

12 Research and Study on the Intellectual Property System in the 21st Century

With the rapid development of the information society and with a view to promoting creative and advanced technology development, Japan has also been increasingly recognizing the importance of the intellectual property system and accordingly enhancing its own system through several legal amendments.

The intellectual property system offers the benefit of exclusive use on the policy basis to a holder of information, which is inherently non-exclusive in the consumption term and freely available, so that incentives for the creation of such information can be enhanced for industrial development and cultural promotion. To this end, it is necessary to strike the appropriate balance between protecting such information by this system and ensuring its free distribution and utilization in designing and operating a specific intellectual property system.

This research studies how an intellectual property system should be in order to encourage technological development and innovation for further industrial development through the appropriate balance mentioned above.

Introduction

Information technology has been rapidly developing in major developed countries including Japan, as witnessed in the explosive penetration of the Internet and Electronic Commerce. In order to ensure continuous economic growth, it is critical for Japan itself to develop creative and advanced technologies. In this respect, the importance of the intellectual property system has been continuing to grow. Considering these circumstances, the Japanese government has been making efforts to enhance its intellectual property system through legal amendments and other relevant measures.

The intellectual property system offers the benefit of exclusive use on the policy basis to a holder of information which is inherently non-exclusive in the consumption term and freely available, so that incentives for the creation of such information can be enhanced for industrial development and cultural promotion. To this end, it is necessary to strike the appropriate balance between the protection of such information by this system and its free distribution and utilization in designing and operating a specific intellectual property system based on the original objective of this system. Particularly in this age of rapid technological innovations, broader information distribution along with the growing networks, and growing importance of basic technologies including biotechnology, a stronger intellectual property system is essential and, at the same time, the free distribution and utilization of relevant information is becoming increasingly necessary. Thus, it seems that the balance between these two conflicting needs should be given further careful consideration.

This research aims to examine what constitutes an intellectual property system beneficial to industrial development particularly through technological development and innovation.

I Trends of Intellectual Property System in Japan

1 Recent Trends of Intellectual Property System

(1) Industrial Property Right Laws

Until the beginning of the 1990s, the Japanese intellectual property system had been regarded as offering less effective protection as characterized by the narrower scope of right and less compensation for damages than its western counterparts.

Since then, however, there has been growing recognition that Japan needs more creative and advanced technological innovations to maintain its economic vitality and, therefore, has to enhance its intellectual property policies. In order to improve the effectiveness of rights protection, several legal amendments have been made, such as the revised Patent Law in 1994 in which description requirements for patent specifications are relaxed, and the revised Industrial Property Right Laws in 1998 and 1999 in which measures are incorporated to relax the burden of proof of infringement of industrial property rights and/or compensation for damages.

(2) Unfair Competition Prevention Law

The 1990 amendment introduced civil remedies for trade secret infringement. In 1993, the protection of unregistered intellectual properties was enhanced, in particular through

the regulation of product form imitation ("dead copy" measures) and abuse of famous names. In 1999, the regulation for offering of devices to cancel technical control means, such as copyguard cancelers, was introduced. Thus, the Unfair Competition Prevention Law has been playing a greater role as a law to protect intellectual properties in broader fields.

(3) Copyright Law

In 1996, the WIPO Copyright Treaty and the WIPO Performances and Phonographs Treaty were adopted as new global rules responding to the changing society of digitalization and networking. Along with this adoption, the Japanese Copyright Law was revised in 1997. And in 1999, another revision was made, including the regulatory measures regarding the circumvention of technological protection measures, the regulation of modification of copyright management information in electronic form, broader presentation rights, the creation of general distribution rights, and the abolishment of the transitional clause regarding the limitation of performance right (Supplementary provision to Article 14).

(4) Technology Licensing Organization (TLO) Law and Others

In 1998, the "Law on encouragement of transferring technological research results of universities to private businesses" ("TLO Law") was established to encourage technology transfer from universities to industry, in order to improve industrial technologies and promote the creation of new businesses. In 1999, the Japanese version of the Bayh-Dole Act (Article 30 of Law on Special Measures for Industrial Revitalization) was established, on which exclusive patent rights relating to nationally sponsored research and development (R&D) activities can be granted in their entirety to inventor(s).

2 Trends of Intellectual Properties in Major Industries

This section looks at two major high-tech industries that are expected to lead the 21st century: information technology and biotechnology.

(1) Information Technology

The industry is characterized by more intensive research and development activities, greater emphasis on product innovation rather than process innovation, and easier imitation of research results (products) than other industries. The industry, therefore, has a relatively high dependency on intellectual property rights.

Particularly in the area of hardware, a large number of components make up a final product,

and accordingly a corresponding number of intellectual property rights are realized. Competitors, therefore, often make cross-licensing agreements with each other in marketing their products and benefit from their own exclusive rights for which permission to use is given in exchange. It is also noted that these large number rights could disturb new entries.

Another characteristic of this industry is its network externalities as seen in the fields of telecommunication services and computer software, which enable monopolistic positions to be easily acquired as for such communication tools.

In the industry where such network externalities exist, business competition tends to be very intense as companies work toward de facto standards. This intense competition clearly produces winners and losers. Such de facto driven competition is generally considered to promote technological innovations, but does not necessarily guarantee the most effective result.

(2) Biotechnology

The development of genetic technologies, including gene recombination technology and gene proliferation technology, enables the quick analysis of gene structure. As a result, intense global competition has been carried on to obtain patents for industrially useful genes. One concern has been pointed out that Japan's slow reaction to patenting useful genes could result in the loss of a foundation for future industrial development.

The industrialization of biotechnology was first seen flourishing in the form of genome medicine development in the medical field. The development of genome drug, a result of linking genome information (all genetic information) to business, is characterized by its process to bring new pharmaceuticals to the market place through the technology transfer of R&D results, from upstream to downstream in the industry, i. e., from "gene analysis" in the upstream to "function analysis and evaluation/examination of target for drug" in the midstream, and then to "search for leading compounds" and "composition of medicinal compounds and creation of final medicinal products" in the downstream.

In this field, thus, new drug (final products) is exhaustively developed through the full use of genome information and based on the human body mechanism. Therefore, the general R&D period can be much shorter than in the traditional development process. On the other hand, a single company alone cannot cover the whole process from high-risk upstream to low-risk downstream, requiring a divisional form of development process with different firms

working in different development stages. There is a concern that unless research results in one development stage are not smoothly transferred to the next, product development would not be encouraged and consequently social welfare would not be enhanced.

Also, in the granting of patents to genes, for example, as in the case when a gene associated with a certain disease is patented, such patented gene could be a final and decisive discovery (patent right) without any other effective alternatives. That means the supply of final products, which leads to enhanced social welfare, might totally depend on the licensing of such a decisive invention (patent rights).

Biotechnology has been built on recombinant DNA technology and cell technology. Technologies used in R&D activities of such fields (e.g. "DNA chips") are often essential ones in conducting relevant R&D activities. When such technologies are patented and if non-right holders are not given permission by right holders to use them, it might bring about a situation where no relevant R&D activities could be conducted at all.

II Trends of Intellectual Property System in the U.S. and Europe

1. Trends of Intellectual Property System in the U.S.

The U.S. seems to have turned into a period of so-called "pro-patent" policy around 1980, when the trade deficit was widening between Japan and the U.S. Under such a circumstance, the stronger global competitiveness of domestic industries was urgently required and accordingly the importance of intellectual property rights was loudly advocated as a means to realize that.

In the 1979 review of domestic policy relating to industrial technological innovations under the Carter Administration, the Patent Subcommittee proposed the following five objectives:

- ① To restructure the U.S. Patent and Trademark Office (USPTO) into a more powerful organization
- ② To establish a reexamination system
- ③ To establish the United States Court of Appeals for the Federal Circuit (CAFC)
- ④ To reduce patent litigation fees
- ⑤ To transfer patent rights as results of federally sponsored research to private sector.

The first half of the 1980s saw several

important court rulings leading to expand patentable subject matters. Two examples are the Chakrabarty case (1980) in which the Supreme Court held that artificial micro-organisms were recognized as patentable subject matter and the Diehr case (1981) in which the Supreme Court approved the patent protection of computer software.

In the technological policy context, several legislative acts were established, including the Bayh-Dole Act of 1980, which set forth a way in which patents based on the results of federally sponsored research is granted to private entities, and the National Cooperative Research and Production Act (NCRPA) which relaxed requirements in applying the Antitrust Law to encourage joint R&D activities.

However, the most influential move among all these measures was the establishment of the CAFC in 1982. Giving the CAFC exclusive jurisdiction of patent-related appeals appreciably has resulted in more stabilized rights and stronger protection, through the standardized judgment and improved predictability of the presence of infringement and validity of rights, the approval of preliminary injunction, and the higher compensation for damages.

But, it should be noted that the U.S. is not simply moving in the direction of stronger protection of intellectual property rights. As a matter of fact, one court ruling did not approve the enforcement of overbroad patents and another interpreted scope of right in a restrictive way.

Some recent achievements in competition policies taken against the enforcement of intellectual property rights include the development of the "Antitrust Guidelines for the Licensing of Intellectual Property" ("IP Guidelines") in 1995 and the publication of an FTC staff report, "Anticipating the 21st Century: Competition Policy in the New High-Tech-Global Marketplace"(*2), in 1996, both of which are briefly described below.

"Antitrust Guidelines for the Licensing of Intellectual Property" (hereinafter cited as "IP Guidelines") were prepared by the Department of Justice and the Federal Trade Commission (FTC), which explains the agencies' approach to licensing and other arrangements involving intellectual property. IP Guidelines note that "the intellectual property laws and the antitrust laws share the common purpose of promoting innovation and enhancing consumer welfare",

(*1) "Network effects" are present when the value of a product or service for any one user increases with the number of consumers using the same product or service, as seen in telecommunications service and computer software.

(*2) A Report by the Federal Trade Commission Staff, Antitrust & Trade Regulation Report Vol.70, No.1765 (1996)

and enumerate three general principles relevant to an antitrust analysis involving intellectual property. First, intellectual property is essentially comparable to any other form of property. Second, intellectual property does not create market power in the antitrust context. Third, intellectual property licensing allows firms to combine complementary factors of production and is generally procompetitive.

An FTC staff report, "Anticipating the 21st Century: Competition Policy in the New High-Tech-Global Marketplace" describes the future direction of U.S. competition policies, and addresses the "Intellectual Property and Antitrust Policy for New Technologies" including information technology and biotechnology in Chapter 8.

The report notes that intellectual property laws and antitrust laws share the common goal of encouraging innovation, industry and competition, and if inappropriate grants of intellectual property interfere with the competition that drives innovation, such grants would conflict not only with the purposes of the antitrust laws, but also with the purposes of the intellectual property laws themselves.

It also states that under most circumstances, the owner of intellectual property rights can enforce them in either an independent act or joint act relating to the intellectual property of new technologies, but intellectual property rights are not absolute, and certain business conducts may exceed the legally permissible use of rights and raise antitrust concerns. Joint conduct, such as cross-licensing and patent pools, sham litigation, tying arrangements, and monopoly leveraging are areas where antitrust issues most often arise, each of which is examined in the report. For example, it notes that anticompetitive cross-licensing and patent pool arrangements could be minimized by preventing the issuance of overbroad patents in patenting. Accordingly, the FTC requires the Patent and Trademark Office and other intellectual property policy makers to examine in such a direction.

The major characteristic of the report is its focus on effects of patent claims on firms' ability to innovate and incentives for inventions. It notes that the issuance of overbroad patents could disturb subsequent innovations.

2 Trends of Intellectual Property System in Europe

In June 1997, the European Commission announced its "Green Paper on the Community

Patent and the Patent system in Europe", as a foundation to discuss future patent policies in the EU. Through public hearings and other opportunities, various comments were collected from a wide range of sources, and subsequently the framework of the European Commission's patent policy was presented in the form of a communication (communiqué). The communication consists mainly of the following four points:

- ① Establishment of Community Patent
- ② Harmonization of patent systems in EU Member States
- ③ Reform of European Patent
- ④ Examination of roles of patent agencies in EU Member States.

This move reflects their recognition of the importance of the intellectual property system in the EU. But it is rather considered as an action to standardize intellectual property systems, now different in each country, in order to promote regional harmonization, than to enhance their systems themselves.

In European countries also, debates have been actively conducted about new areas such as genes and computer software as in Japan. Although legal protection of software has received negative responses there, some recent court rulings have started to show positive attitudes. In a Directive on biotechnology, they clearly describe the exclusion of human cloning technology from patentable subject matters. EU policies, thus, are characterized by their tendency to emphasize their interests in ethical and environmental issues with regard to their intellectual property systems.

In the antitrust context, there have been some court rulings about the refusals to deal in exclusive licensing of intellectual property rights, such as the Volvo case (1988) and the McGill case (1995).

III Economic Analyses on the Intellectual Property System and Technological Innovation

1 Roles of the Intellectual Property System in Promoting Technological Innovation

(1) Roles of the Intellectual Property System in Promoting Technological Innovation

The roles of the intellectual property system in technological innovation can be mainly categorized into three groups as follows:

- (i) Incentives for R & D activities

The necessity and effectiveness of providing incentives for R & D activities through the intellectual property system vary according to

the type of industry. Generally, industries which are characterized by the following two conditions would more strongly require the protection of intellectual property rights: 1) high R & D costs and low marginal costs, and 2) relative ease in imitating developed technologies by other firms for business purposes.

Such industries include pharmaceuticals, biotechnology, and information technology (e.g., computer software).

Also, as R & D costs rise in terms of the percentage of total sales and the share of production and distribution of information and/or knowledge-intensive products increases in terms of the business portfolio, the role of the intellectual property system is given higher importance.

Even in such industries where intellectual property is highly emphasized, however, technological innovation is often cumulative. The enhanced protection could increase incentives for up-front R & D activities, but at the same time could hinder subsequent inventions. It is, therefore, necessary to examine and ensure the proper level of protection.

(ii) Disclosure of Technology

A patent system is considered to effectively increase R & D efficiency by encouraging the disclosure of technology information. In other words, the disclosure of technology information could expectedly encourage new R & D activities conducted on prior discoveries, eliminate the unnecessary duplication of similar research, and help resolve the issue of submarine patents.

(iii) Effective Commercialization

In the context of technological innovation, an intellectual property system plays an important role in encouraging R & D investment for commercialization purposes.

Inventions that will not directly lead to commercialization require additional R & D activities to further examine their marketability. To encourage such activities, it is presumably necessary to grant an exclusive license to inventions regarded as essential for the R & D activities. For example, some unused nationally owned patents may fit this case.

(2) Comparative Analysis of Social Costs and Benefits Regarding the Intellectual Property System

The social benefits of the intellectual property system are as mentioned earlier. Social costs, on the other hand, include the following:

(i) Restrictions on subsequent R & D activities

R & D costs would rise because basic R & D technologies necessary for subsequent innovation are patented and the pace of R & D activities are highly likely to slow down due to the elimination of competition.

(ii) Less product supply due to limited competition

Broader patent scope (patent claims) might give greater market power to a right holder, presumably resulting in restricted product supply and higher price setting.

(iii) Cost of duplicated R & D activities due to detours preventing relevant patents

A longer period of patent protection could increase R & D investment costs for other firms because they have to prevent the use of relevant patented technologies.

(iv) Cost of patent acquisition and technology transactions

There is a higher possibility of increasing the number of defensive applications and costs in technology transactions.

Comparison analysis of the social costs and benefits is essential in designing a specific intellectual property system. As matter of fact, it is difficult at present to understand such costs and benefits in terms of quantity. Described here is the basic idea of the analysis.

First, as a matter of course, patents should not be granted to inventions with no technological value added to publicly known technologies.

Patenting inventions which do not contribute to technological progress or abstract ideas or concepts whose practical usage are not specified only entails social costs, but provides no social benefits. Thus, patenting requires the strict application of following minimum requirements; novelty, non-obviousness, and utility for industrial purposes.

Second, results of very fundamental R & D which can be even categorized as scientific knowledge should be given more careful consideration in patenting, which could produce severe effects on the applicability of such basic research results.

To that end, it is necessary to strictly apply the utility requirement in patent examination. In addition, basic inventions which satisfy the utility requirement should be restrained from giving overbroad patent rights by strictly applying the requirements of written description and novelty.

Third, it is important to prevent the abuse of intellectual property rights. In principle, acquiring market power (i.e., power with which they can set higher prices than marginal costs) as a result of excellent technological achievement itself should not automatically raise questions. Restrictions on the enforcement of their intellectual property rights could hinder developing firms from covering their R & D investments and keeping incentives for

inventions. There seems to be, however, some cases in which social costs of intellectual property rights exceed social benefits, such as business conduct which disturbs the R & D activities of competing firms or restricts the effective use of technologies developed by its own firms; specifically, the refusal of licensing, which could prevent the implementation of excellent technologies, and rejecting to offer network compatibility. Such conduct should be restricted as an abuse of intellectual property rights.

2 Other Economic Analyses

The results of various economic analyses of the relationship between the intellectual property system and technological innovation have been presented mainly in the U.S. Major analyses are overviewed as follows:

(1) Intellectual Property Rights and Profitability of R & D Activities

Intellectual property rights play an important role in firms making profits from their R&D investments, but it is just one of various factors to determine the profitability of a company. Some reports note that companies in general place greater importance on marketing and service activities, a shorter lead time on commercialization, and earlier departure from the experience curve, rather than protection by patents.

(2) Scope and Term of Intellectual Property Rights

The scope and term of intellectual property rights have been studied relatively well for a single technological innovation. Basically, the benefits of intellectual property rights are determined by multiplying scope and period of protection. But, whether more emphasis should be placed on the scope or term depends on the size of the R & D costs incurred by the detour or duplication of prior inventions.

(3) Cumulative Technological Innovation and Intellectual Property Rights

Whether intellectual property rights should be established broadly or narrowly is an important issue when a technological innovation is made in a cumulative way. Supporting a broad patent is the Prospect Theory by Edmund Kitch^(*3) and a narrow patent is supported by the Race to Invent Theory by Merges and Nelson^(*4).

Merges and Nelson argued that the history of technological innovation in the U.S. suggested

that a broad patent could hinder subsequent technological development. The main reason is that the diversity of R & D strategies is a powerful driving force behind industrial innovation, and granting broad rights to certain firms could prevent the proper functioning of such diversity.

When R & D activities by various companies are related vertically or horizontally as seen in the biotechnology industry, enhancing an intellectual property right to encourage a certain technological innovation could hinder other innovations made on such prior innovation. Institutional mechanisms such as joint R & D activities and advance licensing could help to alleviate such a dilemma.

(4) Comparison with Other R & D Enhancing Mechanisms

Other R & D enhancing mechanisms include research activities by public institutes, nationally sponsored research activities by private research institutes, and public grants to research by private institutes.

IV Study on Future Intellectual Property System

1 Introduction

This section describes the major elements of the intellectual property system, specifically the patent system, (hereinafter referred to as "policy measures" as they are established from political standpoints) and pro-competition policies closely related with the system.

2 Overview of Major Policy Measures

Major policy measures regarding the intellectual property system include:

- ① Establishment of scope of rights (Patent Office)
Novelty, non-obviousness, and enablement requirements
- ② Arbitration system (Patent Office, MITI)
Non-enablement, relationship of utilization, and public interest
- ③ Use of the "Abuse of Rights" Doctrine (Courts)
- ④ Claim Interpretation (Courts)
- ⑤ Application of the Antimonopoly Act (Fair Trade Commission)

These policy measures can be divided into

(*3) Edmund W. Kitch, *Journal of Law and Economics*, 265-290(1977)

(*4) Merges R.P. and R.R. Nelson, *Columbia Law Journal*, Vol.90 (1990), 839-916, Merges R.P. and R.R. Nelson, *Journal of Economic Behavior and Organization*, Vol.25 (1994), 1-24

two different groups: measures to adjust factors within the intellectual property system and measures to adjust factors outside the system. The former can be further divided into adjustment before the grant of rights and adjustment after the grant.

3 Details on Major Policy Measures

(1) Establishment of the Scope of Rights

(i) Role of the Scope of Rights

Major factors that determine the level of protection of intellectual property rights are the "scope of rights" and the "period of protection". As technologies get outdated, however, the substantial life of patent rights often get shorter than the term of the patent rights. Furthermore, the effective period of protection is determined by the scope of protection. Therefore, it is practically justifiable to say that a primary factor that determines the level of protection is the scope of rights; i.e., broad or narrow.

(ii) Broad or Narrow Patent

How could a broad patent influence R & D activities? First, the possible positive effects of a broad patent are to keep incentives for R & D activities and to ensure the disclosure of technologies.

A possible negative effect, on the other hand, is that a broad patent for basic technologies provides huge exclusive rights to the developing firm, which often could lead to nipping the buds of ideas about possible applications by others. Furthermore, broad patenting of basic technologies that even cover "basic principles" could disturb possible technological innovations in the future.

The scope of rights, therefore, is a very important factor that could influence the effectiveness of patent rights.

As matter of fact, it seems to be difficult to determine the proper scope of rights for the purposes of the Patent Law on a case by case basis during every examination. It is, thus, practical to establish basic criteria through the modification of the conventional Examination standards and examine separately in terms of prior arts, written description and common knowledge in specific technology fields. In this respect, it is important to thoroughly investigate such basic criteria for examination with due consideration given to characteristics of relevant fields of industry and technology so that the proper scope of rights can be established.

One suggestion is that certain measures should be taken such as no or limited grant of patent rights when it is predictable that patenting could produce the negative effects by a monopoly, which is unacceptable *ex post facto*.

In the U.S., there has been a recent movement of substantially adjusting patent scopes by strictly applying written description requirements.

(2) Arbitration System

Patent rights, exclusive rights that enable a right holder to limit the use of non-right holders, could produce substantial negative effects to society if no use is permitted to non-right holders for certain reasons.

Japanese Patent Law specifies procedures after rights have been granted in Section 93, stating that "where the working of a patented invention is particularly necessary in the public interest", those who intend to work the invention may request the consultation of granting a non-exclusive license by an arbitration decision by the Minister for International Trade Industry. In addition, there are other arbitration systems on the granting of non-exclusive licenses in the case of a failure to work (Section 83) and on the granting of non-exclusive licenses when a relationship of utilization exists (Section 92).

These arbitration systems first should be reviewed for proper use from the standpoint of competition policies. As for the arbitration system stipulated in Section 93, it is possible to interpret that benefits in the pro-competition context, i.e., the promotion of fair and free competition, be included in the term "public interest" in the provisions.

For example, when a right holder's refusal to license violates the Antimonopoly Act, arbitration systems under the Patent Law can be used as a means to deny such business conduct.

Second, arbitration systems, as matter of fact, could affect licensing contracts. One opinion is that arbitration systems could prevent increases in the licensing royalties and subsequently promote licensing at reasonable royalties.

It is, thus, beneficial to refine requirements in applying arbitration systems with due consideration given to all of the above issues.

The usage of the arbitration system to date is as follows. The number of requests for arbitration decisions on the granting of non-exclusive licenses under Article 92 was 13 as of September 1, 1998, out of which 4 were pending and none were approved for the granting of a non-exclusive license. The number of requests for arbitration decisions under Article 93 was zero as of September 1, 1998.

(3) Use of the "Abuse of Rights" Doctrine

For example, in the litigation against the infringement of intellectual property rights, a defendant may challenge the enforcement of an applicable right, alleging that it constitutes an abuse of rights. Although there have been a number of arguments like this, few of them have

been regarded as the defendants have claimed.

One problem with this doctrine is that it has no clear criteria for judgement. Still, its significance is recognized because it provides a theoretical approach to modify existing rigid regulations and to be applied over a transitional period until a further refined theory has been established.

In particular, this doctrine may be effective in interpreting the relationship of intellectual property laws and competition policies in a harmonized way. Suppose that a right holder's enforcement of his/her rights (refusal to license) could violate the Antimonopoly Act and the right holder bring an infringement lawsuit. In such a case, the court could reject such suit by applying this doctrine, regarding enforcement which could produce any anti-competitive effect as a violation of the Antimonopoly Act.

(4) Claim Interpretation by Courts

The most noticeable trend in recent court rulings regarding patent issues in Japan is the application of the Doctrine of Equivalents in determining the patent scope.

The idea here is "to provide proper protection to a patented invention by interpreting its patent claim somewhat broadly from the claim language to such an extent as not to harm the benefits of third parties." The application of the doctrine can be positively evaluated because it enables the adjustment of benefits between a patent right holder and third parties, and eventually a more flexible response in resolving specific disputes in line with the original purposes of the Patent Law. Still, it is necessary to further refine the application requirements.

It is also important to properly define the methods and requirements for interpreting the patent scope restrictively (narrowly) through judicial decisions.

(5) Application of the Antimonopoly Act

(i) Intellectual Property System and Competition Policies

The intellectual property system, which grants exclusive rights for intellectual properties, and competition policies seem to conflict with one other. But, it should be understood that both shares the common goal of promoting industrial and economic growth by dealing with problems that markets alone are not able to solve.

Particularly, these days, when the protection of intellectual property rights has been enhanced both in Japan and other countries, in some cases, such intellectual property rights as exclusive rights are more likely to bring negative effects (i. e., monopoly) which are not socially acceptable. As a tool for regulating such effects, competition

policies seem to have been given greater importance.

In the U.S., where the relationship between the protection of intellectual property rights and the enforcement of antitrust laws often has been considered as conflicting, there has been a growing recognition that stronger intellectual property rights should be accompanied with stronger competition policies.

(ii) Specific Points at Issue

① Article 23 of the Antimonopoly Act

Article 23 of the Antimonopoly Act addresses acts under intellectual property rights. Although there are several interpretations of the provision, virtually none take the Exemption Theory which interprets that the Article legally defines the exclusion of intellectual property rights from the application of the Antimonopoly Act by regarding the enforcement of intellectual property rights as a kind of sacred area. In other words, nearly all experts agree that the Antimonopoly Act can be applied to the enforcement of intellectual property rights in certain cases.

② "Guidelines for Patents and Know-how Licensing Agreements under the Antimonopoly Act" by the Fair Trade Commission (July 30, 1999)

The Guidelines describe the FTC's basic stance in applying the Antimonopoly Act to patents or know-how licensing agreements, particularly refusal to license through patent pooling arrangements and patent concentration in connection with private monopolization. However, there is no explicit description about individual refusal to license rights of originally developed intellectual properties.

③ Individual Refusal to License

Recently, the issue of monopolies has increasingly and globally posed a problem in fields for which no relevant business laws and regulations have been established. Intellectual property rights is one of such monopolies.

Intellectual property rights, particularly patent rights, have the essential effect of prohibiting unauthorized use of patented technologies by third parties for business purposes. This means that a right holder, in principle, can have the freedom to make decisions about possible licensing. But no restrictions imposed on exercising his/her freedom could rather bring about a situation against the original purposes of the patent system.

One possible solution is to regard a right holder's refusal to license (refusal to deal in a broader sense) as a violation of the Antimonopoly Act subject to certain requirements and eventually encourage licensing in line of the original purposes of intellectual property.

In this respect, past court rulings in Japan and abroad suggest following requirements:

- (A) Essentiality
- (B) Business justification

Requirement (A) is regarding whether or not other firms have no alternatives and have difficulty in operating their business activities if they are not permitted to using relevant patents.

Requirement (B) stipulates that the mere fact that certain intellectual property rights are essential to business operations in a certain market doesn't automatically make the refusal to license problematic, instead there could be certain cases in which the refusal to license such essential patents is acceptable to ensure incentives for R & D activities. For example, highly innovative inventions regarded as pioneer in certain fields and less innovative inventions, even though they become requisite as increasingly integrated as standard technologies, should be evaluated rather differently in order to ensure incentives for R & D activities.

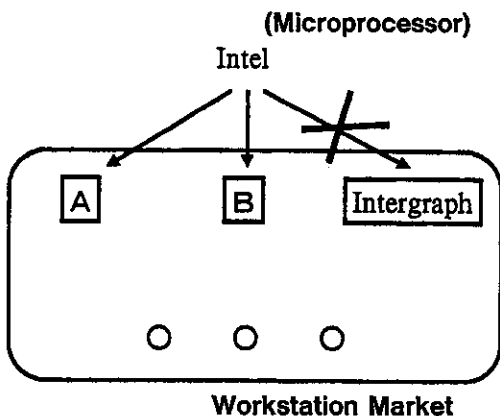
There are some court decisions involving the requirement of business justification in Japan and abroad such as; the Magill case (U.S.), the Kodak case (U.S.), the Pachinko Association case (Japan), the Microsoft case (U.S.) and the Intel case (U.S.).

The next section describes the Intergraph v. Intel case as one of major recent court rulings that represents important issues in the antitrust context in the U.S.

[Intergraph v. Intel case]

(i) Overview

Intel, a microprocessor manufacturer, refused to provide to intergraph, the technical assistance and other special benefits that Intel had been providing to Intergraph. The point at issue was whether this business conduct violates the Antitrust Law.



(ii) Outline of Court Ruling

The CAFC reversed the district court's decision, on the grounds that Intel's refusal to deal doesn't violate antitrust laws, because Intel

and Intergraph are not in a competing relationship, and Intel's market share is small in the market they compete.

(iii) Considerations

As for the grounds that Intel and Intergraph do not have a competing relationship in the workstation market, the general interpretation by Japan and European countries is that Intel's refusal should be considered an issue in the antitrust context despite the non-existence of a competing relationship if Intel eliminates competition in the relevant market by excluding one certain firm from using its monopolistic power. However, our impression is that the viewpoint as expressed in the CAFC ruling seems to be virtually common in the U.S.

This viewpoint is, however, questionable because a serious problem could arise in the connection with competitive policies even if the relationship between relevant parties is less competitive in the relevant market. For example, R & D specialized firms have grown more important as established research entities. They often don't use their own inventions by themselves, and any anti-competitive effects could be produced when they exercise their intellectual property rights. In sum, companies who don't use their inventions themselves could ask for unduly high licensing royalties while companies who use other parties' inventions are often licensed for using their intellectual property rights (cross-licensing between companies in the same industry), expectedly resulting in proper licensing royalties.

As for the grounds that there could be no anti-competitive effects because Intel's share is small in the relevant market, a strong counterargument exists even in the U.S. (the so-called "Leverage Theory"). The reasoning of this court ruling is also considered arguable. Suppose that giant companies whose monopolistic position has been legally approved enter other markets after being relieved from regulations against multiple business operations in the course of recent deregulation movements. Under the reasoning of the said court ruling, if their share is small in such markets, there would be no antitrust issues.

4 Protection of New Industries and Technologies

(1) Points of Consideration

Along with technological development, the scope of subject matters to be protected by the intellectual property system has also been expanding in Japan. This section examines what should be considered in studying the protection of the new type of intellectual properties in fields

which have been excluded from coverage under the existing system or which are not defined yet as per whether or not they are covered under the system.

(i) Necessity of Protection

In principle, protection should be given to information whose creation itself could be hindered if not properly protected (the necessity of incentives for creation) and which is considered useful from the standpoint of industrial policy. It is important to examine the possible protection of specific intellectual property on a case-by-case basis depending on industry situations at any given time.

(ii) Methods of Protection

Methods of protecting intellectual property rights here can be divided into two approaches: "unfair competition approach" in which certain types of conduct should be protected through an injunction or compensation for damages along the lines of a general tort act (Article 709 of the Civil Code) and "sui-generis approach" in which certain types of information can be granted rights similar to property rights. An example of the former approach is the Unfair Trade Prevention Law. The latter includes the Patent Law which has registration and examination systems and the Copyright Law which doesn't.

When comparing both methods, sui-generis approach has an advantage that defining certain information as property helps stabilize its legal status, consequently enabling the transfer of ownership, licensing and the creation of a security interest. It also has some disadvantages, however, including high social costs in maintaining registration and examination systems and certain negative effects produced by the granting of "stronger protection"; specifically, the possible hindrance to the free use of applicable information.

Although a proper intellectual property system for a certain kind of information should be determined on a case-by-case basis, as a basic principle in dealing with this subject, it seems appropriate to first apply a "unfair competition" type of protection and then move toward a "sui-generis" type of protection only if it is recognized that the former method doesn't work sufficiently. For example, a database (with no copyrighted characters) whose necessity has been earnestly discussed at the global level could be properly protected by unfair competition approach when they are subject to the Japanese legal system.

It should be noted that this is just a principle (not a decisive rule). New types of intellectual properties could be protected by sui-generis approach as well.

