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How we can define the required skills of IP human resource in the future?

- Under Intellectual Property Strategies in a Global Age -

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초록 (Abstract)

국제시대에서는, 지적재산전략을 개발하고 실현하는 것을 필요로 한다. 그리고 또한 기업전략 실현에 대한 지적재산권과 지적재산활동을 효과적으로 행사하는 것이 중요하다. 그리고 어떻게 지적재산권과 관련된 법률소송에 익숙한 전문적인 인적자원으로부터 조감하여 기업 및 경영을 통제할 수 있는 인적자원을 생산하는지는 중요한 문제이다. 세계화의 발달과 개방형 혁신은 예를 들면, 인수합병(M&A)과 관련하여 국제법적 기준, 국경을 초월하는 기술 이전 등과 같이 전혀 없는 광범위한 지적재산활동을 필요로 할 것이다. 인적자원을 조성하기 위하여 어떠한 인적 자원이 요구되고 즉각적으로 근본적인 검토를 착수하는지 명확하게 할 필요가 있다. 그렇게 하기 위하여 가령 기관의 필요한 의식 개선, 인적자원 개발계획, 인적자원능력 그리고 업적 평가를 할 수 있다.

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How we can define the required skills of IP human resource in the future? · Under Intellectual Property Strategies in a Global Age –

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I. Introduction

Along with the progress of globalization and open innovation, the industrial world is entering many new phases over the intellectual property rights system and its operation. The business to be handled by the intellectual property rights department of the enterprise is becoming complicated and diversified and it is not possible to contribute sufficiently to corporate management by merely dealing with the right of intellectual property and its legal exercise, which was a large role in the past. In the field of intellectual property rights, it was mainly to carry out legal procedures described in intellectual property related laws such as patent law, design law, trademark law and detailed rules thereof. However, with the globalization of businesses, there are situations in which intellectual property rights are closely related to solving business problems faced by companies, such as issues accompanying M&A and technology transfer, and the work of the intellectual property rights department, which has been greatly expanded and evolved.

Therefore, in this paper, we will review changes in the relationship between intellectual property rights and business, and related issues to intellectual property activities. The objective is to present a new viewpoint as a message to the experts engaged in the company's intellectual property department. As a matter of course, understanding of new perspectives as a result of globalization of business will confirm the necessity of carrying out tasks based on these new perspectives. And there is a need for human resources who can solve those new problems. Through such discussion, we are expecting that the awareness about the capabilities and skills that the experts in the intellectual property field should possess will be increased in the future, and that more advanced intellectual property personnel will be developed.

II. Nine cliffs for IP activities

Going back to the principle that a creation can be born from criticism on the current status, let's conduct critical observations related to IP strategies and concrete

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activities up to now. How IP strategies have been formulated within corporations? If a strategy is a basic guideline for actions that indicate a major direction, it becomes necessary to define and understand the concrete actions along with the strategy. However, what are concrete targets of IP departments, and how have they managed so far? This point differs greatly for each corporation, and it is difficult to express this in a general manner, but upon summarizing interviews and hearings from a certain number of corporations, the following points can be pointed out, and described as critical cliffs, which shall be sincerely recognized by IP people.

1. Lack of strategy formulation processes

For the past behaviors by existing IP departments, they have been gathered strategy examples from other corporations, and defined as their own strategies, without being based on the basics of strategy formulation that has been developed and organized in the field of business administration. In order to formulate a strategy, the external environment analysis and internal resource analysis are necessary, then, the opportunities and risks, and strengths and weaknesses will become visible, which are necessary for strategy formulation. Here, it is expected to move forward with discussions within corporations by the basic process for strategy formulation.

2. Non existence of IP strategy for each business unit

Since the strategy formulation has been made at a companywide level, such strategy does not represent the strategy based on the products and market characteristics of each business unit. Furthermore, the past, present, and future predictions of each business unit are not taken into consideration as the materials for IP strategy formulation. Analysis of the external environment and the internal resources of each business unit are definitely necessary.

3. No clear relations with corporate strategy

The relationship between IP strategy and companywide management strategy has not been fully discussed so far. Although IP strategy is positioned to carry out and realize companywide management strategies, the IP strategy map is closed within the field of IP, and no clear relations with corporate management strategy. Unless the management objectives of the entire company are incorporated as strategy goals for IP field, the activities of the IP department will not be linked to management strategy.

4. Non existence of IP strategy

There are also corporations where no discussions are carried out in particular regarding IP strategy. At such corporations, there are many cases where everything starts and ends with creation of patent application documents based on invention

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proposal and various procedures, etc. with the Patent Office, and the goal is achievement in terms of the number of patent applications. Utilization of rights after registration is limited to procedures such as invention compensation, etc., and there are in reality many cases where special activities for utilization of rights are not carried out.

5. Limited behaviors within IP practices by IP staff

There are many cases where understanding of IP strategy has not permeated within IP departments. Although each member in the IP department is in charge of a business unit or product group and has jurisdiction of the application procedure for an invention, since the application has become more important than its purpose, its relationship with future business is not taken into perspective, and such members lapse into the practice of examining only the novelty and inventive step in terms of the relationship with references cited by the examiner.

6. Lack of collaborations with other functional departments

With insufficient coordination between the IP department and other departments, the activities of the IP department have lapsed into independent activities. Although the need for activities on the basis of trinity among business units, R&D, and IP department is stated and requested, this signifies the necessity for each of the departments to share companywide management strategies. The introduction of balance scorecards is also one of given consideration.

7. Delay for open innovation era

During the period of demanding for open innovation, clear discussions on concrete approaches for IP strategy for joint development, international standards, countermeasures against technology leakage, patenting or knowhow protection, etc. have not been made by existing IP department. Thus, the important decision making has also been missed and overlooked.

8. No serious concerns by IP people for emerging countries

A sense of impending crisis regarding the rapid increase in patent applications in emerging countries has not been shared. In China, the total number of domestic applications for patents, utility model, and design have already exceeded 2 million per year, and the number of Chinese patent applications filed in Europe, the United States, and the other emerging countries is also increasing. The foreign market, which is important for Japanese companies, is exposed to aggressive patent applications from emerging countries. If this goes on, the day when difficulties are faced in terms of IP protection is not far. Although delays by Japanese corporations in filing patent applications have also been pointed out, it seems very difficult for Japanese corporations to make drastic change of strategies and activities.

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9. Lack of consideration of basic inventions

Being unable to get rid of the habit of filing a large number of patent applications in Japan, many patents for improvement inventions are still filed every year. Patent application strategy which is based on the ratio between basic level inventions and improvement level inventions, will be important and necessary in the future. Although a transition from a catch-up-style to front-runner-style technology development has been expected for a long term perspectives, any drastic changes have not been accomplished when looking at domestic patent applications filed in Japan.

Although an attempt was made at criticizing the current status from the nine perspectives above, all phenomena require countermeasures at a very early stage amidst the strenuous changes occurring in the world. Unquestionably, they may be referred and named as the "cliffs of IP strategy and IP activities". For corporations, there are probably some perspectives stating that several of the items have already been resolved. As the degree of development differs for each company, it is only natural that the cliffs that the IP management level faces differ as well. It is necessary to start with discussions regarding which perspectives serve as cliffs for your corporation.

III. Competency to overcome 9 cliffs

Thus far, we extracted nine major crisis factors "cliffs" in the intellectual property field. And we will think about what kind of human resources are needed to get over these cliffs. Common to the nine cliffs, these crisis factors are not related to expertise or skills concerning intellectual property rights. Rather than expert knowledge, it depends on the level of skill "competency" of the behavior possessed by human resources. Therefore, in this report, we would like to summarize how to define the competency necessary to overcome these barriers and make a message including awareness reform of human resources active in the intellectual property field.

Here, we will use the competency model shown in the following table organized from McClelland's competency theory to arrange the competency necessary to overcome the cliff.

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	Relationship with self	Relationship with others
Recognition	Self-relative Self-rating Confidence	Empathy Organization sensory power Service orientation
Behavior	Self control reliability Integrity Adaptability Achievement orientation Foresight	Fostering ability leadership Interpersonal impact Communication skills Transformation driving force Adjustment of interest Building relationships Teamwork

Source: Hay Group's competency model

We extracted the actions required for intellectual property by deductive reasoning from the points of the cliffs and organized the competency to induce those behaviors as follows.

	Precipices	Required attitudes and behaviors	Competency
1	Lack of strategy formulation processes	Sharing corporate strategy Analytical skill for outside environment and internal resources Business management Idea generation	Self-relative Adaptability Achievement orientation Organization sensory power Transformation driving force Adjustment of interest Building relationships Teamwork
2	No IP strategy for each business unit	Business understanding Communication with business unit Footwork to jump into business Product market oriented	Adaptability Organization sensory power Service orientation Communication skills Building relationships
3	No clear relations with corporate strategy	Conceptual understanding Integration between IP with corporate strategy	Achievement orientation Foresight
4	No IP strategy	Broaden the sight from legal to business Review and change current responsibility	Integrity Transformation driving force
5	Limited behaviors within IP practices by IP staff	Sharing knowledge and experience Leadership and involvement	Self control Communication skills
6	Lack of collaborations with other functional departments	Communication with other department Integration of mutual objectives	Communication skills Building relationships
7	Delay for open innovation era	Broaden the sight beyond existing framework Technology scouting	Foresight Communication skills
8	No serious concerns by IP people for emerging countries	Broaden the sight globally Maintain sense of crisis	Self-relative Foresight
9	Lack of consideration of basic inventions	Challenging breakthrough Challenging leading position	Self-rating Foresight

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IV. Reform of awareness of the IP department evolves IP strategy

Many of the human resources engaged in the intellectual property field seem to be practitioners with expertise in intellectual property laws and regulations. However, from the discussion above, in addition to the knowledge and experience in the special field of legal practice so far, a person with a broad perspective such as business administration, business, psychology are necessary. In order to produce such human resources, it seems that it is necessary to reform consciousness from traditional human resources development which has been the first priority to improving the practical ability, centering on acquisition of intellectual property rights.

Although one may overstate that "IP department takes responsibility for increase in our company's competitive strength," at the very least, "supporting our company's competitive strength from a IP aspect" is sufficiently possible. Although it is necessary to start with what the competitive strength of our company is, there exists the source of core competitive strength, or in other words, core competence, somewhere in products and services; a company's competitive strength is supported by preventing imitation by other companies and legally protecting this core competence a something unique to one's company. There are expectations toward the IP department. This awareness greatly impacts the level of activities of the IP department. As a characteristic related to the IP department, we can consider the existence of IP related laws and relevant regulations for necessary operations. To protect IP, a series of legal requirements are assigned, and practitioners perform operations while fulfilling these requirements. We have to consider the substantive laws and practical regulations for legal processes in a detailed manner, and attentive observation skills and analytical strength are sought after in relation to these requirements. Since there are related laws and regulations that exist to constantly monitor the work of practitioners, it cannot be denied that they sometimes lose sight of a wide perspective. Although practitioners are valuable resources who understand technology and law, if they become reliant on this field, their sense of balance from a bird's-eye view such as of products/services, market, customers, etc. that are the main businesses of a company becomes missing and losing. Following legal requirements is their own job, and they have also been observed losing sight of their mission to support improving competitive strength of their company from IP perspective. This represents the necessity of reforming the awareness of the IP department. Is the IP department helpful in realizing the business objectives of a corporation? Top managements believe that the work of the IP department plays a role in business objectives, but the actual head of the IP department tends to become

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confined to the field of IP, and some survey results indicate that they are not very aware of the indicators of the field of business objectives, such as products/services, markets, customers, etc. Shouting "While you are an IP expert, you are also a businessman!" was the guiding principle that should be given to IP staff, but not realistic so far. It is important to allow for coexistence of the specialization of the IP field, by constantly being aware of how the work of the IP department plays a role in management indexes, such as the perspective of customers, the perspective of the proficiency and growth of the organization and employees, the perspective of business processes, the perspective of finance, etc. Although it is necessary to devote oneself to self-improvement on a regular basis, there are departments within corporations that bear many and diverse responsibilities that broaden one's perspective. By deepening coordination with other departments, reformation of the awareness of the IP department would be progressive by a great deal for future improvement and development.

V. Summary

In the true global era, it is required to develop and implement intellectual property strategies, and also important to effectively function intellectual property rights and intellectual property activities toward realization of corporate strategy. And how to produce human resources who can grasp management and business in a bird's view from professional human resources familiar with legal practices related to intellectual property rights is an important issue. Advances in globalization and open innovation will require unprecedented wide range of intellectual property activities, for example, in connection with M&A, international standards, technology transfers across national borders, and so on. It is necessary to clearly define what kinds of human resources are required and promptly undertake a fundamental review to foster them. There are many tasks for that, such as necessary consciousness reform within the organization, human resource development plan, ability of human resources and evaluation of performance.

Reference Literature

- [1] 田中義敏「知財価値を高めるための知財戦略－戦略策定の基本に立ち返った知財戦略の策定を－」, 特技懇 No.255(pp.45-59), 2009
- [2] Yoshitoshi Tanaka, "How can we integrate IP Strategy with Corporate Strategy? Combining IP strategy with Management Strategy Making Process", Contemporary Private Law, IAITL 2012

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- [3] 田中義敏「ビジネス強化・成長のための知的財産の活用」, 日本知的財産協会, 知財管理 Vol. 54-5, 555-566, 2004.
- [4] 田中義敏他「企業経営に連携する知的財産部門の構築; 企業内機能部門との連携に向けて」, (社) 発明協会, 2007
- [5] Tanaka, Yoshitoshi, "Intellectual Property as a Key to Growth and Strengthening of the Enterprise", International Conference on Managing Creativity and Innovation (ICMCI2009), Innovation Management, MACMILLAN, pp. 136-153, 2009.1.
- [6] Yoshitoshi Tanaka, "Collaboration between IP Department and Other Departments promote IP Utilization", Contemporary Private Law, IAITL 2012
- [7] Tanaka, Yoshitoshi, "Research on the Factors How to Avoid Un-utilized Patents to Support Strengthening Technology Management", Portland International Center for Management of Engineering and Technology (PICMET) 2010 Proceeding, pp. 2160-2168, 2010.7.
- [8] Hirokazu Matsuno, Yoshitoshi Tanaka, "Empirical research on the characteristics of unutilized patents based on PLDB data focusing on a leading enterprise", International Journal of Liability and Scientific Enquiry, Vol. 4, No. 3, 2011, pp252-264
- [9] Nagatsuka, Hiroaki & Tanaka, Yoshitoshi, Research on Management of Patent Applications about Long Life-Cycle Electric Appliances, Portland International Center for Management of Engineering and Technology (PICMET) 2010 Proceeding, pp. 2218-2225, 2010.7.
- [10] Hiroaki Nagatsuka, Yoshitoshi Tanaka, "Management of patent applications for digital camera considering the product life cycle", International Journal of Liability and Scientific Enquiry, Vol. 4, No. 3, 2011, pp218-238
- [11] Yoshitoshi Tanaka, Daphne Jue Wang, "Granted patents have the same level of inventive step? A new approach to distinguish patent protection based on the level of inventive step", International Journal of Intellectual Property Management, Vol. 4, No. 4, pp270-282, 2011
- [12] Minoru Masujima, Yoshitoshi Tanaka, "Why Japan boasts of the most patent applications in the world", International Journal of Liability and Scientific Enquiry, Vol. 4, No. 3, 2011, pp185-201
- [13] Minoru Masujima, Yoshitoshi Tanaka, "What are the Reasons Why Japanese Enterprises File so Many Patent Applications without Request for Examination?", Portland International Center for Management of Engineering and Technology (PICMET) 2011