

Research on Selection of Intellectual Property Strategies by Privately-run Sci-tech Enterprises in Guangdong

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Abstract. The development of privately-run sci-tech enterprises is based on the development and application of new high technology, and the precondition for the latter is intellectual property protection. Intellectual property strategies are overall planning as well as important tactics and means to use intellectual property legal protection system to fully safeguard one's legitimate rights and interests, obtain and maintain competitive edges, restrain competitors and seek optimal economic performance. This paper puts forwards to ways to select intellectual property strategies by privately-run sci-tech enterprises in Guangdong based on their characteristics and integrating BCG Matrix.

Keywords: Intellectual Property; Strategies; Privately-run Sci-tech Enterprise

1. Introduction

In legal sense, intellectual property (IP) right is defined as "exclusive rights to a specific creation of the mind granted by law to the owner of the intellectual achievement for a certain period." It is legal, innovative, time-limited, privately-owned and intangible. It mainly includes patents, trademarks and copyrights. IP strategies are overall planning as well as important tactics and means to use IP legal protection system to fully safeguard one's legitimate rights and interests, obtain and maintain competitive edges, restrain competitors and seek optimal economic performance. IP strategy is an interdisciplinary topic integrating science and technology, law, management, economics and other subjects.

The development of privately-run sci-tech enterprises is based on the development and application of new high technology, and the precondition for the latter is IP protection. Without IP protection, a powerful driving force will be missing for the development of privately-run sci-tech enterprises and it will be difficult for these enterprises to grow. Problems with privately-run sci-tech enterprises in Guangdong mainly include low IP awareness, unreasonable structure of IP applications, inadequate patent development capabilities, weak IP management, increasing IP disputes, weak IP protection and shortage of IP talents. For this reason, the research on selection of IP strategies by privately-run sci-tech enterprises in Guangdong is highly necessary for accelerating the development of privately-run sci-tech enterprises and cultivating new economic growth points. This paper proposes ways to select IP strategies by privately-run sci-tech enterprises in Guangdong based on their characteristics and integrating BCG Matrix.

2. Classification of IP Strategies

Currently, domestic scholars classify corporate IP strategies by different attributes.

One method classifies IP strategies by the scope of IP protection as patent strategy, trademark and brand strategy, and trade secret protection strategy. According to the three kinds of legal status of patents, namely

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pending, under examination and granted, patent strategy can be divided into patent application strategy, protection strategy and patented technology introduction strategy; according to the use of patents, patent strategy can be divided into patent exploitation strategy, patent licensing strategy and patent transfer strategy. In the opinion of Feng Xiaoqing (2003), in the stage of patent R & D, patent strategy can be classified as pioneering patent strategy, follower patent strategy and introduced patent strategy according to the corporate strategic positioning of patented technology R & D. Trademark strategy can be further divided into trademark use strategy, trademark design and selection strategy, trademark prompt registration strategy, associated trademark strategy, defensive trademark strategy and renowned trademark strategy etc. Trade secret protection strategy includes trade secret protection strategy and non-competition.

A second method classifies IP strategies by strategy implementation responding to market competition under offensive, defensive and offensive-defensive IP strategies. As viewed by Yang Xingxian (2000), common offensive strategy includes basic patent strategy, around patent strategy, patent sale strategy, patent buying strategy and patent feedback strategy. In the opinion of Han Xiucheng (2003), patent litigation strategy is both an offensive and defensive patent strategy.

According to stages of technology development of enterprises, a third method classifies IP strategies under initial stage, stalemate state and attacking stage. In the opinion of Liu Renhao (2005), in the initial stage of an enterprise, there is patent literature exploitation strategy, strategy for cancelling the rival's patent, strategy to use invalid patents, round-the-barrier patent strategy and patent feedback strategy; in the stalemate stage, there is patent network strategy, publication strategy, and cross-licensing strategy; in the attacking stage, there is basic patent strategy, paid patent transfer strategy, patent-product strategy and patent-trademark strategy.

Based on the contents, the fourth method classifies IP strategies as innovative strategy, application strategy, protection strategy and IP management strategy.

Through a comprehensive view of these different classifications of IP strategies, we can see that some of them are overlapping. Here we summarize them as shown in Table 1.

Table 1 Classifications of Corporate IP Strategies

Types of strategy		Implementation
Corporate patent strategies	Offensive patent strategies	Basic patent strategy, patent network strategy, patent sale strategy, patent buying strategy, patent feedback strategy, patent-product strategy, patent-trademark strategy, patent investment and acquisition strategy, patent litigation strategy, patent-standard strategy
	Defensive patent strategies	Strategy for cancelling the rival's patent, publication strategy, cross-licensing strategy, strategy to use invalid patents, round-the-barrier patent strategy and basic patent expiry strategy
	Offensive-defensive patent strategies	Combinations of the above strategies according to actual conditions
	Technology import and export patent strategies	Patent buying strategy, cross-licensing strategy, direct introduction strategy and innovative introduction patent strategy, patent cooperation strategy, patent franchise strategy, compensatory trade strategy with patent and technology transfer
Corporate trademark strategies		Trademark use strategy, trademark design and selection strategy, trademark prompt registration strategy, associated trademark strategy, defensive trademark strategy, trademark-trade name integration strategy, trademark image strategy, trademark competition strategy, trademark advertising strategy, trademark licensing strategy, renowned trademark

	strategy
Corporate trade secret strategies	Trade secret protection strategy, non-competition
Corporate IP management strategies	Setting up a corporate IP management agency

3. Selection of IP Strategies by Privately-run Sci-tech Enterprises in Guangdong

IP strategies can be classified as patent strategy, trademark and brand strategy, and trade secret protection strategy. Meanwhile, patent strategy can be further classified as offensive, defensive and offensive-defensive IP strategies. According to their characteristics and integrating BCG Matrix, privately-run sci-tech enterprises in Guangdong should select their corporate IP strategy according to the market share of their products and their IP competitiveness, considering that market share represents products' market presence and popularity among consumers and that IP competitiveness represents sci-tech products' market competitiveness and potentials. For an enterprises with strong IP competitiveness and large market share, an offensive IP strategy should be adopted; for an enterprises with weak IP competitiveness but large market share, a defense-oriented offensive-defensive IP strategy should be adopted; for an enterprises with weak IP competitiveness and small market share, a defensive IP strategy should be adopted; and for an enterprises with strong IP competitiveness but small market share, an offense-oriented offensive-defensive IP strategy should be adopted. See Fig. 1 below.

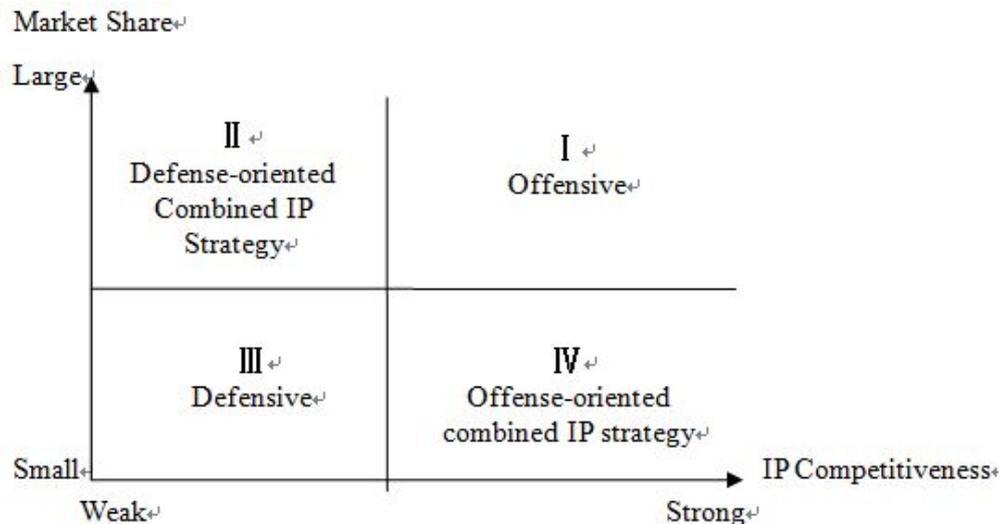


Fig.1 IP Strategic Orientation Chart

3.1. I quadrant

This type of enterprises are star enterprises with high technology capacities, strong IP competitiveness, high market share and strong marketing ability. Enterprise with strong technology development capability and financial strength may establish their own research institute and focus on independent innovation. On the one hand, they should patent their technology, obtain independent IP rights and continuously develop new technology; on the other hand, they should industrialize the technology and explore the market. For example, Huawei, ZTE, Netac and other enterprises in Shenzhen apparently should adopt offensive IP strategies.

Ever since it was established, Netac has attached great importance to technological innovation and marketing, and implemented an aggressive and offensive IP strategy. In 1999, Netac independently developed the first flash disk in the world and named it USB flash disk. This rewrote the embarrassing history that over the past two decades no original invention had ever been put forward in China's computer storage domain. Till now, the company has applied for more than 100 patents, the majority of which are patents of invention. Netac was granted its Chinese patent in July 2002. This patent covers flash disks, flash-based MP3 players and many other digital products, filling the two decades' blank in patents of invention for China's computer storage and MP3 player domains. As a number of patents of invention are granted to the

company, Netac has established a relatively thorough patent network in the field of flash disk. Its ZL99117225.6 flash disk basic patent of invention “Flash Electronic External Storage Method and Its Equipment for Data Processing System” obtained American patent (under No.: US6829672) on 7 December 2004. Netac has also applied for patent in EU, Japan and other countries and regions. In early November 2006, Netac officially announced that it had been granted the flash disk basic patent of invention by Korea and obtained patent protection in Asia.

In terms of patent strategies, these enterprises can adopt basic patent strategy and patent network strategy to increase technical barriers and barriers to entry for competitors; they can also consider protecting their rights and interests as well as earning large sums of damages through litigation. At present, Netac has basically completed its patent layout of flash disk technology and makes continuous efforts to innovate and develop new technology, forming a patent strategy featuring high-end offense, medium-end following and low-end defense.

They can make use of their leading status in the industry and rely on their market advantages to implement standardization strategy and set up industrial technological standards or de facto standards, so as to obtain an absolute monopoly in the market. Netac is formulating the market standards of flash disks which integrate the company's basic patent technology, startup patent technology and super-stable patent technology, thereby setting Netac the real maker of flash disk standards and leader in the industry. While firmly knocking down malicious infringers, Netac establishes long-term cooperation or patent licensing cooperation with Samsung, IBM, Siemens and a number of other major enterprises. It actively participates in the setting up of national flash disk standards and promotes the healthy development of the flash disk market.

These enterprises can also combine patent strategies with trademark strategies, allowing their patents to be implemented by other enterprises but as a condition licensing their products and trademarks to the latter. This increases their sales while further enhancing their awareness and market share. In terms of trademark strategies, Netac has applied for Netac trademark to a number of countries and regions. USB flash disk is the trademark of Netac, and the most important asset of the company.

3.2. II quadrant

At present, most privately-run sci-tech enterprises in China are in this quadrant, such as Masson Group in Guangdong Province and BBK in the DVD industry. These enterprises have moderate scales, average IP competitiveness as well as weak technological innovation capacity and competitiveness yet flexible mechanism, strong resilience and marketing ability as well as high market share. They are cash cows, and can adopt defense-oriented combined IP strategy supplemented by trademark and brand strategies to gain IP competitiveness.

Trademark strategies should be based on genuine products and services, which is the fundamental strategy for the enterprises' growth. These enterprises may implement single trademark strategy, similar-products-same-trademark strategy, and main & vice trademarks strategy etc. according to their actual conditions. At the same time, they should draw up trademark protection strategy to prevent trademark infringements, cultivate top trademark and consider entering overseas markets and applying for foreign trademarks.

Lasting products require quality assurance and continuous innovation, which poses new challenges for the technological development capacity of the enterprises. However, these enterprises have weak technological development capacity and therefore should implement defense-oriented patent strategy. They can introduce technology from other enterprises for secondary development so as to form independent IP or IP network; they can also implement literature search strategy. There are currently up to 30 million patents in the world, but only around 12% of them are valid. As the majority of patents are invalid, enterprises may search from these vast resources and select suitable patent technology. According to the rules of the patent system, invalid patents and foreign patents can be produced, used and sold in China without compensation. Therefore, enterprises should first search for invalid patents, then foreign patents, and finally Chinese patents. In this way, privately-run sci-tech enterprises without strong financial strength can obtain the maximum market efficiency at the lowest costs.

3.3. III quadrant

These enterprises have small scales, limited funds, low IP competitiveness and relatively small market share. It is difficult to turn their technology into IP. They may adopt defensive patent strategies, positively introduce technology from other enterprises or use invalid patents. They can also research and develop IP jointly with other enterprises or research institutes, so as to improve their technology capacity.

Meanwhile they should apply trademark sharing strategy. With brand sharing, medium and small enterprises with limited strength form a union linked by the brand, and advertise as a united body, which cuts costs, enhance effects of brand publicity and promotes the awareness of the shared brand. In addition, brand sharing helps to realize sales channel sharing and improvement of market share.

3.4. IV quadrant

These enterprises feature strong IP competitiveness, relatively strong technological innovation capacity yet inadequate marketing ability and low market share. They are enterprises with unbalanced strength. Therefore, it is critical to enhance their market share by mainly implementing trademark and brand strategy while adopting offense-oriented combined IP strategy.

In terms of trademark strategies, the main consideration is on how to improve the market share of the products of these enterprises. However, the reason why products with high technical contents have low market share is the difficulties technology industrialization. For example, Kingsoft is a famous “small” enterprise, whose annual sales have never exceeded 100 million Yuan over the past 15 years due to rampant piracy in the market. For this reason, these enterprises should consider setting up a research institute for independent R & D, so that they will own more IP and obtain more legal protection. At the same time, they should use patent-product strategy and patent-trademark strategy to increase their product sales and enhance their market share. They can also use publication strategy to publicize technology that they have developed but considered not necessary to apply for patents, so that the technology loses its novelty, preventing other enterprises from obtaining patents for similar technology.

4. Summary

For an enterprise, the core of formulating and implementing IP strategy is to analyze the enterprise' IP competitiveness according to its internal and external environments, and then to select a suitable strategy model. Guided by its overall strategic objective, it should determine its IP strategic objective based on analysis of internal and external environments of its IP, select a suitable IP strategy and strategy combination, and strengthen the implementation, management and monitoring of its IP strategy.

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