

# **Case Studies – Effective Use of IP Assets by SMEs in their Business Strategy**

**Training of the Trainers Program on Effective Intellectual Property Asset Management by Small and Medium Sized Enterprises (SMEs)**

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# IP and Company Performance

- The value of disclosure
- To monitor what competitors and potential collaborators are doing
- To incentivize researchers and employees
- As a source of funding
- To enable licensing of own-technology
- To increase freedom to operate and secure technology from others
- As a focus for management best practice
- As protection against infringement

# The value of disclosure

- As a source of technical information
- As strategic device
  - Firms disclose a large amount of information in their patents
  - Such disclosures are made for defensive purposes
  - Another reason is that if an invention of a given value would have been granted patent protection prior to the disclosure, the disclosure raises the height of the hurdle to be surmount and extends the patent race
- As a shop window
  - Company partially discloses ideas and concepts at technical conferences and fairs to raise profile with potential clients
  - Company uses patents as a form of accreditation of their technology prowess

# To monitor what competitors and potential collaborators are doing

- Monitoring patenting
- Ensure other firms do not infringe company's IPRs and vice versa
- Save costly R & D effort in areas where patented inventions already exist
- "Freedom To Operate" – likelihood that an inventing company will infringe other firm's patents in areas of technology they want to develop and allow access to technology that will be useful in their inventive efforts
- Non-exclusive cross-licence agreements

# To incentivize researchers and employees

- The award of patent rights to a company can be used to incentivize employees
- Case awards, salary increases, promotions, public praise and prestige for employee-inventors
- Such mechanism will encourage employees to share their expertise and endure the lengthy and resource intensive patenting process
- Useful to raise awareness of staff about the importance of IP
- Important that in such incentive programmes that the employee's contract is clear that the company owns the patent
- Confidentiality clause requiring employees to keep the invention secret

# As a source of funding

- Using IP to attract investors
  - Systematically evaluating a company's "Freedom To Operate" before the launch of a new product not only minimizes the risk of infringing, but also improves the chances of finding business partners and attracting investors to support the company's business plans
- As collateral for borrowing
  - Singapore is introducing a new financing scheme to help local SMEs to use their IP as collateral when applying for bank loans
  - Government will partially underwrite the value of patents so that banks will not be made to bear all the risks if the firms cannot repay the loan

# To enable licensing of own-technology

- Licensing means the IPR owner gives written authorisation for another firm to use the patented technology for “specified activities”, in “delimited markets” for a given period of time
  - The case of Pilkington in 1959
  - The case of Bishop Steering (Australian firm)

# To increase freedom to operate and secure technology from others

- Patent pools
- Cross-licensing
- Access to know-how and technology
- Freedom to operate

# As a focus for management best practice

- Protecting IP assets is not an end in itself
- The real commercial objective is to exploit the assets to generate revenue and to maximize profit
- It involves taking a strategic approach
  - Identify all the IP owned by the company
  - Record appropriate details about those assets in an IP asset register
  - Audit it periodically
  - Protect it wisely, using the most appropriate legal mechanisms
  - Value each IP asset and reflect this in the balance sheet
  - Ensure commercialization of new IP does not expose the company to risk
  - Commercialize the property
  - Attribute ownership of IP so that others know who owns it
  - Enforce their rights when they are infringed or threatened
  - Develop and adhere to corporate policies and practices about handling and managing IP

# As protection against infringement

- Protecting an invention
- Protecting a trade mark/brand
- Protecting a design

# Case Studies

- Research conducted on three companies.
- They were selected on the basis that they are likely to be users of the patent system in Singapore and elsewhere.
- These companies have also been chosen because they have been recognized as being very innovative in their products, services, designs and design services.
- Consequently, intellectual property would constitute a sizeable portion of the assets in these companies and the effective protection of their intellectual property would be an important concern.
- Semi-structured interviews were conducted with senior managers from each company.
- The three companies are:
  - Company A – Healthy Lifestyle Products Company
  - Company B – An Electronic Systems Company
  - Company C – A Water Treatment Company

# Company A

## Healthy Lifestyle Products Company

- **Company Background**

- Company A is a Singapore public company listed on the Singapore Stock Exchange Mainboard and is a global leader in healthy lifestyle products.
- Company A manufactures and sells a wide range of healthy lifestyle products focusing on areas such as health, hygiene, nutrition and fitness.
- Company A was established in 1980 and started off as a trading company selling household goods.
- It later ventured into healthy lifestyle products and started to sell handheld massages and foot reflexology rollers.
- Now, Company A has more than 500 outlets in Asia, the Middle East, United Kingdom and North America.
- Its annual turnover for 2012 was S\$601 million and more than 80% of this was generated by markets outside of Singapore. In 2003, its annual turnover was S\$287 million.

# Company A

## Healthy Lifestyle Products Company

- **Use of Intellectual Property**
- Company A owes much of its success to innovative marketing strategies and a constant drive to produce successful products with superior designs, features and quality.
- In 2002, Company A set up a in-house Research and Development Team consisting of product design research and technology research.
- The Research and Development Team is tasked to explore new technologies, product platforms and hybrid products.
- Since its inception, the Research and Development Team in Company A has launched several innovative products including massage chairs, blood pressure meters, eye massagers and scales that read and calculate weight, body fat and water content.

# Company A

## Healthy Lifestyle Products Company

- **Use of Intellectual Property**
- Company A is a strong believer in owning and developing intellectual property.
- It has more than 10 registered designs rights under its name for the various innovative designs of its very successful products.
- It does not own any patents at the moment but has filed 2 utility patents in more than 10 countries in the world.
- The filing of these patents overseas is done via the Patent Co-operation Treaty (“PCT”) route which is more cost effective and time saving.

# Company A

## Healthy Lifestyle Products Company

- **IP Strategy**
- Company A's current strategy is to seek and secure protection for its innovative products and designs here in Singapore and elsewhere in the world.
- The main objective is to erect barriers of entry to its rivals and deter illegitimate copying of its innovative designs.
- As Company A's present competitive edge lies mainly in the innovative designs of its healthy lifestyle products, it uses the registered designs protection system in Singapore and elsewhere to maintain this competitive edge.
- As Company A is gradually building up its technology and functional capabilities, it is now also looking into filing patents to maintain its lead in the relevant art.
- As a strategy, Company A also actively and vigilantly enforces its intellectual property rights.
- It has taken legal action in both Taiwan and China for counterfeits and substantial illegitimate copying of its designs in the massage chairs.

# Company A

## Healthy Lifestyle Products Company

- **IP Strategy**
- On the whole, Company A feels that designs and patent registrations help to increase the company's competitive edge.
- With the legal protection granted by the government, Company A seeks to deter others and this gives the company a head-start in the exploitation and commercialization of its innovative products.
- Company A notes that as patent and design registrations often involve the complete disclosure of the invention concerned to the Patent Office and the public, such a protection scheme may not always be the most appropriate form of protection.
- In fact, from a strategy point of view, it may be more advantageous to resort to secrecy particularly for nutritional and health supplements products.
- Besides, registered designs and pending patent applications, Company A also owns other intellectual property rights such as trade marks and copyrights.

# Company B

## Electronic Systems Company

- **Company Background**
- Company B is one of the largest electronics system houses in the region.
- It is a wholly owned subsidiary of one of the largest public-listed companies on the Singapore Stock Exchange.
- Company B's core business is in the design, implementation and delivery of innovative electronics system solutions for commercial, industrial, defence and public services applications worldwide.
- Company B was established in 1960's and since then, it has become a leading provider of advanced electronics systems and solutions.
- Its business operations cover mainly the Asia Pacific region and the company markets to more than 50 countries worldwide.
- In 2012, Company B's revenue is S\$6380 million. In 2008, its revenue was S\$5345 million

# Company B

## Electronic Systems Company

- **Use of Intellectual Property**
- Company B's expertise and innovative systems solutions are delivered through its three strategic business groups:
  - Communication and Sensor Systems
  - Software Systems
  - Large-Scale Systems
- Each of these strategic business groups has its own Research and Development Units which undertake relentless pursuits in leading-edge technologies in their respective domains.
- Research and development is a key component of Company B's strategy in the creation of cost-effective proprietary products and innovative system solutions for its customers.
- Company B's research and development efforts have resulted in the development of many innovative products, one of such innovative products played a significant role in a recent national health crisis.
- Over the years, Company B's strong focus on research and development had won for itself numerous accolades and awards.

# Company B

## Electronic Systems Company

- **IP Strategy**
- Company B has filed a total of 35 patents in Singapore and the other major markets such as the United States of America and the European Union.
- Patent filing in countries outside of Singapore is done via the Patent Cooperation Treaty (“PCT”) which is considered to be more cost-effective and time saving.
- In Company B, the decision of whether and how to file for a patent is undertaken with the participation of the senior management.
- During the company’s monthly top management meeting involving all the general managers of strategic business groups, inventors will present proposed filings for the meeting’s filing approval.
- The meeting will consider issues such as whether it is more advantageous from the company’s perspective to file for patent or to keep the new technology as a trade secret and if patent filing is the preferred mode of protection, which are the countries to file in.
- Since the filing process involves the general managers of all the strategic business groups, relevant IP protection strategies and experiences are shared and cross-fertilization of ideas often also serves to enhance the inventions.

# Company B

## Electronic Systems Company

- **IP Strategy**
- There are 2 aspects to Company B's IP strategy. One, the conventional defensive approach, is to use standard patents to stop competitors from copying their solutions and products.
- The other motivation for filing and owning patents is to use patents as a differentiating tool and to provide distinctiveness to Company B's systems solution offerings .
- The fact that Company B has proprietary ownerships such as patents in certain specific product features in the entire large system solution offered to their clients gives Company B a competitive edge against its competitors.
- This is because this puts the company in an advantageous position to solve the system problems of their clients in a unique way which is unrivaled by others.
- Patent ownerships are also important bargaining chips for Company B in the negotiation of alliances with other business partners.
- At the present moment, licensing revenues from the commercialization of the patented technology is not one of the main objectives of Company B in its IP strategies.
- In the electronics business, product life-spans are very short and hence Company B does not expect to maintain all its patents through their entire validity period.
- Besides patents, Company B also owns other intellectual property rights such as trade marks and copyrights.

# Company C

## Water Treatment Company

- **Company Background**

- Company C is a public-listed company on the Singapore Stock Exchange's main board, supplying water treatment equipment and systems as well as its proprietary membranes.
- Company C's core business is in five main areas -- seawater desalination; manufacturing process stream separation, concentration and purification; structured build-own-operate/transfer solutions; aquovators and home filter; and material science development in biodegradable plastics and cutting edge technology in lactic acid production.
- Company C was established in 1989 and since then, it has grown into a leading regional player with market capitalization of over S\$480m, employing more than 480 staff in Singapore and China.
- Company C enjoyed a turnover of S\$ 481m in 2012. Its turnover was S\$81.2m in 2003. More than 50% of Company C's gross revenue earned is generated overseas, particularly China.

# Company C

## Water Treatment Company

- **Use of Intellectual Property**
- Company C actively engages in research and development conducted in house or in collaborations with leading institutions worldwide.
- The main areas of research and development are in membrane technology, biodegradable plastics and lactic acid production.
- Company C's relentless pursuit in developing leading edge technology in these key areas of competence not only ensures that Company C stays ahead of its competitors in the field but also serves as a main thrust to put Company C on the world map as a leading water treatment company.
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# Company C

## Water Treatment Company

- **Use of Intellectual Property**
- As an integrated solutions provider, Company C offers a comprehensive range of services which includes the design, fabrication, installation, instrumentation and maintenance of liquid treatment systems.
- Besides water treatment, Company C is also involved in the treatment of process industry fluids such as those used in the agri-food, pharmaceutical, biotech, chemicals and petrochemicals sectors.
- Company C has also made significant in-roads to the food process industry, in particular the cane sugar process technology.
- Its stainless steel membrane separation technology, a technology developed by Company C's in-house R & D, has improved the yield, quality and efficiency of cane sugar production considerably at significantly lower costs.
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# Company C

## Water Treatment Company

- **IP Strategy**
- To date, Company C has been granted a total of 10 patents filed in Singapore and in several other countries such as the United States of America, China and the European Union. Patents filed overseas are made via the Patent Co-operation Treaty which is more efficient and less costly. Presently, Company C is in the process of filing patents covering processes involving organic acids and other by-products. To strengthen and enhance its patent portfolio, Company C acquires patents of leading technology from other countries and also assists its business partners in the registration of patents in Singapore.
- Company C possesses advanced technology for lactic acid production and it also owns one of the world's foremost patents on biodegradable plastics acquired through in-house research and jointly developed with reputable institutions worldwide.
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# Company C

## Water Treatment Company

- **IP Strategy**

- The objectives of filing patents are multifold for Company C.
- It uses the patent system to protect its core competence and know how in the water treatment processes and products.
- Patents granted and acquired serve as an important notice to others in the market that Company C is in the business of water treatment and it has proprietary rights over the relevant processes and products.
- With a strong patent portfolio, Company C is seen as the leader in the relevant technology and this gives Company C the competitive edge when negotiating contracts with others.
- As a strategy, Company C prefers to maintain confidentiality of its new inventions until it is opportune to announce to the business community that it is in possession of such a technology.
- Therefore, not all new technology developed by in-house researchers or with collaborators that are patentable is automatically filed as patents.
- Company C makes careful decisions with regard to what technology to file and what to retain as collateral know how within the company.
- At the end of the day, business consideration dictates whether the patent system is the appropriate means of legal protection for the technology concerned.
- Similarly, business consideration is also the overriding factor whether a particular patent ought to be renewed or not and if it is to be renewed, what is the ultimate term of the patent.

# Company C

## Water Treatment Company

- **IP Strategy**
- Company C feels that patent registration increases its competitive edge, especially when the technology concerned is an important component of Company C's core competence.
- An example is Company C's ultrafiltration membrane technology. The proprietary rights over this technology have allowed Company C to compete advantageously in large scale project tenders.
- The ability to manufacture its own membrane has resulted in substantial costs savings for Company C.
- Besides patents, Company C also has other intellectual property rights such as trade marks and trade secrets.

# Conclusion

- The above discussions show that there are many different ways in which IPRs impact on performance of a company
  - As a shop window to attract new clients
  - As a strategic mechanism to make it harder for competitors to surmount the novelty hurdle in patent applications
- Companies also take on a holistic way to protect their IP with a combination of patents, trade secrets, trade marks and others
- Thus, there are important synergies between the different IPRs which companies can explore to be used to their full competitive advantage

# Thank You!

## Questions?