices.

11. To promote innovation and creativity, there is a need to put a system of incentives in place in the form of cash rewards, prizes, and recognition as well as participation in design contests.

12. Education is a pre-requisite of maintaining and promoting innovation and creativity so there is a need for cooperation with educational institutions involving the gem and jewelry industry.

13. To be successful, it is imperative for the company to have a satisfied and happy work force which takes pride in its work in order to deliver the products and services that will ensure customer satisfaction.

14. To cope with increasing competition worldwide, it is imperative to emphasize quality, quality, and quality. This is possible with making IPR protection and exploitation part of the working environment.

PART III

List of Manuals, Guidelines and Directories
in the Area of
Intellectual Property (IP) Portfolio Management

COUNTRY: THAILAND

No.	English Title + Brief Description of its Contents in less than 50 words	Year of Publication	Agency Responsible and Address	Contacts (Tel/Fax/email)
A.	**PATENT AND INVENTION RELATED**			
1.	www.toryod.com This is the website of the Thai Society for Innovation providing world class resources in the form of patent information, search tools, and patent download and mapping to encourage incremental innovation, facilitate exchange of information, and provide a market place for trading of inventions.	Presently updated	Thai Society for Innovation (TSI), Food Product Research and Development Institute, Kasetsart University, Bangkok	Tel. no. 662-9428629 ext. 908, 626 Email: TSImember@yahoogroups.com
2.	Types of IP- Patent (in Thai) index at www.ipthailand.org, the official website of the DIP. This gives information on procedures and steps on filing of patents, latest directives and regulations and advice to users.	Presently updated	Department of Intellectual Property (DIP), 44/100 Sanambinnam Rd, Amphur Muang, Nonthaburi 11000, Thailand	Patent Office Tel. no. 662-5474713-7, 5474710
3.	Patent Gazette (in Thai). This is a publication of patent applications. It also appears on-line under "Patent publication" on the tool bar of www.ipthailand.org.	Periodically	Department of Intellectual Property (DIP)	Hard copies of the patent Gazette can be found at major libraries and industry and trade organizations
4.	www.ipic.moc.go.th This is the website which provides abstracts of patents granted by the USPTO, EPO, JPO, and the DIP with user guides for searching patents in English and in Thai.	Presently updated	Industrial Property Information Center, DIP	Tel. no. 662- 547 4654 Email: admin@ipic.moc.go.th
5.	"Top Thai Innovations Volume 1" (in Thai). This is a book showcasing innovations which were winners at the National Innovation Awards 2005 and innovations which are the subject of joint projects with the private sector, totaling 50 innovations.	September 2005	National Innovation Agency (NIA), Ministry of Science and Technology, 73/1, Rama VI Rd., Thung Phayathai Sub-District, Rajthevi District, Bangkok 10400	Tel. no. 662-6446000 Fax. no. 662-6448444 Email: info@nia.or.th The book is available at Chulalongkorn University Book Center

6.	Handbook of Patent Registration and Patent Law. This gives advice on how to file a patent application and explanation of the Patent Law in detail. Somewhat outdated.	1994	By Mr. Vibul Tangkittipaporn	Available at Chulalongkorn University Book Center Tel. no. 662-2187010-15 Fax no. 662- 2549495 http://www.chulabook.com
7.	"Innovate Thailand: Case studies from the U.S. and the EU and the strategy for building innovation for Thailand" (in Thai). This book looks at the policies and measures used by the U.S. and EU as well as analyzing weak and strong points to determine a suitable strategy for Thailand.	April 2005 ISBN 974229743-6	NIA Author: Mr. Prida Yangsukstaporn	Available at Chulalongkorn University Book Center
8.	Traditional knowledge index on the home page of www.ipthailand.org which provides a search facility of the database containing works on traditional knowledge notified to the DIP plus basic information and departmental announcements on notification of traditional knowledge.	Presently updated	IP Capitalization Office, DIP, 44/100 Sanambinnam Road, Amphur Muang, Nonthaburi 11000, Thailand	
B.	**INDUSTRIAL DESIGN RELATED**			
1.	All the items in Item A above are applicable here as industrial designs are considered to be a section of patents according to Thai patent law.			
C.	**TRADEMARK RELATED**			
1.	Types of IP- Trademark index (in Thai) on the home page of www.ipthailand.org, the official website of the DIP. It gives basic information on trademarks and guidance on how to apply for registration of a trademark plus relevant rules and regulations as well as an application form. It also provides information on procedures for applying for trademarks abroad.	Presently updated	Department of Intellectual Property (DIP)	

D.	**COPYRIGHT RELATED**			
1.	Types of IP- copyright index (in Thai) on the home page of www.ipthailand.org, the official website of the DIP. It gives basic information on copyright and guidance on how to register copyright works as well as the relevant rules and regulations.	Presently updated	DIP	
2.	CD compilation of model contracts on copyright for MS Word 98/2000	N/A	Chulalongkorn University Book Center	
3.	"Practical Steps on Legal Issues Arising from Copyright Cases in the Intellectual Property and International Trade Court". This book in its 3rd edition provides comprehensive information on procedures in copyright cases as well as steps for initiating litigation in both civil and criminal cases.	2005	By Judge Supis Praneetpolkrang	Available at Chulalongkorn University Book Center
E.	**BUSINESS RELATED**			
1.	"Intellectual Property Valuation Techniques" (in Thai). This book addresses the various factors and criteria for valuation of intellectual property with reference to actual business facts and cases.	September 05	By Mr. Prida Yangsukstaporn ISBN 974-93458-3-4	Available at Chulalongkorn University Book Center
2.	"Handbook for Registering & Managing Intellectual Property" (in Thai). This book provides comprehensive instructions on the registering of intellectual property works, the assessment of their business potential and the ways and means to determine and manage an IP portfolio.	August 05 ISBN 974 229 790-8	National Innovation Agency (NIA)	
3.	Information on converting assets into capital on the home page of www.plangsinsap.or.th, the official website of the Assets Capitalization Bureau. It provides background information on assets capitalization and hyperlinks with other relevant agencies particularly with the DIP on converting IP assets into capital.	Presently updated	Assets Capitalization Bureau, Building no. 41, Prime Miniser Office, Pissanulok Road, Dusit, Bangkok 10300, Thailand	Tel. 662-629-9222 Fax. 662- 629 9222 ext. 205 Email: acb@plangsinsap.or.th

4.	Intellectual Property Central Market index on the home page of www.ipthailand.org , the official website of the DIP. It contains a search tool for available IP products as well as providing an online market place for the buying and selling of IP products and offering opportunities for joint ventures.	Presently updated	Department of Intellectual Property (DIP)	Intellectual Information Center, DIP Tel. 662- 5474660-1 Fax. 665- 5474661
F.	**FINANCIAL GRANTS**			
1.	The index "IP Capitalization" on the tool bar of the home page of www.ipthailand.org . This provides very helpful guidance for those interested in turning IP assets into capital as they will have access to all the relevant regulations, procedures for loan applications with IP as collateral, and examples of how the conversion should be done.	Presently updated	Department of Intellectual Property (DIP)	