Chapter 17
Strategic Patent Value Appraisal Model to Strengthen Corporate Technological Strategies

ABSTRACT

In this chapter, the author creates the strategic Patent Value Appraisal Model (PVAM) that contributes to corporate management technology. Improvement of "patent value" signifies engineers' value creation at work (invention). This model consists of several elements each for "inventive technique" and "patent right" in order to explain the indispensable elements of inventive technique and patent right for a strategic patent, and verified the validity of the model at Toyota and other leading corporations. Furthermore, standardization has been carried out in order to spread the effectiveness of PVAM, and Amasaka's Laboratory Patent Performance Model (A-PPM) has been created and its effectiveness will be investigated through trial application at major enterprises.

INTRODUCTION

Looking to attain a high performance business model for corporate management technology in Japanese companies, the author establishes and verifies the validity of the "New Japan Model" (NJM) using the five core elements "TDS, TPS, TMS, TIS & TJS" (Refer to Chapter 5). Among these, the intellectual property divisions are the think tank of corporate strategy and play a key role in acquiring patent rights and enhance the intellectual productivity of the company through collaborative activities employing SSTTM (Strategic Stratified Task Team Model) (Refer to Section 8.1).

In this section, therefore, the author proposes application of the strategic Patent Value Appraisal Model (PVAM) to corporate technological strategy (Amasaka, 2002, 2003a, 2007, 2009, 2015, 2022; Tsunoi et al., 2009; Anabuki, et al., 2011, Amasaka, Ed., 2012). It is generally stated that a "good patent" refers to an invention and/or a right that is useful for the entity that owns it for retaining their main business, while affecting the business of others. What is available in this field, however, is mere analysis

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of simple metrical statistics that are available from patent information. In other words, no qualitative analysis is available of the engineers' level of consciousness about the depth of "what is a good patent?" for them, the patent inventors.

Specifically, the author undertook the task of formulating measures to define the concept of the PVAM. He defined it by grasping individual engineers' recognition of the present status of their patents as linguistic information and understanding it quantitatively utilizing Science SQC (Amasaka, 2003b, 2004). An improvement of patent value signifies engineers' value creation at work (invention). The author has established the PVAM that consists of several elements, each for a strategic patent. In recent years, the author has continued to apply the PVAM successfully and proved the validity of the proposal with advanced car manufacture Toyota and other leading corporations (Amasaka, 2009, 2015; Amasaka, Ed., 2012).

Furthermore, standardization has been carried out in order to spread the effectiveness of PVAM, and "A-PPM" (Amasaka's Laboratory Patent Performance Model) has been created and its effectiveness will be investigated through trial application at major enterprises; (Akimoto and Shimoda, 2000; Hirota and Miyamoto, 2000; Ishigaki and Niihara, 2001; Kaneta and Kuniyoshi, 2003; Amasaka, 2003a, 2009, 2015, 2022; Amasaka, Ed., 2012; Anabuki et al., 2011). This study provides new insight that contributes to the quality patent creation process for innovating intellectual property function and enhancing engineering strategy.

SIGNIFICANCE OF PATENT ACQUISITION IN CORPORATE STRATEGY

Current Situation of Patent Application in Japan

Patent application by companies accounts for a large percentage of total applications and is growing annually (Japan Patent Office, 2005). Japan had the highest share of global applications in 2005, with approximately 500,000 patent applications filed, which is about 10% of the total number of global applications. However, only 30% of the patent technology was utilized and the remaining 70% are so-called "sleeping patents".

In fact, over 40% of patent applications are "defensive patents" which does not assume any practical use of the patent. The present state, in which approximately 150,000 patents are registered annually, signifies an approximately 1 trillion yen deficit between patent maintenance costs and royalty income from patent utilization. On the other hand, although total patent application in the United States is only half that of Japan (second largest share in the world), its trade balance in the past ten years has resulted in a 17.5 trillion yen surplus. Compared with the 4.1 trillion yen deficit of the Japanese technical trade balance, the US surplus implies remarkably high patent quality (Amasaka, 2003a).

Corporate Innovation and the Significance of Patent Acquisition

The observation above confirms that the recent propagation of "Corporate innovation through competitive patents" is a matter of course (Nikkei, 2002). The current task for a company's technological strategy is to promote development of epoch-making innovative technology that will lead to quality patents and the acquisition of competitive, unique patents. A patent must be innovative and original.