

Section 3 Reform of innovation systems and intellectual property strategy

<Key Points>

1. Reform of innovation systems in Japan

In order to revive the Japanese economy and achieve autonomous recovery in economic growth, the strengthening of industrial competitiveness and innovation that leads to commercializing technology seeds through R&D play an important role. In addition, it is necessary to actively create innovation that can enable Japan to respond precisely to latent global needs, to say nothing of domestic needs, and be the first in the world to create new markets. In such attempts, in addition to creating new demand, the construction of a virtuous circle of innovation and demand will be enabled by advancing supply structure reforms while stimulating demand. In order to construct such a virtuous circle and link this to the revival of the Japanese economy, the following efforts are required: (1) drastic reform and revitalization of the innovation creation environment in Japan as a whole, including R&D of private sector companies, and the construction of a system that will link such efforts for innovation creation smoothly to commercial ventures; and (2) the construction of a system that properly protects and utilizes the results created by such a revitalization of innovation (intellectual property rights, etc.).

2. Intellectual property strategy in Japan

In order to support sustainable growth in Japan, it is important to add high value to the Japanese economy by actively utilizing such intellectual property as inventions and copyrights that are the result of innovation. Towards the goal of establishing Japan as a nation that is built on the platform of intellectual property, it is important to create a social structure that will give rise to high quality intellectual property, appropriately protect such intellectual property, see that it is widely utilized throughout society as a whole, and give rise to a creative power for new intellectual property through reinvestment, or in other words the establishment of an “Intellectual Creation Cycle,” in order to provide a dynamo for the vitalization of the economy through the creation of high value-added intellectual property. To this end, it is also important to formulate a comprehensive intellectual property strategy that will further expand and develop the above-described intellectual creation cycle. In addition, based on the circumstances in which the manufacturing industry, which is responsible for the manufacturing of Japanese products, is accelerating the global development of its business, from the perspective of avoiding a non-beneficial position for such companies, it is important that countermeasures are taken against counterfeit and pirated products. The overflow of counterfeit and pirated products cause a number of negative impacts on the activities of Japanese companies, including a loss of potential profits in overseas markets, deterioration of their brand image among consumers who have purchased poor-quality products, and increased trouble concerning product liability. To deal with this, the government and the private sector need to jointly make efforts to counter counterfeit and pirated products so that intellectual property rights in the countries and regions concerned can be properly protected by involving overseas business activities.

1. Reform of innovation systems in Japan

(1) The role of innovation in economic growth

Looking at the current status of the Japanese economy, the employment situation continues to be severe with persistent sluggish consumption, the economy continues in its stagnant state, demonstrating no sign of entering a track of full-fledged autonomous recovery, and there are also concerns that domestic industry is hollowing out. Under such conditions, in order to revive the Japanese economy and achieve autonomous recovery in economic growth, the strengthening of industrial competitiveness and innovation that leads to commercializing technology seeds through research and development (R&D) play an important role. In addition, it is necessary to actively create innovation that can enable Japan to respond precisely to latent global needs, to say nothing of domestic needs, and be the first in the world to create new markets. In such attempts, in addition to creating new demand, the construction of a virtuous circle of innovation and demand will be enabled by advancing supply structure reforms while stimulating demand. In order to construct such a virtuous circle and advance the structural reform aimed at the revival of the Japanese economy, the following active efforts are required: (i) drastic reform and revitalization of the innovation creation environment in Japan as a whole, including R&D of private sector companies, and the construction of a system that will link such efforts for innovation creation smoothly to commercial ventures; and (ii) the construction of a system that properly protects and utilizes the results created by such a revitalization of innovation (intellectual property rights, etc.). (Details to be found in the following section.)

(2) Characteristics of Japan's R&D by industry

In contrast, it has been pointed out that, when collectively observing the R&D and business trends of private sector companies which play the most significant role in innovation creation, it seems that their research results are not contributing to the creation and cultivation of new businesses or industries, leading to insufficient return of such results to the economy and society, and a reduction in industrial competitiveness. Taking a look at the current status of the R&D systems within Japan's major industries demonstrates that each is possessed with different characteristics, as described below¹.

(a) Electronic information machinery industry

The large companies in this sector have traditionally tended to promote diversification, as they manufactured various parts and products on their own in cooperation with their affiliated companies. However, recent years have brought about rapid technological innovation and shortened the lifecycles of products, making it difficult for large companies to include their business activities in all areas within their core business. For this reason, it has become important to "select and concentrate" to enhance the strength of R&D on the core businesses, as well as to advance collaboration with external sources, as in academia-industry-government cooperation.² In particular, as emphasis on software and services continues to grow, it

¹ Based on the preliminary report of the Innovation System Subcommittee, Industrial Science Technology Policy Committee, Industrial Structure Council (January 2002).

² While it differs somewhat from the categorization of areas within this section, Abe (2003) has pointed out that based on the technological development of components, including semiconductors and the advancement in

is becoming important for a company to develop strategies that determine how best to actively establish and protect its own intellectual property rights, and to develop businesses through promptly combining them with other technologies and products in order to secure the market. One option is to utilize intercorporate technical collaboration for *de jure* or *de facto* international standardization. At the same time, even though this is a sector in which many energetic R&D activities take place and many intellectual property rights such as patents are granted every year, there are many cases in which such rights are unable to find an appropriate market right away and have not been utilized.

(b) Automobile, machinery and precision instrument industries

In the manufacturing industry which carries out assembly and processing, it is important to accumulate technical know-how through collaboration among the manufacturing site and divisions involved in development, procurement, production and other activities. Due to this, there have been comparatively few occasions in which it has been necessary to introduce technology from outside the company. However, in responding to computerization and environmental issues of recent years, it has become necessary to utilize advanced, wide-ranging technology making collaborations with other industries increasingly important. Furthermore, with the advancement of technology, it has become important to gain input from researchers who are knowledgeable in the latest basic research. In some instances, efforts through academia-industry-government cooperation or national projects are required.

(c) Chemical industry

The technology in the chemical industry, which is representative of the materials industry, has already reached a significant level of maturation in the area of so-called general-purpose products. However, in leading edge areas such as that of functional chemicals, there is demand for competitiveness to be maintained and strengthened. It is important to accumulate technology based on R&D in this sector. It is especially vital that the findings of basic research at the material level are promptly linked to research at the application and development stages. In doing this, an embodiment of functions which answers to users' needs must be accomplished in the process of turning materials into parts and components by combining and purifying existing materials (so-called elaborate creation). Moreover, fundamental and primary technology often plays an important role in this sector, and there are many cases in which academia-industry-government cooperation takes place in order to introduce new knowledge that will become the foundation for R&D of companies. What is more, because "elaborately created components" are generally an area dealing with a wide range of products manufactured in small quantities, and because there is demand to take prompt measures in response to the shortening of product lifecycles, it is essential to carry out R&D through "selection and concentration" with commercialization in mind.

modularization of parts, the timeframe for changing product models has shortened within the electric and precision instrument industries, and therefore, from the viewpoint of speeding up the product development process through R&D, companies are more actively utilizing external sources. Furthermore, he also noted the importance of factors including management power to find and acquire the necessary external technology and organization establishment in order to utilize external resources in R&D.

(d) Medical and pharmaceutical industry

In recent years, advanced fundamental and scientific areas such as biotechnology have been developing rapidly. Establishing technology and acquiring patents in this field will contribute greatly to the exclusive sales of future products. At the same time, enormous expenses and considerable risks are involved in the R&D of new pharmaceutical products, while clinical trials and other numerous steps must be taken before the product is commercialized. It is characteristic of this field that such long-term processes are required. With the exception of outsourcing of certain preclinical testing, pharmaceutical companies in Japan in the past generally have developed improved versions of pharmaceutical products independently. However, with the rapid development of biotechnology, new efforts are now required. The characteristics of this industry include such facts as that scientific knowledge has foremost importance, that most of the researchers belong to universities, and that securing rights is possible through obtaining patents while development risks are extremely high. Thus, there is demand for commission of research projects to universities with research results as the payback, and for active transfer of technology from and creation of venture companies (university-launched ventures) by universities that possess technologies. In recent years, the number of various venture companies and new forms of outsourcing businesses have been increasing in Japan, and more pharmaceutical companies are, instead of independently carrying out the entire process of R&D to distribution, outsourcing portions of the work.

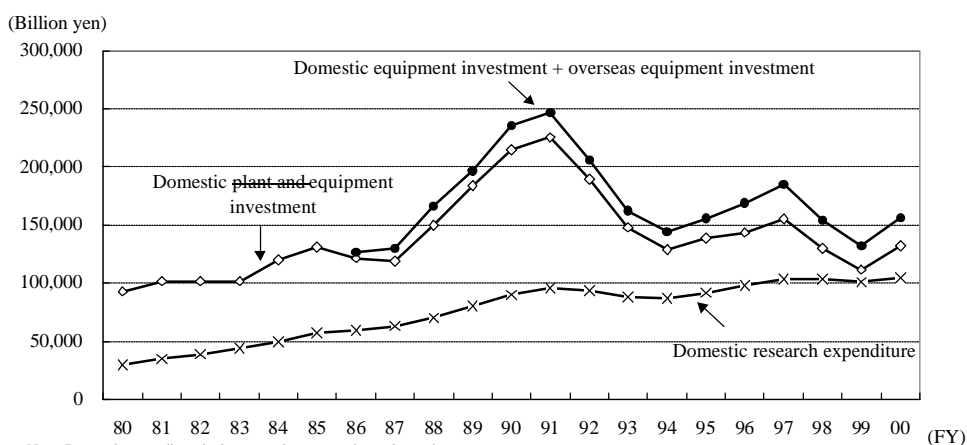
(3) Future issues regarding innovation systems in Japan

Based on the above characteristics of R&D according to each industry, in order to advance the reforms of innovation systems in Japan, the following issues must be taken into consideration. Items regarding intellectual property strategy are explained in detail in the following section.

(a) Promoting commercialization of research results

As the economy has remained stagnant over the recent years and due to the uncertainty of future trends in the economy and the market, there is less enthusiasm toward plant and equipment investments aimed at utilizing the findings of R&D of companies (Fig. 3.3.1). Furthermore, the burden of R&D expenditure is

Figure 3.3.1 Comparison of research expenditure and equipment investment in the Japanese manufacturing industry

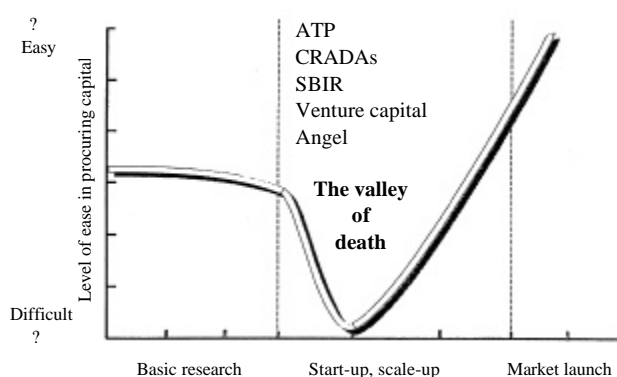


Note: Research expenditure is the research expenses borne by each company.
Source: *Trends in Japan's Industrial R&D Activities III* (METI).
Original source: *Financial Statements Statistics of Corporations by Industry (annual)* (Ministry of Finance), *Survey of Overseas Business Activities* (METI), *Report on the Survey of Research and Development* (Ministry of Public Management, Home Affairs, Posts and Telecommunications).

becoming more and more vast, while at the same time it has become more difficult than in the past to determine whether the findings from the basic research can actually be developed into a commercial product. Thus, raising funds has become quite challenging (the so-called valley of death), and there is now increasing risk in making an investment in R&D for a project on the verge of commercialization (Fig. 3.3.2). For these reasons, there are many private companies which were involved in R&D but were not able to commercialize the results, which then ended up being left unused. In this way, there are many cases in which R&D does not successfully proceed to commercialization through plant and equipment investment, and they are becoming a major bottleneck for Japan's economy (Fig. 3.3.3). Therefore, in order to produce products with high added value necessary for Japan to maintain its advantage in competition, it is important to provide assistance to R&D on the verge of commercialization and contributing to the bottleneck by helping companies to determine whether the project is feasible for commercialization and to overcome the "valley of death" in R&D. In this way, it is vital to facilitate those companies that are turning the R&D results into commercialization, through plant and equipment investments. Therefore, there is demand to develop measures to encourage plant and equipment investment and to introduce new technology and new products based on R&D into the market. (In response to this, an R&D project was established in FY2003 called Focus 21, which was designed for economic revitalization in which the findings of R&D would promptly lead to practical and commercial use, and directly lead to the enhancement of industrial competition. Under "Focus 21," projects that can secure commitments related to funds and human resources in the private sector and attain practical and commercial use of the results were selected in four areas of emphasis (i. life science, ii. information and communication, iii. environment, and iv. nanotechnology and materials)).

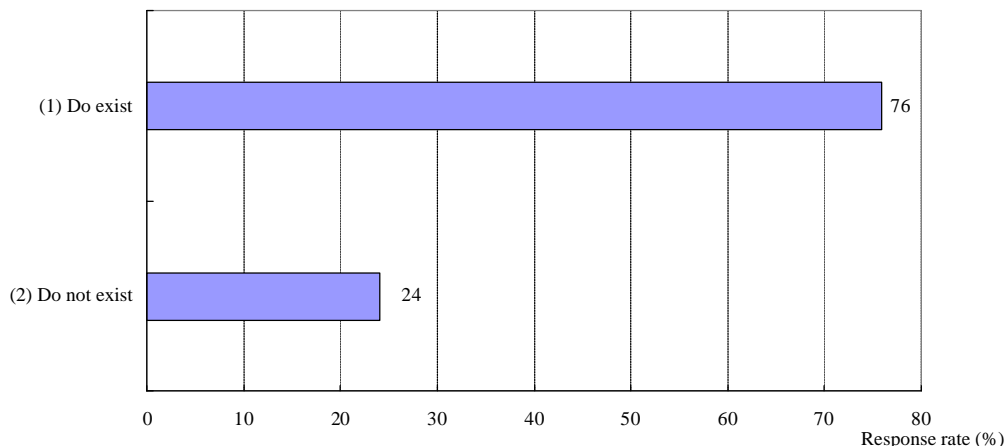
Figure 3.3.2 The valley of death

In the phase of start-up and scale-up, which bridges the gap between the basic research and market launch stages, it is difficult to assess the commercial viability of technology, and therefore it is not easy to secure funds. This gap between research and market launch is also recognized as a challenge in the US, being called the valley of death.



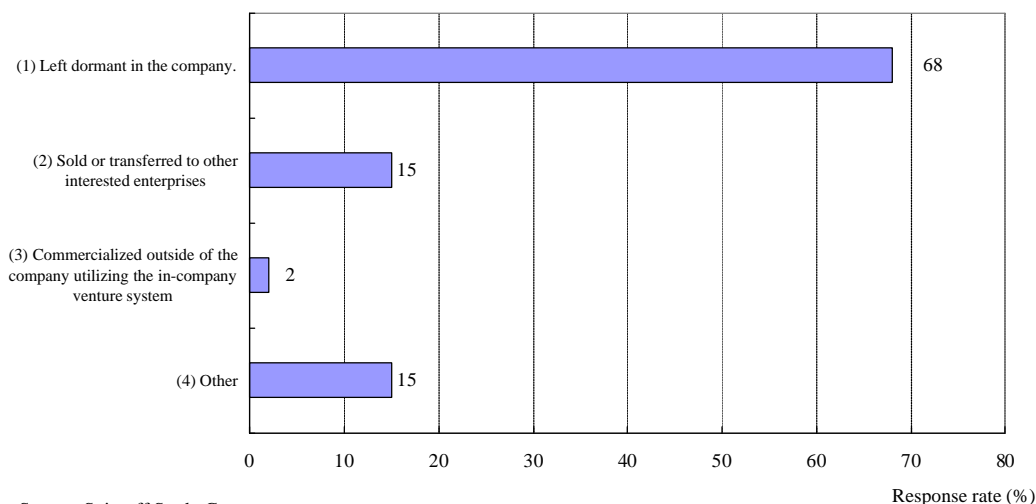
Source: *Trends in Japan's Industrial R&D Activities III* (METI).
 Original source: "Public/Private Partnerships for Innovation" presentation by Dr. Charles Wessner, US National Academy of Sciences, OECD Workshop (December 2001).

Figure 3.3.3 R&D results that have not been put to use and reasons why
(Existence of research results that have not been used)



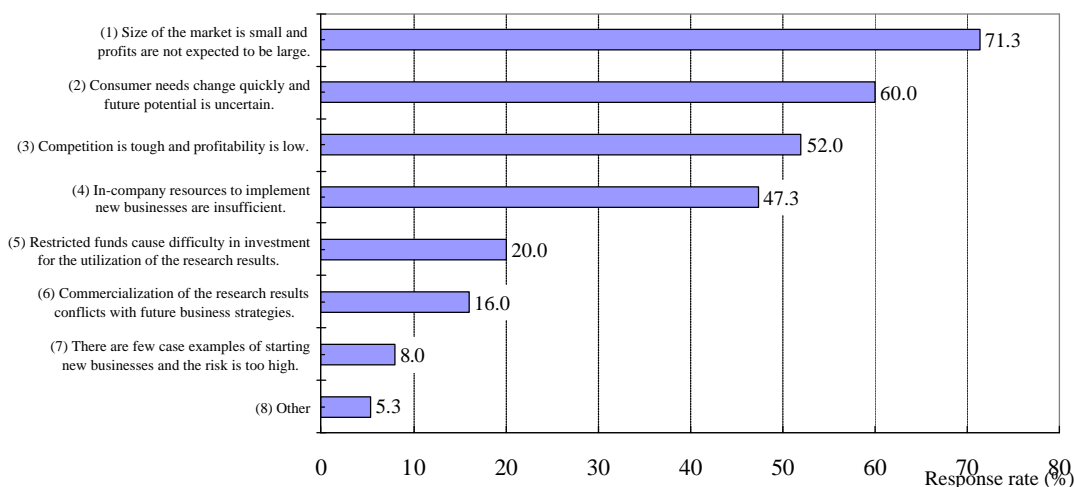
Source: Spin-off Study Group report.
Original Source: *Survey on Companies' Capacity for Technological Development* (Japan Research Industries Association).

(How research results that are not used are handled)



Source: Spin-off Study Group report.
Original Source: *Survey on Companies' Capacity for Technological Development* (Japan Research Industries Association).

(Reasons research results have not been commercialized)



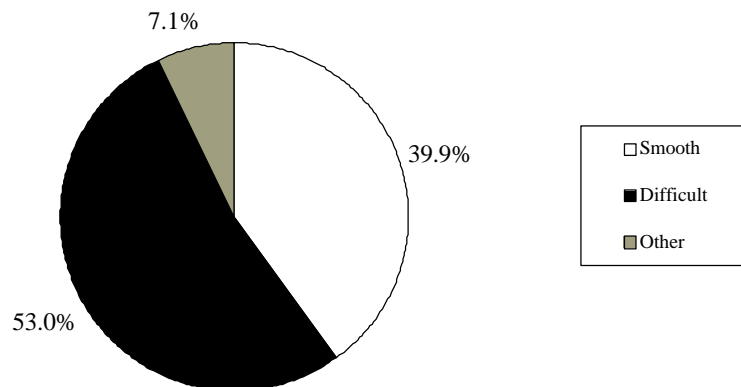
Note: This survey is based on responses to the question: If any promising results of R&D exist within your company that have not been used to start new businesses, what is the reason for that? Please circle three of the following choices.

Source: *Trends in Japan's Industrial R&D Activities III* (METI).
Original source: *Survey on the Strength of Japanese Industrial Technological Development* (Japan Research Industries Association).

(b) Promotion of “selection and concentration” and academia-industry cooperation in R&D

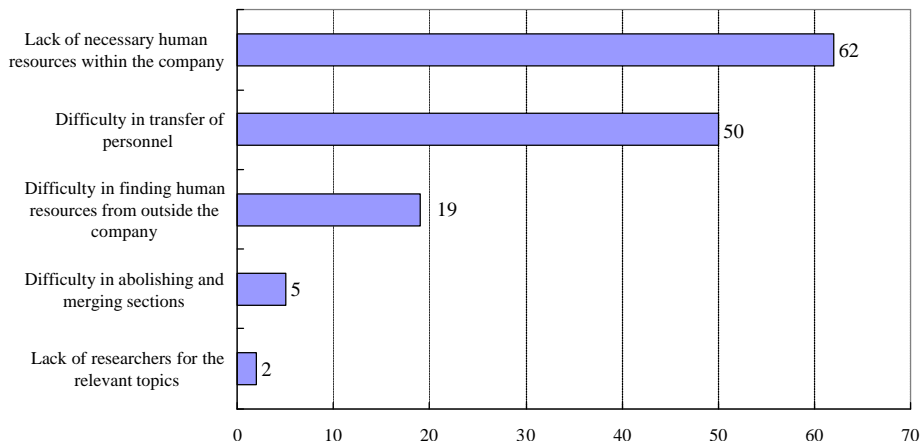
In recent years, innovations have become accelerated, and the competitive environment among companies has become intensified. With this, it has become essential for companies to adopt a core business to generate the necessary edge and to intensively pour management resources into that core business in order to enhance competitiveness, so that they may strengthen their true management vitality and profit structure, based on the strategic viewpoint of “selection and concentration.” This is also true in the area of R&D, where “selection and concentration” must be promoted with emphasis on generating profit. At the same time, another major issue is to do away with the policy of independent R&D, which is characteristic of Japan’s innovation system. Instead, companies must collaborate with other businesses, universities and public research centers in order to reduce the risks and burden associated with R&D investments. However, because companies have adopted a system presupposing long-term employment, the use of external sources cannot be easily facilitated, making it difficult to fully promote “selection and concentration.” Some of the problems include not being able to easily transfer personnel, and not having the necessary human resources (Fig. 3.3.4).

Figure 3.3.4 Difficulties in the integration of R&D
(Whether smooth integration of R&D is occurring)



Source: *Preliminary Report* by Innovation System Subcommittee, Industrial Science Technology Policy Committee, Industrial Structure Council (January 2002).
Original source: *Report on the Strength of Japanese Companies’ R&D* (March 2001) (Japan Research Industries Association).

(Reasons for difficulties in integrating R&D)



Source: *Preliminary Report* by Innovation System Subcommittee, Industrial Science Technology Policy Committee, Industrial Structure Council (January 2002).
Original source: *Report on the Strength of Japanese Companies’ R&D* (March 2001) (Japan Research Industries Association).

As a result of private companies shifting their emphasis on R&D, there are heightened expectations toward collaborations with universities and public research centers in the area of basic research. However, the academia-industry cooperation is not being fully utilized due to various problems. Regarding universities, some do not possess sufficient awareness regarding contracts and patents; some lack the incentive toward research collaboration with the industrial world; and some lack flexibility and promptness in the forming of projects. At the same time, there are issues on the side of the corporations, such as the inability to clarify what they expect of the universities and other institutions. For these reasons, certain measures must be taken in order to revitalize further the academia-industry cooperation. Examples of this include the promotion of collaborative research between industry and academia, enhancing the function of the Technology Licensing Organization (TLO – enhancing the function by shifting the system from one that focuses on technological licenses to one which comprehensively manages the process of academia-industry collaborative research of planning to incubation), developing systems such as setting up an information desk on academia-industry cooperation in universities and other institutions, and clarifying the agreement rules for outsourced and collaborative research with universities and other institutions. Also, in view of companies' importance to strategize and strictly select R&D, they should implement R&D management focusing on the efficient use of its R&D investments. To this end, the management of technology (MOT) education should be enhanced for the purpose of fostering personnel that understands both management and technology, and can establish R&D and commercialization strategies.

(c) Cultivating and utilizing venture companies

During the times when economic growth was being brought about by mass production and consumption, the Japanese R&D system was centered on large companies which mainly implemented comparatively low-risk R&D. In recent years, due to such factors as increased risks in the practical application of technologies, venture businesses are expected to take the initiative in R&D areas in which large companies are weak, such as high-risk and high-return R&D, non-core business or commercialization of small-scale projects. Moreover, to revitalize the Japanese economy, technology seeds that have been left unused by private companies, universities and other institutions must be utilized to create new businesses. To do this, it is vital to promote the creation of new businesses and commercialization based on R&D ventures (e.g. spin-off ventures of corporations, ventures originating in universities, etc.). In other words, through new ventures, the hope is that Japan will gain an innovative industrial structure, invoking new markets and latent demands. To cultivate venture companies, a comprehensive system which supports the entire process, from starting up using technology seeds, cultivating business and to going public. However, there are still many unresolved issues in Japan in creating venture businesses, such as collaboration with universities and other institutions, obtaining personnel and funds, the socially biased view of those who once failed at a business and undeveloped networks including those in large companies. To deal with these issues, various types of support must be made available, such as enhancing the financing tools needed by venture companies, cultivating business personnel to support the venture companies, and facilitating comeback from bankruptcy. In addition, it is important to transfer the technology seeds in universities into business projects of venture companies and large corporations. To do this, the system of collaboration and resources of business-supporting professionals must be enhanced. Such professionals would include TLO personnel,

lawyers, patent agents, certified public accountants, incubators and technology mediation consultants. Also, it is often difficult for a single venture company to enter into a high-risk area of R&D. Therefore, it is important to promote widespread exchange and cooperation among the industry, academia, government and companies, regionally. Through this, the aim is to establish industrial clusters which can complement management resources such as information on technology, management and marketing outlets.

2. Intellectual property strategy in Japan

(1) Demand for adding high value

The main factors which fueled the rapid postwar economic growth in Japan were industriousness of the Japanese people and the strength of a manufacturing industry centering on heavy and chemical industry, as well as the industry in the fields of processing and assembly. In addition, basis for the growth was a Japanese-style production system of introducing and improving technology from the United States (US) and Europe to enhance its on-site production techniques through powerful teamwork. In recent years, however, other Asian countries and regions, with their low labor costs and improved production techniques, have been catching up with Japan. On the other hand, there is fear for Japan that its drastic drop in birthrate and rapid aging of the population may elicit restricting factors in supplying labor and resources, such as decrease in labor population and decline in investment resulting from downslide in savings rate.

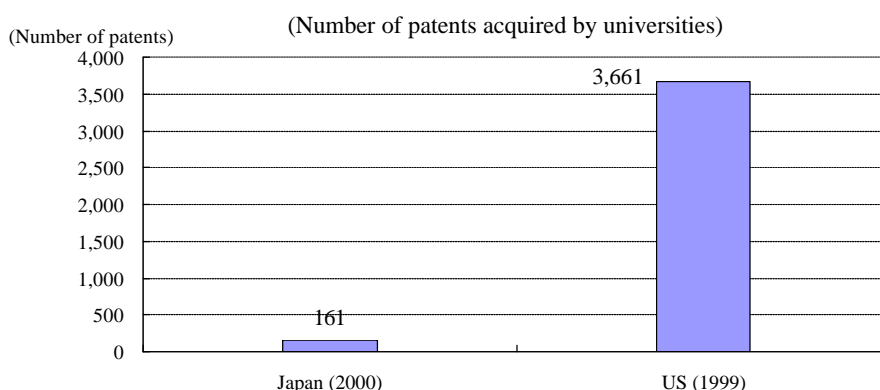
In order to continue to support sustainable growth in Japan, productivity must be improved through technological advancement. In other words, innovation must be promoted. In postwar Japan, the major contribution to its growth is believed to have been the process innovation through *kaizen*, or improvement. In the future, however, it is important to add high value to the Japanese economy by more actively utilizing such intellectual property as inventions and copyrights that are the result of innovation. In order to promote innovation, which is the source of intellectual property, it is essential to realize a dynamic economic society, in which the creativity of each individual and company as members of the society are put into use to vigorously implement creative activities. Therefore, as a strategy to revitalize Japan's economic society, which has poor material resources and high labor costs, it must break away from the former system optimized for manufacturing based on processing assembly and mass production. Instead, it must realize a robust system of manufacturing which flexibly meets the needs of consumers through large-variety small-quantity production. In addition, as a new source for industrial competition, "creation of information" of value must be realized, such as technology, design, brands, and the contents of music, movies, etc. In other words, high value-added intellectual property must be created. Such development of competitive environment with emphasis on intellectual creative activities promotes innovation. At the same time, realizing high added value through innovation will result in enhancing Japan's international competitiveness.

(2) Current situation regarding intellectual properties

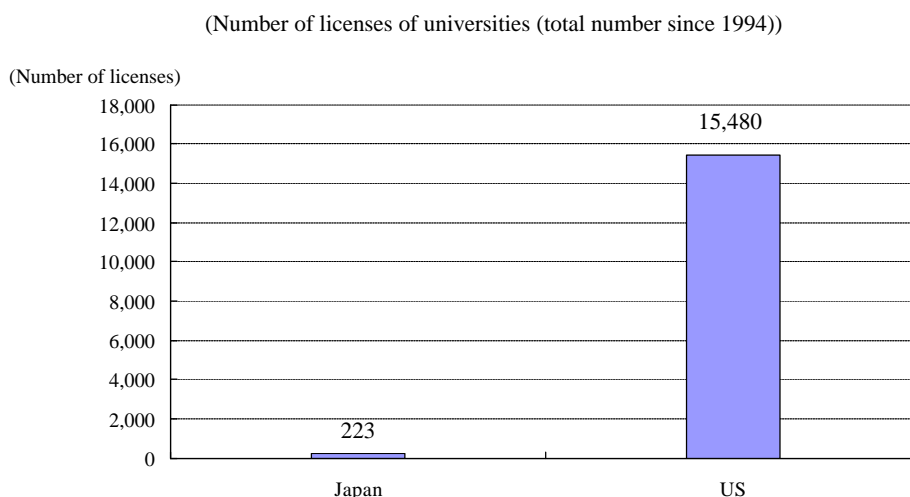
In order for Japan to continue its sustainable growth, it must maximize its use of science and technology which continues to maintain its international competitiveness. At the same time, it must establish an industrial foundation based on the creation of intellectual property. However, the current situation regarding intellectual property in Japan is not necessarily a positive one.

For example, even though there have been drastically increased numbers of applications for patents (149 in 1997 ? 577 in 2000) and patents acquired by universities (90 in 1997 ? 161 in 2000) in recent years, they are still considerably less than those in the US (Fig. 3.3.5). Furthermore, in comparison to the US or the European Union, there are disproportionately more patents obtained domestically than overseas (Fig. 3.3.6). In addition, regarding the intellectual property environment surrounding the Japanese companies, there are problems such as lack of strategy in the acquiring and managing of intellectual properties, fraudulent leakage of business secrets and unintended overseas outflow of technology. As these examples show, Japanese companies do not necessarily possess sufficient intellectual property strategies.

Figure 3.3.5 Comparison of the number of patents and licenses acquired by universities in Japan and the US

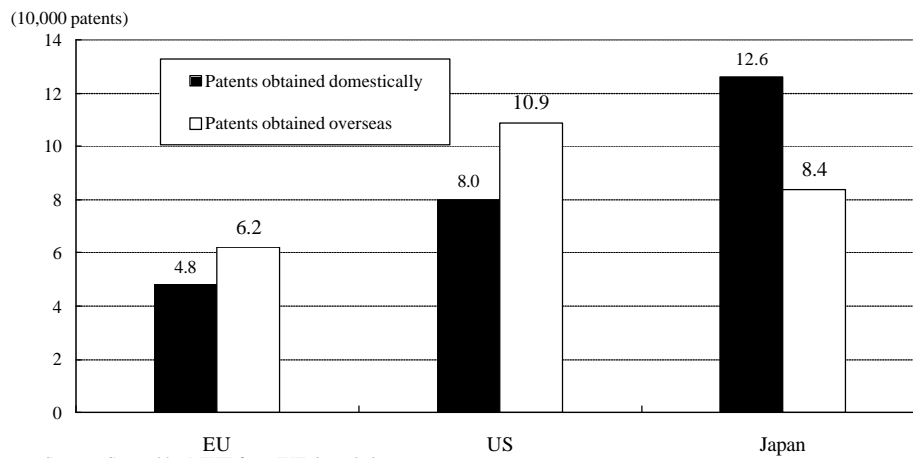


Note: In Japan many patents resulting from inventions by university teachers are attributed to individual teachers (in which case the patents are not counted as patents acquired by universities), while in the US most patents are attributed to universities. The number of patent applications in Japan is for patents of the country or school judicial persons. The number of patent applications including those by individuals is thought to be five times that number. (At present, Japanese universities have a policy of attribution of patents to individuals.)
 Source: Created by METI and Japan Patent Office from *AUTM Licensing Survey* (Association of University Technology Managers, Inc.).



Source: Created by METI and Japan Patent Office from *AUTM Licensing Survey* (Association of University Technology Managers, Inc.).

Figure 3.3.6 Comparison of the number of patents obtained domestically and overseas for Japan, the US and EU



(3) Necessity of intellectual property strategy

(a) Establishing the intellectual creation cycle

In order to utilize the creation of high value-added intellectual property as a powerful engine to revitalize the Japanese economy and society, intellectual creative activities must be stimulated on various levels, including governmental, university, corporate and individual. In addition, a socioeconomic system must be developed in which the intellectual properties such as inventions and copyrights obtained as a result of such activities can be protected appropriately and used effectively as sources of added value for products and services. Moreover, if a framework for creating high-quality intellectual properties is developed, and such intellectual properties become widely used by the entire society while being appropriately protected, the reinvestment will give rise to the development of new intellectual properties. A reform to further develop such a virtuous cycle for intellectual creation is necessary in opening the way to the future of Japan. To do this, Japan must develop an environment in which organizations such as universities, public research institutes and companies can advance R&D on a global level and create intellectual properties rapidly (“creation strategy”). At the same time, it is important to develop an “exploitation strategy” so that newly developed intellectual properties can be returned to society in an appropriate manner. Examples of this include the promotion of the transfer of technology developed by universities and other institutions, and the establishment of a system to evaluate intellectual properties. Furthermore, in order to secure incentives for creating intellectual properties, it is essential to provide appropriate protection. To this end, it is also essential to establish prompt and appropriate systems for patent examination and trial/appeal, as it is to develop a “protection strategy,” such as enhancing countermeasures against counterfeit and pirated products, and promoting international harmonization of and cooperation in the intellectual property system. Also, in addition to cultivating leaders in the creation of intellectual property, there is an urgency for “expansion of the human foundation.” This includes educating experts who provide high-level, specialized services for obtaining intellectual property rights, settling disputes, and drawing up intellectual property contracts. In short, to expand and circulate the intellectual creation cycle smoothly, strategies must be formulated to comprehensively promote various efforts at various levels.

(b) Past efforts toward the establishment of a nation built on the platform of intellectual property

With the increasing national awareness of the importance of intellectual property as a source of wealth for Japan, as well as interest in intellectual property policies, the government of Japan has carried out various deliberations on this topic in a variety of conferences. In February 2002, the Strategic Council on Intellectual Property (Chairman: Tohoku University President Hiroyuki Abe) which is convened by the Prime Minister was set up. This was done in order to quickly establish a national intellectual property strategy, and to promote the enhancement of the international competitiveness of Japan's industry and the revitalization of its economy. Since then, the council meeting has been held once a month where discussions take place to develop an intellectual property strategy which would support the future of Japan. As a result, the Outline for Intellectual Property Strategy was compiled in July 2002. This outline shows a specific reform process that strives to revitalize Japanese economic society. The process involves the further promotion of the creation of intellectual properties including excellent inventions, designs, brands and contents which will become a source of national wealth, and their appropriate protection and utilization. Prior to this, in June, the Council for Science and Technology Policy put together an interim report. A report was also compiled by the Task Force on Industrial Competitiveness and Intellectual Property Policy, a consulting group of the Director-General of the Economic and Industrial Policy Bureau of the Ministry of Economy, Trade and Industry (METI) and the Commissioner of the Japan Patent Office. These reports greatly contributed to the formulation of the Outline for Intellectual Property Strategy. The Outline proposes that by FY2005, reform of over 100 items in areas including intellectual property-related systems would be implemented by the government in a focused and planned manner. It also proposed the formulation of a Basic Law on Intellectual Property, which determines such items as establishing an Intellectual Property Policy Headquarters as an organ responsible for the strong and steady implementation of the outline, in cooperation with related ministries. With this, the Basic Law on Intellectual Property was approved in November 2002, which took effect in March 2003. Under this law, the Japanese government defined the basic policy to promote the creation, protection and exploitation of intellectual property such as inventions and copyrighted works. Along with the implementation of this law, the Intellectual Property Policy Headquarters was set up in the same month to promote in a focused and planned manner measures related to the creation, protection and exploitation of intellectual property, replacing the Strategic Council on Intellectual Property. Moreover, the Council for Science and Technology Policy held further and more specific discussions, and compiled a report on intellectual property strategy in December of last year, which was submitted to the relevant minister. The Expert Panel on Management of Intellectual Properties is planned to be resumed in April of this year by the council, and a report is to be compiled by June. Based on these reports, the Intellectual Property Policy Headquarters is to compile the Promotion Program of Creation, Protection, and Exploitation of Intellectual Property by July of this year. This report includes items which the government is to focus on in the next three years.

(4) Enhancing countermeasures against counterfeit and pirated products (products infringing upon intellectual property rights)

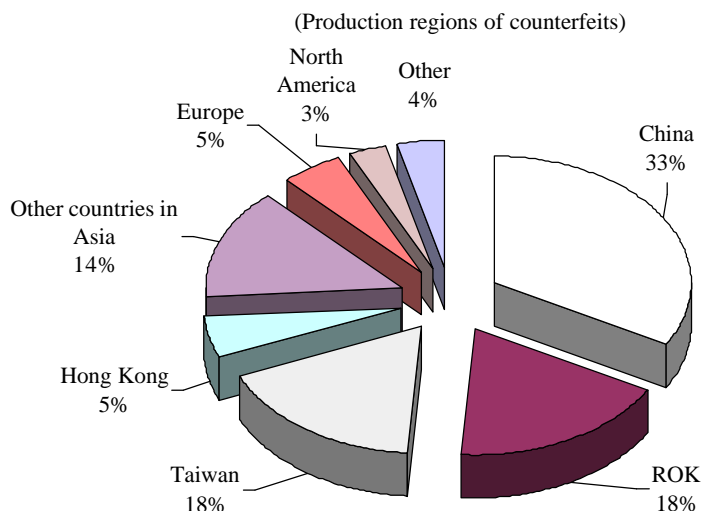
As this comprehensive intellectual property strategy progresses, and based on the circumstances in which the Japanese manufacturing industry, responsible for the manufacturing of Japanese products, is

accelerating the global development of its business, it is important that countermeasures are taken against counterfeit and pirated products from the perspective of avoiding a non-benefiting position for the Japanese companies. In other words, it is important to avoid situations in which intellectual properties produced by Japanese companies are infringed upon overseas, causing them to miss out on the profit that they should be making. Such infringement inhibits them from further creating intellectual properties through reinvestment, which could result in the decrease of Japan's industrial competitiveness.

(a) Current situation on damages caused by counterfeit products

Protection of intellectual properties is a key factor in promoting investments and transfer of technology from overseas. It brings about certain benefits to both advanced and developing countries. Financial benefit generated to the Asia-Pacific region through the enhancement of intellectual property protection is significant. However, in the recent years, Japanese products have been counterfeited and pirated mainly in Asian countries and regions, and this is becoming a serious issue. As the industrial technologies advance in Asian countries and other regions such as China, Taiwan, and South Korea, not only are trademark rights and design rights being infringed upon, but an increasing number of patent rights are being violated. Furthermore, as economic globalization progresses, there are cases where counterfeit products produced in East Asia are exported and distributed throughout the entire Asian region, as well as back into Japan. In ways such as this, damage caused by counterfeit products is becoming quite widespread. According to the FY2001 Survey Report of Counterfeit Damage by the Japan Patent Office, approximately 70 percent of the total of counterfeits products are produced in China (33.0 percent), the Republic of Korea (18.1 percent) and Taiwan (17.6 percent). Such products from these regions are being distributed throughout the world (Fig. 3.3.7). Damage from counterfeit products is affecting many industrial areas, and the quality of such products is becoming increasingly advanced (Fig. 3.3.8).

Figure 3.3.7 Regions of production and distribution of counterfeits, by region and country



Source: *Report on Survey of Counterfeit Damages for FY 2001* (Japan Patent Office)

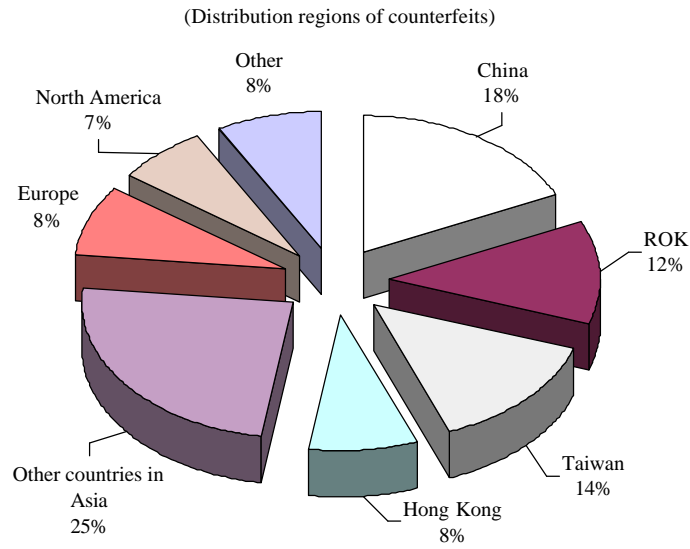
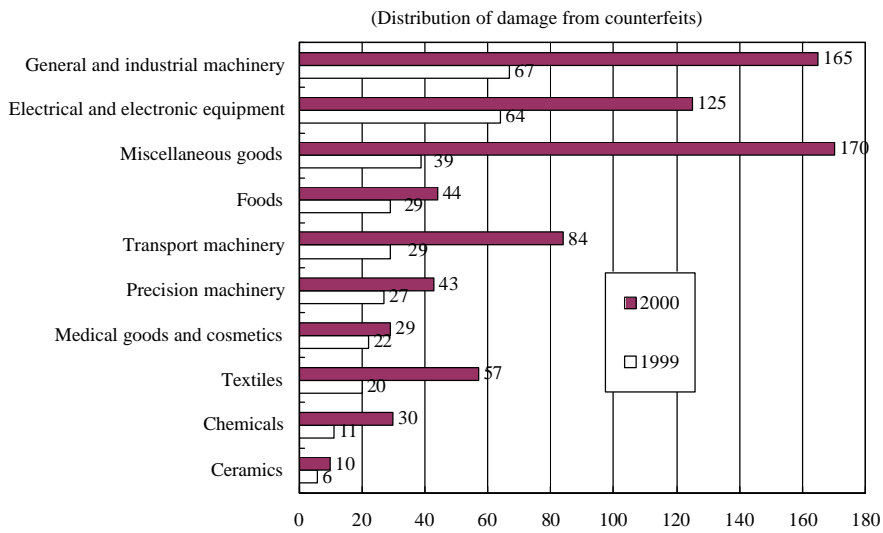
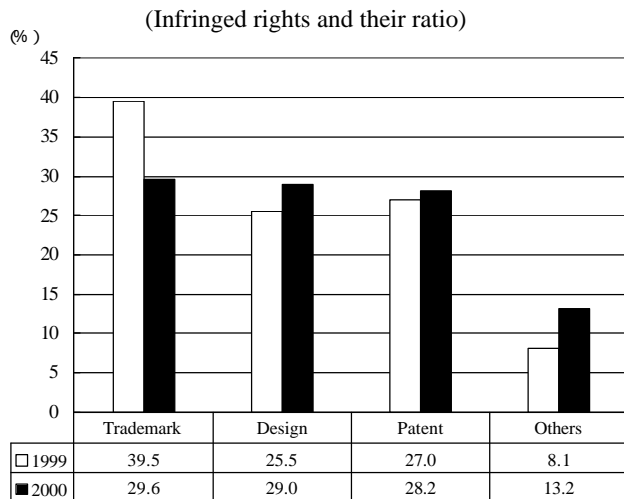


Figure 3.3.8 Distribution and state of damage from counterfeits



Source: Report on Survey of Counterfeit Damages for FY 2001 (Japan Patent Office). (No. of Occurrences)



Source: Report on Survey of Counterfeit Damages for FY 2001 (Japan Patent Office).

Furthermore, according to the Survey on Damages Caused by Counterfeits to Japanese Companies in China conducted by the Japan External Trade Organization (JETRO) on the actual status of the counterfeit issue in China where it is especially serious, of the Japanese companies which have expanded into China, over half (54.3 percent) are still suffering some degree of damage. Among those companies, 54.3 percent—a 3.6 percent increase from the previous survey—have answered that the damage from counterfeit products has increased since 2001. Moreover, of those harmed by counterfeits, as much as 29.5 percent have suffered over 100 million yen worth of damage. Another serious issue is copyright infringement. According to a survey conducted by the International Federation of Phonograph and Videogram Producers (IFPI), about 90 percent of records and CDs in the Chinese music market are pirated (refer to Fig 3.4.8 in a later section).

(b) Efforts to counter counterfeit and pirated products (products infringing upon intellectual property rights)

The overflow of counterfeit and pirated products cause a number of negative impacts on the activities of Japanese companies, including the loss of potential profits in overseas markets, deterioration of their brand image among consumers who have purchased poor-quality products, and increased trouble concerning product liability. To deal with this, the government and the private sector need to jointly make efforts to counter counterfeit and pirated products so that intellectual property rights in the countries and regions concerned can be properly protected when companies are involved in overseas business activities. Also, for the infringing countries and regions, breakdown of market-economy order such as the flooding of infringing products could cause loss of trust in the governments of those countries and regions, resulting in decrease of foreign affiliates' willingness to invest and in constraints on technology development. Such influences could negatively affect the industrial and economic development of these regions. Therefore, it is important to generate awareness within the governments of the infringing countries and regions regarding the significance of the counterfeit and pirated products issue, and to have them enhance their independent efforts. From such a viewpoint, Japan has been putting forth various efforts to counteract the issue of overseas counterfeit and pirated products.

For example, seeing that there was an overflow of counterfeits of Japanese products in various areas mainly of Asia, and judging that the efforts by individual companies and organizations alone would be insufficient, the International Intellectual Property Protection Forum was established in April 2002. The purpose of this forum is to promote cross-sectional collaboration throughout the industrial sector and to enhance the measures against counterfeits through joint industry-government efforts. The Japanese government has actively utilized the emergency proposal by the forum for the statutory and transitional reviews over China and Taiwan's accession to the World Trade Organization (WTO) in September 2002. It also dispatched a joint public-private sector mission to the central and regional governments in China in December of the same year to request an enhanced crackdown on their counterfeit and pirated products. In these ways, the government is working toward the strengthening of measures regarding intellectual property rights abroad through collaboration with the forum. Furthermore, in order to understand the extent of damage on Japanese companies located overseas, the government is conducting surveys on damages caused by counterfeits. It is also providing information in various ways, such as creating manuals on anti-

counterfeit measures, providing case examples of infringement, and conducting seminars. The government is also enhancing measures to respond to inquiries from Japanese companies by operating a counseling section for counterfeits (Counterfeits 110). Moreover, through bilateral and multilateral consultations, Japan is urging the infringing countries and regions to enhance regulations. It is actively conducting human resources development by accepting regulation agency personnel of infringing countries and regions as interns, as well as holding on-site seminars overseas. The government is also taking measures against pirated products, such as compiling manuals for effectively utilizing civil and criminal proceedings in Asian countries and regions, conducting symposiums to assist the development of laws and management systems on copyrights, and inviting and dispatching relevant experts. It also provides support to the Organization for Promotion of Overseas Distribution of Contents, a private-sector organ established in August 2002 by joint efforts of copyright-related organizations and the content industry. By gaining information of infringement issues from this organization, and through the framework of bilateral consultations and international organizations, the Japanese government is working to urge the governments of infringing countries to enhance regulations. To deal with the issue of counterfeit products found domestically, improvements are being made on border regulations regarding products infringing patent and design rights, while linkage with domestic regulation agencies are being enhanced. At the same time, the reality of counterfeit product distribution is being publicized to Japanese consumers through the Internet and other means, and activities to spread the awareness of the importance of intellectual property protection are actively being carried out. In these ways, the Japanese government is taking widespread measures against counterfeit and pirated products both domestically and overseas (Figs. 3.3.9, 3.3.10).

The Japanese government must continue in taking advantage of various opportunities to urge infringing countries and regions to work toward resolving the intellectual property right issues, while focusing on the following areas: (i) making strategic approaches to the central and regional governments of China (combined approach of promoting awareness of intellectual property and providing support measures such as human resources development); (ii) enhancing collaboration with the US and Europe (harmonization through multilateral consultations such as the WTO); (iii) approach at the Asia-Pacific Economic Cooperation Conference (APEC) (establishment of a comprehensive strategy related to intellectual property rights protection and implementation of each measure); and (iv) enhancing public-private sector cooperation (making specific appeals based on actual examples and supporting the independent efforts of Japanese companies).

Figure 3.3.9 Japan's key efforts in combating foreign counterfeit and pirated products

1. Cooperation with the International Intellectual Property Protection Forum (IIPPF)

The International Intellectual Property Protection Forum (IIPPF) (Chairman: Yoichi Morishita, Chairman of Matsushita Electric Industrial Co., Ltd., Secretariat: Japan Institute of Invention and Innovation, Members: 160 enterprises and organizations as of April 2003) was established in April 2002, with the objective of promoting cross-cooperation and implementing measures with the government and the industrial world united. The IIPPF dispatched a joint government-private sector mission to the Chinese central government (Beijing) and to local governments (Zhejiang and Guangdong) in December 2002, and requested enhancement of counterfeits control for those governments. The IIPPF implemented projects for formulation of recommendations from the industrial world regarding the counterfeit issue, projects requesting enhancement of measures against counterfeit products for government of infringing countries, information exchange and survey research projects, and human resource development cooperation projects for developing countries.

2. Support for the Content Overseas Distribution Association (CODA)

METI and the Agency for Cultural Affairs, acting as a Secretariat, support the operation of the Content Overseas Distribution Association (CODA), which was established in August 2002 with the objective of actively facilitating the offshore operations of the copyright-related organizations and content industry, as well as of taking countermeasures against foreign pirated products. (Head of the CODA: Tsuguhiko Kadokawa, Chairman of Japan Video Software Association, Members: 37 enterprises and organizations as of April 2003). In addition, the CODA is a member of the IIPPF.

3. Collection and provision of information on counterfeit and pirated products overseas

(1) Implementation of field studies on counterfeit damage

In order to grasp the actual situation in terms of counterfeit damage suffered by offshore Japanese companies, questionnaire surveys on Japanese companies are carried out on an annual basis and the information is made widely available using the Internet, etc.

(2) Collection of information overseas

Information on local legislation and management related to execution of intellectual property rights is collected through overseas offices of JETRO and the Interchange Association (Beijing, Shanghai, Hong Kong, Seoul, Bangkok, Taipei, etc.).

Seminars and consultations are held for local Japan-affiliated companies. Also, manuals on measures against counterfeit activities are created for each country where counterfeit damage occurs, and the information is made widely available using the Internet, etc.

A task force comprised of Japanese experts was established to conduct field studies and collect and arrange information on rights enforcement systems in various Asian countries and regions, as well as to distribute to domestic parties concerned enforcement manuals created to deal with infringements of copyrights. Manuals on the Republic of Korea, Taiwan, Hong Kong and China has been created to date.

4. Establishment of Counterfeit 110

A special contact point "Counterfeit 110" was established within the International Affairs Division of the Japan Patent Office in 1998, strengthening counseling in regard to issues of infringements of industrial property rights in Japan and overseas.

5. Pressure on other governments

Pressure on other governments is implemented through bilateral consultations and multilateral international frameworks in order to strengthen measures to combat counterfeit and pirated products. The main achievements are listed below.

(1) Bilateral consultations

<China>

March 2002: Meeting with MOFTEC (reorganized into Ministry of Commerce)

May 2002: Meeting with the State Economic and Trade Commission (partly reorganized in Ministry of Commerce)

June 2002: Meeting with the State Development Planning Commission

November 2002: Japan-China patent office conference (with China State Intellectual Rights Department)

March 2003: Japan-China Conference on Copyrights (Agency for Cultural Affairs/China State Copyright Department)

April 2003: Meeting with the Ministry of Commerce

<Taiwan>

November 2002: Japan-Taiwan Trade and Economy Meeting_ (Interchange Association/Association for Asian Relations)

<Republic of Korea>

July 2002 onward: Japan-ROK FTA Joint Study (with MOCIE, etc)

November 2002: Japan-ROK patent office conference (with ROK patent office)

<Thailand>

6. Human resource development cooperation to governments of developing countries

Human resource development cooperation, such as training courses and local seminars for enforcement agencies personnel and copyright related parties, is provided in order to improve the enforcing capacity of the governments of developing countries. .

(1) WIPO-Japan Trust Fund Program for Receiving Trainees (from FY1998 onward)

Results of the FY2002 enforcement course

A total of 19 trainees were received from China, India, Indonesia, Malaysia, Iran, Philippine, Sri Lanka, Thailand, and Viet Nam.

(2) Enforcement Seminars (from FY1999 onward)

Results for FY2002

Location: China

Duration: December 9-12, 2002

Participants: 35 people

Target persons: personnel of law enforcement agencies in local governments in China (local administrations for industry and commerce, quality, quantity and technology inspectorates, public safety services, customs)

Location: Singapore

Duration: January 20-23, 2003

Participants: 33 people

Target persons: personnel of law enforcement agencies in the governments of Indonesia, Malaysia, Philippine, Thailand, Viet Nam, and Singapore

(3) Asia-Pacific Copyright Systems Enhancement (APACE) Program (from FY1993 onward)

This program provides annual trust fund to WIPO on a continuous basis, and implements in cooperation with WIPO, symposiums, training programs and dispatches of experts, and supports improvements of domestic legislation and for fostering of organizations for copyright control in each country.

(4) Asia-Pacific Copyright and Neighboring Rights Seminar (Tokyo Seminar) (from FY1996 onward)

This annual program invites copyright experts of Asia-Pacific countries and holds international seminars to exchange information and views on trends in each country as well as modalities for cooperation among the countries. (The seminar was held in cooperation with APEC in FY2000.)

(5) JICA Group Training Course in Copyright systems development (from FY 1998 onward)

Approximately a month-long training program (group training courses) implemented in cooperation with Japan International Cooperation Agency (JICA). Training programs are held once a year and include lectures on various topics, such as copyright legislation, copyright-related control organizations, copyright enforcement, etc. Seven trainees participate in the courses each fiscal year.

Source: Japan Patent Office (2002), etc.

Figure 3.3.10 Japan's key efforts in domestic countermeasures against counterfeit products

1. Cooperation for domestic enforcement agencies

(1) Strengthening of borderline measures

The customs tariff law was revised in April 2003 for the purpose of covering by the import suspension application system products that infringe upon patent, model utility or design rights, in addition to products infringing trademark, and the necessary steps are being taken, such as the establishment of an inquiry system from Director-General of Customs to the Commissioner of Japan Patent Office.

(2) Cooperation to inquiries from police and customs

Cooperation in combating industrial property right infringements is made through answering infringement inquiries by domestic regulation agencies. The number of inquiries by domestic regulation agencies in 2002 was 573.

(3) Dispatch of instructors to seminars for customs officials

Instructors are dispatched from Japan Patent Office to seminars and other events aimed at people in charge of intellectual property at Customs.

2. Educational activities

Along with publicizing information on the actual state of the distribution of counterfeits in order to protect well-intentioned consumers, the importance of protecting intellectual property rights is appealed for the purpose of preventing the deliberate purchase of counterfeit products through the creation and distribution of booklets and Internet contents. (In FY1999 the booklet *Fabricateur* was created aimed at general consumers, and in FY2000 the booklet *No Fakes* was created aimed at distributors. In FY2001, the educational Internet website Fake Town was created.

Source: Japan Patent Office (2002), etc.