Patent Management in Enterprises

Japan Patent Office
Asia-Pacific Industrial Property Center, JIII

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Chapter 1. Corporate Activities and Patent Management

1. General Outline

Moving into the twenty-first century, we are now in a “Knowledge Value Society.” In such a society, technological innovation is a source of business growth. Being poor in natural resources, Japan needs to create new technologies to expand businesses based on high added value. In 2000, Japan came out with the policy of realization of a Nation Built on Intellectual Property as a measure to strengthen its international competitiveness. Since the announcement made by then Prime Minister Koizumi in 2002: ”We make the strategic protection and utilization of intellectual properties a target of the state,” the policy has been systematically advanced through the establishment of Intellectual Property Basic Act and setting up of the Intellectual Property Strategy Headquarters, for example. With the development of computerization in recent years, digitalization and networking of technologies have progressed, leading to a dramatic globalization of the economy. Competition in the global market is growing increasingly fierce among enterprises all over the world, making the situation increasingly unstable at the same time. In order to maintain lasting growth and survive the competition in this environment, we need to create “knowledge” and use it in business. Various measures to realize a Nation Built on Intellectual Property started against this background.

When the United States was suffering a long economic stagnation in the 1980s, the Reagan administration pursued a pro-patent policy to strengthen intellectual properties, aiming at the restoration of the industrial competitiveness of the US. In 1982, the Court of Appeals for the Federal Circuit (CAFC) was established to handle all appeal trials concerning patent disputes. In 1984, a bill concerning the extension of the term of medical product patents was approved to extend the term of patent right for marketing time lost while developing the product and awaiting government approval of a new drug. In 1985, the Young Report stressed the importance of the creation and protection of new technologies and a trade policy focused on the strengthening of intellectual property protection was announced. Later in 1988, the Comprehensive Trade Act was established, and protection of intellectual properties was powerfully advanced, including the institution of the Super 301 clause of the Omnibus Trade and Competitiveness Act and the revision of Section 337 of the Tariff Act, leading to the restoration of industrial competitiveness.

In Japan, with the setting up of the Intellectual Property Strategy Headquarters in 2003, the Intellectual Property Strategic Program was formulated as a concrete progress schedule for realization of a Nation Built on Intellectual Property. General improvements have been promoted including the revision/improvement of laws and rules, improvement of operation, and review of the organizational structure. Major achievements are the revision of the Patent Law including the review of the patent-related fee structure, acceleration of examination, revision of the employee's invention provision, establishment of the Intellectual Property High Court that handles appeal trials concerning intellectual property, and revision of the Unfair Competition Prevention Law to strengthen the protection of trade secrets, for example.

The first step for an enterprise to effectively utilize intellectual property and expand its business is to make high-quality inventions in its technology development department. Then, the enterprise needs to obtain rights for the inventions and maximize their value. Such inventions are exploited in its business and serve as a source of profit. The generated profit is then reinvested in the creation of "knowledge," establishing the new cycle of intellectual creation of creation, protection, and exploitation. An enterprise can expand business and increase profits by accelerating and expanding this cycle of intellectual creation.

Strategies that form the foundation of the cycle of intellectual creation cannot be independently formulated or implemented but should be promoted while ensuring the consistency with the business strategy and the technical development strategy. In principle, the business strategy of the company is established first and then strategies for technical development and intellectual property are decided based on the former. Depending on the business field, however, strategy building may start from the perspective of intellectual property, and the business and the technical development strategies may be constructed based on this. These strategies are not to be decided independently but enterprises in the future will be required to make strategic decisions by grasping them as three aspects of one strategy.

2. Role of a Patent Department

Enterprises engage in business activities for profit. The creation of new technologies is essential to increase profit and expand business. While enterprises create new technologies ahead of competitors and try to expand business, the patent system allows the exclusive use of

such new technologies in return for disclosing them. Disclosed technologies could soon lose their competitive edge when they are imitated by competitors but the granting of an exclusive right prevents imitation by competitors and allows enterprises to secure profits and expand their business.

In this way, the patent system grants exclusive rights to the inventor in return for disclosing the invention so that the disclosed technologies will raise the general technical level, encourage new technology development by third parties, and contribute to the expansion of industry.
In response to the development of technologies, enterprises need to create new technologies ahead of competitors, obtain patents for the created technologies, and expand their business interests by utilizing the patents for business. The key to these is the management of patents in a company.

2-1. Purpose of obtaining patent rights

The purpose of an enterprise to obtain a patent is to generate profits by using the exclusive rights that are granted in return for disclosure of the idea. Whereas excellent ideas make contributions to technological advancement and cultural development and win praise and honor for the inventor and the enterprise, an enterprise obtains a patent to generate profit, which is its original purpose. A patent that does not generate profits is a nonperforming asset and could constitute a limiting factor in business profits. Consequently, an enterprise needs adequate patent management.

(1) Maximization of business profits

Because a patent right is an exclusive right, only the holder of the patent right may work the invention. Therefore, a patent can protect a product that contains a new technology from imitation by others, allowing advantageous business evolution. Even having a monopoly of a business is possible if you can completely exclude the rights of others and produce a product only using the company's technology. This is effective in fields where the technologies used for products are relatively limited. Many such cases are found in fields such as medical products and materials where technological development requires large investment and the components of products are relatively small in number.

If a company has patents but needs to use the patents of others, it can ensure its business through cross-licensing with the patents of another company. This strategy can be used not only for current products but also to ensure a scope of freedom in future business. This is an

effective means when it offers more business benefits compared with spending substantial time and effort to avoid infringing the patents of others. This strategy is often used especially in the field of frontier technology where speed is essential and in the fields of electricity and machinery where the number of rights is large and individual treatment would require significant time and effort.

(2) Direct profits from patent rights

You can obtain profits directly as license fees by granting the right to use your patent to another company. If a patent right has ensured sufficient time advantage and the threat from following products is lower, you can try to increase profits by collecting license fees. Actively grant licenses to use patent and ensure that the license fee depends on the level of maturity of the technology and the situation of the business if you have obtained a patent but abandoned its commercialization or if there are many alternative technologies, for example. In addition to licensing, the sales of patents are also increasing.

2-2. Functions of a patent department

An enterprise is expected to provide products/services that enrich social living by developing new technologies. In this process, the patent department takes charge of the operations of forming patent strategies to generate maximum profits, filing patent application for inventions made by engineers, obtaining patents, and utilizing them for business.

Intellectual property rights generated in business activities include industrial property rights such as patent, utility model, design, and trademark, the right of layout designs of integrated circuits that protect semiconductor chips, and copyright that protects computer programs and trade secrets such as know-how that is protected by the Unfair Competition Prevention Law.

(1) Function as strategy staff

An important function of strategy staff who support the top management is to formulate and implement the patent strategies. Patent strategies should not be separately formulated or established. It is important to formulate and implement them in close coordination with the business strategy and the technical development strategy. Therefore, it is necessary to have ongoing discussions with the departments in charge of the business strategy or the technical development strategy and to plan in-depth strategy.

The foundation of patent strategy is in running the intellectual creation cycle of invention, protection, and utilization rapidly and widely. It is necessary for strategy staff to fulfill their function by making a plan and a strategy for creation, protection, and exploitation while considering the various risks at the same time. When developing a patent strategy, you need an annual plan in addition to a mid- to long-term plan tailored to the cycle of the business/technology.

<Items to be included in a patent strategy>

- Patent policy with consideration of the business strategy and the technical development strategy
- Strategy for patent application and for enhancement of the company's patent portfolio
- Patent exploitation strategy to increase business income
- Analysis of and countermeasures against patent risks that might impact the business management

(2) Line function

Obtaining patents for inventions made in the technology development department and their utilization is the primary operation of a patent department. Benchmarking of the rights of competitors and the response to infringement are also important operations for risk management. Major items are listed below:

<Acquisition of rights for invention>

- Receiving invention disclosure report
- Decision on filing application for patent and acquisition of rights
- Maintenance/management of patent rights

<Exploitation of patents>

- Formulation of patent licensing policy
- Exclusion of infringement by others
- Conclusion of licensing agreements

<Risk management>

- Benchmarking and clearance of the patents of competitors
- Response to infringement warnings from others

Inventions made as a result of day-to-day technology development activities are reported to the patent department. The department makes a decision on whether or not to file an application for

a patent based on the judgment of their business value and patentability. Because the term of a patent is as long as 20 years, it is efficient to establish a patent management system. After the registration of a patent, it is desirable to review the patent regularly based on the evaluation of its exploitation in business and, if business benefit is not found, to promptly abandon it. If an infringement by another company is found in the process of evaluation, the department should judge whether to eliminate the infringement or grant a license and make an appropriate response.

The handling of the patents of other companies as well as those of the company is part of the day-to-day operation of a patent department. It is necessary to check every phase from the point of starting a technology development and to provide the technology development department with guidance to check the possible use of others' patents before product shipment. If a problematic patent is found in an advanced stage of development, avoidance of the technology concerned and a change of business direction will take much time and cost. Therefore, it is essential to do benchmarking of the patents of others in an early stage. If the company received an infringement warning from another company, it is necessary to check the facts of infringement and explore countermeasures, including signing a contract, in order to minimize the risk.

(3) Service function

Providing service as a patent specialist to other departments is an important function for the reduction of business risks as well as the promotion of patent strategy.

<Checking of patent-related clauses of various contracts>
Companies conclude a variety of contracts, including joint development contracts, development commission contracts, confidentiality agreements, technology license agreements, and sales contracts, on a daily basis. Clauses concerning patents in such contracts cover a wide range of provisions from the attribution of rights to patent guarantee. Consequently, the department is involved in decisions on the company's policy concerning patent clauses and enters negotiations with the other party in some cases where discussion is required on the matter.

<Liaison with the technology development department>
The patent department's mission is to enhance the company's patent power, the source of which is the wisdom of engineers and the direction of the technology development. For direction, the department can provide advice concerning the level and the precedence of the company's

technology by analyzing patent information and comparing the patent strength of the company with that of its competitors.

In addition, the department is expected to provide engineers with education on the Patent Law as well as advice and guidance on how to grasp an invention from the viewpoint of an expert. Engineers who produce new technology on a daily basis often lack sufficient knowledge on how to acquire effective rights. In such cases, the patent department needs to listen to the content of their achievement, analyze the part that may be found as constituting an invention, compare it with prior arts, check its possibility as a business, and maximize the scope of its right. For this purpose, the department has to request to add new embodiments, experiments in some cases.

<Providing of patent information service>
The patent department, as a team of specialists, has a responsibility to analyze a vast amount of patent information and provide advice on the direction of future business and technology development. It is possible to determine the area of focus, direction of technology development, merits of technologies, etc. of the individual competitors through analysis of patent information and regularly report the results. This allows analysis of future patent risks at the same time.

Providing information to the related departments including executives is an important duty because information on litigations in the field relating to the company products and license information, etc. may include information that has a direct impact not only on risk management but also on the business strategy of the company.

<Providing of services to related departments>
Regular business reports and the provision of risk information to the top management are important duties of a patent department but there is also a demand for various support including information provision and patent education for the related staff departments and the sales department. Individual staff departments are expected to draw out and implement strategies in their field but the strategies should be synchronized with the patent strategy. For the sales department, which plans products and functions desired by users, in particular, the provision and analysis of patent information concerning them will be helpful. When selling products, there is an issue of patent guarantee. In an environment where patent disputes have become an everyday affair, a company's products are exposed to the risk of injunction or compensation for damage and, if users receive an infringement warning from a right holder, risk elimination is expected. In such a case, the provider of the products must check the possibility of infringement, scope of liability, etc. and make a suitable response.

<Establishment of various policies>
As corporate social responsibility has become a big issue in recent years, establishing policies concerning patents is an important company responsibility. A company is expected to establish patent-related policies including those concerning compensation to inventors based on Article 35, Patent Law, various recognitions, a management system, and responsibilities/authorities concerning patents. It is also necessary to establish a management system of technology information including know-how and software in cooperation with the related departments to prevent the outflow of technologies.

2-3. Organization of a patent department

(1) Function of a patent department

A patent department has both technical and legal functions due to the nature of its duties. In terms of its duty to protect inventions, it is a support organization for technology development departments with a focus on the operations to obtain patent rights for inventions made in the process of technological development. In terms of its function of handling patent contracts and contract/dispute issues that include responding to litigation, its legal aspect comes to the fore. Whether a patent department is positioned as a legal department or as a technology department varies among companies depending on the company's approach to patents and its development history but an increasing number of companies are now positioning the patent department as an independent division separate from the technical or legal division.

There are several types of roles to be fulfilled by a patent department. Some enterprises are trying to manage patent-related functions by separately setting up a department focused on obtaining rights and a department focused on contract disputes. In such cases, right-obtaining operations are handled mainly by people with a technical background whereas those concerning contract disputes are handled mostly by people with a legal background.

(2) Management structure of a patent department

The organizational structure of a patent department widely varies depending on the size and the business of the enterprise. While many enterprises adopt the department system, an increasing number of enterprises/business groups are adopting the internal company system where the responsibilities of individual departments are made clear and greater independence is given to them, or are going further by separating the specific business as a company, or by making all of its operating companies subsidiaries to be controlled by the parent company that is a holding company. Accordingly, various structures are also adopted for the patent department but the structures needed are those that make the role and results of the department more visible.

<Integrated structure>

A structure that concentrates all patent-related operations in the department is most desirable for the unification of patent-related information and the execution of strategy of the patent department with good operational efficiency. This is also desirable in terms of the split of work and human resource development. However, there is a risk of insufficient coordination with operating departments and the technology development department, which requires some efforts such as the assignment of concurrent staff. If business places have multiple locations, there will be a need to consider setting up a resident department, for example.

<Separated structure>

This is a separated structure where a patent department is set up in each operating division in a manner coherent to the individual operating division. This is adopted by many enterprises that have introduced the internal company system with greater independence of individual businesses. This structure allows strategy execution that is integrated with the business strategy and technology development strategy of the operating division and may be the optimal choice for an operating division. However, there is a risk of inefficiency in the execution of intellectual property strategy of the entire enterprise and conflict of interests between internal companies, for example, which needs to be addressed.

<Mixed structure>

This structure takes advantages of the integrated structure and the separated structure while softening their disadvantage by setting up a patent department at both the head office and individual operating divisions. Their respective authority, responsibility, etc. will vary depending on the factors including the state of other staff organizations, business line, and size, but generally, the patent departments set up in operating divisions take charge of the operations that are more closely related to the operating division, including finding inventions and obtaining rights for them, patent clearance, and exploitation of patents, whereas the patent department of the head office takes charge of the operations such as the patent strategy of the entire enterprise, assignment and training of patent personnel, external contact, and adjustment of interests among individual operating divisions. This structure is effective if the enterprise is large in scale and a sufficient number of patent personnel is available.

3. Intellectual Property Strategy in Trinity

When drawing up and executing an intellectual property strategy, it is important to form an integrated strategy involving the trinity of intellectual property strategy, business strategy, and technology development strategy, as shown in Figure 1. In view of the current portfolio of the company's patents and benchmarking of the patents of competitors, intellectual property strategy is formed by examining which field to seek business growth, what the strategic factors and differentiation factors for this will be, and what the technologies and challenges to realize them will be, for example.

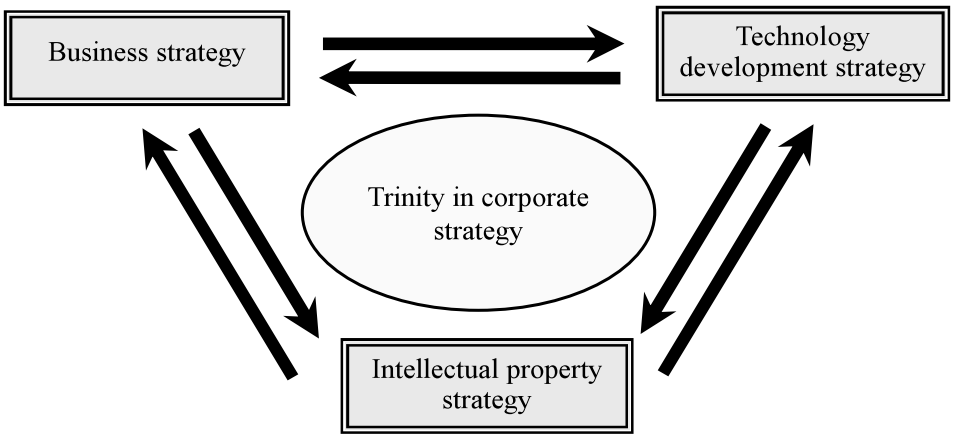

Figure 1: Intellectual property strategy in trinity

3-1. Coordination with business strategy

Business strategy is a strategy for the survival of an enterprise and the increase of the enterprise value. The strategy creates a model for the company's evolution by exploring the possibilities of business expansion, including review/change of the existing business, increase of profits, and entry into new territories. The company has various management resources to realize this, including technical capabilities, marketing capabilities, sales capabilities, and capital. Intellectual property power and patent power are also recognized as important management resources. Tools of competition strategy for business expansion include cost reduction, differentiation, and concentration. How to position and utilize intellectual properties in these strategies is the key to planning an effective intellectual property strategy.

Even having a monopoly of a business is possible if you have unique technologies and strong patent power. However, because a patent right expires after 20 years, you need to consider

measures to maintain your competitive edge after their expiration. If your patent power is competitive or inferior to that of your competitors, you may pursue differentiation in collaboration with other companies in addition to taking measures to reinforce your patent power. Another choice is to pursue business growth by establishing unique technologies in a niche market where other companies have not yet entered.

When deciding the direction of the business, you need to build a strategy based on the patent power of your company as well as other management resources. It is important to build a strategy not only from a short-term but also from medium- and long-term perspectives.

3-2. Coordination with technology development strategy

(1) Transition in technology development

The development of modern technologies in Japan started with the introduction of technologies from Western countries. In the beginning, manufacturing was possible only by introducing technical know-how and learning technologies. Enterprises improved the introduced technologies and produced domestic technologies gradually. The value of know-how decreases as improvement technologies are produced with the passage of time, but a patent is effective in its scope of right until the expiration of the right. Improvement patents that are produced based on a basic patent will also generate new value and require licensing as a practical patent.

Japanese enterprises had been introducing the technologies of foreign enterprises in return for license fees. In 1986, under the background of the pro-patent policy of the United States, however, Texas Instruments (TI) Inc. filed a lawsuit against Japanese semiconductor companies to the International Trade Commission (ITC) of the US. TI Inc. invented integrated circuits (ICs) in 1958 and the Japanese companies introduced the technology based on license agreements. They continued to conclude cross-license agreements with TI Inc. including improvement inventions. However, the failing TI Inc. demanded more payment for its patents than before. ITC deliberated and then made a decision in just one year; if a patent infringement is found, the strict measure of an import ban will be applied. TI's filing may be a result of the development that Japanese companies first introduced the technology based on license agreements but then developed their own technologies and overtook TI Inc. in terms of business. The parties agreed on a settlement in the ITC litigation, which made Japanese companies recognize the importance of patents once again.

Japanese enterprises that recognized the importance of in-house technologies in the technology

competition with foreign enterprises produced unique technologies and their technologies have caught up with or overtaken those of Western enterprises. As a result, Western companies were forced to withdraw from some business fields. This came to the surface as economic conflicts between the US and Japan not only in the field of semiconductors but also steel, automobiles, computers, etc.

Japanese enterprises continued technology development but competition has become increasingly severe not only in the Japanese market but also in the global market of software, information and communication, and network business, for example. With the global expansion of business scale, global standards are replacing the specifications unique to Japan and making standardization an important factor. If your company's technology is adopted as standard technology, you can enjoy not only the direct income from a license fee but you can also lead the entire market. Efforts in standardization should be made not only by going ahead of competitors in technology development but also based on patent strategy.

(2) Development of original technologies

The development of unique technologies is important. What is most desired by enterprises is the creation of a basic invention. If you can introduce new products and create a new market based on a basic invention, you will be able to prevent entry by a third party and monopolize the market. If you judge that you will be able to firmly maintain the business of your company, you can grant a patent license to other companies to expand the market and obtain a license fee in addition to the business profits based on the pioneer invention. Earned profits can be reinvested in the development of new products and technologies and, if you succeed in repeating this cycle, the company will grow further.

In this way, a basic invention can greatly expand a company. As technologies become increasingly sophisticated and complex, a single basic patent may not be enough in some cases. If a competitor obtains an improvement patent and the product is projected to lose its competitive edge without using it, you need to produce improvement inventions one after another to cover the product through "a cluster" of patents, including improvement patents. This requires the integration of patent strategy with technology strategy in accordance with individual products and technologies.

(3) Introduction of open innovation

Producing all necessary technologies within the company is most desirable but technology development will not necessarily always succeed. Especially in medium- to long-term technology development, even if it has produced favorable results at the research stage, many challenges including cost, safety, and repeatability must be overcome before getting into operation. This trial stage is called “Death Valley.” Enterprises are increasingly considering joint research and contract research, including industry–university cooperation for medium- to long-term development in order to reduce risks in technology development.

In the field of cutting-edge technology where products are increasingly complex, you must adopt the strategy of “concentration and selection” and identify the areas for in-house development while advancing technology introduction from and collaboration with other companies in the remaining area. When selecting partners among various candidates including universities, public institutions, and business enterprises, it is important to assess their technological level. For this purpose, assessment of their patent power will serve as a useful reference. Candidates will be evaluated as to whether their technological level is sufficient as a partner not only in the field concerned but also in other fields.

3-3. Intellectual creation cycle

The development of intellectual property strategy assumes consideration of the business strategy and technology development strategy, but actual IP strategy is basically built based on the intellectual creation cycle of creation, protection, and exploitation of inventions.

While the key to creating valuable inventions is in how to produce basic and unique inventions in technology development, patent information is some of the most important information for making decisions on the direction of the development. It is difficult to make a pioneer invention in a field where companies have already produced a large number of inventions and filed applications for patents. When development is already in progress, you can conduct patent search successively to grasp the development direction and actual invention contents of your competitors for comparison with the achievement of your company’s development. At the same time, you must examine where to conduct development in your company and where cooperation with other companies is necessary.

The protection of invention starts from evaluating the invention produced by research and development. You must decide whether or not to file an application for patent and examine the

possibility of foreign application to obtain maximum protection. When filing an application, you have an option of not making the know-how publicly known. The mode of protection will vary depending on the content of the invention and the possibility of use.

The acquisition of rights assumes use in business and therefore patents that are not used are nonperforming assets. Ways of exploitation include exclusion of competitors, ensuring of the flexibility of business, expansion, and direct income through active licensing. You can ensure effective business development through the exploitation of intellectual properties by deciding on patent exploitation policy as well as the direction of development in technology development. Income generated by patent exploitation will be reinvested for the creation of new inventions.

In this way, the basis of the strategy is expanding corporate profits by running the intellectual creation cycle of creation, protection, and exploitation of inventions rapidly and widely.

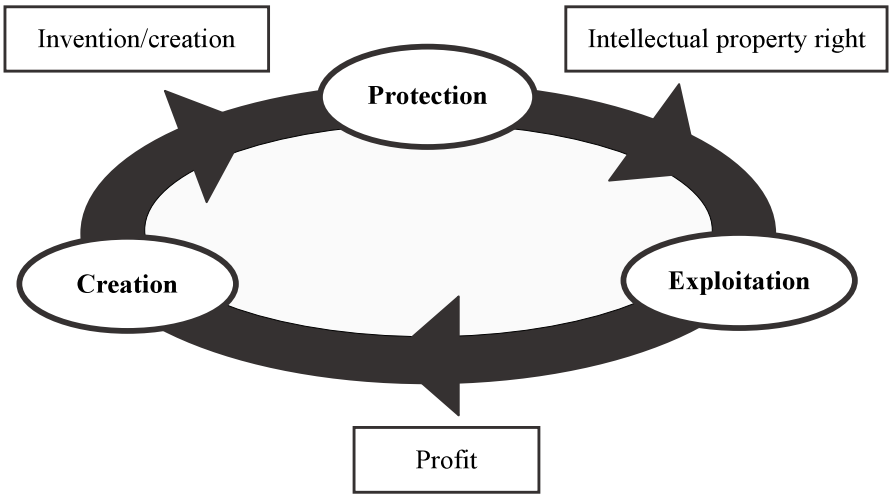

Figure 2. Cycle of intellectual creation

Chapter 2. Creation, Protection, and Exploitation of Inventions

1. Creation and Discovery of Invention

Continuing the creation of invention is the basis for running the cycle of intellectual creation in a company. While inventions are made in the technical development department, the patent department is expected to create a better invention environment for engineers and to provide necessary support.

1-1. Creation of inventions

(1) Decision on a technical development policy

The key to the efficient creation of inventions is conducting development ahead of competitors. You can produce basic ideas and original inventions by working in fields where competitors have not yet started development. As regards the situation of other companies, you can identify the field where others have not yet entered or where your company's technology is ahead of others and secure the competitive edge of your technology by checking their state of application for patents. It is desirable that a patent department is actively involved in the selection of development subjects and the setting of the direction and targets of the development based on the results of patent power assessment and patent analysis.

If your company's technology is immature and its resources are limited, there is a need to consider joint development with other companies or the introduction of outside technologies. In the past, many enterprises used to conduct research and development independently in all fields but in recent years when speed of development has been required, it is necessary to concentrate resources on specific fields and reduce the development time. You must improve the efficiency of technology development by separating the field for in-house development from that where outside resources are to be sought. Furthermore, it is necessary to clarify how to handle patents when collaborating with other companies. Determining how to handle the patents you already have as well as the inventions produced through collaboration will be an important element of future business.

(2) Selection of development subjects

Typically, the technical development department selects specific development subjects with the business strategy in mind and draws up a plan. The patent department provides the patent

information concerning the field and the technical development department selects specific development subjects and creates a schedule based on the information.

In recent years, however, the patent department has selected specific subjects in some organizations. The patent department decides on concrete development subjects based on the technical information obtained from the technical development department and market information from the planning department. This system allows improvement of development efficiency by selecting development subjects based on the analysis of the information from other departments and objective patent information.

Some companies select subjects through the involvement of the two departments. Concrete subjects are decided with participation from the technical development department and the patent department. In this case, other staff departments will also participate in comprehensive decision making, taking into consideration the budget and risks.

(3) Utilization of patent information

Functions to be fulfilled by the patent department in the discussion on research and development are the analysis and provision of patent information. Information on the cutting-edge technologies of competitors is revealed with the publication of a patent one-and-a-half years after the filing date. Analysis of this information allows objective assessment of the technology portfolio of the competitor, including its focused area, number of inventors involved, and concrete ideas, etc. Similarly, because patent analysis including risk information has a great impact on business, checking is required not only at the stage of starting a development but also at various stages including midstream, final, and product shipment stages.

1-2. Discovery of inventions

(1) Planning for patent application

Once a technical development plan is decided, it is advisable to draw up an invention proposal plan that is consistent with each development phase. The target number of inventions is determined based on the examination of the current technological opportunities and results expected in the development plan. This is preferably set as a target of the technical development department rather than an imposition by the patent staff. Engineers who come up with new ideas often fail to propose them in the rush to work on their development. Some

inventors who produced a basic invention said that they could produce good inventions under various pressures. Setting a target number adds an appropriate amount of pressure on engineers and motivates them to invent at the same time. The aim is to produce more unique development results through invention-oriented technology development.

It is also effective to specify the content of the expected invention for each target product including the future product, next-generation product, or improvement of the current product as well as the number of inventions. Setting an annual or biannual target number is also a widespread practice. However, excessive focus on numbers may lead to a flood of proposals of mere ideas. Guidance on content will be required.

(2) Activity for invention discovery

It is preferable that engineers thoroughly understand patent issues and report inventions that were made in the process of development in a timely manner but the reality is different. Consequently, it is an important duty of patent staff to visit the technical development department regularly or irregularly to check the progress of development and offer support/follow-up to invention proposals.

Figure 3 shows an example of the plans of an application for patent included in various development plans. Ideas generated at the stage of basic research have hidden potential to become basic patents and unique basic inventions can be expected. At the same time, additional experiments and validation of the scope of the invention will be needed in many cases. A patent right is easier to obtain for a basic invention but the broad definition often makes the invention unclear and might allow inclusion of a prior art. It is necessary to establish an adequate scope of rights that is wide and has a clear difference from prior arts at the same time. This is where the active involvement of patent staff is expected.

Concrete product development will start based on the basic technical idea. This stage is defined as preceding development because it must be done earlier than competitors. In this stage, technology is developed based on a specific product image and a large number of patents that constitute a product and are actually used will be created. What is expected are prior inventions that go one step ahead of competitor. The important point at the stage of manufacturing is to file applications not only for pioneer patents but also for “a bundle” of patents that effectively comprise a product to ensure the inventions necessary for production and mass production, enough coverage for the developed product, and avoidance of omission of any invention proposal, for example. In other words, it is an important duty of patent staff to establish “a perfect cluster of patents.”

If the efforts reached the stage of manufacturing, various improvement inventions are expected toward next generations. It is important to develop a new product into a product that outclasses those of competitors by adding continual improvements and conducting product development that is always one step ahead of others, aiming at business expansion. What matters here is to establish a cluster of patents at each development phase and to manage them as a large cluster of patents for each product or technology, including patents from the basic research. This method of cluster management/portfolio management has been introduced by many enterprises.

Liaison activities targeted at engineers are an important factor in the strengthening of patent power. Ensuring that engineers understand patents and come up with unique ideas is an area in which corporate patent staff can demonstrate their skills and power. Excellent patent staff are expected to have not only patent expertise but also broader knowledge and skills, including knowledge of the technology field concerned, information concerning the industry and the market, analysis ability, and communication skills, etc.

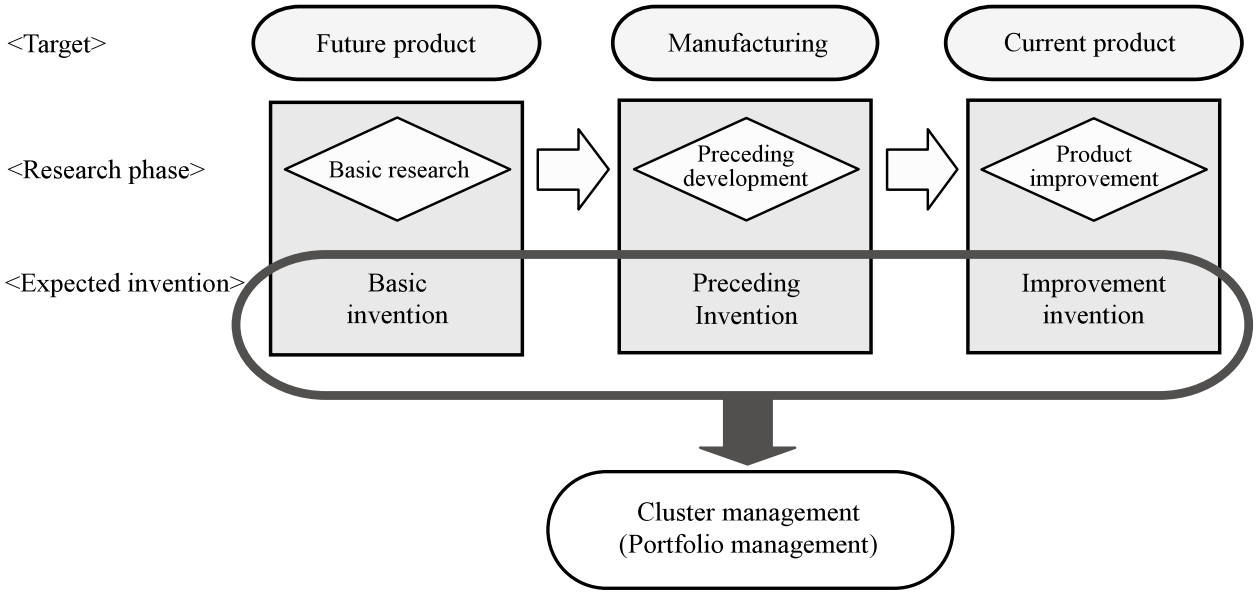

Figure 3. Plan for a patent application

(3) Notification of invention disclosure

When an invention is made, it is reported as an invention disclosure report to the patent department using a form prepared by the company. There are various forms of the invention disclosure report and their bibliographical items include the name of the invention, the name of the inventor, the date of the invention (proposal), and the presence or absence of related contracts. A form concerning the content of the invention is made according to the form of the

patent filing document to include scope of claims, prior arts, problem to be solved by the invention, structure of the invention, operation/working effects, concrete embodiments, and related drawings, for example. Because typical engineers do not have sufficient knowledge of the Patent Law and are not good at expressing their inventions in writing, their education will make a difference.

The report also includes an entry by a supervisor that is mainly about the business aspects such as the purpose of the application, working schedule, technical evaluation of the invention, and presence or absence of contract. If the entry of the proposal is not complete or if the content of the invention is not clear, the patent department may explain the reason and ask for a correction or additional data. For this, daily liaison activities will make a difference. The department makes judgment on patentability and checks contracts as well as the content of the report.

2. Protection of Invention and Acquisition of Patent Rights

2-1. Application for patent

(1) Decision on application

When an invention report is submitted, judgment is made as to whether or not to file an application mainly from the perspectives of business potential and patentability. Patentability is judged by patent staff after discussion on the issue of precedence, width of the scope of right, and difference with prior arts with a focus on comparison with prior arts. Business potential is evaluated by the supervisor of the inventor and the person in charge of the business from the viewpoint of operability and technical effect. The final decision on filing is made by the patent department, taking into consideration the opinion of the technical development department.

If there is a possibility of overseas business, foreign application is also considered. The evaluation is focused on the impact on the business. However, it is important to look toward the future not only from the viewpoint of the current business but also from the perspective of future business, particularly the market. There have been cases of deciding on foreign application at the time of domestic application and of judging this within the priority period after the domestic application. Recently, foreign applications have been considered at the same time as domestic applications more frequently.

(2) Protection of know-how

Recently, there have been cases in which an invention is not publicly known and is kept secret as know-how. This involves a comprehensive judgment based on the evaluation of the strategic value of the business and the competitive nature with other companies. Typically, patents are sought for inventions that will become publicly known with production and sales but there is an option to keep technologies secret as know-how and not seek patents if they won't become publicly known. Whereas a patent is a finite right, know-how keeps its value as intellectual property as long as it remains secret. As such, some enterprises value this higher than patents depending on the field.

However, if the invention becomes publicly known due to poorly executed management, its value will be lost. Consequently, the measures and management to keep it secret are essential and the risk of leakage is high, making the company's management system an important factor. It is also necessary to take measures to avoid inadvertent disclosure by individual persons. In particular, prior checking is crucial before the presentation of research results or a conference presentation. In the cases of technical assistance, joint development, etc., you must consider whether or not to include certain know-how in the technologies to be provided to the partner company and, if they are to be included, how to handle the risk of the technology leakage from the partner to a third party. For know-how management, "Trade Secret Management Guidelines" and "Technology Leakage Prevention Guidelines" of the Ministry of Economy, Trade, and Industry will serve as a useful reference.

If you have chosen the option of keeping an invention secret as know-how, you must prepare materials to prove the prior user's right. The system of prior user's right allows a person who, at the time of filing of the original application for a patent of the invention, has independently completed an invention of the identical content and has been commercially working the invention or has been making preparations for commercially working the invention to do so concerning the patent of the prior applicant without compensation and to continue his/her business.

(3) Preparation of filing documents

In order to obtain a patent, you must file an application for patent to the Patent Office. For an application for patent, you are required to submit a request with an attachment of the scope of claims, specifications, necessary drawings, and an abstract. The specifications must include the name of the invention, prior art documents, outline of the invention, embodiments, etc.

The filing document has two functions: it functions as technical material that enables

examiners to understand the content of the invention and it functions as a certificate to claim the rights concerning the invention against third parties. Therefore, it must be prepared with the greatest care. It also provides an opportunity to give full play to the ability of experts. The scope of claims, in particular, defines the technical scope of the invention. A part of the invention that should be deemed to be within the scope of right may be found to be outside of the scope of right due to poor expression. Therefore, it requires correct expression that highlights the difference from prior arts and the nature of the invention. Here, you will face a real test of strength as a patent expert.

(4) Utilization of patent attorney

If procedures with the Patent Office or a court, including the preparation of filing documents, are to be handled by another person, you can commission a representative who has a patent attorney license for this task. Big companies employ patent attorneys but there are also many enterprises that outsource patent attorneys.

A patent attorney is employed mostly for representation in an application for patent, which has a quantitative aspect of responding to the increase in the number of patent filing and a qualitative aspect of expecting the expertise of a patent attorney. In the quantitative aspect, representation in filing is asked for the part that exceeds the company's capacity due to the increase in patent-related affairs as well as the number of applications for patents. Representation in application filing for patents accounts for a large part of the operations of most patent offices and is also their strong point.

The qualitative part involves opinions concerning the effectiveness and scope of right of a patent and consultation concerning infringement of a patent of another company, for example. Patent attorneys often work with lawyers as representatives in an infringement suit. Patent attorneys who are licensed as procedural attorneys for specified infringement litigation are allowed to work as representatives in litigation within a certain scope and are therefore often asked to handle part of such procedures. With the increase in the value of patents, patent issues, including patent disputes with third parties, are also increasing. A result is the increase in consultations with patent attorneys concerning corporate patent strategy, for example.

It is important to secure competent patent attorneys, but they are difficult to find when you need them. Therefore, you need to build a broad network in daily activities, including various consultations. It is also necessary to go through an experimental period before starting the actual transaction.

(5) Application for patent

As described above, a person who seeks a patent submits to the Patent Office a request that includes the scope of claims, specifications, necessary drawings, and an abstract (principle of documentary proceeding). The specifications should contain the name of the invention, prior art documents, outline of the invention, embodiments.

The filing date is the day of submission to the Patent Office and a request sent by post is deemed to have arrived at the Patent Office on the day that it was accepted by the post office. A recent change now enables application procedures to be made via the Internet from the applicant's PC to the Patent Office.

(6) Foreign application

In today's environment of severe global competition, overseas application must be considered in addition to domestic application. Foreign application must be made based on the examination of the business in the country concerned. In addition to the company's own business, the probability of the company's product being exported as part of another company's product and the probability of the invention being worked by a third party in the country concerned are important factors. If royalty income is considered as one of the uses of a patent, it is particularly worthwhile to file an application in the countries where the working of the invention by other companies is expected. In this case, consideration needs to be made for many things, including possible royalty income and business scale. Because foreign application that requires translation of related documents, etc. is expensive compared to domestic application, cost-benefit performance must also be considered. In addition, foreign application involves various decisions regarding application routes, as shown in Figures 4, 5, and 6. You can choose the best route after consideration of the number of countries where patent is sought, the procedure, and cost, for example.

i. Paris Convention Route (Figure 4): Application claiming priority under the Paris Convention is possible within one year after the application in Japan. In this case, application is filed directly to the country where the patent is sought. After the filing, procedures of examination and registration will be made in accordance with the legal system of the country. Note that some countries don't have substantive examination systems.

ii. PCT Route (Figure 5): If there is a large number of countries where application is to be filed, you can simplify the procedure by filing an international application based on PCT to the patent office of your country. The application will be treated as a domestic application to all member countries. However, you are required to submit translated documents within 30 months from the priority date in order to actually obtain the right. Then, the procedure to obtain the right will be carried out in the designated states. After moving to the designated states, the procedure will take the same course as that of the Paris Convention.

iii. EPC Route (Figure 6): If you wish to obtain rights in European countries, you can simplify the procedure by choosing the EPC route. Application to the European Patent Office involves a single procedure that includes everything from substantive examination to the granting of rights. Later, for the acquisition of rights in individual states, you are required to go through the procedures prescribed in the respective designated states and submit translated documents, for example. You can also choose EPC as one of the member states after selecting the PCT Route.

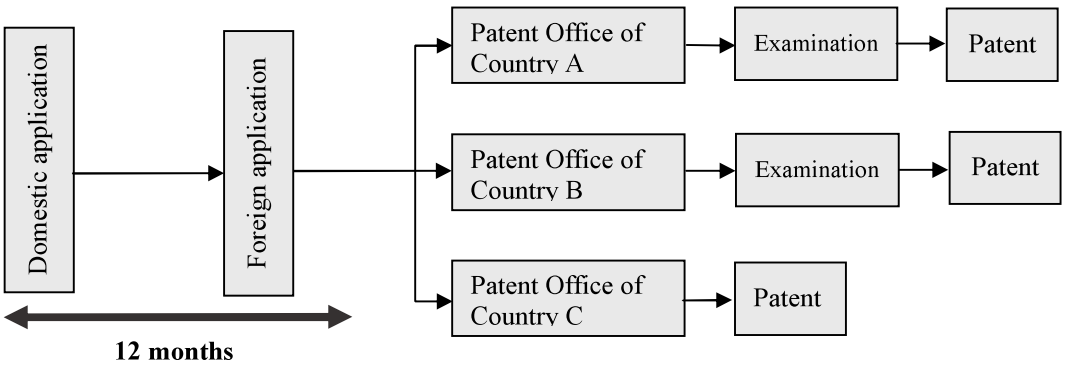

Figure 4. Foreign application on the Paris Convention Route

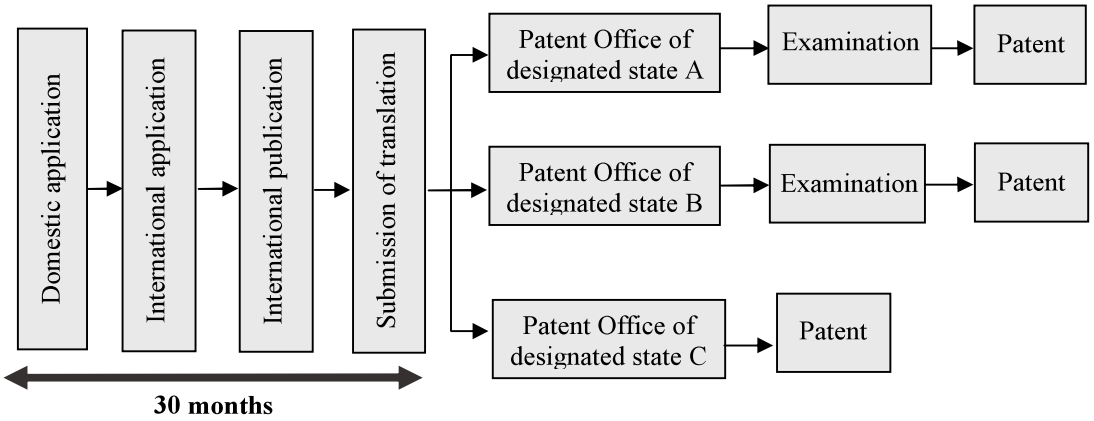

Figure 5. PCT (international) application

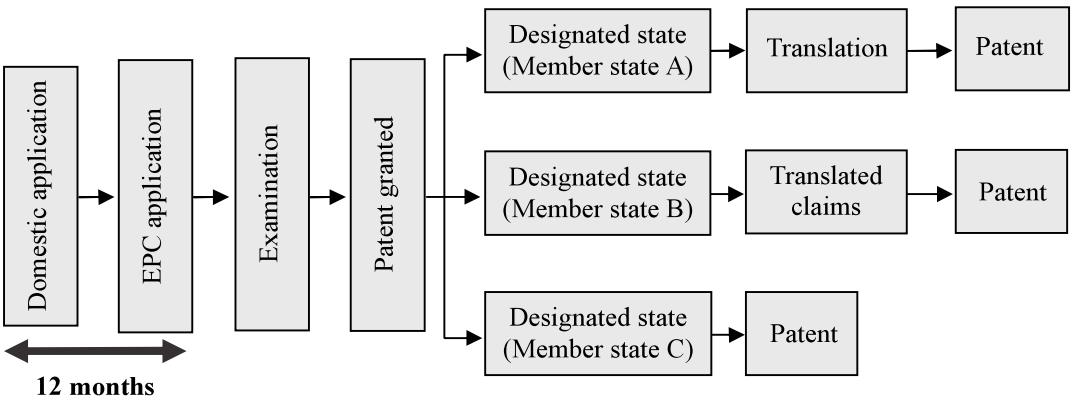

Figure 6. EPC application

(7) Publication of unexamined applications

All applications for patent are made open after the lapse of one year and 6 months from the filing date (the day of claim of priority for applications with claim of priority) in the Kokai gazette. If a third party worked the published invention and warning is made with presentation of the document that contains the content of the invention pertaining to the application for patent, the applicant may demand payment of compensation for the part that was worked after the warning and before the registration of the establishment of the patent right. Publication of unexamined applications is not adopted in the utility model system where right is granted earlier without examination.

2-2. From examination of application to acquisition of right

(1) Request for examination

An applicant is required to request an examination of the application if he/she needs a patent right for the invention. The invention is expected to be used in business and to generate profit, but the applicant may shelve the working of the invention in response to changes in the situation. The Patent Office also prefers not to examine inventions that are no longer wanted so that it can reduce the burden of examination. The system of request for examination is designed to reduce the burden of examination and accelerate the examination process. In 1999, the time limit of request for examination was reduced from within seven years to within three years. Consequently, an applicant must judge whether or not to make a request for examination, evaluating the business potential, etc. within three years after filing the application. A person other than the applicant may request an examination. The system of request for examination is not adopted in the utility model system where right is granted without examination.

(2) Examination of application

Examination of patent application includes a formality examination and a substantive examination. The formality examination checks whether or not the application conforms to the style prescribed by the law. In the substantive examination, an examiner examines whether or not the invention for which the application is filed fulfills the patent requirements prescribed in the law. To be registered, an invention must fulfill all of the following requirements:

a. The Invention is a creation of technical ideas utilizing the laws of nature
b. The Invention is industrially applicable
c. The Invention has novelty
d. The Invention has an inventive step
e. The Invention is not described in a prior application
f. The application is the earliest application for the identical invention
g. The Invention is not a disservice to the public
h. The Invention is concretely described to allow working by a person skilled in the art
i. The Applicant has the right to obtain a patent

Substantive examination is not adopted in the utility model system where a right is granted after a formality examination but the requirements to be fulfilled for enforcement of the utility model are much the same as the patent registration requirements with the exception that the criterion of inventive step is lower than that of patent.

(3) Registration of patent

If a reason for refusal is not found as a consequence of an examination by an examiner, a decision to grant a patent will be made. The patent will be registered with the Patent Register when the annual fee for the first three years is paid after receipt of the notification of the decision to grant a patent. Registration of the patent causes the issuance of a Patent Gazette by the Patent Office and the applicant is given the exclusive right of the patent. The duration of a patent is 20 years after the filing date but registration of an extension is allowed by up to five years for medical products and others.

Registration of establishment of a utility model is made after a basic examination without substantive examination. The applicant is required to pay the annual fee for the first three years at the time of filing. Once the registration of establishment is made, the applicant is given the

exclusive right of the utility model. The duration was six years after the application but the term was extended to 10 years after the application in 2004 to further encourage the utilization of the system. Because the utility model does not go through a substantive examination, enforcement to a third party is allowed only after giving a warning with presentation of the utility model technical opinion.

(4) Appeal/trial system

If a person disagrees with a decision for refusal after examination of his/her application for patent, he/she may appeal against the examiner's decision of refusal within 30 days from the date on which a certified copy has been served. Although an appeal/trial is concluded when a trial decision has been rendered, an appellant who disagrees with the trial decision may present his/her case to the Intellectual Property High Court, which was established in 2005.

The opposition system was abolished in the revision of 2003 and integrated into trial for invalidation of a patent. Namely, any person who has an objection to the continuation of a patent right after its establishment may demand a trial for invalidation of the patent. The concept of the existing opposition system is to allow anyone, in principle, to demand a trial for invalidation. A demandant who disagrees with the decision of the trial for invalidation may present his/her case to the Intellectual Property High Court in the same way as in an appeal against an examiner's decision of refusal

2-3. Management of patent rights

(1) Maintenance of patent right

In order to maintain a patent right after its registration, you need to pay the annual fee for the fourth and subsequent years. The patent right will expire if the annual fee is not paid within the payment time limit. The annual fee amount increases every three years after the registration but becomes fixed in the tenth year.

Many rights will lose their usefulness for the company as time passes. It is a waste of money to continue to pay an annual fee for a useless right. Therefore, you must re-examine your rights regularly to ensure that you pay the annual fee only for the rights you need. Re-examination must be done by evaluating the exploitation state in your company and other companies, the possibility of exploitation and technological value, etc.; it should involve the planning, development, and patent departments, for example.

(2) Management of annual fee payment

You can't afford to allow a valuable patent right to expire by failing to pay the annual fee. The annual fee is paid in the form of a patent revenue stamp using a prescribed payment document within a prescribed period. Recently, the procedure was simplified by introducing a system where you can entrust patent revenue stamps to the Patent Office in advance for later deduction when payment is due. Enterprises need a management system to pay the annual fee for the first three years at the time of patent registration and to pay the annual fee from the fourth year onwards if the right is to be maintained. This is managed by computer in many cases but even management by computer depends on manual entry and requires double checking. Should you fail to pay the annual fee, you will be able to maintain the right by paying double the amount of the annual fee within six months.

(3) Patent portfolio management

The value of some patent rights may increase as time passes while the value of others may decrease and there will be no need for their maintenance. Because the annual fee increases as time passes, regular review of patents is advisable. You don't need a special procedure because the patent right will expire if you stop paying the annual fee for the patents you judge to be unnecessary.

As explained above, an increasing number of enterprises handle patents in a specific field as a "cluster" and manage multiple patents as a collective formed from a certain perspective. This is the concept of the patent portfolio. With the increasing value of patents, patent management is conducted in view of their exploitation in business. Criteria of evaluation on whether or not to maintain a patent are based on its positioning in the patent portfolio as well as the evaluation of individual patents, for example.

One or two pioneer patents may become invalid due to the existence of a prior art, etc. In such cases, managing patents as a "cluster" is advantageous in that a cluster of patents can maintain its validity through other patents. Furthermore, a solid patent cluster can prevent design around the pioneer patent. This also allows the understanding of technologies in their collectivity and avoids missing things out at the time of filing, strengthening the protection of the company's technologies and ensuring sufficient patent power for the exploitation of rights.

An outline of enterprise evaluation standards on right maintenance is described below.

<Rights to be maintained>

- Patent rights used for the company's products, manufacturing process, manufacturing equipment, and other purposes
- Patent rights licensed to the third party
- Patent rights that compose a patent cluster to which patents of item 1 or 2 belong
- Patent rights for which future exploitation by the company or others is expected
- Patent rights with high technical evaluation
- Patent rights useful for sales and marketing

It is advisable to promptly abandon patents that are unlikely to be exploited by the company or other companies either now or in the future. Early abandonment is also preferable even if the patents is part of a patent cluster if it is not used by the company and you can allow its use by other companies because there are a large number of alternative techniques.

(4) Investigation of the exploitation state of patent rights

When conducting research for the maintenance and management of patents, it is advisable to carry out regular research on the exploitation state in the company and infringement research for aggressive exploitation. Exploitation in the company is an important factor in the assessment of the patents' value and their contribution to the company. Regular research is necessary, especially if a system of performance compensation to inventors has been introduced. This will be described later.

It is also an important role of the patent department in the exploitation of patents to evaluate the company's rights on a routine basis to explore possibilities of enforcement on other companies and to prepare measures against possible attack from other companies.

3. Exploitation of Patents

The purpose of an enterprise does not involve obtaining patents; however, patents are expected to contribute to the business through their exploitation in the company's business. The primary mission of the patent department is to contribute to the increase in profit and continuing growth of the business, which are the objectives of an enterprise, through the exploitation of patents in business.

3-1. Evaluation of patents

(1) Evaluation of the company's own patents

Important points in exploitation include evaluation of the company's own patents. If no one needs a patent, it would not contribute to business nor be exploited; it would become a nonperforming asset. Judgment on need requires research into who needs the patent, when they need the patent, and how they need the patent and for which products. In the evaluation, examination must determine whether a patent is needed or will be needed for the company's business or products or elsewhere in the industry. Generally, evaluation of exploitation in the company may be relatively easy but whether or not other companies are exploiting a patent or will need it in the future is difficult to judge due to a lack of objective criteria or information in some cases. For the latter, you need expert knowledge of related industries and product trends. In recent years, companies have emerged that offer the service of patent value evaluation. An increasing number of enterprises are using such services.

(2) Benchmarking

Exploitation requires research into the patent power of other companies in addition to that of the company. The company may have important patents but patent power is relative. You will lose more than you gain when you resort to enforcement and are attacked by the opponent using counter patents. Consequently, exploitation requires research into the patent power of other companies as well as that of your company. Effective enforcement is possible if the patent power of your company is superior. You can evaluate the patent power of other companies by evaluating the possible application of their patents on the products of your company. In this way, you can make an objective evaluation through comparison with the product plan of your company. Assuming the cases where you would have to use the patents of other companies in the future, it is possible to take proactive measures, including the development of technologies to evade such patents and checking of the effectiveness of the patents concerned. The benchmarking of the patents of other companies is an important means of both attack and defense.

(3) Infringement detection survey

When a product competing with a product of your company appears, you have to check for possible infringement of the company's patent. Typically, the patent department or the

technical development department checks the relationship between the product and patents. There won't be any major problem if you can purchase the product and check it, but patents concerning the production process or those related to software, for example, may not allow judgment based on ordinary analysis and sometimes require the use of a specialized analysis service. With the increasing number of patent disputes, there are more and more services that survey and check the relation between patents and products and more companies are using the service.

3-2. Exploitation of patent rights

Exploitation of patents includes exploitation to maximize the benefits for the company's business and that to earn income from the patent. The result of the former is an increase of business income while that of the latter is the income directly obtained from patents. You can also combine the two. There are many ways to use patent rights.

(1) Use for the company's business

The largest number of patents is used for in-house products. A product is composed of many technologies. By inventing them in-house and equipping your products with the functions and performance lacking in the products of competitors, you can increase sales or sell your products at a higher price. Even if competitors wish to imitate them, you can prevent this by obtaining patents. This allows differentiation from competitors' products, leading to improved profits and business growth.

You can also impress consumers by encouraging them to believe that your goods are leading-edge products that have introduced new technologies by using words such as "invention" and "new technology" or by making patent marking as part of marketing strategy.

(2) Business monopoly

A business monopoly is realized by taking full advantage of the exclusive right that is the primary function of a patent right. This is possible and the contribution of a patent is greatest when the number of technology components of a product is relatively small and you can do business without using any technology of others. In the drug industry, exclusive rights are used for many products and cross-licensing is relatively rare.

Points to remember here are to obtain all patents necessary for your business and to stick to the principle of not granting licenses to other companies. This manner of exploitation is difficult in fields where a large number of patents are needed. There is also a risk that the company will cling to existing technology and be delayed in adopting new technologies when a new technology superior to the company's technology is developed or at a major turning point for technology. As a result, you might be forced to withdraw from the market in some cases. Therefore, this is a difficult strategy and it also requires consideration of the measures after the expiration of the right. The patent department is expected to provide information on the patent power of the company and technology trends including the patents of other companies and to support correct business judgment from the perspective of patents.

(3) Cross-license

Composing a product using only in-house technologies is most desirable but it is impossible to cover everything from material, parts, manufacturing technology, manufacturing equipment, system, etc. with in-house technologies for a product in which various technologies are incorporated. Consequently, it is inevitably necessary to use technologies and patents of other companies. In this case, if the patent power is lower, there is no choice but to simply obtain the license for patents of other companies. If the values of the patents of the two companies are comparable, they may allow exploitation of each other's patents for the respective businesses. This is called cross-licensing.

Cross-licensing may not involve any compensation of value if the values of the patents of two parties are on the same level, or it may involve monetary compensation if one is superior than the other. Cross-licensing is possible not only between patents in the same field but also across fields. The key here is that the patents for which license is granted to each other have value to the parties. Compensation depends on the difference between the values of the patents.

(4) Charged license

License for a patent may be granted in response to a request from another company or as a result of aggressive licensing activities. In the case of the former, judgment will be made based on the current state of use and the prospect of the utilization by the company and others. Negotiation will be conducted with a generally friendly atmosphere. The latter includes cases

where, after detection of infringement by another company and infringement warning, a license may be granted based on the payment of compensation for damage, and cases where a license is granted for patents that are not exploited now but are expected to be used in the future. In a case where an infringement warning is issued, the difference in thinking between the parties often makes the negotiation difficult, leading to litigation. The difficulty of license negotiation is in the setting of conditions, which greatly vary depending on the technical field and the product. The value and the number of the involved patents are also essential. In any case, it is important to set conditions that will benefit both parties. In contrast, a negotiation for patents that are not currently used but may be exploited in the future can progress in a relatively rational way. Depending on the business plan of the company, such negotiation may include the sale of the right itself.

In this way, active licensing generates licensing revenue as direct benefits and often helps expansion of the market and the growth of the company's business at the same time as a result of the spread of the company's technology. Granting licenses means assisting competitors but you can increase both sales and profits by sharpening the competitive edge of the company products. Furthermore, you can demonstrate the technological superiority of your company. For these reasons, enterprises conduct aggressive license activities.

In addition, once used under a license agreement, a patent is often used continuously in the company and improvement patents are produced based on the licensed patent in many cases. As a result, the original licensor can lead at all times in terms of both patent and technology.

(5) License of standardization technology

With the digitalization and network building of technologies, standardization of technologies is also in progress. In standardization, knowing how to handle patents necessary for the commercialization of products is important. Even a superior technology established as standardization technology may not be used in effect due to patent issues, or, if used, there is a risk of unreasonable enforcement by the patent holder. In order to avoid such problems, it is preferable to identify necessary patents in the process of the discussion on standardization technologies and to set the terms and conditions beforehand. Right holders of related patents have formed a patent pool and set conditions beforehand in many recent cases. Many patent pools have been formed especially in the fields of network, consumer devices, and information communication.

In licensing of standardization technology, it is important to set conditions that are fair to everybody. This is called the RAND (Reasonable and Non Discriminatory) condition. Where a patent pool is formed, a representative chosen among the right holders may conduct license activities or an external license agency may be commissioned for the task. Such an external agency will also fulfill an important role as coordinator of the interests of right holders if there are multiple right holders of necessary patents. The latter may be a preferable way to maintain fairness and transparency for licensees.

In any case, a patent pool also benefits licensees by allowing licensing of standardization-related patents in a lump. Care must be taken to maintain fairness and ensure transparency.

(6) Disposition of patent

If a company does not expect to use a patent it owns in its business, the company may dispose of it. Because maintenance of a patent right involves payment of an annual fee and management costs, an increasing number of enterprises are proactively selling such patents. Looking from the purchasing side, too, whereas there aren't many benefits in just obtaining a license, acquisition of the right itself allows the company to take full advantage of the exclusive right of the patent. For this, payment of a substantial amount of money may be considered. A patent is sometimes sold together with the related business. The key here is adequate evaluation of the value of the patent.

(7) Examples of actual exploitation

Figure 7 shows examples of actual exploitation strategies. If the patent power of the company is relatively low, the main strategy is the use in the company's business focused on the prevention of imitation or the use in cross-licensing with patents of other companies. When the patent power is increased and the flexibility of the company's business is ensured, you will stand at a crossroad of whether to use patents for growth of the business or to use them to increase direct revenue from the patents. If business expansion and business income increase are chosen, you will limit licensing and try to expand business income independently or in alliance with specific companies. If you have chosen direct profit increase through patents, you have to conduct strong license activities and propose the use of your company's patents to other companies. If the patented technologies of your company are established as standard technology, you can expect license revenue from all enterprises involved in the business. There

is also a strategy to expand the company business and increase license revenue with the expansion of the market. You need strategic thinking here.

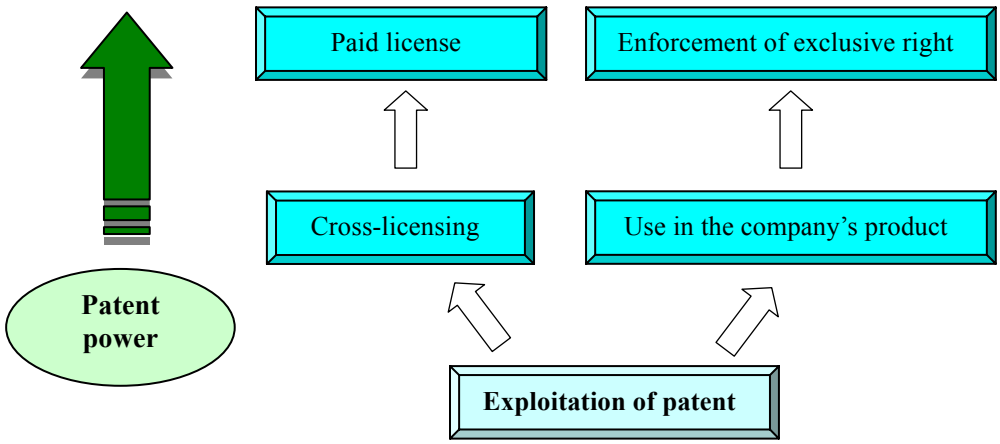

Figure 7. Patent exploitation strategies

Chapter 3. Risk Management

1. Patent Clearance

1-1. Survey of technology trends

A survey of technology trends from the perspective of patents is widely conducted to obtain indicators used in deciding the direction of the future business and technology development. Patent information contains a wealth of data on the new technologies of enterprises. Through their analysis, you can determine where other companies are investing their resources and what technologies are produced. A field where many enterprises have already put much efforts and a large number of patents has been granted is less likely to produce unique new technologies. In addition, it is more likely to be forced to use patents of others when starting business, which makes proactive measures important. On the other hand, fields where others have not yet entered or, if entered, there are not many new technologies, are more likely to produce groundbreaking inventions. The risk of patent infringement is low either way.

In this way, conducting a survey of technological trends before deciding on the direction of business and the subject of research and development is an important step for enhancing the efficiency of development. This also allows you to identify the basic patents in the technical field concerned and the patent power of the individual companies and to build a technology development system with the risk in mind.

1-2. Infringement survey

When starting a project after the completion of a product development, it is essential to conduct a patent infringement survey and to clear all related third-party patents. If infringement of a patent right of another company is discovered after starting a project, large compensation for damage might be demanded or the project itself might even be forced to end. It is important to always respect patents of others and to avoid risk by obtaining a license beforehand if needed.

It is important to conduct a survey of controversial patents in accordance with each step from the stage of starting research and development to finally shipping the products. Some patents may not become clear through a single survey. The composition of a patent may change depending on the direction of the research or at the stage of application of the actual product. Patents that were deemed controversial at first may be cleared as the development progresses. The important point is to clear all patent infringement risks before shipment of products.

2. Response to Patent Disputes

2-1. Response to infringement assertion

You may have cleared all third-party patents by conducting a patent survey at the time of R&D and product shipment, but a patent holder might still issue a warning of patent infringement or file a suit due to an incomplete survey or a difference of opinion between the parties. In such cases, you have to make a legal decision based on the comparison of the patent right concerned and the product of your company. At the same time, it is advisable to work for prompt settlement with the patent holder.

In case of enforcement by a third party, early response in coordination with the related departments is important. If the filing of a suit is anticipated or the business scale is large, it will be necessary to respond with a project team that includes external patent attorneys and lawyers.

(1) Checking the maintenance of the patent right

This consists of checking of the holder of the patent right concerned with the patent register. In rare cases, the patent right has expired because of a failure to pay the annual fee. If the patent holder in the patent gazette and the sender of the warning letter are not the same person, there is a need to check whether or not this is the legitimate right holder.

(2) Relationship between the patent and the product

The relationship between the patent and the product is the most important element and is where the most differences of opinions will occur with the patent holder. The first thing to do is to make a comparison with the language of the claims. However, if there is a question concerning the interpretation of the language, it is necessary to obtain the filing document and make judgment by checking the background.

(3) Survey of the invalidation of the patent

A patent that is effectively registered may still include a cause of invalidation. Many patents are invalidated due to the existence of prior arts that were not discovered at the time of the examination. In some cases, the existence of a prior art may limit the scope of the patent right. You may examine the case with the help of external experts if necessary and, if you find a cause of invalidation, you may make a request to the Patent Office for an appeal for invalidation of the patent.

(4) Existence of license

If the patent had been exploited in your company before the application for the patent, you can make a case that there is a license based on prior user's right. In other cases, exploitation is allowed within a certain scope such as experiment and research. These claims must fulfill the requirements prescribed by the law and the related evidence must be prepared.

(5) Possibility of design around the patent

If you cannot but judge that you are now working the patent concerned, it is important to explore the possibility to design around the patent. If you can design around the patent technology and continue the business using a different technique, you can prevent the negotiation for settlement from becoming a one-way argument by the other party and you can make judgments weighing the cost for design around against that for settlement.

2-2. Toward settlement

(1) Negotiation with the patent holder

After the completion of the survey in the company, a response policy will be decided and negotiation with the patent holder will start toward settlement. If the internal survey denied the existence of the infringement, an argument will be made accordingly. If the patent holder has a different view, however, settlement will not be reached and judgment by a court will be sought in many cases. If the patent holder does not want to grant a license, litigation is especially likely. Because closing of a project is most damaging to an enterprise, proactive measures and patent clearance are essential.

If there are a large number of competitors or many similar technologies in the field, it is not efficient to develop everything in-house, which makes the option of actively obtaining a license advisable. In this case, it is important to obtain the license on the basis of conditions that allow the maintenance of the competitive edge of your company. You must negotiate advantageous conditions to the furthest extent possible by using the patent power of your company.

(2) Conclusion of a license agreement

Disputes concerning patent rights are often settled through negotiation after enforcement by the patent holder. Settlement is made based on the payment of a certain consideration for the

products already manufactured and sold. For the future, however, a license agreement will be concluded with the patent holder. Naturally, it is advisable to ensure that necessary licenses are held before starting the project. The types of licenses will be described below.

i. Exclusive license

An exclusive license occurs by an act of establishment (conclusion of an agreement) and becomes valid with the registration with the Patent Office. Exclusive license allows exclusive exploitation of the patented invention within the scope established between the parties. Consequently, not even the patentee may implement the invention within the scope. The setting of conditions is important because the patentee will receive compensation based on the exploitation of the exclusive licensee. Having the rights that are the same as those of the patentee within the agreed scope, the exclusive licensee has the right to require an injunction, the right to demand compensation for damage, and other rights and may establish a non-exclusive license.

The revision in 2008 allowed the establishment of a provisional exclusive license even during pending within the scope of the items described in the application for the patent.

ii. Non-exclusive license based on agreement

A non-exclusive license based on agreement is the most common type of license that occurs with the agreement of the patentee or the exclusive licensee based on a contract. The non-exclusive licensee may work the patented invention within the scope of the agreement and, if it is registered with the Patent Office, may assert his/her right against a third party in a case where the patent right is transferred. The revision in 2008 allowed the establishment of a provisional non-exclusive license even during pending and disclosure of highly confidential registration items such as the name of the licensee and the scope of the non-exclusive license is limited to a certain scope of the persons involved in order to promote use of the system. For non-exclusive license agreements not specifying the patent right, etc., namely, so-called comprehensive license agreements, a new registration system has been established.

A non-exclusive license, if not exclusively licensed**,** may be granted repeatedly for the same right and the same scope, and the patentee also may work the invention in principle. An restrictive non-exclusive license may also be granted on the condition that the license shall not be granted to another person. The difference with an exclusive license is the absence of the limitation of exploitation by the patentee. Namely, exploitation by the patentee is not limited in the case of a restrictive non-exclusive license**.**

iii. Non-exclusive license with sublicense

With a non-exclusive license with sublicense, the licensee has a right to grant a license to a third party in addition to a non-exclusive license based on agreement. This is often found in exclusively licensed non-exclusive licenses from foreign patentees in particular. A non-exclusive license with sublicense is often granted to allow expansion of the license to subsidiaries and affiliates.

iv. Other non-exclusive licenses

Other licenses include statutory non-exclusive licenses and compulsory licenses. A statutory non-exclusive license occurs for public interest and fairness, independent of the will of the patentee. The license may be set up against a third party without registration with the Patent Office. A representative example is a non-exclusive license based on prior user's right given to a person who has been working the invention or has been making preparations to do so at the time of filing of the original patent application and a non-exclusive license given to employees, etc. for service invention.

A compulsory license is a non-exclusive license established when a person who wishes to work an invention of another person could not obtain agreement of the patentee or the exclusive licensee and requested arbitration of the Commissioner of the Japan Patent Office. There are three types of compulsory licenses:

- Non-exclusive license in the case of non-working
- Non-exclusive license to work one's own patented invention
- Non-exclusive license for public interest

2-3. Actual contract procedures

(1) Contract negotiation

Because terms of contract have a direct impact on the business of a company, due examination and consensus among the parties involved, including the operating departments, are necessary for the negotiation to avoid creating obstacles for business execution. Negotiators are expected to have not only specialized knowledge of patents but also a wide range of knowledge, capability, and experience, including knowledge of the product, patented technology, business trends, and contract practice as well as negotiating ability. Because the parties are in different positions, conflict of opinions will naturally occur in contract negotiation. However, it is

important to seek a mutually acceptable compromise and efforts are required to reach a win-win conclusion. Especially in a negotiation with a foreign company, knowledge of the politics, economy, and culture of the country of the other party, together with language skills, often deepen the understanding of the other party and make the negotiation smoother. Consulting with experts and obtaining opinion briefs in the country concerned is also important.

(2) Drawing up of a contract

An agreement resulting from a negotiation is put in writing as a contract document. It is important to specify all items of concern in the contract document with a view to future risks, including the identification of the patent concerned, scope of the license, term of the contract, and payment of compensation. Although parties may decide everything freely based on the principle of contractual freedom, it is important not to deviate from the law-abiding spirit. It is essential to conclude a contract in view of the Unfair Competition Prevention Law as regards standardization technologies, patent pool, etc. Contracts with foreign enterprises are on the increase with the globalization of business. You should not neglect to check the legal system and regulations of the countries concerned, including expressions of articles.

3. Patent Infringement Litigation

In addition to cases of infringement of the patent right of a third party, those concerning the exploitation of the company's own patent will be brought to court if the negotiation with the other party could not reach an agreement. Patent infringement litigation took a long time in the past but the process has accelerated and a decision is issued in a year or so in many cases. Careful preparations are necessary before filing a suit. It is necessary not only to check the facts of infringement but also to prepare relevant documents and evidence. Suits may be filed in the Tokyo District Court or the Osaka District Court, which were designated as having exclusive competency for patent infringement cases in the law revision in 2003. Appeal trials are handled in the Intellectual Property High Court established in 2005. A system of expert officials consisting of patent attorneys, etc. was also introduced in response to the increasingly sophisticated and complex nature of intellectual property litigations. Expert members provide judges with explanations based on specialist knowledge.

The path toward reconciliation is not closed even after starting litigation. A judge makes a proposal for reconciliation on many occasions. Therefore, it is advisable to take measures and make responses that prepare for both war and peace according to the arguments in the suit and the evidence presented.

Apart from litigation, there is also an option of arbitration based on the agreement of the parties. Arbitration procedures are simpler than lawsuits and allow settlement in less time. Typically, two or three arbitrators that the parties agree on are appointed and the procedure is started. Arbitral institutions include the Japan Intellectual Property Arbitration Center that handles disputes concerning industrial property rights.

3-1. Civil remedy

Most common civil remedy means include the following claims of right:

i. Right to require an injunction: Right to demand a infringer to discontinue such infringement
ii. Right to demand compensation for damage: This is the right to demand compensation for the earnings that would have been obtained if there had been no infringement by the infringer, so-called passive damage. Because proving the amount of damage is sometimes difficult, a section was added in the law amendment in 1998 to make proving of the amount of damage easier. Now, when a patentee demands compensation for damage, the amount of damage may be presumed to be the amount of profit per unit of the article pertaining to the patent multiplied by the quantity of articles sold by the infringer. This made demanding compensation for damage easier and effectively boosted the amount of damage at the same time. However, the right to demand compensation for damage expires after a lapse of three years.
iii. Right to demand restitution of unjust enrichment: This is the right to demand the return of the profits that the infringer wrongfully earned by the infringement. This is a practically more effective means in that, unlike compensation for damage, there is no requirement of intention or negligence and the expiry is as long as 10 years.

3-2. Criminal remedy

Penal provisions are also provided for patent infringement and have been strengthened. Infringement used to be a crime indictable upon complaint but was changed to public crime in

the law amendment in 1998, which also introduced heavy penalties on corporate bodies to increase penalties on corporate bodies separately from the penalties on the infringer. Current penalties are imprisonment with work for a term not exceeding ten years or a fine not exceeding 10,000,000 yen or their combination on an infringer and a fine not exceeding 300,000,000 yen on a corporate body.

3-3. Restoration of credibility

A patentee may demand that a person who impaired his/her business credibility take measures for credibility restoration, which may include publishing an apology in a newspaper. Credibility restoration may be demanded in place of compensation for damage or together with the latter.

3-4. Provisional disposition

Civil or criminal remedy is executed only after final and conclusive judgment by the court and will therefore take a long time. However, you can demand discontinuation of infringement by requesting a provisional disposition. If issued, an order of provisional disposition can minimize the damage to the patentee before the conclusion of the principal litigation.

Chapter 4. Patent Education and Incentive System

1. Patent Education

A company is made of people. In order to promote a patent strategy in close coordination with a business strategy and a technology development strategy, you need to train and educate the patent staff and to educate the general employees, the organization, and the executives that form the company. Because patent education involves many professional elements, it is important to provide education systematically and continuously in accordance with the years of employment. It is effective to build an education system that provides an introductory course for new recruits, then group them based on their department in the second year and after to provide intermediate and advanced courses in accordance with the department and individual students.

1-1. Patent education for general employees

With the rising value of patents for enterprises, patent education to all employees has gained significance. Now, one of the most important factors for enhancing the corporate value is that all employees from new recruits to executives deepen their understanding of patents including creation of invention, acquisition of rights, utilization of patents in corporate activities, and risk management. A basic course for general employees when they join the company is essential and it is also efficient to continue education using PCs and a computer network, informing employees of law amendments, revisions of regulations, etc.

1-2. Patent education for engineers

Inventions are made by engineers. Patents that are useful for business and patents of basic contents can be obtained only when engineers understand the nature of patents. Some engineers make good inventions but fail to report them because they did not recognize them as inventions. Sometimes a right could not be obtained due to an incomplete response in the application procedure. These are cases experienced by many enterprises. A commitment to technology development is important but it is also essential to teach that reporting the results as inventions/patents will make your contribution to the company evident.

A lack of patent knowledge often leads to the inadvertent use of another's patent in the process of technology development. It is important to instill the idea that using another person's patent carries a risk for the business and to nurture the spirit to respect others' patents at the same time.

An education system for engineers should be built in accordance with the business experience of the targets, which may include beginners, intermediate-level individuals, and managers. It is effective to provide beginners with education on the outline of the patent system focusing on invention proposal; intermediate-level individuals with practical education focused on important patents of the company and other companies and countermeasures against others' patents; and managers with education on methods of patent management.

1-3. Education for executives

For recognition of the importance of patents by the entire company, the understanding and recognition of patents by executives are necessary. For this purpose, you need to provide executives with an explanation of the relation between patents and the business through regular reports, patent strategy meetings, etc. so that patent policy is incorporated in the business policy and the business strategy is established based on the state of patents.

Education for executives is typically provided by the patent department through training focused on case examples but it is also useful to organize discussion sessions among executives, lectures by external lecturers, and participation in external seminars, for example.

1-4. Education for the sales department

The sales department can win the trust of customers by explaining that "our products are excellent ones that are protected by patents." The same applies to the patent indications of products. For this purpose, patent education for the sales department is essential. At the same time, the sales department needs knowledge of patent liability in sales contracts. For risk management of a global business, it is important to clarify the scope of the responsibility in a case of infringement by combination with another company's product as well as patent liability of the company's product alone in order to avoid overly heavy responsibility if a third party claimed patent infringement in the future.

2. Incentive System

2-1. Compensation for employee inventions

When an employee of a company makes an invention as a part of the business, the company has a non-exclusive license on the invention and the right to obtain a patent and the patent right for the invention according to company regulations. It has been established that the inventor has the right to receive reasonable compensation in such cases.

Enterprises wish to encourage invention and they pay compensation in accordance with the contribution to the business in order to increase the incentive for engineers who are the source of inventions. However, some inventors do not agree on the amount. In order to prevent this kind of trouble with inventors, the law amendment in 2004 has established that, where an employment regulation. provides for reasonable compensation in a reasonable manner, the payment of compensation is to be made in accordance with the provision.

In response to this amendment, many enterprises reviewed their existing regulations and established an employee invention policy that meets the expectation of inventors. As patents are positioned as a management resource and their value is increasing, the amount of compensation is also rising. There are various types of policies depending on the invention policy of the company including lump-sum payment of compensation and payment based on performance. Some enterprises pay several tens of million yen as compensation.

Some enterprises pay the same amount of compensation for usual inventions and those kept secret as know-how based on the company policy after succeeding the right to obtain a patent.

(1) Compensation for assignment

A compensation for assignment is paid when the inventor assjgns his/her invention to the company. Typically, a fixed amount per invention is paid. Some companies pay different amounts depending on whether or not an application is filed.

(2) Compensation for application/Compensation for registration

A compensation for application is paid when an application for patent is filed. A compensation for registration is paid when the invention for which an application is filed is registered after examination. Most enterprises adopt either or both of the two compensation policies.

Compensation is generally paid at a fixed amount but the value of the invention, the number of claims, etc. are taken into consideration in some cases. This applies also to joint application and joint invention but it is advisable to define the rate of contribution to the invention beforehand. For foreign applications, some enterprises pay separate compensation in addition to the compensation for domestic application.

(3) Compensation for performance

A compensation for performance is paid based on the contribution to the business when a patent is used for a company product. In many cases, performance is assessed based on certain criteria including sales of the products and contribution to the business to decide the amount of compensation.

Contribution rate to the business is assessed based on the state of licensing to other companies, existence of competing products, etc. If the patent made a great contribution to the business income, many enterprises pay big compensation from a business perspective.

(4) Compensation for licensing

There are increasing cases of earning income directly by granting licenses to other companies as a way of patent exploitation. When patents directly generate income this way, a certain percentage of the income is paid as compensation. With the increasing number of patent disputes and rising license fees, more companies are paying big compensation.

This compensation also applies to cross-licensing, but it is difficult to calculate the amount of compensation if there is no income in effect or if the actual income is low and offset by the patent of the other party. Each company establishes its own method of assessment for such cases. Some enterprises calculate the income as the amount reduced from the hypothetical royalty payment to the other party.

2-2. Recognition/Award

Many enterprises have various recognition schemes to encourage the creation of inventions and patent activities. Eligibility varies depending on the scheme. An inventor who made a fundamental invention, a group that has built a strong patent cluster on a specific subject, or a group that has produced a result in a dispute with another company may all be eligible. This type of scheme is important to increase employee motivation.

Whereas the compensation systems described above are legal requirements, recognition schemes, including their selection criteria, must be built focusing not only on the amount but also on honor because engineer incentive is more important.

(1) Inventor recognition

The recognition scheme most commonly adopted among enterprises is one to honor inventors who have made an excellent invention. Some schemes select and honor specific inventions and others offer public recognition when the number of inventions reaches a certain level. In the case of the former, an invention is honored when it is registered or its performance is confirmed. In order to enhance the effect of recognition, however, it is advisable to do this as early as possible after creating the invention. As such, some companies select among inventions for which application is filed within a certain period. In the case of the latter, application, registration, etc. are counted as points and recognition is made when a certain number of points have been accumulated.

(2) Patent activity recognition

Patent activity recognition is conducted to honor individuals and groups who are recognized to have contributed to corporate profitability in various patent activities. Selection is made mostly in consideration of the relation to the business income. Winners may include a development group who has built a patent cluster that contributed to the corporate profitability, an inventor or a team of inventors who made the invention for which the patent promoted patent exploitation and contributed to the business income, and a patent countermeasure team that minimized enforcement by other companies.

(3) National awards

As a measure to promote science and technology, recognition systems have been established to honor persons who have made an excellent invention and those who have contributed to the exploitation of invention. These include a Medal with Yellow Ribbon, a Medal with Purple Ribbon, and a Medal with Blue Ribbon. Among them, the Medal with Purple Ribbon is closely linked to invention in particular. In addition, the Commendation by the Minister of Education, Culture, Sports, Science, and Technology is conferred to individual persons of merit in the science and technology field by the Ministry of Education, Culture, Sports, Science, and Technology. These medals serve as strong incentives for invention activities by engineers.

(4) Civil commendations

Among various recognition schemes, representative private commendations are the National Commendation for Invention and the Local Commendation for Invention sponsored by the Japan Institute of Invention and Innovation. They are conferred every year to announce excellent inventions to the public nationwide and to honor the achievement of the inventors. The National Invention Award includes nine special awards, including the Prime Minister's Prize in addition to the Imperial Invention Prize. In 2004, the 21st Century Invention Prize was established for scientifically or technologically outstanding inventions within three years after the registration of the establishment. These awards are effective in raising the awareness of top executives because representatives of the enterprises are awarded the Distinguished Service Prize for Employment of Invention at the same time that inventors are honored.

Chapter 5. Development of Patent Strategies

With the rising value of patents as management resources, the impact of patent strategy on business management is also increasing. With the development of technologies, business activities are facing not only domestic competition but also global competition. In such an environment, the need for the exploitation of patents for business is higher than ever before while patent-related risk is increasing in business. It is increasingly important to develop a patent strategy in close coordination with the business strategy and the technology development strategy.

5-1. Patent strategy that increases added value

For a company to increase sales of its products and continue growth, differentiation from the competitors' products is necessary. Elements of differentiation include price, function, performance, and reliability, for example. The shortcut to the success of business is technology development that allows keeping one step ahead of competitors in these elements. The first step of differentiation is having a head start over the competitors in development, filing an application for patent when a novel idea emerges, and obtaining a patent right. For this purpose, benchmarking that considers not only patents but also directions of business and technologies including competitor conditions, technology trends, and market trends is desirable. Analyze information appropriately in regard to which field to explore, incorporating the opinions of the product planning department and others and examine the results. The key after the start of technology development is to build a cluster of patents that is unbeatable by competitors through the management of collectives based on appropriate terms and by repeating regular checks in collaboration with the technical development department and the product planning departments at each step from measures against the patents of others and identification of the core patents of in-house technologies to the securement of periphery patents.

5-2. Patent management system of a company group

Previously, when one company had various businesses, they were generally operated under a single management system. Now, however, more speed and transparency are required for business decisions and various business structures have appeared, including an internal company system and the split of specific businesses. Operated together with the business, patent management is naturally expected to have a structure that is tailored to the business, including organizational structure and manner of operation.

As described above, types of organizational structure induce integrated structure, separated structure, and mixed structure. In the operation of any structure, efforts should be made to compensate for its shortcomings. The key to executing the intellectual property strategy in the trinity described above is the function to form basic intellectual property strategy. It is advisable to lay out the framework for directly providing the top management with explanation and immediate reporting when a risk is found.

A sense of unity in the patent department is necessary for the execution of a strategy. Functions of the patent department include the function for patent strategy, the function as a team of experts in the acquisition of patent rights and response to disputes, and the provision of services including patent search. The department should ensure coordination of these functions and work to promote cooperation, including personnel rotation.

Patents are generally controlled by respective operating departments but the scope of right and technical field of one patent often involve multiple operating departments or affiliate companies. In such cases, it is desirable to adopt the best form according to the policy of the company group and the nature of the business. The choices may include joint control, mutual licensing, and central management.

With the progress of overseas development and manufacturing, inventions are also made in overseas subsidiaries. In this case, determining how far to provide support from Japan is a difficult issue. In terms of raising the morale, everything should be left to the local organization, but there are many things to be considered, including communication with the office in Japan and the degree of advancement in patent management. There is no easy answer as to what form is the best. It is essential to move forward by considering the nature of the business and the policy of the group management while ensuring consistency with other management resources.

5-3. Territory of the patent department

Though the patent department's territory is naturally that related to patents, knowledge and experience in fields beyond patents are also required in view of the business strategy and the technology development strategy. Patents protect new technologies and inventions but there are doubts as to whether patents can offer enough protection to them. A patent is a strong right that even allows the monopoly of a business but the right might become invalid for unforeseen reasons. Furthermore, because the technology will be made open and will become publicly known, other companies could advance further based on the technology. If a technology is not made public and is kept secret as know-how, you can protect the technology but will need to

establish a secure system to keep the secret. For this, there are many things to consider, including the education of individual engineers and the construction of a mechanism as well as management policies. Even if you have constructed a system, there is still a risk of the secret leaking out through a former employee, management mistakes, etc. There is also a great risk that another company will independently develop a similar technology and obtain a patent for it.

In this situation, it has become necessary to explore possible protection measures from every point of view, including patent, know-how, and technology information management to protect new technologies and new products. The extent to which the patent department should be involved may vary depending on the business field and the nature of the product, but this requires deliberation from the perspective of new technology protection with a view to collaborate with other departments.

5-4. Achievements of the patent department

It is obvious that each department is to report the achievement of its operation to the top management. For the patent department, however, evaluation criteria are complicated and we often hear complaints such as the difficulty in determining the relation with the management/business and the contribution of patent activities. Amid calls for transparency of management, each department has the responsibility to explain its cost-effectiveness. The patent department, too, is required to "visualize" the amount of resources that should be invested and how much return on the investment is expected.

Revenue and expenditure of license is often used as an indicator of patent power and achievement of activities. Whereas the amount of the revenue is the profit in one-way licensing, calculation of the amount of contribution is difficult in cross-licensing.

The generally recognized amount of contribution to the business income and expenditure is as follows:

<Amount of contribution>

- Amount of license revenue
- Sales increase or production cost reduction based on non-licensed patents
- Reduced amount from the payment based on cross-licensing
- Amount that would have been paid due to the existence of a patent of another company

<Amount of expenditure>

- Patent application cost
- Cost for maintenance of patent rights
- Labor cost of the activities
- Amount of license expenditure

Among them, the amount of license expenditure may be regarded as a cost for development considering that it has an aspect of reducing the development cost and purchasing of technology. It is necessary to quantify these costs as much as possible and to "visualize" the contribution by the patent department.

Information disclosure concerning the contribution to business is required not only in the company but also to the outside of the company. An increasing number of companies are disclosing information to their investors in the form of intellectual property reports. Such reports are expected to provide disclosure/explanation on the patent policy/strategy, portfolio of important patents, major activities, and their achievements, and risk information concerning important litigations, for example.

5-5. Global patent strategy

As business is showing increasingly global aspects, a global perspective is also required in patent strategies. When planning the route of development, manufacturing, and sales, an increasing number of enterprises are choosing development in Japan, manufacturing in Asia, and sales in the US and Europe, for example. In this case, sophisticated strategy is needed including what patent strategy to form and to what extent infringement risk is to be considered.

A decision on a foreign application must be made in consideration of various factors such as the timing (at the stage of manufacturing or distribution, for example) and competitors' movement. Here, the business plan of the company and whom to consider competitors are essential. You are expected to plan a strategy based on the business evolution of the company. You need to elaborate a strategy based on a long-term perspective because the term of a patent right is 20 years. You are expected to make every effort to build patent power exceeding that of your competitors based on an understanding of their patent power, filed applications in countries around the world, etc. At the same time, it is important to consult experts in foreign countries on a regular basis and to construct a structure for immediate response if a problem should occur.

5-6. Human resource development

The basic knowledge/skills required of patent staff may include technical comprehension in the field for which they are in charge and knowledge of domestic and overseas patent systems. There is also now a need for more specialized knowledge and skills such as the interpretation of patent rights, negotiation ability, and experience in litigation, which calls for the training of specialists. With the increasing number of disputes abroad in particular, there is a call for greater expertise, including knowledge of the overseas legal system and procedures as well as language skills. Because overseas disputes could lead to a huge loss, specialists must be developed in each field.

In order to advance patent strategy in close coordination with the business and technical development strategies, you need to have both specialized skills and a wide range of knowledge and skills including strategic thinking. This calls for the training of strategy staff. It is necessary to develop human resources who have knowledge as patent specialists but are also experienced in the business, including the understanding of financial statements, have broad knowledge and a sense of balance for discussion of cutting-edge technologies, and are capable of deciding the direction of the patent department and building its strategy.

Developing such human resources is not possible for a patent department to do on its own. This requires the temporary transfer of staff to other departments and overseas to gain experience. The first five to ten years after joining a company or a patent department may be needed for acquiring patent expertise. In this manner, a staff member is expected to accumulate experience systematically through overseas training/missions, working in other staff departments or operating departments, for example. This must be planned for the entire patent department but not every patent staff member needs to go through this. It is important to conduct well-planned human resource development based on the ability, character, and aptitude of each person.

The End

Japan Patent Office

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