PACIFIC
INDUSTRIAL PROPERTY ASSOCIATION
太平洋工業所有権協会

PRESENTATIONS

The Thirteenth International Congress

KOBE
November 3-5, 1982



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P R O G R A M

WEDNESDAY, NOVEMBER 3, 1982

9:00 a.m. OPENING CEREMONIES

Opening Address - Shigeo Takeuchi
Report on 1981 Activities - Thomas I. O'Brien
Installation of PIPA Officers for 1982
Keynote Address - Kojiro Ozu, President of PIPA
Guest Speakers:
Honorary Chairman - Sadakazu Shindo, Chairman of Japan Patent Association
(Chairman of Mitsubishi Electric Corporation)
Honorable Kazuo Wakasugi, Director General, Japanese Patent Office
Honorable Donald J. Quigg, Deputy Commissioner, U.S. Patent and Trademark Office
Honorable David S. Guttman, Chairman of Licensing, Patent and Trademark Committee, American Chamber of Commerce in Japan

10:20 a.m. COFFEE

10:40 a.m. REPORTS OF COMMITTEE NO.1
Japanese Practice Relating to "Selection Inventions"
Tomehiko Ida

11:05 a.m. *Selection Inventions*
Robert P. Raymond

11:30 a.m. *Japanese Practice and Problems Relating to a Publication*
Kotaroh Hara

11:55 a.m. *Patent Term Restoration - An Update*
Rudolph J. Anderson, Jr.

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LAW CENTER LIBRARY
CONCORD, N.H.

12:20 p.m. LUNCHEON

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1:30 p.m. *Reasons for a Large Number of Patent Applications in Japan*
Shigeyasu Horigome

1:55 p.m. *The New U.S. Patent and Trademark Office Fees*
William T. McClain

2:20 p.m. *Recent Appeal Cases Regarding Trademarks in Japan*
Nagahisa Yuasa

2:45 p.m. *Proprietary Protection of Computer-Related Inventions, Software and Programmable Systems*
Arthur G. Gilkes

3:10 p.m. COFFEE

3:30 p.m. REPORTS OF COMMITTEE NO.4
Recent Court Decisions in Japan Relating to Doctrine of File Wrapper Estoppel
Hiroshi Yamamoto

3:55 p.m. *What Litigants Can Expect from the New U.S. Court of Appeals for the Federal Circuit*
Alvin Isaacs

4:20 p.m. *Assertion of New Evidences in the Action for Revoking Patent Invalidation Trial Decision*
Masao Shimokoshi

6:30 p.m. GRAND RECEPTION
}
8:30 p.m. Welcome Address - Mutsuo Ohya, President of Japan Patent Associaton
(General Manager Patent & Licensing Department, Kobe Steel, Ltd.)
Award

THURSDAY, NOVEMBER 4, 1982

9:00 a.m.	REPORTS OF COMMITTEE NO.2 *Recent Trend of JFTC's "Antimonopoly Act Guidlines for International Licensing Agreements"* Kensuke Norichika
9:25 a.m.	*Changes in Attitude toward Patent Licensing by U.S. Department of Justice; Elimination of No-No's.* Paul M. Enlow
9:50 a.m.	*A Case of Antimonopoly Act Violation Involving an International Licensing Agreement* Kuniharu Atake
10:15 a.m.	COFFEE
10:35 a.m.	*An Analysis of the Stanford University Gene Splicing License* Karl F. Jorda
11:00 a.m.	*Issues of Joint R&D Agreement between Japanese and U.S. companies* Hideo Doi
11:25 a.m.	*Joint R&D Agreements between U.S. and Japanese Companies* William R. Norris
12:30 p.m.	BUS TOUR to HIMEJI-CASTLE (Box Lunch)
6:15 p.m. ~ 8:15 p.m.	DINNER at ROKKOSAN HOTEL

FRIDAY, NOVEMBER 5, 1982

9:00 a.m.	REPORTS OF COMMITTEE NO.3 *Recent International Developments in the Protection of Computer Programming* Paul D. Carmichael
9:25 a.m.	*Patent System of the Republic of Korea and Its Background* Naoyuki Yonemoto
9:50 a.m.	*Climate of Industrial Property Protection and Technology Transfer in Central and South America* Arnold H. Cole
10:15 a.m.	COFFEE
10:35 a.m.	*Recent Situation of Patent and Technology Transfer in Taiwan* Mamoru Takada
11:00 a.m.	*Proposal for Convention Priority Extension Based upon Optional Early Publication* Martin Kalikow
11:25 a.m.	*Reports of Diplomatic Conference on the Revision of Paris Convention* American and Japanese Groups Edgar W. Adams, Jr.
12:20 p.m.	LUNCHEON AND CLOSING CEREMONIES Guest Address-Honorable Hiroshi Iwata, Engineer General, Japanese Patent Office Closing Address-Thomas I. O'Brien

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Opening Address

By Shigeo Takeuchi
Secretary Treasurer, PIPA Japanese Group
Senior Managing Director, Japan Patent Association

Good morning honored guests, ladies and gentlemen, I'm Shigeo Takeuchi, Secretary Treasurer of PIPA.

I suceeded Mr. Okano, who served PIPA exceptionally well. Mr. Okano gracefully retired at the end of February last year. Frankly speaking, when I was appointed Senior Managing Director of the Japan Patent Association, I had to accept the post of Secretary Treasurer of PIPA according to an established custom, and this is my first experience to attend the PIPA international congress. It is my great honor and pleasure to have this opportunity of making an opening address.

The PIPA international congress has annually been held alternately in the U.S. and Japan with significant and productive programs, and the 13th International Congress now opens its three-day session of meetings here in Kobe.

As you are well aware, nowadays, industrial property system is growing its importance. And, further, reflected by complicated international situations, some difficult problems such as the revision of Paris Convention and others have occurred. Under such circumstances, the position of PIPA has risen and PIPA members' interest in such problems has deepened.

I think an increase in the number of attendance of this Congress is an indication of deepened interest among our members. The total number of attendance of this Congress is 132, the largest number that we have ever had, 27 from the U.S. group, 105 from Japanese side.

I feel deeply on the occasion of this splendid meeting that we are largely indebted to a good many of our seniors who have endeavored in the management of our Association during the past 12 years of PIPA. Further, I would like express my thanks to the members of the working group headed by Mr. Kawaguchi, Governor of our Association, for their earnest services given to the preparation of this Congress.

This meeting is honored by the presence of Mr. Shindo, Honorary Chairman of this Congress, and three distinguished guests. I appreciated for sparing their previous time for this congress. I would like to express our cordial welcome by giving our big hands to honorary chairman and to each of the honorable guests. I ask you, ladies and gentlemen, to kindly join me in the clapping of hands. First, honorable Sadakazu Shindo, chairman of Japan Patent Association and Chairman of Mitsubishi Electric Corporation, he kindly accepted Honorary Chairman of this Congress. Next, honorable Kazuo Wakasugi, Director General of the Japanese Patent Office. He returned home only the day before yesterday from Geneva Diplomatic Conference. Next, honorable Donald J. Quigg, Deputy Commissioner of Patents and Trademarks, United States of America. Next, honorable David S. Guttman, Chairman of Licensing, Patent and Trademark Committee, American Chamber of Commerce in Japan. Addresses by honorary chairman and each of honorable guests will be given later.

In the seats for observers, Mr. Donald W. Banner attends this Congress. Mr. Banner contributed to the establishment of PIPA and he attended the 9th PIPA Congress held in Nagoya as then Commissioner of Patents and Trademarks, the United States of America. I also find in the seats for observers, Mr. Shozo Saotome who was the first president of PIPA and who has been contributed to activities of PIPA since its establishment. Mr. Saotome was given the first PIPA Award for outstanding contributions to international cooperation in the intellectual property right field.

In closing my address I sincerely hope that this congress will prove pleasant and rewarding to you.

Thank you.

Report On 1981 ACTIVITIES

BY Thomas I. O'Brien

President American Group, PIPA

Union Carbide Corporation

GOOD MORNING. OHAYO GOZAIMASU.

DISTINGUISHED GUESTS AND FELLOW-MEMBERS OF THE PACIFIC INDUSTRIAL PROPERTY ASSOCIATION.

IT IS A GREAT PLEASURE FOR ME TO ATTEND THIS 13TH INTERNATIONAL CONGRESS AND TO VISIT AGAIN WITH SO MANY OF MY JAPANESE FRIENDS. ON BEHALF OF THE AMERICAN GROUP, I WOULD LIKE TO EXTEND GREETINGS TO OUR JAPANESE COLLEAGUES.

THIS IS OUR FIRST CONGRESS IN KOBE, AND I MUST SAY THAT THIS FINE CONFERENCE CENTER ON " PORT ISLAND " IS VERY IMPRESSIVE IT COMPARES FAVORABLY WITH THE BEST CONFERENCE CENTERS YOU WILL FIND ANYWHERE IN THE WORLD. I AM DELIGHTED TO BE HERE.

AGAIN THE TIME HAS COME WHEN WE HAVE THE OPPORTUNITY OFFERED BY THESE ANNUAL CONGRESSES OF OUR ASSOCIATION FOR DIALOG AND INTERACTION BETWEEN PEOPLE, A MOST IMPORTANT OBJECTIVE OF THE ASSOCIATION. LET US USE THIS OPPORTUNITY WELL, SO WE CAN DEVELOP FURTHER THE RESPECT AND ADMIRATION WE HAVE FOR EACH OTHER WHICH NOW HAS COME ABOUT IN A LARGE MEASURE THROUGH THIS ASSOCIATION.

IT HARDLY SEEMS POSSIBLE THAT A WHOLE YEAR HAS PASSED SINCE WE MET IN NEW YORK AT THE 12TH PIPA CONGRESS. LET ME VERY BRIEFLY LAST

HIGH LIGHT SOME OF PIPA'S ACTIVITIES IN THAT YEAR.

AT THE NEW YORK CONGRESS THE PIPA AWARD IN INTERNATIONAL COOPERATION WAS ORIGINALLY ANNOUNCED AND THE FIRST AWARD WAS GRANTED TO THE DISTINGUISHED SHOZO SAOTOME. ANOTHER OUTSTANDING CONTRIBUTOR TO INTERNATIONAL COOPERATION IN THE INDUSTRIAL PROPERTY FIELD HAS BEEN SELECTED THIS YEAR TO RECEIVE THE PIPA AWARD, AND THE AWARD WILL BE CONFERRED ON DONALD BANNER THIS WEEK DURING THIS CONGRESS.

WORK HAS BEEN COMPLETED BY THE AMERICAN GROUP ON THE PIPA POSITION PAPER URGING THE PEOPLE'S REPUBLIC OF CHINA TO BROADEN THE SCOPE OF THE PATENT LAW THAT IS UNDER CONSIDERATION BY THE PRC. UPON FINAL REVIEW BY THE JAPANESE GROUP, THIS POSITION PAPER WILL BE TRANSMITTED TO THE AUTHORITIES IN THE PRC WITH THE PURPOSE OF BEING HELPFUL TO THOSE AUTHORITIES IN THEIR FORMULATION DEVELOPMENT OF A WORKABLE AND USEFUL PATENT LAW FOR THEIR COUNTRY.

PIPA CONTINUED ITS ACTIVE INTEREST IN THE ON-GOING INTERNATIONAL NEGOTIATIONS FOR THE REVISION OF THE PARIS CONVENTION. AS YOU KNOW, PIPA HAS THE STATUS OF AN " OFFICIAL OBSERVER ", AS A NON-GOVERNMENTAL ORGANIZATION, AT THE DIPLOMATIC CONFERENCE, AND PIPA HAD 4 MEMBERS, 2 AMERICANS AND 2 JAPANESE, IN ATTENDANCE AT THE MOST RECENT SESSION OF THE DIPLOMATIC CONFERENCE THAT TOOK PLACE IN GENEVA IN OCTOBER OF THIS YEAR. IN ADDITION PIPA SUBMITTED AN UP-DATED POSITION PAPER REITERATING PIPA'S STANDS ON THE MAJOR ISSUES BEFORE THE CONFERENCE. A REPORT WILL BE MADE LATER AT THIS CONGRESS ON THE EVENT AND OUTLINE OF THE OCTOBER

SESSION.

I KNOW THAT MUCH EFFORT HAS GONE INTO THE PREPARATIONS FOR THIS CONGRESS AND ITS PROGRAM ALTHOUGH OUR ASSOCIATION IS STILL A YOUNG ORGANIZATION, IT ALREADY HAS IN THESE PAST 13 YEARS ESTABLISHED A REPUTATION AND A TRADITION OF HIGH STANDARDS OF PROFESSIONAL EXCELLENCE IN THE PRESENTATIONS OF ITS CONGRESSES. I AM SURE THAT THIS CONGRESS WILL CONTINUE AND STRENGTHEN THIS TRADITION. I LOOK FORWARD TO ANOTHER INFORMATIVE AND SUCCESSFULL CONGRESS.

THANK YOU.

KEYNOTE ADDRESS

Kojiro Ozu
President, PIPA

November 3, 1982

Honorable guests and fellow members of the American and Japanese Groups:

As a keynote to the thirteenth Congress of the Pacific Industrial Property Association, I should like to discuss the reconversion of the intellectual property rights world and our increasing tasks and responsibilities.

Changes in the outside situation surrounding the industrial property world in which we all live and do business are now becoming more complicated and complex so that we are faced with numerous problems which should be solved.

It is very important and useful for us to exchange timely information among PIPA members with respect to our major common problems and to take measures against such various changes in the situation together.

In order to do so, the reconversion of our industrial property system should be strongly recognized from the international view point. And we should expand our territory of PIPA activities in the field of information exchange in order to keep pace with the extensive changes.

Now, I would like to take a few minutes to talk about the following three aspects of these problems. Namely, the quality changes in the technology subject to industrial property rights, and the changes in the industrial property rights system itself and their impact on the transfer of technology.

First, there have been major changes in quality in the technology subject to the industrial property rights. Dramatic technological innovations have brought about a wide range of new products, new production methods and obtained new natural and man-made resources.

With these developments a multitude of new legal issues have arisen. For instance, can patent system appropriately protect inventions in the field of computer software, mask patterns of Large Scale Integrated Circuits, marine developments, biochemistry and so on.

With respect to the protection of computer software, as you well know, the United States Federal Supreme Court made a decision favorable to patentability of software inventions in the 1981 Diehr case. Nonetheless, it still remains unclear what is the most appropriate form for a computer program.

The situation is quite similar in our country. The Japanese Patent office has maintained its position that they do not deny the patentability of software-related inventions. In 1976, the Japanese Patent Office issued "Examination Manual on Software Inventions" in which program-related inventions were recognized as being eligible for process patents. Now, they are preparing "Guidelines for the Examination Manual on Inventions in the field of Micro-Computer Application Techniques" in which such programs are recognized as product inventions.

On the other hand, the Tokyo district court has recently made a decision admitting preliminary injunction under copyright of Read-Only-Memory programs. Under these circumstances, the Japanese Government is considering legislating a special act for software protection under the copyright law. Further more, the Japanese Government is now preparing a special act for program insurance for hire-purchase of computer software.

Anyway, the question of how computer programs should be protected by means of patent, copyright or license agreement is not yet answered.

In particular, I would like to point out that the question now being debated is only how to protect computer programs. But the scope of a program-related patent has not yet been discussed.

I think we should have clear-cut guidelines on the interpretations of the scope of a program-related patent in the immediate future. In particular, such guidelines on the so-called "Doctorine of Equivalence" of software patents are extremely important in order to keep an appropriate balance between the patentees' rights and the users' rights.

The relationship between the newly-obtained resources from marine developments and biochemical developments, and the resulting industrial property rights is also a very important issue we must consider.

I think that the Law of the Sea Treaty may be considered a bit later in connection with the transfer of technology. Here, I just want to consider the relationship between industrial property rights and the sea which is a treasure-house of resources both for natural industrial materials and for energy.

What I want to emphasize here is that all natural resourses, even sources of energy or industrial materials, have no value unless new techniques are created for using them effectively, namely, such utilization techniques give primary value to such resourses. Such techniques are the very industrial properties which should be protected.

Today, we already have such examples of marine energy utilization techniques like the ocean thermal energy conversion systems. However, the problems of protecting industrial property rights against the usage of the rights in international waters are so complex that we can not solve them within national boundaries. Accordingly, I think that it is very significant for us to take the initiative on this problem.

Next, I would like to talk about the changes in the industrial property rights system and their impact on the transfer of technology.

A Revision of the Paris Convention and a proposed "Code of Conduct" will alter the historical basis of the industrial property right system, and these proposals are pressing us to take a different approach to the transfer of technology.

For one thing, more and more developing nations are taking specific, restrictive policies against patents which are owned by developed nations. Consequently, it is getting more difficult for transferors to retrieve investment on research and development for new technology by means of the transfer of this technology.

For example, it is substantially impossible to receive royalties from Brazil. Several ASEAN nations impose strict conditions for their permission to transfer technology from the developed countries. They have set a ceiling on the amount of royalty to be paid or made strict rules and regulations favorable to the users of the transfered technology.

Considering this, we must take into account the political restrictions of the transferrer's countries on royalties, tax, permission of transfer of technology and so on. Accordingly, it is necessary for us to exchange information and to discuss how to promote our beneficial license with these countries under these conditions.

Finally, I want to talk about our domestic problems. Advances in various fields of technology have led to a rapid increase in the number of patent applications, which causes severe problems for examination in both the U.S. Patent and Trademark Office and the Japanese Patent Office.

In the meantime, both countries now aim to establish the so-called "Cheap Government" by means of a "Small Government" policy in the United States or the reform of the administrative structure in Japan.

Under these circumstances, it is inevitable for both the U.S. Patent and Trademark Office and the Japanese Patent Office to have a self-supporting based examination system. From last month, U. S. Government fees for patents and trademarks have been increased. The Japanese Patent Office also aims to increase their fees. Furthermore, the Japanese Patent Office has recently announced that they will adopt the so-called "paperless system" in which all patent documents are filed and retrieved by electronic means.

I think it is necessary for us to cooperate with these government policies while airing our opinions in regard to these matters.

As I mentioned at the beginning, the situation surrounding us is becoming so complicated and complex that the roles and responsibilities of PIPA are becoming more and more extensive and important.

I believe the reports which will be given here will present valuable insights into these matters and will spark fruitful discussions. Furthermore, I believe this Congress will enhance our mutual friendship and will encourage us to exchange information and to cooperate much more closely and freely.

Thank you.

Address by Honorary Chairman

Mr. Sadakazu Shindo
Chairman, Japan Patent Association
Chairman, Mitsubishi Electric Corporation

Mr. Chairman, laides and gentlemen, members and guests:

First, I would like to express my great joy, as President of the Japan Patent Association, at welcoming you to this PIPA General Assembly Meeting here in Kobe, a city remarkably international in flavor.

I am very proud to have been appointed Honorary Chairman of this meeting, and another great honor I am sincerely grateful for is the attendance of this assembly by Mr. Quigg, Deputy Commissioner, U.S. Patent and Trademark Office, and Mr. Guttman, Chairman of Licensing, Patent and Trademark Committee, American Chamber of Commerce in Japan, and Mr. Wakasugi, Secretary General of the Japanese Government Patent Office, despite their busy schedules.

All of us here are more than fully aware of the rapid pace at which technical innovation occurs today; and it is in assisting this continually innovative advancement that the industrial property system has played such a prominent role. It is owing to the system prevailing in each country, based on the Paris Treaty, that valuable technologies thus-far developed have been well-protected and technology transfer has gone on smoothly between nations.

In developing countries, however, the patent system has been disputed, which fact has generated great international difficulties.

It was amid these concerns, as you all know, that the recent diplomatic convention was held in Geneva to revise the Paris Treaty.

In regard to such revision, several previous PIPA General Assembly meetings have had the matter on their agendas, and PIPA sent observers to the revision convention. Such steps are indeed encouraging.

If the issue should be taken up as one of the subjects at this meeting, I ask that you discuss the problem thoroughly and in service to understanding and cooperation among nations, so that a new and viable patent system will result.

I understand that the United States and Japan are separately considering various policies with regard to the smooth operation of the patent system; therefore it is of great importance that you, experts in patent matters, exchange the latest information and opinions as well, for your mutual understanding and development. I anticipate very fruitful results.

The international city of Kobe, facing the scenic Inland Sea, has a centuries long history as a trade port; moreover it boasts the neighboring splendors of Kyoto and Nara, ancient capitals of Japan. It is in the spirit of such tradition that I invite you to enjoy to the fullest the autumnal splendor of Japan.

And lastly, I pray for bountiful results from this meeting, and that PIPA may continue to advance with as great strides as it has in the past.

Thank you for your kind attention.

FOR

PACIFIC INDUSTRIAL PROPERTY ASSOCIATION
13TH KOBE INTERNATIONAL CONGRESS

By: Mr. Kazuo Wakasugi
Director-General, the
Japanese Patent Office

I take great pleasure in expressing my congratulations on the opening of the 13th International Congress of the Pacific Industrial Property Association. I sincerely welcome the honorable guests from the U.S.A. including Mr. Quigg, the Duputy-Commissioner of the U.S. Patent and Trademark Office (USPTO), Mr. Guttman, Chairman of Licensing, Patent & Trademark Committee, the U.S. Chamber of Commerce in Japan, Mr. Banner, Ex-Commissioner of USPTO, Mr. O'Brien, US Group President, and friends from U.S. PIPA Group. I also extend my gratitude to Mr. Ozu, President of the Japanese Group and other personnel who have devoted their efforts to organizing this important event.

The industrial property rights system has an inherently global framework, and has a great impact upon the development of the industry and economy of all countries. Its role is becoming more and more important as industrial technology increases its influence over economic activity. Under these circumstances, it is very important to have prompt access to information in order to be able to analyze it and take the appropriate countermeasures earlier. In this respect, the

Pacific Industrial Property Association (PIPA) plays an important role, providing patent people with regular opportunities to frankly exchange opinions and increase mutual understanding. This meeting is a typical example and there can be no doubt as to its significance in terms of mutual understanding. I sincerely hope it is a great success.

Last month, I attended the Diplomatic Conference on the Revision of the Paris Convention, held in Geneva, and returned to Japan the day before yesterday. During the Geneva conference a consent was made concerning the protection of the official name of a country under Article 6 ter of the Paris Convention. Regarding Article 10 quater, some progress was seen through concession with reference to the protection of a country-name used in trade and of a name of origin, which I think very significant.

I would now like to talk about Article 5-A in some detail because national industrial circles showed a keen interest in this issue. Although Article 5-A was not on the agenda for formal discussion, a new proposal was put forward by Mr. Mossinghoff, Commissioner of USPTO. As some of you may recall, the Nairobi Conference reached a consensus in a form of so called "Nairobi Compromise Text" to which the U.S. and some other countries opposed. As the result of Mr. Mossinghoff's strenuous efforts the newly proposed draft has come on the scene with a hope to

obtain final consent in the coming end-November round of Geneva Conference.

The main subject for discussion of the Geneva Conference was the promotion of technology transfer to the developing nations. This is a worthy cause, and will also help to reactivate the world economy. However, it is fundamental to the realization of this objective that industrial property right be upheld and respected. I think this can be clearly demonstrated by looking at the Japanese experience.

Thirty years ago I started my official career at the Ministry of International Trade and Industry (MITI). My first job was to examine licensing agreements with U.S. and European licensors. In this job, I became increasingly aware of the extremity of the technology gap between Japan and the U.S.A. or European countries. The U.S.A. and European companies owned most of the important patents, and there was a large, one-way flow of royalties paid by Japanese licensees. As a young man, I was anxious for the future of Japan. I thought of my forebears who first introduced the patent system to Japan a century ago. They too must have felt the same anxiety.

Nevertheless, Japan has consistently respected and upheld industrial property rights since that time. Such respect and loyalty remains unchanged and, in Japan, is emphasized now more than ever. I think our loyalty to industrial property rights has greatly contributed to Japan's

remarkable economic success. It is my view, therefore, that the respect of and loyalty to industrial property rights are indispensable prerequisites to technology transfer in real terms. Without them, perhaps the real development of a country would not be possible. Bearing this in mind, it can be seen that there are strong reasons for supporting the amendment of the Nairobi consensus as to Article 5-A. I am sure that the amendment would contribute, in the long run, to both advanced and developing nations.

The Geneva Conference was attended by a number of representatives from U.S. industry, for example Dr. Newman, FMC Corporation and Mr. Jorda of Ciba-Geigy. I gained the impression that U.S. industry is well organized in its support of the government position. It gave me the impression of an "American Inc." parallel to the "Japan Inc". In saying this it is not my intention to criticize rather praise the American attitude. Those concerned should not be indifferent to industrial property rights as they are intended to protect personal property. The protection of rights of ownership is of fundamental importance in the free world. As I see it, a nation whose government does not listen to suggestions of its industry is unfortunate because it can not expect to experience proper development. The U.S.A. is one step ahead of Japan in terms of the unity of its industry's attitude towards

the patent system. As I said before, I have only praised U.S. industry in this respect.

Next, let me mention two patent-related matters in which the Japanese government is taking a major interest. The first involves measures relating to international cooperation, and the second concerning action to cope with the large accumulation of patent information.

The first matter includes international exchange of data and information, improvements in international cooperation and the promotion and advertisement of the industrial property rights system in order to encourage its respect on a world-wide basis. This is particularly important in developing countries. Japan will make further efforts to provide them with technical assistance including sending experts and accepting trainee engineers. However, one danger I should point out in this connection is that there is a risk in the present international atmosphere of restricting patent rights. We must avoid this risk by emphasizing, if necessary, that technology transfer in real terms will not be available where industrial property rights are not respected.

The second problem, how to cope with the vast accumulation of information, requires consideration from two different standpoints. The dramatic increase in quantity requires a radical response. The USPTO has an accumulation of well over twenty million data files. This approximately

equals the Japanese figure. In ten years time, the total number will exceed fifty million causing serious management problems in Japan. The problem lies not only in coping with the volume, but also in the consequent delay to prosecutions of patent, trademark and design applications. We should also consider the potential for cooperation with private companies in handling the vastly accumulated data files for easy access to such data. Unfortunately, this will not be possible until private companies adopt new, modern patent management systems.

The solution to these problems is full-scale computerization to replace conventional procedures. During the previous conference in Geneva, Mr. Mossinghoff explained to me privately the progressive program for a new patent management system which Mr. Quigg has just mentioned here in this meeting. The program has yet to be ratified by Congress, so I was unable to obtain a copy, but I learned that it offers an extremely modern patent management system. I told him about the Japanese situation and the organization of project team last summer to consider possible office automation. We agreed that, though Japan has been slow starter the lead will change hands frequently in the race for efficiency, and with give and take we shall eventually reach the same goal. We both acknowledged the need for cooperation in future from the very begining of a project, an entry after a project has started interruptes its

smooth development. I have mentioned these conversations with Mr. Mossinghoff in order to show the close tie between our two countries. Mr. Mossinghoff plans to visit Japan next January and I am looking forward to meeting him again.

Finally, I would like to talk briefly about the "Pacific Group" which was newly formed during the Geneva Conference. This group is of the same nature as PIPA but includes Australia, New Zealand and Canada. The "P" group, as it is known, strengthened the unity of the member countries and was able to present an influential opinion on the issue of trademarks and name of place of orign in relation to Article 10 quater. Unfortunately, the members failed to present a united front in relation to the issue of Article 5-A. I should point out, however, that Japan and the U.S.A. were in harmony on all these issues. Such harmony was possible, I think, because Japan and the U.S.A. have a strong respect for industrial property rights and because there is mutual recognition that the system is properly managed in our two countries. This is a solid basis for future cooperation and if this relationship can be maintained we shall be able to take the initiative in giving an appropriate lead to other countries. I have great confidence in this.

For this reason, I hope PIPA continues this kind of meeting. If PIPA, on behalf of the private sector, and

the "P" group, on behalf of the government sector, can work together with a view to the future, we shall surely lead the way into a new era for the industrial property rights system.

I would like to conclude my speech by wishing a great success for this meeting. Thank you very much for listening.

REMARKS BY DONALD J. QUIGG

DEPUTY COMMISSIONER OF PATENTS AND TRADEMARKS

BEFORE THE

13TH INTERNATIONAL CONGRESS OF

PACIFIC INDUSTRIAL PROPERTY ASSOCIATION

KOBE, JAPAN

NOVEMBER 3, 1982

GOOD MORNING GENTLEMEN. IT'S A PLEASURE TO HAVE AN OPPORTUNITY TO GIVE YOU AN UPDATE ON DEVELOPMENTS WITHIN THE UNITED STATES PATENT & TRADEMARK OFFICE OVER THE LAST 12 MONTHS. COMMISSIONER MOSSINGHOFF GAVE YOU A STATUS REPORT AT YOUR 12TH ANNUAL CONGRESS LAST YEAR IN NEW YORK CITY.

AT THAT TIME HE TOLD YOU THAT THE SECRETARY OF COMMERCE HAD REVISED THE COMMERCE DEPARTMENT ORGANIZATION SO AS TO HAVE THE COMMISSIONER REPORT DIRECTLY TO HIM AND TO THE DEPUTY SECRETARY.

ON OCTOBER 2ND OF THIS YEAR, CONGRESS TOOK STEPS TO MAKE PERMANENT THAT CHANGE IN THE PATENT AND TRADEMARK OFFICE STATUS. ON THAT DAY, BOTH HOUSES OF OUR CONGRESS PASSED A BILL WHICH INCLUDED A PROVISION PROMOTING THE COMMISSIONER TO THE POSITION OF ASSISTANT SECRETARY OF COMMERCE. ON OCTOBER 25TH, THE PRESIDENT SIGNED THE BILL INTO LAW (P.L. 97-366). ALTHOUGH THIS CHANGE IN OFFICIAL STATUS WILL NOT MAKE A CHANGE IN THE WAY THE

OFFICE WILL ACTUALLY FUNCTION IN THIS ADMINISTRATION. IT EMPHASIZES THE IMPORTANCE WHICH THE U.S. GOVERNMENT PLACES UPON THE PATENT AND TRADEMARK OFFICE IN THE UNITED STATES ECONOMY.

AS COMMISSIONER MOSSINGHOFF REPORTED TO YOU LAST YEAR, SEVERE PROBLEMS EXISTED IN THE PATENT AND TRADEMARK OFFICE WHEN HE ACCEPTED THE POSITION. TO PUT IT VERY SIMPLY, YOU COULD SAY THAT THE MOST OBVIOUS PROBLEMS WERE THOSE OF "BACKLOGS" AND LACK OF "QUALITY". THERE WAS A BACKLOG OF MORE THAN 200,000 PATENT APPLICATIONS AND MORE THAN 115,000 TRADEMARK APPLICATIONS AND THE BACKLOGS WERE INCREASING AT THE RATE OF 10% PER YEAR.

PLANS HAD ALREADY BEEN MADE TO ESTABLISH THE TRADEMARK OPERATIONS AS A GROUP OF SEPERATE LAW OFFICES WITHIN THE PATENT AND TRADEMARK OFFICE IN WHICH INDIVIDUAL EXAMINER ATTORNEYS WOULD HAVE THE RESPONSIBILITY AND ACCOUNTABILITY FOR CERTAIN PORTIONS OF THE BACKLOG AND NEWLY FILED TRADEMARK APPLICATIONS. THAT REORGANIZATION WAS ACTUALLY MADE DURING FY '82 AND HAD AN IMMEDIATE BENEFICIAL EFFECT UPON THE QUALITY AND QUANTITY OF WORK IN THE TRADEMARK OPERATIONS.

A SHORT RANGE SOLUTION TO THE BACKLOG PROBLEMS WAS TO INCREASE THE PROFESSIONAL AND CLERICAL STAFFS IN BOTH THE PATENT AND TRADEMARK OPERATIONS SO THAT MORE APPLICATIONS COULD BE DISPOSED OF THAN WERE BEING FILED IN A GIVEN YEAR. IN FY 1982 WE HAD, AND MET, THE OBJECTIVE OF HIRING 235 NEW PATENT EXAMINERS AND 14 ADDITIONAL TRADEMARK EXAMINERS, BRINGING THE PATENT EX-

AMINER TOTAL TO SLIGHTLY OVER 1,000 AND THE TRADEMARK EXAMINER TOTAL TO 98, THE LATTER BEING A RECORD HIGH. WE HAVE ALREADY STARTED AN EXTENSION OF THE RECRUITING PROGRAM TO ADD 245 ADDITIONAL PATENT EXAMINERS IN FY 1983. BY 1984, OUR MANPOWER NUMBERS AND EXPERIENCE WILL BE SUCH THAT MORE PATENT APPLICATIONS WILL BE DISPOSED OF THAN ARE FILED THAT YEAR. IN TRADEMARK OPERATIONS, WE ARE WELL ON THE WAY TOWARD OUR GOAL OF ISSUING A FIRST ACTION WITHIN 3 MONTHS AND FINAL DISPOSITION WITHIN 13 MONTHS AFTER FILING THE APPLICATION.

IN FY 1982, CONGRESS PASSED A BILL WHICH PROVIDED A NEW FEE SCHEDULE FOR PATENT AND TRADEMARK OPERATIONS. THIS IS THE FIRST TIME THAT FEES HAVE BEEN MATERIALLY CHANGED IN THE UNITED STATES SINCE 1965. UNDER THE NEW LAW, FEES WERE INCREASED TO A POINT AT WHICH FEES OTHER THAN THOSE FOR MAINTENANCE OF PATENTS, WILL COVER ABOUT 52% OF THE COST OF PROSECUTING A PATENT APPLICATION. MAINTENANCE FEES WERE ALSO PROVIDED, WHICH WHEN FULLY OPERATIVE WILL, IN COMBINATION WITH THE NON-MAINTENANCE FEES, COVER ABOUT 80% OF THE TOTAL COST OF THE PATENT OPERATIONS. AS FOR TRADEMARKS, THE NEW LAW PROVIDES FOR FEES WHICH WILL TOTALLY COVER THE TRADEMARK OPERATIONS.

EVEN WITH THOSE IMPROVEMENTS, WE ARE STILL FACED WITH A MAJOR PROBLEM WHICH HAS EXISTED FOR A LONG PERIOD OF TIME. EXAMINERS ARE OPERATING IN A SEA OF PAPER. THERE ARE SUPPOSED TO BE MORE THAN 24 MILLION PIECES OF PAPER IN THE EXAMINER'S SEARCH

FILES. AND THOSE PIECES OF PAPER MUST BE HANDLED MANUALLY. THAT SORT OF SYSTEM INHERENTLY RESULTS IN MANY REFERENCES BEING OUT OF THE FILE AT TIMES WHEN EXAMINER'S ARE SEARCHING THOSE FILES. OUR BEST ESTIMATE IS THAT AN AVERAGE OF 7% OF THE REFERENCES ARE MISSING AT ANY ONE TIME. IT IS ALSO ESTIMATED THAT THE PERCENTAGE IS HIGHER THAN THAT IN SOME OF THE MORE ACTIVE TECHNOLOGIES.

ALTHOUGH THIS PROBLEM HAS EXISTED FOR MANY, MANY YEARS, IT HAS NOT BEEN SOLVED. REGARDLESS OF THE APPROACH, THE SOLUTION, EVEN THOUGH IT IS A SHORT-TERM ONE, WILL BE EXPENSIVE. ITS RELATIVE PRIORITY TO OTHER PROBLEMS MUST BE ASSIGNED. OBVIOUSLY WE MUST BRING THE FILES UP TO DATE IN ORDER TO GET THE FILE INTEGRITY NECESSARY FOR A HIGH QUALITY EXAMINATION. BUT THAT HAS BEEN DONE BEFORE AND IN A MATTER OF WEEKS, THE FILES BEGAN TO DETERIORATE.

SO THAT POINTS UP ANOTHER ELEMENT OF OUR SHORT-TERM PROBLEM. WE CAN BRING THE SEARCH FILES UP TO COMPLETION, BUT IF WE DO NOT PROVIDE A MEANS FOR MAINTAINING THEM IN THAT CONDITION, THE PROBLEM WILL DEVELOP AGAIN, VERY SOON.

WE ARE LOOKING AT SEVERAL ALTERNATIVE WAYS IN WHICH THE PROBLEM MAY BE SOLVED ON A SHORT-TERM BASIS.

BUT WHILE WE ARE LOOKING AT SHORT-TERM SOLUTIONS WE ARE ALSO LOOKING AT A LONG RANGE SOLUTION TO THE PROBLEM. THE OBVIOUS ANSWER IS AUTOMATION. AUTOMATION IS NOT SOMETHING WHICH CAN BE ACCOMPLISHED OVER NIGHT. IT WILL TAKE TIME AND LOTS OF MONEY.

IT WILL BE PARTICULARY COSTLY TO ESTABLISH THE DATA BASE FOR USE IN SEARCHING.

AS COMMISSIONER MOSSINGHOFF REPORTED TO YOU LAST YEAR, IN DECEMBER OF 1980, THE U.S. CONGRESS MANDATED THAT THE COMMISSIONER REPORT TO THE CONGRESS WITHIN TWO YEARS A PLAN UNDER WHICH THE OFFICE CAN BE AUTOMATED. AT THE TIME THE COMMISSIONER SPOKE TO YOU, A FIRST DRAFT OF THE REPORT HAD BEEN CIRCULATED TO A LARGE NUMBER OF INDIVIDUALS AND COMPANIES FOR COMMENTS. THE RESULTING COMMENTS WHICH WE RECEIVED WERE CONSTRUCTIVE AND VERY HELPFUL IN DEVELOPMENT OF THE FINAL REPORT.

DURING THIS PAST YEAR, A DIRECTOR OF AUTOMATION WAS EMPLOYED AND HAS DONE AN EXCELLENT JOB OF REFINING AND DEFINING THE DETAILS OF THE REPORT. THE REPORT IS NOW IN ITS FINAL STAGE OF APPROVAL BEFORE ITS DELIVERY TO CONGRESS. THE GOAL OF THE PLAN COVERED BY THE REPORT, WHICH IS VERY AMBITIOUS, IS TO COMPLETELY AUTOMATE THE OFFICE BY THE 1990'S.

THE PLAN WAS DEVELOPED, KEEPING IN MIND THE MISSION OF THE OFFICE, EXISTING AUTOMATED SYSTEMS AND SUPPORT NEEDS, AND AREAS WHERE AUTOMATION WILL PRODUCE OPERATIONAL BENEFITS. WE HAVE ALREADY INSTALLED A COMPUTER TERMINAL IN EACH OF OUR 15 PATENT EXAMINING GROUPS TO GIVE PATENT EXAMINERS ACCESS TO ALL AVAILABLE COMMERCIAL PATENT DATA BASES. TERMINALS HAVE ALSO BEEN PLACED IN THE PUBLIC SEARCH ROOM AND ARE AVAILABLE TO THE PUBLIC ON A FEE BASIS.

WE ARE PROCEEDING WITH PLANS TO HAVE ALL OF THE TRADEMARK OPERATIONS COMPLETELY AUTOMATED BY THE END OF FY 1984. AT THE SAME TIME, WE PLAN TO FULLY AUTOMATE ONE PATENT EXAMINING GROUP (GROUP 220), WHICH DEALS WITH ALL AREAS OF TECHNOLOGY. SUPPORTING PRE-EXAMINATION, POST EXAMINATION, CLASSIFICATION AND MANAGEMENT INFORMATION WILL BE AUTOMATED AS WELL. AN OBVIOUS ADVANTAGE OF FULL AUTOMATION OF THE OFFICE WILL BE TO PROVIDE COMPLETE SEARCH FILE INTEGRITY.

IN JULY OF THIS YEAR WE RAISED THE STANDARD OF PATENTABILITY THAT WAS BEING USED IN OUR QUALITY REVIEW PROGRAM. I HAVE ALSO ASKED THE BOARD OF APPEALS TO USE A HIGHER STANDARD OF PATENTABILITY. WE HAVE ALSO PLACED GREATER RESPONSIBILITY AND ACCOUNTABILITY FOR QUALITY ON THE GROUP DIRECTORS OF OUR EXAMINING CORP.

IN JUNE OF THIS YEAR, WE STARTED A PROGRAM AIMED AT MAKING EACH OF OUR PATENT EXAMINERS MORE AWARE OF THE DAY TO DAY PROBLEMS WHICH INDUSTRY FACES IN ITS OPERATIONS. THIS PROGRAM WILL RESULT IN EACH EXAMINER HAVING AN OPPORTUNITY, ONCE EVERY THREE YEARS, TO VISIT INDUSTRIAL FACILITIES WHICH UTILIZE THE TECHNOLOGY IN WHICH THE EXAMINERS IS SPECIALIZING. U.S. INDUSTRY HAS MADE THIS PROGRAM POSSIBLE BY MAKING A LARGE NUMBER OF INDUSTRIAL FACILITIES AVAILABLE FOR VISITS BY THE EXAMINERS AND IS ALSO MAKING THE MONEY AVAILABLE FOR PAYMENT OF TRAVEL EXPENSES FOR THE EXAMINER'S TRIPS. APPROXIMATELY 55 EXAMINERS HAVE TAKEN PART IN THE PROGRAM UP TO THE PRESENT TIME. THEY ARE BECOMING MORE

AWARE THAT SOME THINGS, WHICH ON THE SURFACE APPEAR TO BE ONLY SLIGHT IMPROVEMENTS, ACTUALLY CAN BE IMPORTANT SOLUTIONS TO LONG STANDING PROBLEMS.

A NEW PROGRAM, REEXAMINATION, WENT INTO EFFECT IN JULY OF 1981. THE NUMBER OF REQUESTS FOR REEXAMINATION WHICH HAVE BEEN FILED IS SOMEWHAT LOWER THAN WE HAD ANTICIPATED. SOME PEOPLE SEEM TO FEEL THAT IS AN INDICATION THAT REEXAMINATION IS DOOMED TO FAILURE. I AM MORE OPTIMISTIC. AS OF MID-SEPTEMBER 1982, 260 REQUESTS FOR REEXAMINATION HAD BEEN FILED.

(A) CHEMICAL 77

(B) ELECTRICAL 84

(C) MECHANICAL 99

REEXAMINATION CAME ABOUT AS A RESULT OF ATTEMPTS BY THE PATENT BAR TO FIND A WAY FOR REDUCING THE COST OF LITIGATING PATENTS. IT WAS FELT THAT IF SOME WAY COULD BE FOUND IN WHICH CLAIMS OF A PATENT COULD BE EVALUTED IN THE FACE OF NEWLY DISCOVERED REFERENCES, FEWER LAWSUITS WOULD BE NECESSARY.

THERE WAS A GREAT DEAL OF DISCUSSION ABOUT POSSIBLY LIMITING THE TIME PERIOD AFTER A PATENT ISSUES IN WHICH TO REQUEST REEXAMINATION. IT WAS FINALLY DECIDED NOT TO LIMIT THAT PERIOD AND TO PERMIT ANY PARTY TO REQUEST REEXAMINATION WHEN A PATENT BECOMES IMPORTANT TO THAT PARTY.

IF WE TAKE INTO ACCOUNT THE PRESENT ECONOMIC SITUATION I BELIEVE WE CAN RIGHTLY ASSUME THAT FEWER PARTIES THAN USUAL ARE

TAKING STEPS TO MAKE CAPITAL INVESTMENTS AT THIS TIME. FEWER SITUATIONS ARE ARISING WHICH REQUIRE AN EVALUATION OF A PATENT. THAT COULD ACCOUNT FOR THE LOWER THAN EXPECTED NUMBER OF REQUESTS. AS THE ECONOMY IMPROVES, MORE PATENTS SHOULD ASSUME GREATER IMPORTANCE IN THE PLANS OF INDUSTRY. WE WILL THEN HAVE AN OPPORTUNITY TO MAKE A BETTER EVALUATION OF THE IMPORTANCE OF REEXAMINATION. COSTS OF PATENT LITIGATION ARE STILL INCREASING AND IT IS IMPORTANT THAT WE DO OUR BEST TO SEE THAT THE PATENT OWNER CAN DEPEND ON HIS PATENT TO BE VALID.

PIPA 13TH INTERNATIONAL CONGRESS

NOVEMBER 3, 1982

OPENING GUEST SPEECH: D.S. GUTTMAN

Good morning ladies and gentlemen. On behalf of Americans working in Japan, let me say "Yōkoso", a Japanese greeting meaning "How good of you to come." To the U.S. members who invited me and the Japanese members who made arrangements for this important international congress, my special thanks.

Although many of the U.S. attendees will be "old Japan hands," having traveled often to Japan on business, in this, the heart of Japan, there is always more to see and do than time allows. There are the famous metropolises Kobe, Kyoto, Osaka and such cities as Nara and Sakai, each with its own flavor and special treasures. Kobe, for instance, is as old as the history of Japan, the still bustling foreign trade of its harbors having as long ago as the 4th century introduced to Japan the astounding cultures of China and Korea. The clear water from the nearby mountains has been famous a long time too, and the Kobe sake wine that comprises it historically in high demand, even in the distant eastern capital of Tokyo. And I'm sure you are looking forward to our trip tomorrow to Himeji Castle, a masterpiece by those skilled in the art of feudal fortifications.

The American Chamber of Commerce in Japan, whose Licenses, Patents and Trademarks Committee I serve, is no stranger to the promotion of exchanges of information about industrial property. In the past we have sponsored and published, in

English, several books of Japanese industrial property case decisions, something we hope to resume again. Our monthly meetings in Tokyo have provided a forum for Japanese government officials, lawyers and patent attorneys, and fellow licensing executives to tell us Americans about "things Japanese" and ask about "things American." Currently we have two studies under way, one on the effects of the Japanese Industrial Property Laws on American investment in Japan, the other on the effect of U.S. Antitrust Laws on American competitiveness in Japan.

This Congress meets at an historic time when we are all concerned about a worldwide recesssion, the frictions accompanying the scale of world trade, and calls for tampering with the Paris Convention. Although not a member of your Association, as a U.S. Patent Attorney who has been working and researching in Japan on intellectual property for the past three years, I thank you for inviting me to hear your timely Committee Reports and meet with you informally during the Congress. I am sure this Congress will, as did the one last year in New York, promote better understanding not only of industrial property, but of our two Pacific countries.

Thank you.

Welcome Address at Grand Reception

Mutsuo Ohya,
General Manager
Patent & Licensing Dept.
Kobe Steel, Ltd.
(President of Japan Patent Association)

As one of the residents of Kobe, I am very glad to have the 13th International Congress of Pacific Industrial Property Association here, and cordially welcome all of you to our city.

It seems that the international situation surrounding the patent system is now in a very important and difficult phase with problems such as the issue of the revision of the Paris Convention. I am particularly impressed that the Congress is being held in Kobe, at this juncture, which has been an international city. I sincerely hope and believe that this Congress will be fruitful for all of us.

However, I do not think you will spend all the time in meetings or sleeping in your hotel rooms. Please go out, see the sights and meet the people of Kobe as much as time allows. I will be very happy if you can experience the atmosphere of Japan in this international city which is now in midst of autumn, the finest season of the year for such a purpose. Especially, today is called "Culture Day" and is a national holiday.

Let me leave you with a Japanese expression. "This Congress is triply perfect; the right place, the right day and the right people." I wish for the success of this Congress, and hope those participants from the United States, who will remain in Japan after the session for their trip, enjoy the rest of the schedule.

Recitation and Award

Speech by Mr. Ozu, PIPA President
On the Occasion of the Award Presentation to Mr. Banner

May I have your attention please.

I am about to do the most pleasant task I have to do during this Congress.

I would like to present an award to a person who has made outstanding contributions to international cooperation in the industrial property field.

He is Mr. Donald W. Banner.

Please come this way, Mr. Banner.

Mr. Banner has distinguished himself in many, many fields and I'll mention but a few of them.

From 1953-1978, Mr. Banner was General Patent Counsel of Borg-Warner Corporation.

When PIPA was founded in 1970, Borg-Warner was a charter member and Mr. Banner was the representative of Borg-Warner Corporation to PIPA from its inception to 1978.

Mr. Banner was particulary active in development of the Conciliation System which was formally adopted by PIPA in 1975.

In 1978, as you all know, Mr. Banner became U.S.Commissioner of Patents and Trademarks.

Two years ago, he was a member of the U.S.Delegation to the Geneva Diplomatic Conference to revise the Paris convention.

For his outstanding contributions to international cooperation in the intellectual property field, I consider it a great honor to present this award to him.

Mr. Banner, please accept this plaque as a small token of our recognition of your many achievements.

Congratulation.

Congratulation Address
by Mr. Shozo Saotome, President, Dia Research Institute Inc.

In praise of Mr. Donald W. Banner

Dear Mr. Banner. Please accept my sincere congratulations on your receiving the prize of the Pacific Industrial Property Association.

Everyone knows your activity and great contribution to the Industrial Property Right circles in the United States and abroad. If I try to mention all these things that you have achieved, I will have to make an endless speech. So, tonight, I would like to mention my private memories, instead of speaking your public achievements.

I met you for the first time in 1969 when I held a preparation meeting for the establishment of PIPA in my office. I was talking with Mr. John Shipman who arrived at my office before the time appointed for the meeting. At that time, a little fat and tall person and a comparatively slim person got into the room. These two men were you and Mr. Benson. Both of you expressed your quite courageous opinions in high spirits, and I received a deep impression that you are typical Americans.

At that time, I expressed my opinions as follows; "I don't want to make PIPA to be the organization which only has the right of speaking at the governmental conference of PCT. If I do it at all, I would like to make PIPA to be the organization whose members can debate on all the matters about the Industrial Property Right System and its operation in the United States and Japan in order to promote a better understanding and cooperation between both countries." When I told like that, you immediately agreed to this opinion.

Later, we met many times at the conferences of PIPA and AIPPI and at other opportunities. Thus, we promoted our friendship. When I was invited to PRC as a lecturer of the licensing seminar at the request of WIPO, we acted together from morning till night. Every day, we dined together with other members at the fixed time, gave lectures, and had a party in someone's room each bringing something to drink after eight thirty at night.

After the seminar in Shanghai was over, we were invited to Peking. There, we visited many palaces, museums, the Great Wall of China, the undergorund palace, and so on. It was a quite pleasant trip for us.

Now, there are a lot of difficult problems arising in the field of the international industrial property right system. I think, however hard we were attacked, we should never distort the basic principles of the existing Patent Law which has continued to be effective for hundreds of years and contributed to the development of the world. Under such a situation, PIPA should be united to solve the problems, and I sincerely hope that the American group including Mr. Banner will display its strong leadership in the world.

Dear Mr. Banner. I hope you will more and more take an active part in this field while enjoying a good health.

Thank you very much.

Address to the 13th International Congress
of the Pacific Industrial Property Association

HIROSHI IWATA
Engineer-General
of the Japan Patent Office

Mr. Chairman, distinguished guests, ladies and gentlemen. It is truly a great privilege and honor for me to have this opportunity to congratulate at the closing ceremony of the 13th International Congress of the Pacific Industrial Property Association. I am also delighted that this occasion has given me an opportunity to renew old friendship and begin some new ones.

I recall now my visit to the United States in 1971 as a member of a study team on the chemical product protection. We met people of the U.S. Patent and Trademark Office, the Pharmaceutical Manufacturers Association in Washington, D.C. and the National Association of Manufacturers in New York. At that time, we obtained useful information and suggestions from them. After returning to Japan, we submitted a report to a government legal advisory committee, "Industrial Property Council", which contributed very much for the establishment of the chemical product protection in 1975. I would like to mention this fact and thank for their hospitality extended to us while we were in the U.S.A.

PIPA was established in 1970 with the aim of the further development of the industrial property system in the world and pacific region. PIPA has made much effort in that line and has gained good reputation in the field of industrial property.

With a view to stable growth of the world economy and promotion of welfare of people in the world, a revitalization of industry by means of furthering technological development and of reasonable technological transfer among countries are essentially required while a further restrictive situation with regard to the natural resources and energy is predicted and worldwide recession is going on. This calls for further development and internationalization of the industrial property system upon which the technological development is based.

In this connection, Japan has actively responded to such a movement by carrying out the revisions of legislation in keeping with the times, such as that of 1970 where adoption of the deferred examination system and also of 1975 where protection of chemical products, medicines and foods per se and multiple claims in patent specifications and the mandatory use of a trademark for renewal of registration, etc. were provided. In october, 1978, we became party to PCT, in May, 1980, we also became party to the Budapest treaty.

Japan and the United States have different history and tradition in many respects, however, both countries have common standpoints as follows.

1) Both Governments attach importance to industrial development on which technology and research are based.

2) Industrial property system is highly regarded as one of the foundamentals of industrial policy.

3) Industrial circle's views have a large influence to the determination of the government policy.

4) Both are main members of group B and cooperate closely as partners of Pan-pacific Rim subgroup.

Under such circumstances, my sincere hope is that carrying out a free and active exchange of views in this congress among persons from Japan and the United States whose work concerns industrial property right promotes better mutual understanding among themselves and closer cooperation.

I would now like to use this occassion to present you a brief introduction on some of the important problems which the system of industrial property right in Japan is currently facing and what kinds of the measures have been taken to cope with the problems. I hope that the brief remarks might serve as some useful points of reference.

In 1981, a total of 610,000 applications were filed with the patent office in Japan in which 417,000 were for patents and utility models, 59,000 for designs and 134,000 for trade marks. There has been a rapid increase in the number of patent application filed. Whereas about 218,000 patent applications were filed in 1981, the figure was only 105,000 in 1971, 43,000 in 1961, 17,000 in 1951. These two years, particularly, number of patent application increased with incredibly high rate of about 13% a year. Last year, patent office received 215,000 applications which were requested for examination of patent and utility model and disposed of 213,000. The already unacceptable backlog thus grew by 1% or 2,000 applications to a year end total of 460,000. Its average pendency time is two years and three months and high ratio of request for examination of 69% for patent and 65% for utility model will cause to increase inevitably the number of application in future.

In order to cope with this situation, Japan Patent Office has endeavored to increase its capacity by expanding its facilities and personnel and to improve its office work procedures by such means as encouraging more mechanization so far. It is no exaggeration to say actually that the history of the patent office is the battle of disposing backlog. In the past 30 years the number of examiners has been increased five times from 216 to 1,112, the number of

whole personnel 3.5 times from 683 to 2,362. Moreover, the deferred examination system introduced in 1970 reduced backlog and pendency time dramatically from 6 years to 2 years.

Unfortunately, due to a severe financial deficit national budgets, number of personnel will be suppressed. Under these circumstances, patent office is taking following measures.

1. Appeal for stressing quality rather than quantity of application

About one half of applications requested for examination or about one third of applications filed are rejected due to mainly insufficient "State-of-the-Art-search" as well as "Pre-examination-search" and an inadequate preliminary study of the patentability which are originally requested to be conducted by an inventor when a research project is contemplated and when an inventor is to determine if his ideas are worthwhile to file and application for a patent.

Since examination is delayed because of a large number of such applications, rapid grant of patent to truly useful inventions is prevented and also due to the publication in huge quantity of unexamined patent application, effective use of patent information is obstructed and this results

in great loss from the viewpoint of national economy as well.

To solve such problems, patent office has requested the cooperation of applicants particularly large private enterprises by contacting them separately or their groups of several technological field for the purpose of transfering their importance from quantity to quality of applications and for better patent management and those for which examination requested subsequently. In this contact, the leading staff members of the patent office meet those of private enterprises for exchange of view and ask their cooperation for improvement in the quality of applications, and as examiners side, they meet the members of the patent department of the enterprises so as to exchange their views. Furthermore, patent office will make contact with patent attorneys by asking them better specification and better response.

2. Maintaining and improvement of quality of the examination

Patent office has strived to obviate diversity of judgment of respective examiners. It is the most ideal, as a matter of fact, that the examination is carried out uniformly and promptly according to some proper and definite examination standard applicable to all the applications. Increase of number of the examiners and applications might result in

reduction of the technical field in charge of the individual examiners as well as in possibility of diversity of judgment.

In order to assure uniformity of examination, the chamber of examination standard has been established. The activity of this chamber is as follows:

1) to establish the examination standards, to elaborate and publish them

2) to give the examiners a guide line for examination, in any information concerned and in any legal and practical question

3) to hear any complaints and questions on examination from attorneys and applicants and to find solution about them

4) to review quality of examination and to advise the examiners by analizing the statistic data resulted from the computerized process of quality and contents of the examination.

Now I would like to explain the examination standards.

There are 15 general standards and 67 specified technical field standards which are available for public. The former is the interpretation of substantial law which should be applicable for any invention regardless of technical field and deals with the essential matters of an invention such as the completeness of invention, the inventive step, the change in gist of invention, industrial utility, disclosure of

specification etc. On the other hand, the latter deals with the matters inherent to the respective industrial field.

These standards were prepared by the examiners as well as the men of learnt and experience outside of patent office in order to reflect fully the views of the industry, patent attorneys and academic circles concerned. Both standards are used not only for all examiners but also for applicants as a reliable guide line when the applicants determine whether he should file an application for an invention. Thus defense application will be reduced and prompt execution of examination procedure might be attained. Furthermore, the examination standards are served not only for reduction of the diversity and indefiniteness but also for elimination of troubles which may arise unnecessarily such as opposition to grant as well as appeal for invalidation of a patent.

3. Further development of the patent information policy

One of the most serious problems we now face is the pieces of paper documents, now we have about 23 million, may reach 50 million by the turn of the century. Under such circumstances, it is a vital question to establish a management system for patent information to pick up for use what is actually required from an enormous sea of information.

With such a background as mentioned above, a Patent Information Committee was newly established in Industrial Property Council to study the overall problems of patent information from various viewpoints and make a report. In the light of this report, we will start this year an experiment of an automated information retrieval system, so called "search system from plural viewpoints". Our final aim is to build up a full automated paperless system in patent office by the end of 20th century. Japan will maintain a close relationship with the United States and other advanced nations in this field to develop the more valuable and useful information retrieval system.

I would like to close my speech by touching this congress. I am impressed very much by the enthusiastic discussions, active exchange of views and constructive suggestion that have been made during this congress on such important and various matters as international problems, legal matters, contracts etc. and very well organized meeting. For the big success of this meeting and for the extraordinary efforts of people who organized this congress I would wish to offer my sincere compliments and congratulations. Further, may I give you my best wishes for your future success and contribution to the field of international industrial property.

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--- Robert P. Raymond ---------- 83

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--- Kotaroh Hara ---------- 100

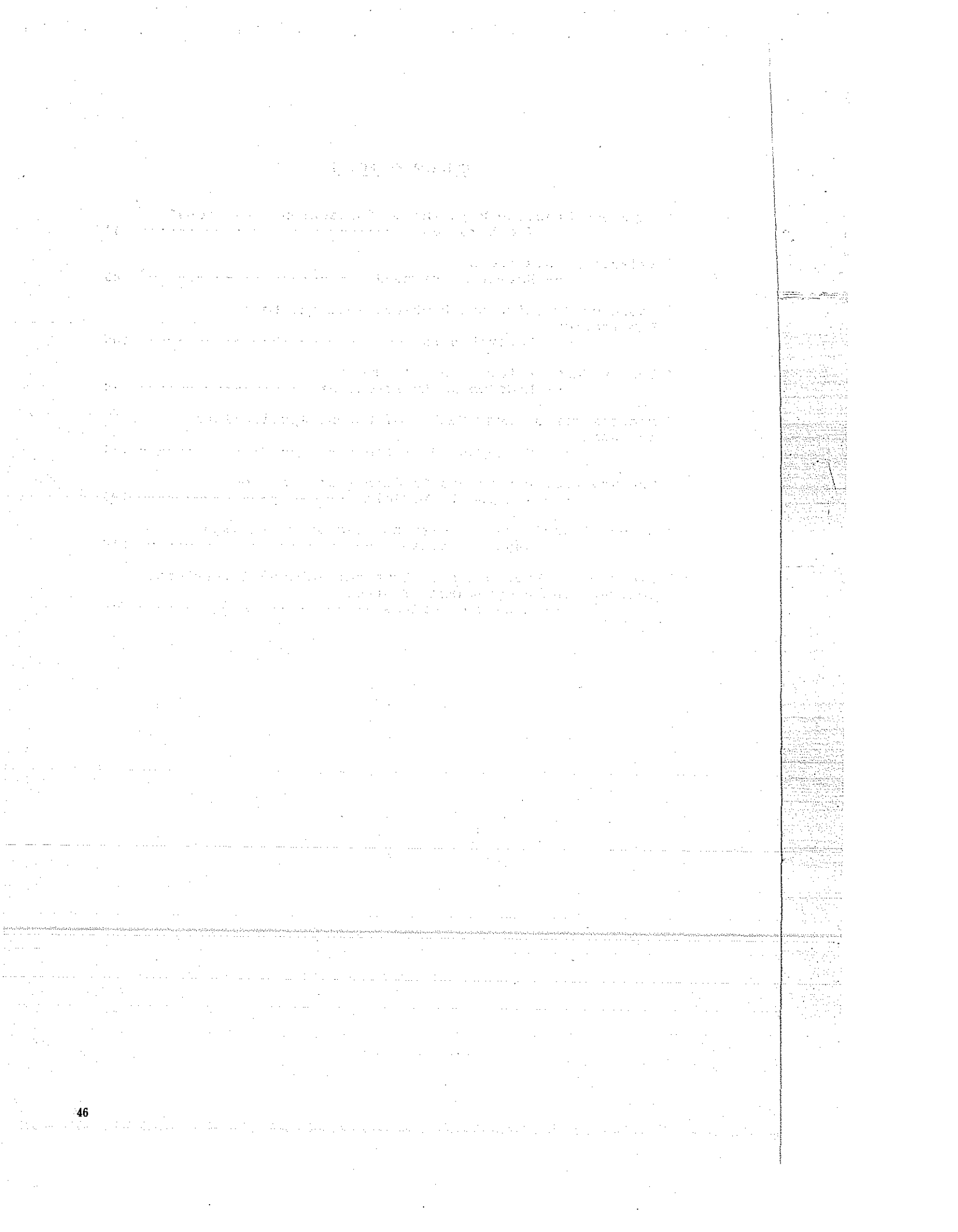
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JAPANESE PRACTICE RELATING TO "SELECTION INVENTIONS"

Patentability of Selection Inventions and Infringement by Selection Inventions of the Prior Patents When the Selection Inventions are Practiced

PIPA Japanese Group, Committee No. 1

Atsushi Matsushita:	Ricoh Company, Ltd.
Tomehiko Ida:	Kyowa Hakko Kogyo Co., Ltd.
Kensaku Asato:	Mitsubishi Petrochemical Company, Ltd.
Akio Okuda:	Fuji Photo Film Co., Ltd.
Katsuyuki Sadakane:	Kobe Steel, Ltd.
Suguru Sugimoto:	Toyota Central Research and Development Laboratories, Inc.
Seiya Yura:	The Furukawa Electric Co., Ltd.
Kazuhira Watanabe:	Chiyoda Chemical Engineering & Construction Co., Ltd.

Speaker: Tomehiko Ida

Abstract

With respect to the patentability of selection inventions, the Japanese courts generally subscribe to the following view.

As a matter of definition, in the case where there is a prior patent application or publication, or a prior document which contains a broad description or claim covering the whole area within which a subsequent invention falls, but the subject matter of the subsequent invention has never specifically been disclosed, an invention concerning such subsequent invention is generally called a selection invention. When a selection invention has a particular advantageous effect or effects which were not anticipated by the invention of the prior patent application, publication or document, the selection invention is patentable. This is because recognizing the patentability of such a selection invention complies with the spirit of Japanese patent law, in which it is declared that the purpose of the law is "to encourage inventions by promoting their protection and utilization so as to contribute to the development of industry."

As to the matter of whether or not, when a patent for a selection invention is granted, the practicing of the selection invention will constitute infringement of the prior patent that broadly includes the selection invention, there is no leading case determining the point. Generally, however, it is considered that the practicing of a selection invention will constitute infringement of the prior patent.

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1. Introduction

In an era of keen technological competition, a great number of inevitably similar patent applications are filed daily and, under these circumstances, there are cases in which the patentability of selection inventions are argued. Our group will attempt to introduce the way the patentability of selection inventions has been considered in Japanese court decisions. There has, however, been no case in which the patentability of a selection invention was openly argued in the field of alloys or catalysts. Thus,

our comments in these fields will be based on the examination standards of the Japanese patent office.

As to the problem of whether or not, when a selection invention is patented and is practiced, such practicing constitutes infringement of the prior patent that describes the selection invention in broad terms, there have been no Japanese court decisions dealing with the question. We therefore must wait for a definitive answer. Nevertheless, we shall try to introduce certain other opinions relating to infringement by selection inventions in Japan.

2. Patentability of Selection Inventions

2-1 - Major Court Decisions

In a recent court decision (Tokyo High Court, Case No. 107 (Gyo-Ke)/1979, Date of Court Decision: November 5, 1981), the "Penicillin Case," the Tokyo High Court decided as follows, relating to the patentability of a selection invention.

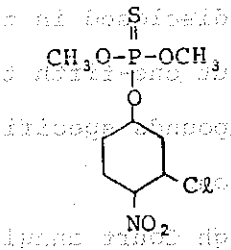
"When the feature elements of an invention disclosed in a patent application are all covered by a prior invention described in a prior patent specification or in a prior document, and those features are merely described in more specific terms in the later patent application than the terms used in the prior patent, as a rule, no patent shall be granted, on the ground that both inventions are

identical. However, when several points are selected from the prior invention, which were not specifically described in the specification of the prior patent, and they are combined to produce an invention having advantages which were not anticipated by the prior invention, in such a case, the granting of a patent for such an invention complies with the spirit of Japanese patent law, which is aimed at encouraging inventions by promoting their protection and utilization so as to contribute to the development of industry. In this case, as a matter of form, there come to exist double patents -- but there is no reason for rejecting such patents."

This view is also seen in the following several court decisions, and in the further details of the Penicillin Case which appear below.

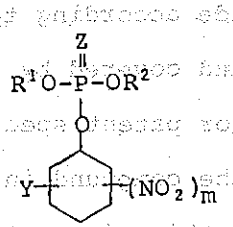
(1) "Method of Producing an Organic Phosphoric Ester"
(Tokyo High Court, Case No. 13 (Gyo-Na)/1959,
Date of Court Decision: October 31, 1963)

This case is famous as the first case in which a selection invention was patented. The subject matter of the application in this case related to an insecticide which has extremely low toxicity to warm-blooded animals. The effective constituent of the insecticide is shown by the formula I.



(I)

In the specification of a prior patent, there is described an invention relating to a method of producing compounds represented by the formula II, which covers the specific compound disclosed in the subsequent application.



(II)

where Z represents sulfur or oxygen; R^1 and R^2 each represent an alkyl group, an aralkyl group or an aryl group; Y represents a substituent other than hydrogen or NO_2, which is inert to chemical reactions; and m is an integer not greater than 3.

In the prior patent specification, it is disclosed that the compounds represented by the formula II have insecticidal effects. However, in that patent specification there is no specific description of the compound sought to be patented in the application in question, and nothing is described about toxicity to warm-blooded animals.

Furthermore, the compound disclosed in the subsequent patent application has only about one-fifth the toxicity to warm-blooded animals as the compounds specifically described in the prior patent specification.

In this case, the Tokyo High Court annulled a trial decision by the Japanese Patent Office, which had been that the subject invention sought to be patented as a selection invention was not a patentable selection invention over the prior patent, stating as follows:

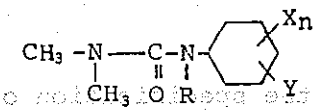
"Although the insecticide according to the present invention comprises a compound covered by the general formula disclosed in the prior patent specification, in the prior patent specification the compound in question is not specifically described and nothing is mentioned about the important subject matter of the present invention, that is, that the compound disclosed in the later patent specification has almost the same insecticidal effect as that of the compound disclosed in the prior patent, but with a toxicity to warm-blooded animals that is extremely low as compared with the prior-art compound. Therefore, the present invention could not easily have been made from the description in the prior patent specification. Therefore, the present invention constitutes an invention which may contribute to the development of industry."

(2) "Composition for Suppression of Harmful Organisms"

(Tokyo High Court, Case No. 142 (Gyo-Na)/1960,
Date of Court Decision: September 18, 1970)

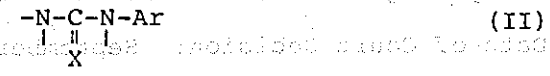
The Tokyo High Court annulled a trial decision by the Japanese Patent Office, which had been that the subject invention sought to be patented as a selection invention was not a patentable selection invention over an patent. As a result, that invention was patented.

The subject compound in the selection invention is a compound represented by the formula I which is covered by the formula II described in the specification of the prior patent.



(I)

where R represents an alkyl group having 1 or 2 carbon atoms; X represents halogen; n is an integer 1, 2 or 3; and Y represents hydrogen or an alkyl group having 1 to 4 carbon atoms; and the aromatic substituent has at least one unsubstituted ortho-position.



(II)

where Ar represents an aromatic group; X represents oxygen or sulfur, and, of the three bonds of the nitrogen atoms, one, two or three bonds are connected to a mono-aliphatic hydrocarbon with 1 to 3 carbon atoms, and the remainder of the nitrogen bonds, if any, are connected to hydrogen.

In the prior patent specification, there is disclosed a herbicidal composition containing as the effective component a chemical compound represented by the formula II, with a simple description that that composition has a herbicidal effect.

In contrast to this, in the specification of the present subsequent patent application, there is disclosed a composition for suppression of harmful organisms, which is specifically defined as a herbicidal, insecticidal, germicidal and miticidal composition, comprising as the effective component the compound represented by the formula I. That composition in fact has herbicidal, insecticidal, germicidal and miticidal effects.

In this case, the Tokyo High Court annulled a trial decision by the Japanese Patent Office, which had been that

the invention concerned was unpatentable as a selection invention, stating as follows:

"The composition for suppression of harmful organisms according to the patent application concerned is characterized in that a chemical compound covered by the general formula II described in broad terms in the prior patent specification is contained therein as the effective component. However, in the prior patent specification, nothing specific about the chemical compound concerned is described. On the contrary, there is a description that a particular substituent contained in the chemical compound concerned is excluded as being not preferable.

"In contrast, in the present selection invention, the compound concerned is specified by the formula I, by which particular groups at particular positions are defined and the particular combinations of those groups are selected, whereby it was discovered that the compound has insecticidal and germicidal effects in addition to the herbicidal effect.

"In the prior patent specification, nothing is described about those effects discovered in the present invention. Therefore, it should be considered that the subject chemical compound was not anticipated by the description in the prior patent specification.

"In this sense, by the present invention, a novel application of the compound which was not anticipated by the prior patent was reduced to practice, and the present patent

application seeks protection of the invention. Therefore, the present invention is different in its technical concept from the invention disclosed in the prior patent."

(3) "Polymeric Ion-exchange Membrane"
(Tokyo High Court, Case No. 20 (Gyo-Ke)/1978,
Date of Court Decision: July 30, 1981)

In this case, the invention concerned was not recognized as a selection invention patentable over a prio invention, on the ground that, although distinct advantages of the subject invention over the prior invention were recognized, in the specification of the subject patent application there was no direct and distinct description of the specific differences in the advantages and effects between the prior invention and the subject invention.

More specifically, in the prior patent specification, it is described that an "ion-transfer medium" employed for the production of pure hydrogen from a mixture of a hydrogen gas and other gases is an "acid electrolyte," while, in the specification of the subsequent patent application concerned, it is described that the "ion-transfer medium" is a "polymeric ion-exchange membrane."

The plaintiff insisted that "acidic electrolyte" does not include "polymeric ion-exchange membrane."

However, the Tokyo High Court rejected the plaintiff's contention, saying that the court's own analysis of this case, with the specification of the prior patent and other evidence submitted to the court taken into consideration, indicated that "acidic electrolyte" does include "polymeric ion-exchange membrane."

The plaintiff's alternative argument was that, even if "acidic electrolyte" includes "polymeric ion-exchange membrane," the plaintiff's subsequent invention attains distinct effects and advantages that were not anticipated by the prior invention, by use of the "polymeric ion-exchange membrane," and, therefore, the present invention should be recognized as a patentable selection invention over the prior invention.

To this, the court stated as follows:

"Unquestionably, the subsequent invention attains distinct advantages in terms of the 'purity of obtained hydrogen' and 'power consumption' over the prior invention. However, there are no specific data concerning the purity of the obtained hydrogen gas in the specification of the patent application concerned. Rather, a shortcoming of a conventional hydrogen purification method is merely pointed out by describing that 'in a conventional hydrogen purification method, one or more repetitions of the purification process are usually required to obtain high-purity hydrogen gas, that is, a gas containing at least

99.5% hydrogen; but, when a method according to the present invention is employed, purification of hydrogen gas can be done with elimination of the conventional difficulties.'

"The above description merely allows us to speculate that, according to the invention concerned, hydrogen gas with a purity of 99.5% or more can be obtained by one purification processing step."

"Furthermore, with respect to the power consumption, in the specification of the patent application concerned, it is described that, 'when this fuel-cell-type apparatus is employed for the processing of hydrogen, its energy consumption is so low that economizing in cost can be attained,' and 'this low energy consumption corresponds to as low as 53 kwh per 1000 cubic feet, and that is all the energy required by this processing system.'"

In conclusion, the court did not recognized the invention concerned as a patentable selection invention, stating as follows:

"In order for the subsequent invention to be recognized as a patentable selection invention over the prior invention, the fact that there is a distinct difference in advantage(s) and effect(s) between the prior invention and the subsequent invention is not enough. In addition to that fact, it is required that, in the specification of the subsequent patent application, there be a direct description of its distinct advantages over the prior invention, which

are not taught in the specification of the prior patent."

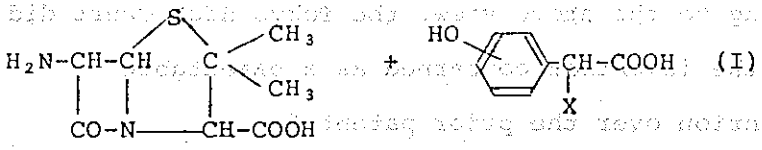
Subscribing to the above view, the Tokyo High Court did not recognize the invention concerned as a patentable selection invention over the prior patent."

This case has been appealed to the Supreme Court, where there has not yet been a decision.

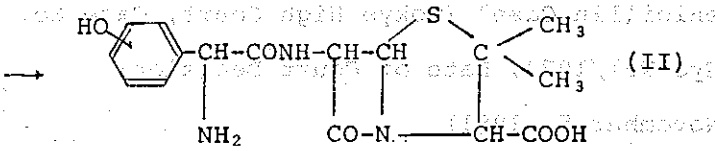
(4) "Penicillin Case" (Tokyo High Court, Case No. 107 (Gyo-Ke)/1979, Date of Court Decision: November 5, 1981)

In this case, the Tokyo High Court upheld a trial decision by the Japanese Patent Office in which the invention concerned was not recognized as a patentable selection invention.

More specifically, in this case, a patent was initially granted for the invention concerned, relating to a novel penicillin and a salt thereof represented by the formula II, and a method of producing the same by causing a carboxylic derivative represented by the formula I to react with 6-aminopenicillanic acid or a salt thereof.



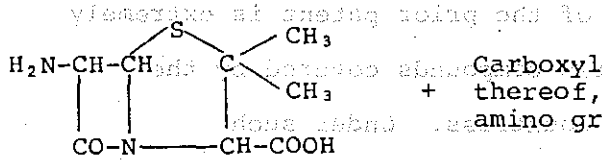
6-aminopenicillanic acid

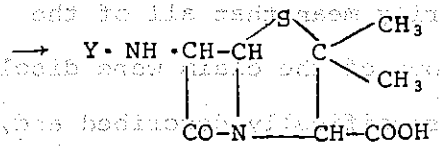


where X represents an amino group or a group which can be converted to an amino group.

This patent was invalidated in a patent invalidation trial within the Patent Office on the ground that the invention concerned, as a whole, was covered by a prior patent. The patentee appealed to the Tokyo High Court, seeking annulment of the trial decision by the Patent Office.

In the specification of the prior patent, there is disclosed a penicillin derivative and a non-toxic salt thereof, represented by the formula III, and a method of producing the same under the following procedure:





where Y represents an amino-substituted acyl group containing carbon atoms up to 20, and the carbon chain can be substituted by an amino group or a part of the carbon chain can be an alicylic ring, an aromatic ring or a heterocyclic ring.

(i) In the trial decision, it was asserted as follows:

The invention concerned is covered by the prior patent in view of the scope of the claim of the prior patent. The drug effect of the products according to the subsequent invention concerned is not better than that of ampicillin which is a representative final product according to the prior invention. Therefore, the invention concerned is considered identical to the prior invention, and accordingly, is not patentable and the patent is invalid.

(ii) Against this trial decision, the plaintiff argued as follows:

The scope of the claim of the prior patent is extremely broad and, therefore, specific compounds covered by the scope of that claim will be countless. Under such circumstances, although the general formula which covers those countless compounds was made known by the prior patent, it does not necessarily mean that all of the compounds covered by the scope of the claim were disclosed, since they are in fact not specifically described and, as a matter of course, their specific properties are not described in the specification of the prior patent.

In particular, in the specification of the prior patent, nothing is described about nine compounds according to the subsequent invention concerned. Therefore, even though the present invention concerned is conceptually covered by the prior patent, the present invention is different from the prior invention and, therefore, should be recognized as a patentable invention.

Furthermore, in the trial decision, it is asserted that the prior patent discloses ampicillin (D(-)- α -aminobenzyl-penicillin) in the specification of the prior patent. Based on this assertion, in the trial decision, the nine compounds according to the invention concerned are compared with ampicillin in terms of antibacterial activity. However, in the specification of the prior patent, although

DL- α -aminobenzylpenicillin is disclosed, no data are given individually about its isomers, D(-) - α -amino-benzyl-penicillin and L(-) - α -aminobenzylpenicillin. Furthermore, when the patent application of the prior invention was filed, ampicillin did not exist. It was in fact after the prior patent application was filed, that is, around 1960, that ampicillin was produced for the first time and its antibacterial activity was confirmed.

Therefore, the assertion that ampicillin, that is, D(-) - α -aminobenzylpenicillin, is disclosed in the specification of the prior patent is groundless, and, therefore, the comparison between the nine compounds according to the present invention concerned and ampicillin is also groundless.

Moreover, when the compounds according to the invention concerned are compared with the compounds according to the prior invention in terms of drug effect, there is no justification for requiring that the compound with the best drug effect of the compounds according to the invention concerned be compared with the compound with the best effect of the compounds according to the prior invention. The comparison should be in terms of the average drug effect of each group of compounds.

Nevertheless, in the specification of the subsequent patent concerned, there is a description to the effect that the drug effects of DL-para-hydroxy compound and

DL-meta-hydroxy compound according to the invention concerned are better than the drug effect of ampicillin, which has the best drug effect in the compounds according to the prior invention. So long as this is the case, the present invention should be recognized as an independent patentable invention.

(iii) The Tokyo High Court upheld the trial decision by the Japanese Patent Office and did not recognize the invention concerned as a patentable invention, stating to the following effect:

In the specification of the prior patent, as the plaintiff admitted, there is specifically disclosed DL-α-aminobenzylpenicillin, and it is further described that, when there exist optical isomers of the DL-α-amino-benzylpenicillin, D-type aminobenzylpenicillin and L-type aminobenzylpenicillin and a mixture thereof are included. It is reasonable to conclude that this description indicates a specific disclosure of D(-)-α-aminobenzylpenicillin, that is, ampicillin.

The Japanese Patent Law does not require specific disclosure of all the compounds within the scope of the claim. Therefore, even though there are disclosed no specific data concerning the D-type isomer and the L-type isomer, it cannot be said that there is no disclosure about D-type α-aminobenzylpenicillin or L-type α-amino-

benzylpenicillin. Therefore, there is justification for saying that ampicillin is specifically disclosed in the specification of the prior patent. Further, even if it was not until around 1960 that ampicillin was produced and its excellent antibacterial activity was confirmed, as the plaintiff insisted, this has nothing to do with the matter of whether or not ampicillin is described in the specification of the prior patent.

As to the comparison between the drug effect of the compounds according to the invention concerned and the drug effect of the compounds according to the prior invention, the plaintiff insisted that they should be compared in terms of the average drug effect of each group of the compounds. The court rejected the plaintiff's argument, stating that the compounds covered by the scope of the claim are almost countless and not all the compounds are in fact given in the specification. It is impossible to determine the average drug effect of the countless compounds. For this reason, there is good justification for using ampicillin, which is a representative compound with high drug effect according to the prior invention, as a comparative compound in this case.

With respect to the plaintiff's argument that, in the specification of the patent concerned, there is a description that the drug effects of DL-para-hydroxy compound and DL-meta-hydroxy compound according to the invention concerned are better than the drug effect of

ampicillin, which has the best drug effect of the compounds according to the prior invention, and that this point was not taken into consideration in the trial decision, the court rejected the plaintiff's argument, stating to the following effect:

In the trial decision, the Japanese Patent Office determined that, of the nine compounds according to the patent concerned, eight compounds (with exception of ℓ-para-hydroxy compound) are not better in antibacterial activity than ampicillin. This judgment by the Japanese Patent Office is correct. The invention concerned is directed not only to a compound with excellent drug effect, but also to compounds which are not necessarily better in drug effect than ampicillin. Therefore, the invention concerned, as a whole, is not considered advantageous over the prior invention, and, therefore, cannot be recognized as a patentable selection invention.

2-2 - Patentability from the Viewpoint of Court Decisions

From the viewpoint of the court decisions summarized above, it can be generalized about the patentability of a selection invention as follows:

(1) In the case where there is a prior patent application

or publication, or a prior document which contains a broad description or claim covering the whole area within which a subsequent invention falls, but the subject matter of the subsequent invention has never specifically been disclosed, such a subsequent invention is generally called a selection invention.

In the previously described "Method of Producing an Organic Phosphoric Ester" case, and the "Composition for Suppression of Harmful Organisms" case, from compounds represented by a general formula there were selected compounds with specific substituents at specific positions, while in the "Polymeric Ion-Exchange Membrane" case, a polymeric ion-exchange membrane was selected as an acidic electrolyte. In the Penicillin Case, from a prior invention relating to a method of producing a penicillin represented by a general formula, there was selected a method of producing a penicillin with particular substituents at particular positions covered by said general formula.

(2) In order for a selection invention of the above-described type to be recognized as a patentable invention, it is necessary that the selection invention have a particular advantageous effect over the prior invention, which was not anticipated by the prior invention.

In the previously described "Method of Producing an Organic Phosphoric Ester" case, the selection invention has

the advantage over the prior invention that the insecticide concerned has extremely low toxicity to warm-blooded animals, about which nothing is said in the specification of the prior patent.

In the "Composition for Suppression of Harmful Organisms" case, a selection invention was recognized as a patentable selection invention on the ground that the insecticidal effect, germicidal effect and other effects of the composition concerned were not described in the specification of the prior patent. In these two cases, the advantages of the selection inventions over the counterpart prior inventions are different in character from the advantages of the prior inventions.

In the case where the advantage of a subsequent invention over a prior invention is the same in character as, but significantly different in the degree of accomplishment from, the advantage of the prior invention to the extent that the advantage of the subsequent invention was not anticipated by the prior invention, the subsequent invention will be recognized as a patentable selection invention. This view was indicated in the Penicillin Case and the Polymeric Ion-exchange Membrane Case.

(3) The above requirements are most important for a selection invention being recognized as a patentable

selection invention. In addition, it will be necessary to take into consideration the following points as requirements for patentable selection inventions.

(i) In the "Polymeric Ion-Exchange Membrane" case, although the court recognized the advantages of the selection invention as to the purity of hydrogen gas obtained and the power consumption over the prior invention, the selection invention was not recognized as a patentable selection invention on the ground that the advantages attained by the selection invention were not described positively. This case suggested that another requirement for a patentable selection invention is that the advantages of the selection invention be described in direct and clear terms.

(ii) In the Penicillin Case, the selection invention was not recognized as a patentable selection invention on the ground that 8 compounds of 9 compounds claimed as the selection invention were not better in drug effect than a compound according to the prior invention, and the selection invention concerned, as a whole, was not advantageous over the prior invention and did not satisfy the first described requirement, that a selection invention have an advantage over a prior invention which was not anticipated by the prior invention. This case suggested that a further requirement for a patentable selection invention is that the

selection invention, as a whole, be advantageous over the prior invention.

2-3 - Selection Inventions in the Fields of Alloys and Catalysts

As can be seen from the above-described cases, cases argued in the courts over selection inventions are comparatively many in the fields of agricultural chemicals and pharmaceuticals, in which chemical compounds are described by general formulae, but, in other fields, it appears that selection invention cases are rare.

Our group investigated the manner in which selection inventions are handled in the fields of alloys and catalysts.

(1) In the field of alloys, there has been no case in which patentability of a selection invention was an issue. Thus, as a matter of course, we cannot tell what views the Japanese courts might hold as to the patentability of selection inventions in this field.

Our comments in this field are therefore based on the examination standards of the Japanese Patent Office.

It appears that, unlike in the fields of agricultural chemicals and pharmaceuticals, the Japanese Patent Office does not recognize, as a matter of practice, the concept of

a selection invention when examining patent applications in this field.

According to the examination standards for determining the patentability of inventions in the field of alloys, the key points for determining whether or not two or more inventions in this field are identical are as follows:

(i) Whether or not each component, the content range of each component, and the alloyed state of each component, in two or more alloys, are the same; and

(ii) Whether or not the properties and use of the two or more alloys are the same.

In the case where each component, the content range of each component, and the alloyed state of each component, in two alloys according to a prior invention and a subsequent invention are the same, but the properties of the alloy according to the subsequent invention, as recognized by its inventor(s), are different from the properties of the alloy according to the prior invention, and, due to those properties, the alloy according to the subsequent invention in fact finds use different from the use of the alloy according to the prior invention, the two inventions are not deemed to be identical inventions.

In contrast, in the case where each component, the content range of each component, and the alloyed state of each component, in two alloys according to a prior invention

and a subsequent invention are the same, and the inventor(s) have discovered new properties in the alloy according to the subsequent invention, but, in spite of the discovery of the new properties, the alloy according to the subsequent invention finds no novel use and is used in the same manner as in the case of the alloy according to the prior invention, the two inventions are not recognized as different inventions, since only the novel properties, nothing else, were discovered in the subsequent invention.

According to this standards, for instance, when an alloy containing a component A in the range of 1% to 10% by weight is disclosed in the specification of a prior patent, and an alloy with same components, except with the content of the component A ranging from 3% to 5% by weight, is disclosed in the specification of a subsequent patent application, and the alloy according to the subsequent invention finds novel use which was not anticipated by the prior invention, the subsequent invention is recognized a patentable invention different from the prior invention. Thus, in its examination procedure, unlike in the fields of agricultural chemicals and pharmaceutical chemicals, the Japanese Patent Office does not apply to the general concept of selection invention to such subsequent inventions.

Nevertheless, in the just described case, if the alloy according to the subsequent invention finds no new particular use and is used in the same manner as in the case

of the alloy according to the prior invention, but the subsequent invention attains significant advantages over the prior invention which were not described in the specification of the prior patent, there should at least be a chance that the subsequent invention will be recognized as a patentable invention by analogy to the concept of a selection invention, although the examination standards do not specify patentability in such as a case.

(2) In the field of catalysts, there has been no case in which patentability of a selection invention was an issue. Thus, again, we cannot tell what views the Japanese courts might hold as to the patentability of selection inventions in this field.

Our comments in this field are once more based on the examination standards of the Japanese Patent Office pertinent to the field of catalysts.

According to the examination standards for determining the patentability of inventions in the field of catalysts, whether or not two or more inventions in this field are identical is in principle, based on

(i) whether or not the compositions of two or more catalysts are the same; and

(ii) whether or not reactions in which the two or more catalysts concerned are employed are the same, from the viewpoint of the description in the scope of

the claim(s) of the patents or patent applications of the inventions.

In the case where, in the specification of a prior patent, the components of a catalyst and its applicable chemical reactions are described in general terms, while, in the specification of a subsequent patent application, there is described a specific catalyst which is covered by the general description in the specification of the prior patent, but the components of the catalyst according to the subsequent invention and its applicable chemical reactions are not specifically described in the specification of the prior patent, and the advantages of the catalyst according to the subsequent invention over the catalyst according to the prior invention are significant, the two inventions are deemed not to be identical inventions.

With respect to judgment on the issue of an inventive step in a subsequent invention over a prior invention, the examination practice in the Japanese Patent Office is as follows:

In the case where a catalyst according to a prior invention and a catalyst according to a subsequent invention are applicable to the same chemical reactions or the same types of chemical reactions, and, in the specification of the prior patent, the components of the catalyst are described in general terms, but the catalyst according to

the subsequent invention contains as a feature component a component which is not described specifically in the specification of the prior patent, and the catalyst concerned can attain particular catalytic advantage(s) over the catalyst according to the prior invention, the subsequent invention is deemed to have an inventive step over the prior invention.

In conclusion, in the field of catalysts, while the concept of selection inventions is not recognized per se, in the following two cases there will be a real chance of a subsequent invention being recognized as a patentable invention by analogy:

(i) When specific catalytic components, which are covered in general terms by a prior invention, but are not specified in the specification of the prior patent, are selected and there is invented a catalyst with significant advantages over the prior invention, finding application to the same chemical reactions or to the same types of chemical reactions as in the case of the prior invention; or

(ii) When, by making the above-described selection with respect to the catalytic components, a catalyst is invented which works particularly advantageously over the prior invention in particular chemical reactions selected from the chemical reactions described in general terms as being applicable in the specification of the prior patent.

3. Does Practicing of a Selection Invention Constitute Infringement of a Prior Patent Which Covers the Selection Invention in Broad Terms?

As to the problem of whether or not, when a selection invention is patented and is practiced, such practicing constitutes infringement of the prior patent that describes the selection invention in broad terms, there have been no Japanese court decisions dealing directly with the question. We therefore must wait for a definitive answer.

In the previously discussed case of "Composition for Suppression of Harmful Organisms," the patentability of a selection invention was the issue. In the court decision of this case, it was stated as an obiter dictum that:

"Since the compounds according to the invention concerned are covered by the prior patent in general terms, there may be a problem as to whether or not the compounds according to the invention concerned are within the technical scope of the prior patent. However, this problem has nothing to do with the problem of whether or not the two inventions are different inventions."

In other words, the court raised the question of whether or not, when a selection invention is patented and is practiced, such practicing constitutes infringement of the prior patent that describes the selection invention in broad terms, but did not provide an answer.

Regarding this problem, there are two dominant, but opposing, opinions in Japan.

The first view is that, when a selection invention is patented and is practiced, such practicing does constitute infringement of the prior patent that describes the selection invention in broad terms.

This opinion is based on the following reasoning:

Even though it is the case that a selection invention attains advantageous effects which were neither specifically described in the specification of a prior patent nor recognized in the prior invention, the technical advantages so attained are additional, new advantages to the original technical achievement of the prior invention. Which invention achieves more is obviously important. However, so long as all the feature elements of the selection invention are covered by the prior invention in broad terms and the technical advantages attained by the prior invention are also attained in the selection invention, it cannot be denied that the selection invention utilizes the technical concept of the prior invention. Therefore, when the selection invention is patented and is practiced, such practicing constitutes infringement of the prior patent that describes the selection invention in broad terms.

In contrast, it should be noted that, if the advantages attained by a selection invention are not disclosed in the specification of the prior patent and the advantages

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attained by the prior invention are not utilized in the selection invention, those who hold to the above view are of the further opinion that the practicing of the selection invention would not constitute infringement of the prior patent.

The second opinion is that, when a selection invention is patented and is practiced, such practicing does not constitute infringement of the prior patent that describes the selection invention in broad terms.

This opinion is based on the following reasoning:

For instance, in the field of chemical inventions, chemical compounds according to a selection invention might seemingly be covered by the scope of the prior patent. But the compounds according to the selection invention are not in fact described in the specifation of the prior patent. Moreover, the selection invention has itself been recognized as a patentable invention. Because the existence of the prior patent must have been taken into account when recognizing the selection invention, the scope of the prior invention corresponding to the scope of the selection invention may be said to represent only an unfinished or incomplete portion of the prior invention, having no significance. Therefore, the selection invention and the prior invention are different inventions, and the practicing of the selection invention does not constitute infringement of the prior patent.

As to the argument that the prior invention included (as to the selection invention) only an unfinished or incomplete invention, it will be seen that that reasoning requires limiting the patentable scope of any invention to the scope of specific examples disclosed in the specification of the patent application, since later selection patent applications are unpredictable at the time of the prosecution of each patent application. Further, when subscribing to that reasoning, no inventions described in general or broad terms can be recognized as patentable inventions, in order to avoid the granting of patents for unfinished or incomplete inventions.

The latter reasoning, however, does not conform to the present patent practice in Japan.

In conclusion, as to the problem of whether or not, when a selection invention is practiced, such practicing constitutes infringement of a prior patent that describes the selection invention in broad terms, there are two conflicting opinions in Japan. Generally, however, it is considered that the practicing of a selection invention will constitute infringement of the prior patent (i) in the case where a patent is granted for the selection invention on the ground that the advantages attained by the selection invention are the same in character as those attained by the prior invention, but the selection invention is more advantageous than the prior invention, or (ii) in the case

where a patent is granted to a selection invention on the ground that the advantages attained by the selection invention are different in character from those attained by the prior invention, but the selection invention attains the advantages of the prior invention at the same time.

Major Court Decisions Concerning Patentability of Selection Inventions in Japan

Case	Invention	Plaintiff	Defendant	Relevant Article of Law	Patentability	Note
Tokyo High Court No. 13 (Gyo-Na)/1959 Date of Court Decision: October 31, 1963 "Method of Producing an Organic Phosphoric Ester"	Patent application no. of the invention concerned: 28-7717 Publication no.: 39-17191 Publication no. of prior art: 26-1570	Farbenfabriken Bayer Aktiengesellschaft	Director-General, Patent Office	Article 1 of Old Patent Law of 1921	Patentable	
Tokyo High Court No. 142 (Gyo-Na)/1960 Date of Court Decision: September 18, 1970 "Composite for Suppression of Harmful Organisms"	Patent application no. of the invention concerned: Additional application of 25-15548 Patent application no. of prior art: 25-15548 Publication no.: 29-2450	E. I. Du Pont de Neumours & Co., Inc.	Director-General, Patent Office	Article 8 of Old Patent Law of 1921	Patentable	
Tokyo High Court No. 75 (Gyo-ke)/1966 Date of Court Decision: February 25, 1975 "Stabilization Method of Polyurethan Resin"	Patent application date of the invention concerned: September 8, 1959 Patent application no. of prior art: 30-9075 Publication no.: 36-20042	Mitsui Toatsu Chemicals, Inc.	Director-General, Patent Office	Article 8 of Old Patent Law of 1921	Not patentable	
Tokyo High Court No. 19 (Gyo-ke)/1976 Date of Court Decision: March 30, 1978 "Optical Brightening Agent"	Patent application date of the invention concerned: September 22, 1966 Publication no. of prior art: 31-3536	Ciba-Geigy Aktiengesellschaft	Director-General, Patent Office	Paragraph 2 of Article 29 of Patent Law	Not patentable	

Case	Invention	Plaintiff	Defendant	Relevant Article of Law	Patentability	Note
Tokyo High Court No. 20 (Gyo-ke)/1978 Date of Court Decision: July 30, 1981 "Polymeric Ion-Exchange Membrane"	Patent application no. of the invention concerned: Separate application of 40-45796 Patent application no. of prior art: 39-15550 Publication no.: 43-9646	General Electric Company	Director-General, Patent Office	Paragraph 1, Article 39 of Patent Law	Not patentable	Appealed to Supreme Court
Tokyo High Court No. 107 (Gyo-Ke)/1979 Date of Court Decision: November 5, 1981 "Penicillin Case"	Patent application no. of the invention concerned: 484059 Patent application no. of prior art: 36-16277	Beecham Group Ltd.	Bristol-Myers Company	Item 1 or 3, Paragraph 1, Article 29 of Patent Law	Not patentable	

Speaker Robert P. Raymond
American Cyanamid Company

SELECTION INVENTIONS

Robert P. Raymond

PIPA Meeting
November 3, 1982

SELECTION INVENTIONS

Robert P. Raymond

The expression "selection patent" or "selection invention" cannot be found in the current United States Patent Act and in fact is seldom used in federal court decisions or decisions of the Patent and Trademark Office. That is not to say, however, that Selection Patents do not exist in the United States. They do exist and the rules dealing with them are very well established. They are not generally singled out for special treatment and are analyzed in terms of:

NOVELTY AND NON-OBVIOUSNESS

These two prerequisites for patentability coupled with a need to be useful are expressly set forth as the criterian for all patents under the 1952 Patent Act.

One other word in our 1952 Patent Act deserves mention here. It is the word IMPROVEMENT in Section 101 which reads:

> "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor ...".

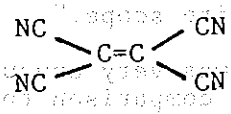
This reference to improvements is a carry over from our first patent statute of 1790. Use of the word carries the implication that inventions of the selection type should be just as patentable as basic inventions. In practice, however, the statutory reference to improvements has received little attention.

The Lexis computerized data bank of patent decisions registers only 16 reported and 1 unreported patent decisions

involving selection inventions in the United States since 1960. They generally concern mechanical inventions except for a 1965 drug case which happened to involve the American Cyanamid Company. Undoubtedly, other cases have existed in the United States which in fact concerned selection invention which simply were not viewed or analyzed as such.

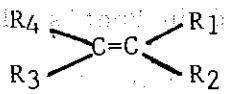
In the chemical arts, the leading selection invention decision under the 1952 Patent Act was the 1964 District of Columbia, Court of Appeals decision of E.I. Du Pont de Nemours and Company v. Ladd, Commissioner of Patents et al.[1]

In this case du Pont hoped to get patent protection for the monomer tetracyanoethylene of the formula:



Claimed By du Pont

Facing this claim was an issued United States Patent to unsaturated compounds of the formula:



Prior Art Alder Patent

"wherein R_1 and R_2 stand for a member of the group consisting of CN, acyl and an esterified carboxylic acid group,

R_3 stands for a member of the group consisting of hydrogen, CN, acyl and an esterified carboxylic acid group and

R_4 stands for a member of the group consisting of alkyl, oxalkyl, aryl, CN, acyl and an esterified carboxylic acid group."

Tetracyanoethylene had never been reported in the chemical literature and was not exemplified or mentioned in the prior art patent. du Pont had discovered that it could be reacted to form a high temperature resistant polymer useful for coating electric wires. They also claimed the polymer. The Patent Office rejected du Pont's claim as lacking novelty or being anticipated by the prior art.

To overcome this rejection, du Pont appealed to the Federal District Court which permits the applicant to introduce additional evidence. du Pont had 4 distinguished organic chemists testify to the effect that:

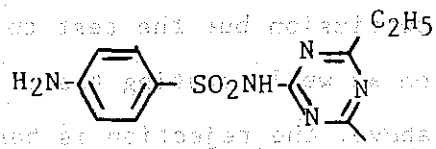
1. The genus from which the invented compound was selected was "of infinite scope."
2. The compound selected was very unusual in structure and properties in comparison to typical members of the genus.
3. The newly claimed compound would not readily come to mind reading the prior art patent.

The Court of Appeals upheld du Pont's claim to a selection invention stating:

> "It seems clear to us, therefore, from a reading of the entire record, that the disclosures in the Alder patent would not have taught one skilled in the art the subject matter of Claim 1. When by reason of a combination of properties and characteristics, a new product constitutes a substantial improvement, providing unforeseen uses and results, the product represents a difference in kind and not merely in result. As distinguished from difference in degree, difference in kind

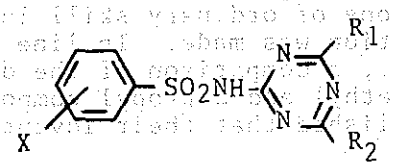
exists when a product possesses a unique combination of extraordinary and novel properties and characteristics of which the prior art was not aware."

The following year the case involving American Cyanamid Company, entitled Application of Krazinski was decided before the Court of Customs and Patent Appeals.[2] This case involved a claim to an improved sulfa drug which was an N'-heterocyclic derivative of sulfanilamide having the formula:



Claimed By Cyanamid

This compound was claimed as a selection invention over a generic prior art patent to compounds of the formula:



Prior Art Patent

wherein X includes H_2N- and R_1 and R_2 are alkyl or aryl.

The invention of the prior art patent concerned a novel process for preparing N-heterocyclic sulfanilamides and mentioned that the products were valuable therapeutic agents.

The Examiner and Patent Office Board of Appeals accepted that Applicant's diethyl compound was novel in that it was not specifically mentioned in the prior art patent but rejected Applicant's claim as being obvious.

To overcome the obviousness rejection, Applicant submitted affidavit evidence in the Patent Office showing that the claimed compound was 3 to 5 times more active than the corresponding

dimethyl and dipropyl homologues and the known dimethoxy analogue. It was also shown to maintain its efficacy for unexpectedly long periods of time in-vivo.

The Board of Appeals considered Cyanamid's comparative data but rejected it as showing a difference in degree as opposed to "a difference in kind". Thus, the Board used the same test as did the Court of Appeals a year earlier in the du Pont case.

Judge Rich, the author of section 103 of the Patent Act rejected not only the Board's conclusion but the test to be applied to a selection invention as well, stating that:

> "... as pointed out above, the rejection is based upon section 103, which says nothing at all about differences in degree and differences in kind, but instead clearly requires us, in determining whether a patentable invention has been made, to consider the differences, whatever their nature, between the subject matter sought to be patented and the prior art and to determine if the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made. In line with the board's own test, i.e., a comparison of the diethyl compound with the dimethyl and dipropyl compounds, appellants have established that their invention is unobvious."

Securing selection patent protection is facilitated in many of the chemical arts due to the fact that minor changes in structure can dramatically alter utility. Also helpful is the fact that an inventor may be working to overcome a problem in one particular art using a novel species of a known class of compounds having no known or suggested utility in that art.

Securing selection patent protection in a chemical art such as that relating to alloys or alloy production can be more difficult. An improved alloy will generally have the same uses as the class from which it was selected. Rarely will the new alloy species be patentable because it has provided one working

in a different art with a new, unexpected use or a solution to his particular problem. That is not to say that patentable selection alloy cases are not possible as was the case in West Germany. Under the traditional German view if a composition claim to a broad range of alloys had been granted, a segment of that broad range could not properly be the subject of a selection invention since as a member of the broad range it lacked novelty.[3] Under such reasoning of course a selection patent could never exist. The early authorities' problem seems to result from their having combined and confused elements of infringement and patentability. More recent West German authority now seems to accept general principles of selection invention in all arts including the art dealing with alloys.[4]

As early as 1934, the U.S. courts sustained a selection patent claim to a heavy duty steel alloy which differed from an earlier patented class of alloys only in having the usual ingredients in new specific proportions.[5] The selection gave rise to the first or at least unexpectedly improved castable, heavy duty, high speed steel. In deciding the case, the court approvingly quoted the following rule to be applied to selection alloy cases:

> "Patentable novelty may reside either in the elements of alloys or in the proportions of the elements. But novelty of proportions in the sense of the patent law involves something more than figuring out proportions differing from any that were known before. It involves new results from new proportions, developing a new metal, or, it may be, an old metal with new characteristics of structure or performance, embracing entirely new, or at least substantially enhanced, qualities of utility."

A more recent selection alloy case heard in the Court of Customs and Patent Appeals in 1960 provides an important lesson

in specification drafting. The invention in the case of In re Nehrenberg related to the first homogeneous, wholly ferritic stainless steel.[6] The court acknowledged that while the specific alloy was a novel member of the ferritic stainless steel art, the 1952 Patent Act's provisions required a "new and unobvious result" to be associated with the selected alloy and further required that the unexpected advantage provided by the invention be disclosed in the patent application specifications.

Under U.S. law, mechanical selection inventions have not always faired as well as chemical cases as a result of a 1950 Supreme Court decision in the A & P Tea Company v. Supermarket Corporation.[7] This case which related to an instantly popular, novel device by which the grocer could pull the items being checked out to his cash register was composed of known parts assembled in a novel manner to produce a novel article or machine.

The Court which rarely has exposure to patent matters stated that:

> "The conjunction or concert of known elements must contribute something; only when the whole in some way exceeds the sum of its parts is the accumulation of old devices patentable*** A patent for a combination which only unites old elements with no change in their respective functions *** obviously withdraws what already is known into the field of its monopoly and diminishes the resources available to skillful men." Finding that the combination before it was "wanting in any unusual or surprising consequences," and that the old elements which made up the device did not "perform any additional or different function in the combination than they performed out of it," the Supreme Court in A & P Tea held the device non-patentable."

As a result of this holding mechanical improvement inventions began receiving a more stringent unobviousness requirement than did basic inventions.

It was clearly intended that Section 103 of the 1952 Patent Act replace the miscellaneous judicially created tests of patentability with the single criterion of "non-obviousness" which was to be applied alike to chemical, mechanical and electrical cases be they basic inventions, improvement inventions, selection inventions or whatever.

Unfortunately, old habits and practices die hard as evidenced by the recent case of Rengo Co. Ltd. v. Molins Machine Co. Inc.[8] The invention, which was made in Japan, related to the selection of conventional components used in corrugated cardboard box manufacture. The particular combination and arrangement of components led to enhanced productivity.

In an infringement suit brought by Rengo Co. Ltd., in the Federal District Court for the District of New Jersey, the patent was held to be invalid for lack of "synergism" in the selection made.

The Federal Circuit Court of Appeals struck down the trial court's use of the higher standard of patentability in the 1981 decision stating that:

"Section 103 itself does not discriminate among various types of patents; its requirements, instead, apply to all applications, regardless of their subject matter. This uniformity is not accidental, for Congress, in enacting Section 103, intended to replace the mosaic of "negative rules," many of which could be applied to only a limited range of patents, with a single standard of non-obviousness. As Judge Learned Hand once pointed out, however, no standards can be articulated for delineating a class of "combinations," for every invention is a combination of

old elements.

The defendant argues that the supposed invention is no more than a substitution of materials familiar to the art in the same uses; an aggregation of which each part performs what it did before. We may concede as much arguendo, for the same may be said of every invention. All machines are made up of the same elements; rods, pawls, pitmans, journals, toggles, gears, cams, and the like, all acting their parts as they always do and always must. All compositions are made of the same substances, retaining their fixed chemical properties. But the elements are capable of an infinity of permutations, and the selection of that group which proves serviceable to a given need may require a high degree of originality. It is that act of selection which is the "invention" and it must be beyond the capacity of commonplace imagination.

Assuming the definitional hurdles can be overcome, synergism, whether conceptualized as a characteristic of individual parts or of the product they cooperate to produce, can rarely, if ever, exist. In virtually every mechanical patent, the constituent parts will perform their known and expected functions, and the possibility that the elements will function differently in combination than they did separately is correspondingly remote. Moreover, "mechanical elements can do no more than contribute to the combination the mechanical functions of which they are inherently capable;" thus the performance of a combination will equal the sum of the functions of its components and we will rarely, if ever, find that "the whole in some way exceeds the sum of its parts." If applied consistently, a

synergism requirement might well foreclose the validity of all mechanical patents.

Additionally, we agree with the Seventh Circuit's observation in Schlage Lock that the synergism standard contravenes important objectives of patent protection. By looking exclusively to the functioning of the individual components after combination, the approach is premised on "the assumption that it is always obvious to take known elements and combine them." 592 F.2d at 971, 200 USPQ at 778-779. But the selection of elements may itself be non-obvious and therefore inventive. Focusing on the performance of elements after combination, to the exclusion of the obviousness of making the combination, thus seems inconsistent with Section 103, which establishes as the standard of patentability the non-obviousness of the combination "at the time the invention was made."

But abandoning the verbal trappings and "rhetoric of synergism" must not cause courts to overlook the importance of the requirement of novelty and invention, long required by the patent statutes and the Constitution.

As pointed out in John Deere itself, Congress may not "enlarge the patent monopoly without regard to the innovation, advancement or social benefit gained thereby. Moreover, Congress may not authorize the issuance of patents whose effects are to remove existent knowledge from the public domain, or to restrict free access to materials already available. Innovation, advancement, and things which add to the sum of useful knowledge are inherent requisites in a patent system which by constitutional command must 'promote the Progress of *** useful Arts.' This is

the standard expressed in the Constitution and it may not be ignored."

Similarly, this Court has said: "Thus, the courts, in determining obviousness in a combination patent, must undertake the tripartite Graham inquiry without losing sight of the necessity to determine whether the device performs its function in an innovative fashion." 608 F.2d at 91, 203 USPQ at 965-966.

It must never be forgotten that the power given to Congress by Art. I, sec. 8, cl. 8 of the Constitution is "To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." The primary policy of the patent laws is to promote invention for the benefit of the public. The private gain enjoyed by the patentee is secondary; the "exclusive Right" conferred by the patent monopoly is merely the means of accomplishing the intended result of advancing the growth of science by adding to the sum of human knowledge. A patent cannot be sustained which would withdraw or subtract from what is already known and practiced. To fence in by a newly created monopoly elements previously available to the public (by aggregating them in a combination patent without any inventive innovation) would be contrary to public policy and fundamental principles of patent law.

To emphasize the importance of these constitutional aspects of our patent system, whether or not they are clothed in "the rhetoric of synergism," it seemed proper to dwell upon them specifically in this concurring opinion when joining in the judgment of the Court."

This last point made by the court is enlightening for an indepth understanding of the legal and social underpinnings of the novelty and obviousness standards as they have evolved in our laws. It also helps in avoiding confusion in concepts of infringement and patentability.

As a general rule, infringement questions and patentability questions are best treated as separate topics having no bearing upon each other. Keeping them separate is more difficult where selection patents are involved.

As we noted in the Rengo decision in order to satisfy our Constitution's purpose, patents must promote the useful arts and this purpose would not be achieved if a patent was granted for something old. Thus, two patents should not be granted for the same invention.

In the case of a selection patent, however, it is not uncommon for the selected invention to be covered by two patents; namely, the basic patent on a broad range and the improvement patent on the selected species.

In granting this second patent, are we violating our Constitution directive not to grant a patent on something old or grant two patents for the same thing? Alternatively, are we depriving the first inventor of part of his monpoly? We answer both questions in the negative.

The second inventor will have to make a material new teaching to the art to secure his selection patent. He will have to prove it is inventive over the basic invention.

In securing the basic patent, the first inventor will have to have disclosed the best mode he can think of to practice his invention. If someone invents a better way or an improve machine or compound within the first inventor's broad class, the first inventor has not really lost anything because he had not thought of or been enjoying the improvement. The first inventor himself may be making such improvements and should likewise be given the incentive of the possibility of an improvement or selection patent to encourage his investment in such research.

Since the patent grant carries with it the right to exclude others from using one's invention for a limited period of time as opposed to the right to practice what one has invented, the selection patent inventor may well have to honor the basic patent on which he built with a royalty.

Viewed as above, notions of having to institute a nullity proceeding to cancel an improvement patent prior to or in connection with the enforcement of a basic patent are not understandable to a U.S. practitioner.

Likewise, the concept that hy securing a selection patent one can reduce one's infringement problems is also generally foreign to us. That is not to say, however, that one might not inadvertently establish that the basic patent should not have been granted because it was generally inoperative or otherwise devoid of patentable merit when one performed comparative studies in support of one's selection patent. The point is, however, that

more than one valid patent can cover the same subject matter so long as the twice dominated species was not specifically disclosed or obviated by the basic patent.

Leaving U.S. law for a minute, it is interesting to note that the Technical Board of Appeal of the European Patent Office in Munich has recently handed down its first decision on a selection invention In re Bayer AG (Baatz and Others).[9]

The rejected Bayer application concerned an improved carbon free copying paper where the invention resided in selecting a novel member from a known class of isocyanates to prepare micro-encapsulation films of enhanced stability to the hydrophobic liquids being encapsulated.

Having been rejected for lack of novelty on a reference teaching isocyanates for the particular use Bayer had made of them, Bayer appealed. With their appeal brief, Bayer introduced for the first time comparative data showing unexpected shelf life for the copying paper made with the particular isocyanate selected. The Board overlooked the late submission of the comparative data and allowed the application to the selection invention.

One word might be in order with regard to the successful solicitation of selection patents. As a general practice, use of Rule 132 Affidavits to overcome obviousness rejections is discouraged because it opens the resulting patent to attack on the basis of the way the tests were done or on whether the expert was totally candid in the statements made.

In the case of selection inventions, however, a Rule 132 Affidavit showing the unique, unexpected advantages of the selected invention over the general members of the class will usually be required.

In conclusion selection inventions are patentable under the U.S. Patent Laws through application of the same standards of patentability as are applied to basic inventions in the chemical, mechanical and electrical arts. The selected chemical species or arrangement of components must be novel and must offer an unexpected advantage which is mentioned in the application specifications. Applicant should be prepared to support the asserted unobvious advantages or properties with affidavit evidence if required to do so by the Examiner. Novelty of a species is not defeated by knowledge of the class of which it is a member.

1. E.I. Du Pont de Nemours and Company v. Ladd, Com. Pats. et al., 140 USPQ 297 (1964).

2. In re Application of Krazinski, 347 F.2d 656 (1965).

3. Bayer et al., Zur Patentfähigkeit von Metall--Legierungen, 10 Jahre Bundespatentgericht, Festschrift (1971) p. 201 et seq.

4. Dr. V. Vossius, Journal of the Patent Office Society, March, 1977, Vol. 59, No. 3, page 180 at 185.

5. Darwin and Milner v. Kinite, Corporation 72 F(2d) 437 (1934).

6. In re Nehrenberg 126 USPQ 384 (1960).

7. A & P Tea Company v. Supermarket Corporation, 340 U.S. 147 (1950).

8. Rengo Co. Ltd. v. Molins Machine Co., Inc. 211 USPQ 307 (1981).

9. In re Bayer AG (Baatz and Others) RPC No. 12, p. 321 (1982).

JAPANESE PRACTICE AND PROBLEMS RELATING TO A PUBLICATION

JAPANESE GROUPE

COMMITTEE NO. I

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HIROSHI YUMOTO ; MEIJI SEIKA KAISHA, LTD.

HIROKI SERI ; MEIJI SEIKA KAISHA, LTD.

SPEAKER,

KOTAROH HARA ; TEIJIN LIMITED

SUMMARY:

A prior art reference or "a publication" available prior to the filing of an application is the most common basis for the determination of the novelty of the invention. Under the Japanese patent law, a question of novelty with regard to a publication is determined on the basis of whether or not the invention is described in "a publication distributed..." (Article 29, Paragraph 1, Item 3 of the Patent Law), and if the invention has been disclosed in a publication prior to the filing of the application by the inventor himself, the novelty of the invention is not lost under certain conditions (Article 30, Paragraph 1 of the Patent Law).

Under the circumstances, there have been a number of cases in which the interpretation of the terms "a publication distributed" and "a disclosure in a publication" or the term "a publication" itself is at issue and disputed at the Patent Office or the courts. In a recent case, Tokyo High Court considered a question of whether or not the disclosure in an issued U.S. patent falls within the term "a disclosure in a publication" and the court has judged that the disclosure of the invention in the U.S. patent does not come in the term "a disclosure in a publication by the inventor himself", and thus denied the novelty of the invention. This decision is the first case in which the court rendered a judgement on the question of whether or not a patent publication falls within the term "a disclosure in a publication".

In this paper, we should like to report the court decision and its background information as well as the current practice and interpretation of the terms "a publication distributed" and "a publication" itself in view of the trial decisions by the Patent Office and the decisions by courts.

In addition, the Japanese Patent Law contains quite unique

provisions that once 5 years have been passed since a patent was granted, no trial for the invalidation of the patent may be requested on the basis of "a publication distributed in a foreign country" as prior art (Article 124 of the Patent Law). We should like to touch upon these provisions to the extent that they are concerned with a question of "a publication".

JAPANESE PRACTICE AND PROBLEMS RELATING TO A PUBLICATION

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1. Introduction

Publications are most frequently used in practice for the determination of the novelty or inventive step of an invention and they are regarded as the most important basis for the determination. However, for a publication to be regarded as a valid prior art reference under the Japanese patent law, it must satisfy certain requirements.

Recently a new court decision has been delivered by Tokyo High Court on the question of "a publication". In this case, the inventor (or his assignee) filed a patent application in Japan within 6 months after the issue of a U.S. patent (i.e. within the grace period provided for in Article 30 of the Patent Law) for the same invention as disclosed in the U.S. patent. While admitting that the U.S. patent is a publication as provided for in the Patent Law, the court went on to decide that the disclosure in the patent does not meet "the disclosure in a publication by the inventor himself".

Under the Japanese patent law, where an inventor has disclosed his invention in a publication, a relief is given to him under certain conditions to the effect that the novelty of the invention is not lost by the disclosure in the publication (Article 30 of the Patent Law). However, the Patent Office policy has not been settled and no court decision has been available on the question of whether or not the patent publications in foreign countries can be regarded as the publications under Article 30 of the Patent Law, or as to the reasons if the answer is in negative.

The decision of Tokyo High Court this time is noteworthy in that the court clearly indicated that the disclosure in the U.S. patent does not fall within the term "disclosure in a publication" of Article 30 of the Patent Law because the publication of the U.S. patent does not amount to a disclosure by a positive intention of the inventor. The details of the court decision will be mentioned later.

This court decision has given us a good opportunity to review the legal status of the "publication" in Japan, i.e. how the "publication" has been treated under the Japanese patent practice and how it has been defined in court decisions or trial decisions by the Patent Office. The results of our study will now be reported.

In this report, we shall discuss not only the essential requirements for a publication to be effective as a valid reference against the novelty or inventive step of an invention but also the requirements for the novelty of an invention not to be defeated by the publication. We hope that the report will be useful to those in the patent profession.

Refelecting the ever increasing technological innovation and developments in recent years, the dissemination of technologies is taken place in various forms, and various means for the dissemination of technological information are being developed and put into practice. It appears that this trend will continue to be accelerated. Under the circumstances, we should like to consider if the conventional concept and practice for "a publication" will continue to be acceptable in future, and, if not, what will be the problems involved.

At the PIPA 10th International Congress, 1979, Philadelphia, Pensylvania, Mr. Y. Takahashi, a member of Committee 1 of the Japanese Group, presented a report entitled "Criteria for Judgement of Novelty of an Invention", in which he reported two court cases relating to the publication. His report was concerned primarily with the question of novelty in general. In the present report, we should like to concentrate our discussion on the question of "a publication" and various problems inherent thereto.

2. "A publication" under Japanese Patent Law

"A publication" being the subject of the present report is treated substantially in the same manner under the Japanese Patent Law and Utility Model Law. Accordingly, when a reference is made in this report to a patent (or an invention), it is likewise applicable to a utility model (or a device) unless otherwise specified.

In the Japanese Patent Law, "a publication" is referred to in Article 29 (Novelty and Inventive Step), Article 30 (Exceptions to Lack of Novelty) and Article 124 (Special Provisions for Invalidation Trial).

Public knowledge prior to the filing of a patent application gives a great influence over the novelty or inventive step of the invention in the application. In many cases, a publication is used as evidence to establish the public knowledge.

On the other hand, when the inventor himself has disclosed his invention in a publication prior to the filing of the application, the novelty of his invention will not be denied by the publication provided the prescribed requirements and procedures are satisfied.

Under the Japanese patent law based on a first-to-file system, a publication, particularly how it is defined or how it is treated in practice, gives a great impact on the patentability of the invention of an application. Under the circumstances, we should like to explain the legal status of the publication and its interpretation and discuss its concept and problems involved with reference to recent trial decisions, court decisions and the Examination Manual of the Patent Office.

3. Article 29 of the Patent Law (Novelty and Inventive Step)

3-1 Provisions and their interpretation

Article 29, Paragraph 1 of the Patent Law provides for the novelty of an invention, in which the novelty requirements are divided in the following three categories and an invention falling under any one of the categories will be rejected as lacking in the novelty:

(i) Inventions which were publicly known in Japan prior to the filing of the patent application.

(ii) Inventions which were publicly worked in Japan prior to the filing of the patent application.

(iii) Inventions which were described in a publication distributed in Japan or in a foreing country prior to the filing of the patent application.

Whereas Article 29, Paragraph 2 provides for the inventive step, under which an invention which could easily have been made by a person with ordinary skill in the art on the basis of the invention(s) referred to any one of the above categories (i), (ii) and (iii) will be rejected as lacking in the inventive step.

The categories (i), (ii) and (iii) set out different bases for the availability of the respective public knowledges. Namely, the availability of the publicly known inventions (category (i)) and the publicly worked inventions (category (ii)) is restricted to Japan, while the availability of the inventions described in a distributed publication (category (iii)) is not restricted to Japan but extends to cover foreign countries.

The intention of the legislation of Article 29 of the Patent Law is believed to reside in that no patent right should be granted for a technical concept which has already been available in this world. Nevertheless, different bases are given for the availability of the respective public knowledges. The reason for this differentiation is said to reside in that if the availability of (i) the publicly known inventions and (ii) the publicly worked

inventions is extended to cover countries outside Japan (i.e. foreign countires), it would be extremely difficult to prove or ascertain the public knowledge (or the facts), thus likely to create unnecessary disputes and leads to adverse or ill effects, as contrasted to the case of (iii) the inventions described in a distributed publication.

Thus, the inventions known or worked in a foreign country cannot per se be effectively used as evidence to deny the novelty of the invention of a Japanese patent application. It is of course possible, however, that if such public knowledges were brought in and published in Japan by some means prior to the filing of the application, they may then be regarded as the known inventions or the inventions described in a publication.

Detailed discussions on (i) the publicly known inventions or (ii) the publicly worked inventions will be omitted since these subjects have no direct relevance to the subject of this report.

As mentioned above, (iii) the inventions described in distributed publications can be valid evidence to prove the public knowledges whether the publications were available in Japan or in a foreign country. For the "distributed publications" to be practically effective as prior art references, they must satisfy the two requirements, i.e. (1) they must have been "distributed" and (2) they must be "publications". We will now discuss each of these requirements in detail.

3-2 Distribution

A publication (which will be discussed in detail later) satisfies the requirements for a prior art reference stipulated in Article 29, Paragraph 1 of the Patent Law only when it has actually been distributed. Accordingly, even if a reference is qualified as a publication, it cannot be regarded as a valid prior art reference unless it has been distributed. For instance, printed publications which have not yet been distributed or

which are in a process for distribution, do not satisfy the requirement of "distributed".

A single instance of the distribution to only one person is sufficient to satisfy the requirement of "distributed". Further, so long as a publication is available for the public inspection, it is regarded as "distributed", even if it is simply placed in a library and no body has yet actually inspected it.[1)]

3-3 Publication

Heretofore, various definitions have been given to "a publication". Conceptually, however, a publication may be regarded as "a document, a drawing or any other similar information transmitting medium reproduced for the purpose of opening to the public by distribution", as the Supreme Court stated in its decision. (Decision No. 53 (gyo-tsu) 69, delivered July 4, 1980, Supreme Court).

According to this definition, for a reference to be a publication, it must be a reproduced copy having a public nature and a distributable nature. These natures will now be discussed individually.

(a) Public nature of a publication

A publication must be intended for opening to the public. Accordingly, for instance, a secret publication intended to keep its contents in secrecy cannot be regarded as "a publication". Whereas, limited publications such as journals of certain associations, publications distributed only to particular subscribers or publications not for sale are "publications" so long as they are intended for opening to the public.

Coupled with such a public nature, it is required for "a publication" that its contents have a nature of information i.e. a nature to be widely circulated to the public as information. Accordingly, for instance, reproduced copies of the records of law suits cannot be regarded as "a publication" since

they are not intended to be circulated as information even though they are obtainable upon request. [2)]

(b) Distributable nature of a publication

The public nature of a publication is satisfied only when the publication has been distributed. Namely, a publication must have a distributable nature, i.e. a nature to be distributed to the general public. Accordingly, information materials not intended for distribution, such as technical instruction manuals or specifications, cannot be regarded as "publications".

(c) Reproduced copies

According to the Patent Office practice in the past, a reproduced copy was defined to be a printed matter. Reflecting the recent developments in the reproduction techniques, it is the current practice to include, within the scope of "reproduced copies", not only the printed matters but also various types of reproductions prepared by many other reproducing means, as follows:

(i) Printed matters

(ii) Copies prepared by copying machines (e.g. electrophoto copies or photographs)

(iii) Other reproduced copies prepared by reproducing means (Copies reproduced mechanically, chemically or electrically from the originals which may be hand-written or typed.)

3-4 Specific examples of the publication

We shall now discuss various publications to see if they can be regarded as "a publication" stipulated in Article 29 of the Patent Law. Particularly, on the question of whether or not a foreign patent specification which was not issued as a printed publication but the original text of which was available for the public inspection at the Patent Office, can be regarded as "a publication" or whether or not a reproduced copy of the original text can be regarded as "a publication", there is a recent court decision in which

the court has clearly indicated its view for the determination of "a publication distributed", and we shall give a detailed discussion on this point.

(a) Original text of a specification of a patent application

A mere fact that in a foreign country where the specifications of patent applications are not published as printed publications and their original texts are available for the public inspection at their Patent Offices, an original text was available to the public inspection, is not sufficient for the original text to be regarded as "a publication".

Now, we will introduce a court case in which the issue was whether or not an original text of a specification of a patent application in a foreign country can be regarded as "a publication". A summary of this court decision is attached as Reference 1. Further, there are, for instance, the following trial decisions of Patent Office in which similar judgements were made:

(i) As regards a Belgian patent specification
Trial No. Sho-45-8569 (the decision delivered December 25, 1979)

(ii) As regards a laid-open Italian patent specification
Trial No. Sho-53-15373 (the decision delivered October 23, 1979)

(iii) As regards a South African patent specification
Trial No. Sho-43-3310 (the decision delivered October 16, 1975)

(a)-1 Decision No. Sho-50 (gyo-ke) 97, Tokyo High Court (delivered October 30, 1978)

In this decision, the court has judged that the original text of a specification of a Belgian patent application is not "a publication". The court has stated in its decision:

(i) It is reasonable to understand that "a publication" is a document, a drawing or a photograph, in a form to express the certain technical concept, which is intended for distribution (distributable nature) to the common general public (public nature) and which was reproduced from the original model or the original text (i.e. original) by means

of printing, photography or photocopying reproduction or any other similar means.

(ii) The original text or the original does not have such an intrinsic nature that it is intended for distribution to the common general public although it may exist in a plurality of copies and may take various forms.

(iii) The Belgian patent specification itself (original text) is always maintained at the Belgian Patent Office and will not be distributed elsewhere.

(iv) A Belgian patent specification cannot be regarded as "a publication" distributed in a foreign country stipulated in Article 29, Paragraph 1, Item 3 of the Patent Law, since the original text itself is not distributed although its copies may be distributed elsewhere.

(a)-2 Comments on the court decision above

The decision that the original text of a patent specification cannot be regarded as "a publication" in the sense of Article 29, Paragraph 1, Item 3 of the Patent Law, may be taken as quite natural since the original text itself is always maintained at the Belgian Patent Office and has no distributable nature.

However, as an original text of a Belgian patent application becomes available to the public inspection relatively soon after the filing of the application, it is quite often used as an important source of technical information. In this respect, we consider it desirable to set up a legislation to the effect that once the original text is laid open to the public inspection, it should be regarded as having a formality equivalent to "a publication distributed" and should be deemed to be "a publication distributed" of Article 29, Paragraph 1, Item 3 of the Patent Law.

(b) Reproduced copies of specifications of applications

An original text of a specification of an application laid open to the public inspection in a foreign country is not regarded as "a publication" as mentioned above in item (a). However, reproduced copies of the original text are regarded as "a publication" provided the prescribed requirements are satisfied.

We shall introduce a Supreme Court decision in which reproduced copies of the original were recognized to be "a publication". A summary of the decision is attached as Reference 2. A similar judgement is also found in a recent Tokyo High Court decision (Decision No. Sho-55 (gyo-ke) 68, delivered August 31, 1981).

(b)-1 Decision No. Sho-53 (gyo-tsu) 69, Supreme Court (delivered July 4, 1980)

In this decision it was held that a reproduced copy of the original text of a West German utility model specification can be regarded as "a publication distributed" stipulated in Article 29, Paragraph 1, Item 3 of the Patent Law. The major points for the judgement are as follows:

(i) If the original text itself is laid open and available to the public for free inspection and if a facility is available whereby its copies can be supplied without delay upon requrest by the public, it is reasonable to understand that the "publication distributed" may be the one which can be reproduced from the original text and supplied each time when a request is made by the public.

(ii) The reproduced copy is a document reproduced from the specification for the purpose of opening to the public by distribution and was distributed prior to the filing of the patent application in this case.

(b)-2 Comments on the decision

The above Supreme Court decision does not indicate that every kind of a copy reproduced from an original specification can be regarded as "a publication distributed". The decision indicates that for a reproduced copy of an original text to be regarded as "a publication distributed" stipulated in Article 29, Paragraph 1, Item 3 of the Patent Law, the following three requirements must be satisfied:

(i) The original text of the specification must be laid open and available to the public for free inspection.

(ii) There must be a facility whereby its copies can be supplied without delay upon request by the public.

(iii) The copies must have been reproduced from the original text each time upon request by the public and issued prior to the filing of the patent application.

Reproduced copies of the original text satisfying the three requirements have a public nature as well as the distributable nature, and in the particular case, it was confirmed that the reproduced copies were in fact distributed. Thus, the court decision is quite acceptable.

Further, a single copy of the reproduction from the original text is sufficient to establish "a publication distributed". [3)]

Thus, in order to effectively use a reproduced copy of the original text laid open to the public inspection in a Patent Office, such as a West German utility model specification, a Belgium patent specification, an Italian patent specification or a South African patent specification, as a prior art reference, it is necessary to satisfy the above mentioned requirements (i) to (iii).

Practically, however, it involves a great deal of trouble to collect evidence to prove that the three requirements are fully met. In reality, contents of laid-open specifications are worldwidely distributed through various

service companies. Under the circumstances, it is desirable to take a legislative measure so that reproduced copies of the original texts can be used as "a publication distributed" without necessity of taking complicated and troublesome procedures.

(c) Other publications

(c)-1 Books, journals and patent gazettes or publications

These are obviously "a publication".

(c)-2 Microfilms

Microfilms for specifications of applications are recognized as "a publication".[4] The reason is that such microfilms are small size reproductions of the original texts and have a public nature and a distributable nature required for "a publication" although they require a reader for reading.

(c)-3 Catalogues

There is no doubt that catalogues or panphlets can be regarded as "a publication distributed" so long as it can be proved that they were actually distributed. Practically, however, it is often difficult to prove the facts for the distribution and the date for the distribution. For instance, it is not certain that the indication of the date of printing (such as "1960. 8. Second printing (1000)") appearing on the catalogue will be accepted as the date of distribution. In a certain trial decision, this was affirmed[5] and in another trial decision, this was rejected.[6]

It appears that for a catalogue to be recognized as "a publication", there must be an objective situation, e.g. such that the printing date indicated in the catalogue is substantially earlier than the filing date of the application, whereby it can empirically be said with reasonable certainty that the catalogue was distributed prior to the filing of the application.

Further, there is a court decision in which it was held that even if a publication bears a copy right indication (such as © 1962), such a copy right indication is not, by itself, sufficient to establish the date of distribution of the publication.[7] Accordingly, in a case like this, it is necessary to prove the date of distribution by evidence e.g. by a certificate of a public library showing the fact that the publication was received by the library.

(c)-4 Technical instruction manual

A technical instruction manual or specification is not intended to be distributed to the public, and accordingly it cannot be recognized as a publication distributed at the date thereof even if such a date is indicated in the manual or specification.[8] Separate evidence will be required to establish the fact of the distribution and the date of the distribution.

(c)-5 Others

With respect to magnetic recording tapes, magnetic recording discs, optical recording discs and the like, there has been no trial decision or court decision in which a question has been raised as to whether or not such recording media can be regarded as "a publication" in terms of Article 29, Paragraph 1, Item 3 of the Patent Law. This is a question yet to be answered in future.

It is hard to literally call such recording media "a publication". However, their function is similar to that of the above mentioned microfilms and they have "a public nature" as well as "a distributable nature". Thus, it seems to be reasonable to consider that they belong to "a publication".

4. Article 30 of the Patent Law (Exceptions to lack of novelty of the Invention)

4-1 Provisions and their interpretation

Article 30 of the Patent Law provides for the cases in which the novelty of an invention is not lost by the disclosure of the invention prior to the filing of the application. Paragraph 1 of the Article provides for the disclosure in a publication distributed prior to the filing of the application. This Paragraph reads as follows:

Article 30, Paragraph 1 of the Patent Law

> In a case of an invention which has fallen under any one of the Items of Article 29, Paragraph 1 by reason of the fact that the person entitled to obtain a patent has conducted an experiment, made a disclosure in a publication or made a disclosure in writing at a study meeting held by a scientific body designated by the President of the Patent Office, such invention shall be deemed not to have fallen under any one of the Items referred to, provided that such person has filed a patent application within six months from the date on which the invention first fell under those Items.

The entire provisions of Article 30 are attached as Reference 3. These provisions involve a great deal of practical problems. Article 30 provides for exceptions to lack of the novelty stipulated in Article 29, Paragraph 1 and more particularly, it provides for exceptional cases in which the novelty of an invention is not lost even when the invention has been disclosed prior to the filing of the application. For an application to be entitled to the benefit of these provisions, it must satisfy the prescribed procedural requirements as well as the prescribed substantive requirements.

In short, Article 30 provides that in a case where an invention has become publicly known by reason of any one of the following items (i) to (iii), the novelty of the invention shall not be lost by such reason, provided

that a patent application is filed within 6 months from the date on which the invention became publicly known:

(i) A person entitled to obtain a patent has disclosed his invention by an experiment, a disclosure in a publication or a disclosure in writing at a certain study meeting. (Paragraph 1)

(ii) The invention has been disclosed against the will of the person entitled to obtain a patent, e.g. by a spy or swindler in spite of the fact that the inventor kept the invention secret. (Paragraph 2)

(iii) The invention has become publicly known by reason of the fact that the person entitled to obtian a patent has exhibited his invention at a certain exhibition. (Paragraph 3)

Article 30, Paragraph 4 provides for the procedure. The person who desires to obtain the benefit of Paragraph 1 or 3, must submit a written statement to that effect simultaneously with the patent application and within 30 days from the filing of the application, he must also submit a document to prove the fact.

It is important to note here that the filing date of the patent application in Article 30 is the actual filing date and is not the Convention priority date, if claimed. Accordingly, in a case where a Japanese patent application is to be filed claiming a Convention priority based on a U.S. patent application, if the invention has been disclosed prior to the filing date of the U.S. application in the sense of Article 30, the Japanese application must be filed within 6 months from the date of the disclosure irrespective of the Convention date.

Now, reverting to the main topic of this report "a publication", Article 30 involves various practical problems or questions. Is it correct to understand that "a publication" in Article 30, Paragraph 1 is the same as "a publication" in Article 29? Is a patent publication or gazette included in

"a publication" in Article 30, Paragraph 1? How about the identity of the invention disclosed in the publication with the invention described in the patent application? How about the identity of the inventor(s) who has disclosed the invention in the publication with the inventor(s) named in the patent application? What are the impacts of other publications having an effective date during the peirod after the disclosure in the publication ? Full understanding of these problems will be useful for practice. We shall discuss these problems with reference to trial decisions and court decisions.

4-2 Does the term "a publication" in Article 30, Paragraph 1 have the same meaning as the same term in Article 29, Paragraph 1, Item 3?

Article 30 provides for exceptions to Article 29, Paragraph 1. Nevertheless, there have been controversies over a question of whether or not the same interpretation should be applied to the term "a publication" in both Articles. The major question here was how to treat patent publications or gazette. There is no question or doubt that the patent publications are included in "a publication" in Article 29, Paragraph 1, Item 3 of the Patent Law. However, the opinions split when it comes to a question of whether or not a patent publication should be included in the term "a publication" in Article 30, Paragraph 1.

Meantime, Tokyo High Court in its recent decision has made a judgement on this point for the first time. The details of this decision will be explained later. Here, we will present the outcome of the decision as follows.

(i) There is no good reason to interpret the term "a publication" in Article 29, Paragraph 1, Item 3 of the Patent Law and the term "a publication" in Article 30 of the same law differently.

(ii) A patent publication distributed in Japan or a foreign country must naturally be regarded as "a publication" stipulated in Article 30.

(iii) However, the publication of the invention in a patent publication does not meet the condition that a person entitled to obtain has made "a disclosure in a publication".

This decision is the first one in which Tokyo High Court has clearly indicated its view on the term "a publication" stipulated in Article 30, Paragraph 1 to the effect that the patent publication is included within the scope of the term and that the publication of the invention in a patent publication does not amount to a disclosure made by the person entitled to obtain a patent.

This decision has not yet become conclusive but is noteworthy as indicating the view of Tokyo High Court for the first time.

Now, we shall review the background of the decision and the historical developments of the examination practice.

4-3 Historical developments and examination practice

(1) Following the enactment of the current Patent Law in 1960, the Japanese Patent Office issued an Examination Manual in April, 1962 to ensure the fair and harmonious enforcement of the Law. In Paragraph 10.28 A of the Manual, the following comments were presented in connection with Article 30, Paragraph 1 of the Patent Law:

10.38A

DOCUMENT ESTABLISHING THAT THE INVENTION OF THE PATENT APPLICATION IS THE ONE DISCLOSED IN THE PUBLICATION

When a person entitled to obtain a patent wishes to file a patent application for an invention which has fallen under any one of Items 1 to 3 of Article 29, Paragraph 1 of the Patent Law for reason of the fact that he has disclosed the invention in a publication such as a book,

journal, news paper or patent publication issued in Japan or a foreign country and seeks for the application of the provisions of Article 30, Paragraph 1 of the Patent Law, a document must be submitted which establishes that the invention of the patent application is the one disclosed in the publication.

As seen from the above comments, the Patent Office specifically mentioned "a book, journal, news paper or patent publication" as an example of the publication of Article 30, Paragraph 1. On the basis of this Examination Manual, the Patent Office recognized a foreign patent publication as the publication stipulated in Article 30, Paragraph 1 of the Patent Law and took a position that the novelty of the invention of the application would not be denied by the foreign patent publication. (For instance, see Japanese Patent Publication (Kokoku) No. 31401/74.)

(2) Subsequently, however, the Trial Board of the Patent Office rendered a decision to the effect that a foreign patent publication could not be regarded as "a publication" stipulated in Article 30, Paragraph 1 of the Patent Law. (See Trial Decision in Trial No. Sho-44-1138, August 8, 1974.)

(3) Then, in February 1977, the Patent Office issued a revised edition of the Examination Manual in which Paragraph 10.38A of the original Examination Manual was revised. (See Paragraph 10.46A.)

The main point for this revision was to delete the listing of the specific publications i.e. "a book, journal, news paper or patent publication issued in Japan or a foreign country" which appeared in the original Examination Manual. There was no clear reason given for the deletion of the listing of the specific publications, but it was said to be intended to exclude a patent publication from the scope of the publication of Article 30, Paragraph 1 of the Patent Law.

Since then, there were many cases in which a request for the application of Article 30, Paragraph 1 of the Patent Law based on a foreign patent publication was rejected, although in some cases, such request was granted. For example, there are the following trial decisions in which such request was rejected. (In a case where such request was granted, the applicant would not naturally demand a trial and no trial case is available.)

(i) Trial No. Sho-46-4762, February 22, 1979

(ii) Trial No. Sho-49-5251, April 11, 1979

(iii) Trial No. Sho-52-14779, September 4, 1980

These trial decisions were consistent with one another in the sense that no application of Article 30, Paragraph 1 of the Patent Law was granted with respect to a foreign patent publication. However, their reasonings were different, i.e. in some cases, it was held that the foreign patent publication is not regarded as "a publication" stipulated in said Article, and in other cases, it was held that the foreign patent publication is regarded as "a publication" in said Article, but the disclosure in the patent publication cannot be regarded as "a disclosure in a publication" in said Article. Thus, the same conclusions were not necessarily based on the same grounds or reasonings.

The patent publication in question in connection with the publication of Article 30, Paragraph 1 of the Patent Law is limited to a foreign patent publication. Consequently this question is restricted mostly to cases where a foreigner files a Japanese application for an invention already published in a patent publication in a foreign country. Namely, in the case of a Japanese patent publication, once it has been published, the related application documents are laid open to the public inspection at the Patent Office and the inention thereby becomes to be publicly known and loses its novelty under Article 29, Paragraph 1, Item 1 (not Item 3).

Accordingly, it is meaningless to request the application of Article 30 of the Patent Law based on a Japanese patent publication or laid open Japanese patent application.

4-4 Recent court decision

The applicant who received the unfavourable trial decision in the above mentioned Trial No. Sho-52-14779 (iii), appealed the case to Tokyo High Court (Sho-56 (gyo-ke) 22). On June 22, 1982, Tokyo High Court rendered a decision on this case to the following effect (a summary of this decision is attached as Reference 4).

(1) The same term in the same law should be interpreted in the same way unless there is good reason to interpret it differently. There is no good reason to interpret the term "a publication" in Article 29, Paragraph 1, Item 3 of the Patent Law and the term "a publication" in Article 30 of the same law differently. The trial decision is in error in stating that the U.S. patent publication is not included in the publication stipulated in Artcicle 30, Paragraph 1, of the Patent Law.

(2) However, the disclosure of the invention in the U.S. patent publication cannot be regarded as "a disclosure in a publication" of Article 30, Paragraph 1 of the Patent Law. Namely, the term "a disclosure" in this Paragraph is meant for a disclosure which the person entitle to obtain a patent has made with his positive intention to disclose. The applicant's intention in filing a patent application is either to obtain a patent right or to prevent someone else to obtain a patent right. Accordingly, the disclosure in the patent publication is not a disclosure with the applicant's positive intention. The conclusion of the tiral decision refusing the application of Article 30, Paragraph 1 of the Patent Law with respect to the U.S. patent is correct.

4-5 Comments on the court decision

The above decision by Tokyo High Court is noteworthy in that this is the first court decision which rendered a judgement that the provisions of Article 30, Paragraph 1 of the Patent Law is not applicable to a foreign patent publication.

The judgement was based on the ground that the disclosure in the patent publication is not a disclosure made by the positive intention of the person entitled to obtain a patent, and accordingly it does not fall under the term "a disclosure in a publication" stipulated in Article 30, Paragraph 1 of the Patent Law.

This decision has not yet become conclusive. However, the conclusion of this decision will probably be supported.

Accordingly, it is expected that in many trial cases in which the application of Article 30, Paragraph 1 of the Patent Law is at issue with respect to a foreign patent publication, trial decisions will be delivered with the same conclusion as in the above decision of Tokyo High Court. It is also likely that patent applications filed under Article 30, Paragraph 1 of the Patent Law on the basis of foreign patent publications will be rejected on the ground of lack of the novelty and such applications will be meaningless.

4-6 Certain points which must be kept in mind to secure the benefit of Article 30, Paragraph 1 of the Patent Law for an invention disclosed in a publication

As mentioned in the above paragraph 4-4, the benefit of the provisions of Article 30, Paragraph 1 of the Patent Law will no longer be entertained with respect to a foreign patent publication. However, with respect to other ordinary publications, the provisions are of course still applicable.

Since Article 30 of the Patent Law defines exceptions to lack of novelty, the provisions of Article 30 are naturally quite restrictively interpreted, and the practice includes certain features which are peculiar to Japanese patent system.

We should like to briefly discuss certain important points which the applicant must bear in mind when filing a Japanese patent application under Article 30.

(a) Identity of the invention disclosed in the publication with the invention in the patent application

The invention of the application filed under Article 30, Paragraph 1 of the Patent Law must be the same as the invention disclosed in the publication. For instance (1) in a case where the essential point of the invention was vaguely disclosed in the publication and it was then clearly set out in the later application for the first time or (2) in a case where an improvement of the invention disclosed in the publication was made the subject matter of the later application, the invention of the application usually has novelty without relying on the application of Article 30, Paragraph 1. However, depending upon the degree of the vagueness in (1) or the degree of the improvement in (2), it may happen that the invention of the application will be unpatentable as being obvious from the invention disclosed in the publication. A due care must be taken to avoid this.

(b) Relationship between the inventor who disclosed the invention in the publication and the inventor named in the application

As a rule, the name of the inventor appearing in the publication should be the same as the name of the inventor in the patent application when requesting the application of Article 30, Paragraph 1 of the Patent Law. However, there may be a case in which someone else than the inventor such as a mere assistant is included in the reporters disclosed in the publication

or a case in which the reporter disclosed in the publication is a co-inventor among the inventors named in the patent application. In such a case, the application of Article 30, Paragraph 1 of the Patent Law will be granted provided that a satisfactory statement is submitted as to the discrepancy in the naming of the inventors. (See the Examination Manual, Paragraph 10.45A.)

(c) Impact of other publications having an effective date falling within a period between the disclosure in the publication and the filing of the patent application

If the invention was disclosed several times in publications prior to the filing of the application and the application was filed under Article 30, Paragraph 1 of the Patent Law based on the first publication, the novelty is considered to have been lost by the second or subsequent publication and the invention is unpatentable pursuant to the provisions of Article 29, Paragraph 1, Item 3 of the Patent Law. However, the Patent Office practice is such that if the subsequent disclosure is closely related to the first disclosure e.g. as between the first edition and the second edition of the publication, the first disclosure in a collection of reports and the subsequent disclosure to a scientific organization, or the first disclosure by an exhibit at an exhibition and the catalogues for the exhibit, the application of Article 30, Paragraph 1 will be granted. (See Examination Manual, Paragraph 42.45A.)

5. Article 124 of the Patent Law (Trial for invalidation of a patent on the basis of a publication distributed in a foreign country)

5-1 Provisions and their interpretation

With respect to a demand for an invalidation trial against a granted patent using as evidence a publication distributed in a foreign country, Article 124 of the Patent Law provides for a period within which such demand may be filed, as follows:

Article 124 of the Patent Law:

124. - Where a patent has been granted for an invention which was described in a publication distributed in a foreign country prior to the filing of the patent application or for an invention which could easily have been made on the basis of such invention by a person with ordinary skill in the art to which such invention pertains, a trial (i.e. trial for invalidation of a patent) on the patent under Article 123, Paragraph 1 may not be demanded after five years from the registration of the establishement of the patent right.

Thus, these provisions stipulate that once 5 years have been passed from the date of the registration of the patent (in the case of a utility model registration, 3 years from the date of its registration), the invalidation trial can no longer be demanded on the ground that the invention was described in a publication distributed in a foreign country prior to the filing of the patent application or the invention was obvious from such invention.

The U.S. Patent Law does not have the corresponding provisions, and these provisions are unique to the Japanese Patent Law. We wish to explain the intention of the legislation of these provisions and problems involved.

The 1921 Patent Law (effective to patents granted by the end of March 1960) provided for a similar period of 5 years for all grounds of invalidation as contrasted to the current Law. Such provisions were intended to stabilize the rights granted. However, for the reason that such provisions are likely to be abused by the propriators of patent rights, such period is restricted to be applicable under the current Law to the ground of invalidation based on a publication distributed in a foreign country. The reason for maintaining such period to be applicable only to the ground of invalidation

based on a publication distributed in a foreign country, is said to be such that the balance of interests as between the propriators of rights and the public can thereby be ensured since the ground of invalidation is thereby limited to a publication which was distributed in a foreign country but not in Japan prior to the filing of the patent application and which was accordingly not readily available.

Thus, with respect to the Japanese patents (or utility models) granted on or after April 1, 1960, an invalidation trial cannot be demanded on the basis of a publication distributed in a foreign country once 5 years from the date of the registration of the patent rights (3 years in the case of the utility model registration) have been expired.

It is important to note here that if the publication distributed in a foreign country was brought into Japan and distributed in Japan prior to the filing of the patent application, the publication is regarded as "a publication distributed in Japan" and then the prescribed period of 5 years is no longer applicable.

5-2 Effect of the publication after expiration of the prescribed period

As mentioned above, even when a pertinent publication distributed in a foreign country has been found after expiration of the prescribed period, it is impossible to invalidate the patent on the basis of the publication. While Article 124 of the Patent Law provides for a case in which the patent rights cannot be invalidated, it is undesirable that the exclusive rights can be mtaintained with respect to an invention which includes something already known to the public and which accordingly should not have been patented, because such invention has nothing to contribute to the development of the industry.

In the following court decisions, the technical scope of the patent rights including a prior art was restrictively interpreted to exclude the prior art portions from the patent rights.

(i) Decision No. Sho-52 (gyo-wa) 4423, Osaka District Court (delivered December 14, 1979

(ii) Decision No. Sho-53 (gyo-wa) 1909, Osaka District Court (delivered December 14, 1979

5-3 Judgements in the decision

The Osaka District Court rendered a decision on these two cases as they were combined. A summary of this decision is attached as Reference 5. The court made the following judgements:

(i) How to interpret the scope of a Claim based on various materials and within the scope not departing from the intention of Article 70 of the Patent Law, is a matter for the court for an infringement suit to decide with its exclusive authority.

(ii) The fact that the patented invention was known by a publication in a foreign country at the time of the filing of the application cannot itself be negated, and it is rather natural that this fact is taken into consideration in the determination of the technical scope of the patented invention.

(iii) The technical scope of the patented invention may be restrictively interpreted in view of the publication in a foreign country even after expiration of the prescribed period.

5-4 Comments on the decision

As mentioned above, Article 124 of the Patent Law provides that a trial for invalidation of a patent cannot be demanded on the basis of a publication distributed in a foreign country once the prescribed period has expired.

On the other hand, the above court decision makes it clear that in the enforcement of Article 70 of the Patent Law providing that the technical scope of the patent rights shall be determined based on the description of a Claim or Claims, the Claim or Claims may be interpreted to exclude from the technical scope the invention known by a publication distributed in a foreign country prior to the filing of the application even if the period prescribed in Article 124 has been expired. This decision is acceptable.

6. Conclusion

(1) As explained in the foregoing, the current Japanese patent system adopts a worldwide basis only when the invention is known as disclosed in a publication. Accordingly, the novelty of an invention will not be denied merely for the reason that it was publicly known or publicly worked in a foreign country prior to the filing of the application in Japan or for the reason that the original text of the patent publication was laid open to the public in a Patent Office in a foreign country.

(2) According to a Supreme Court decision, "a publication" is defined as "a document, book or any other similar information transmitting media reproduced for the purpose of opening to the public by distribution".

Accordingly, for copies reproduced from the original text of a patent publication laid open to the public inspection at a Patent Office in a foreign country to be regarded as "a publication", they must satisfy certain requirements. If lack of novelty is to be established on the basis of such copies, it is necessary to first prove that they satisfy the requirements. However troublesome it may be, we have to live with it under the current Japanese Patent Law.

(3) In view of the fact that copies reproduced from the original text of a foreign patent publication laid open to the public inspection are distributed

to Japan through various service companies and in view of the fact that as a consequence of the rapid developments of various information transmitting means in recent years, information has become readily available in Japan, it appears that time is ripe for serious consideration to employ the worldwide bases for all novelty bars.

(4) In a case where a person entitled to obtain a patent (e.g. an inventor) has disclosed the invention in a publication prior to the filing of the application in Japan, the novelty of the invention will be saved only when the requirements of Article 30 (exceptions to lack of novelty of an invention) of the Patent Law are fully met. Accordingly, under the Japanese patent system it is advisable not to disclose the invention prior to the filing of the application.

REFERENCES

1. Tokyo High Court, Sho-48 (gyo-ke) 119, Decision delivered February 26, 1975
2. Tokyo High Court, Sho-50 (gyo-ke) 97, Decision delivered October 30, 1978
3. Ditto
4. Osaka District Court, Sho-52 (gyo-wa) 4423, Decision delivered December 14, 1979
5. Trial No. Sho-46-6444, Trial Decision delivered May 25, 1976
6. Trial No. Sho-46-804, Trial Decision delivered September 10, 1970
7. Tokyo High Court, Sho-49 (gyo-ke) 85, Decision delivered September 20, 1979
8. Tokyo High Court, Sho-50 (gyo-ke) 59, Decision delivered February 22, 1979

REFERENCE 1 (Summary of Decision No. Sho-50 (gyo-ke) 97, Tokyo High Court):

The sole issue in this case is whether or not the trial decision in which Article 29, Paragraph 1, Item 3 of the Patent Law, was applied on the ground that the original text of Belgian Patent No. 620107 was a publication distributed in a foreign country on its laying-open date, is justified. This court does not consider that even if the Belgian patent (original text) was published and laid open to the public inspection, it necessarily constitutes "a publication" distributed in a foreign country as stipulated in Article 29, Paragraph 1, Item 3 of the Patent Law, and decides that the trial decision is unjustifiable as erring in the interpretation and the application of the Patent Law. The reasons for this decision are as follows:

(1) The provisions of Article 29, Paragraph 1 list unpatentable inventions to define the requirements for patentability, and make it clear that they must be an invention, i.e. a certain technical concept and must meet at least one of the conditions "publicly known", "publicly worked" and "described in a publication distributed".

Accordingly, the "publication" stipulated in Item 3 of the Paragraph is distiguished from those stipulated in Items 1 and 2 of the Paragraph, and it is reasonable to understand that the publication is a document, a drawing or a photograph, in a form to express the certain technical concept, which is intended for distribution (distributable nature) to the common general public (public nature) and which was reproduced from the original model or the original text by means of printing, photography or photocopying reproduction, or any other similar means.

The public nature here is meant for elimination of secrecy and is distiguished from the distributable nature which is meant for

extensively distributing the reproduced copies. That the public nature differs from the distributable nature, is apparent, for instance, from the fact that the records of law suits or other actions are open to the public and available for reproduction, thus having a public nature, and yet they are not intended for distribution, nor do they have a distributable nature. Further, the distributable nature is meant for the intrinsic nature of the subject to be distributed which is intended for distribution, and accordingly, it is distinguished from the fact that the subject "has been actually distributed".

Further, it is reasonable to understand that the publication is meant for the one which is, after its content, i.e. a technical concept, has been reduced to a certain form such as writings or the like (i.e. establishment of the original model, the original text or the original), reproduced therefrom or therewith for the purpose of distribution. And, the original model, the original text or the original does not have such an intrinsic nature that it is intended for distribution to the common general public, although it may exist in a plurality of copies and may take various forms. (However, there may be an instance where it is identical with its reproduction in both the outer appearance and the content and no difference from the latter is observable also in its distributed form and thus, it is meaningless to distinguish the two. In such a special case, the two may be regarded as being the same.)

Plaintiff asserts that for a certain document to be regarded as a publication, it must have been reproduced in a number of copies and must have been available for distribution to the general public. However, there is an instance where a reproduction is prepared each time when a request is made and therefore even a single reproduction may be regarded as a publication so long as there is an intention for distribution.

Thus, there is no good reason in the assertion that a number of reproductions must have been available. On the other hand, Defendant asserts that even a single document should be regarded as a publication so long as it is prepared for the purpose of opening its content to the public and its copy is readily reproduceable and available and that the state in which its copy can immediately be prepared and available upon request, should be regarded as "distributed". However, it is apparent from the foregoing that even when a document is prepared for the purpose of opening its content, it can not be regarded as a publication so long as it is not expected to be distributed to the common general public.

.....(omitted).....

A Belgian patent is laid open to public about 3 to 6 months after the filing of the application and any person can obtain a copy thereof on or after the laying-open date. However, the specification itself (i.e. the original text) is always maintained in the Belgian Patent Office and will not be distributed elsewhere. Such being the case, the laid-open Belgian patent specification can not be regarded as the "publication distributed" in a foreign country as stipulated in Article 29, Paragraph 1, Item 3 of the Patent Law, since the original text is not of the nature to be distributed elsewhere although its copies may be distributed to other places. In the present case, there is no evidence which substantiates any other fact than mentioned above with respect to the original text of Belgian Patent No. 620107, and the original text can not be regarded as the "publication" distributed in a foreign country at the laying-open date.

REFERENCE 2 (Summary of Decision No. Sho-53 (gyo-tsu) 69, Tokyo Supreme Court):

The "publication distributed" stipulated in Article 29, Paragraph 1, Item 3 of the Patent Law is a document, a drawing or any other similar information transmitting medium reproduced for the purpose of opening to the public by distribution, and is meant for a distributed publication. Here, those reproduced for the purpose of opening to the public by distribution are not necessarily restricted to those which are already widely available to the public in the form of copies reproduced from the original texts in a sufficient number to meet the demands of the public in anticipation of the public inspection, and if the original text itself is laid open and available for free inspection by the public and if a facility is available whereby its copies can be supplied without delay upon request by the public, it is reasonable to understand that it may be the one which can be reproduced from the original text and supplied each time when a request is made by the public.

Referring to the present case in this respect, the original decision has rightly established that the first reference in question Exhibit No. Otsu-1) is identical in its appearance and content with the reproduced copies (hereinafter referred to as "the reproduced copies in this case") which Agpha Gefelt Co., Eastman Kodak Co, Ernst Reitz Co, Rolei Welke Co, etc., famous camera or film makers in West Germany obtained one after another as copies of West German Utility Model Registration No. 1859490 during a period from October 15, 1962 to November 14, 1962 i.e. prior to the filing of the application in this case, from the West German Patent Office or through German Patent Service Co, private service company, and can therefore be confirmed to be the ones

distributed by said Patent Office or by said German Patent Service Co. prior to the filing of the patent application in this case. Whereas, the specification in this case was laid open to the public inspection since that date at said Patent Office, as the application document of said utility model registered on October 4 of the same year, i.e. prior to the filing of the patent application in this case. Besides, it has been established by the original decision that any person who desired to obtain a reproduced copy of the original text of an application document of a registered utility model such as the specification in this case was normally able to obtain it from said Patent Office or through a private service company such as said German Patent Service Co. in about 2 weeks from the dispatch of an order. Thus, the reproduced copy in this case or the first reference is a document reproduced from the specification in this case for the purpose of opening to the public by distribution and was distributed prior to the filing of the patent application in this case, and accordingly, it can reasonably be regarded as the publication distributed, as stipulated in Article 29, Paragraph 1, Item 3 of the Patent Law.

REFERENCE 3 (Article 30 of the Patent Law)

(Exceptions to lack of novelty of invention)

(1) In a case of an invention which has fallen under any one of the Items of Article 29, Paragraph 1 by reason of the fact that the person entitled to obtain a patent has conducted an experiment, made a disclosure in a publication or made a disclosure in writing at a study meeting held by a scientific body designated by the President of the Patent Office, such invention shall be deemed not to have fallen under any one of the Items referred to, provided that such person has filed a patent application within six months from the date on which the invention first fell under those Items.

(2) In the case of an invention which has fallen under any of the items of Article 29, Paragraph 1 against the will of the person having the right to obtain a patent, the preceding article shall also apply, provided that such person has filed a patent application within six months from the date on which the invention first fell under those item.

(3) In the case of an invention which has fallen under any of the Items Article 29, Paragraph 1 by reason of the fact that the person having the right to obtain a patent has exhibited the invention at an exhibition held by the Government or by any local public entity (hereinafter referred to as the "Government ect.") or at one which is not held by the Government etc. but is designated by the President of the Patent Office, or at an international exhibition held in the territory of a country party to the Paris Convention by its government etc. or by a person authorized thereby, or at an international exhibition held in the territory of a country not party to the Paris Convention by its government etc. or by a

person authorized thereby where such country has been designated by the President of the Patent Office, Paragraph 1 shall also apply, provided that the person having the right to obtain a patent has filed a patent application within six months from the date on which the invention first fell under those Items.

(4) Any person who desires the application of Paragraph 1 or the preceding Paragraph with respect to an invention claimed in a patent application shall submit a written statement to that effect to the President of the Patent Office simultaneously with the patent application. Within 30 days of the filing of the patent application, he shall also submit to the President of the Patent Office a document proving that the invention claimed in the patent application is an invention falling under Paragraph 1 or the preceding Item.

REFERENCE 4 (Summary of Decision No. Sho-56 (gyo-ke) 22, Tokyo High Court):

For the consideration on the question of whether or not the trial decision is justifiable, Article 29, Paragraph 1 of the Patent Law provides that the inventions falling within the terms of any one of the items in said Paragraph are unpatentable as lacking in novelty and lists in its Item 3 "inventions described in a 'publication' distributed in Japan or in a foreign country prior to the filing of a patent application", whereas Article 30 of said Law provides that even such an invention shall not lose the novelty for the reason that the person entitled to obtain a patent has disclosed the invention in a publication prior to the filing of the application, if the invention has become to fall under said provisions of Article 29, Paragraph 1 as a result of the fact that said person has made "a disclosure in a 'publication' " and provided that said person files a patent application for the invention within 6 months from the date on which the invention became to fall under said provisions. While the same term in the same Law should be interpreted in the same way unless there is a special reason to interpret it differently, there is no special reason to interpret the term "publication" in Article 29, Paragraph 1, Item 3 of the Patent Law and the term "publication" in Article 30 of said Law differently, and accordingly, if a Patent Gazette distributed in Japan or a foreign country falls within the term "publication" in Article 29, Paragraph 1, Item 3 of the Patent Law, it must naturally likewise be interpreted to fall within the term "publication" in Article 30 of said Law. Since it is apparent that a Patent Gazette distributed in Japan or a foreign country falls within the term "publication" in Article 29, it follows that if the publication of the invention of the application in a Patent Gazette can be regarded to meet the condition that the applicant

(i.e. person entitled to obtain a patent) has made "a disclosure in a publication", the invention of the application does not lose the novelty for reason of the disclosure, provided the applicant files the patent application within 6 months from the date of the disclosure. However, the publication of the invention of the application in a Patent Gazette does not fall within the condition that a person entitled to obtain a patent has made "a disclosure in a publication", as stipulated in Article 30 of the Patent Law. The term "made a disclosure" (which corresponds to the term "presented a dissertation" in the English translation of Article 30 in attached Reference 3) in said Article is meant for the disclosure made by the person entitled to obtain a patent with his positive intention to disclose (emphasis added) and mere presence of a negative intention to permit someone else to disclose is not sufficient to meet the term "made a disclosure" in said Article. The publication of applications is made by the President of the Patent Office by publishing the prescribed particulars in the Patent Gazette (Article 51 of the Patent Law), and is not made on the basis of the positive intention of the applicant (i.e. a person entitled to obtain a patent) to disclose the invention of the application. It should be regarded that a person entitled to obtain a patent files a patent application with an intention to either obtain a patent right or prevent someone else to obtain a patent right (in the case where no request for examination is made) and not with an intention to disclose the invention of the application by the publication of the application in the Patent Gazette or by the laying open of the application.

The above mentioned principle regarding the disclosure of the invention by the Patent Gazette applies without difference to Japanese Patent Gazettes and U.S. Patent Publications. Although the trial decision is in error in the statement that the cited reference (U.S. Patent

Publication) is not included in the "publication" stipulated in Article 30, Paragraph 1 of the Patent Law, it finally concludes that the disclosure of the invention in the Patent Gazette can not be regarded as "a disclosure in a publication" by the person entitled to obtain a patent, as stipulated in Article 30, Paragraph 1 of the Patent Law, and the conclusion is right.

REFERENCE 5 (Summary of Decision No. Sho-52 (gyo-wa) 4423, Osaka District Court)

It is needless to say that once the Patent Office has granted a patent right with its exclusive authority, it is unwarranted for a court for a patent infringement suit to regard it to be invalid without good reason, and to judge the complaint on the assumption of invalidity, unless it has been judged to be invalid in the invalidation trial (and the subsequent patent administrative suit) prescribed in the Patent Law and the judgement has become conclusive. In further consideration, however, it should be noted that the Patent Law is designed, on one hand, to let the patent applicant disclose his new and ingenious technical art and to let it contribute to the development of industry and to the benefit of the public and, on the other hand, to grant a patent right thereby to entitle such a person to exclusively use the technical art for a prescribed period of time. Such a basic relationship in the balance of interests between the patent applicant and the general public should be duly taken into accounts when a court for an infringement suit determines the technical scope of a patented invention.

As a general rule, for the interpretation of a claim, it should be considered in its substance duly taking into consideration the nature, the objects and the detailed description of the invention and the accompanying drawings and without sticking merely to the wording of the claim, and especially when the invention includes certain matters which were already known and used at the time of the filing of the application, the invention should be interpreted to exclude such portions. In an exceptional case as is the present case where the technical concept of the patented invention was wholly known prior to the filing of the application,

the technical scope should be interpreted narrowly as far as possible so as to satisfy the basic requirement as mentioned above. Namely, even when the wording of the claim is composed of broad terms or functional or abstract expressions, the technical scope should be interpreted, irrespective of the wording, to be restricted to the technical construction specifically disclosed as the working example in the detailed description of the invention, within the technical concept thereby expressed.

With respect to the patent in this case, 5 years from the date of registration of the right were already passed at the initiation of the present suit, and the right was already established so that a demand for a trial for invalidation of the patent was no longer admitted on the ground that said DBGM was in existence. However, this matter must be distinguished from the matter that the technical scope of the patent in this case should be restrictively interpreted as mentioned above. Because, how to interpret the scope of the technical scope of a patent based on various materials and within the scope not departing from the intention of Article 70, is a matter for the court for an infringement suit to decide with its exclusive authority, and there is no good reason why a basic reference which happens to be a document known in a foreign country should be treated differently from other references. The fact that the patented invention in this case was known by a publication in a foreign country at the time of the filing of the application cannot itself be negated, and it is rather natural that this fact is taken into consideration in the determination of the technical scope of the patented invention. The neglect of the reference simply because 5 years have passed since the registration, is likely to lead to a result that the intention or consideration of the court to restrictively interpret the technical scope of the patented invention in a rare case where the invention was wholly known at the time of filing the application as an exceptional case will

thereby be meaningless. Further, it can not be justified as a reasonable consequence that the technical scope is inconsistently interpreted depending upon the timing of whether or not 5 years from the registration of the patent right in question have been passed at the time of the determination of the technical scope.

..... The technical scope of the patented invention in this case is restricted to the scope of the working example as disclosed in the detailed description and the accompanying drawing.

PATENT TERM RESTORATION - AN UPDATE

COMMITTEE NO. 1

RUDOLPH J. ANDERSON, JR.

Status report on the Patent Term Restoration Act of 1982 is provided. The activities of the Subcommittee on Courts, Civil Liberties and the Administration of Justice of the House Judiciary Committee chaired by Congressman Kastenmeier and by the full Judiciary Committee chaired by Congressman Rodino are given together with an analysis of the amendments to the legislation made by the respective committees. Action by the House of Representatives has not been completed. There is a possibility of such action in the course of a legislative session in early December.

PATENT TERM RESTORATION - AN UPDATE

PRESENTED BY RUDOLPH J. ANDERSON, JR.
ASSOCIATE GENERAL COUNSEL/DIRECTOR OF PATENTS
OF MERCK & CO., INC.
AT PACIFIC INDUSTRIAL PROPERTY ASSOCIATION
MEETING IN KOBE, JAPAN, NOVEMBER 3, 1982

At our meeting in New York last fall, we discussed the then current status of the United States legislative process with respect to the "Patent Term Restoration Act of 1982". At the time of our meeting, I had reported to you that the United States Senate had enacted this important legislation substantially in the form in which it had been introduced by Senator Matthias. A copy of the Matthias bill had been distributed at our meeting.

I then reported that important hearings by the Sub-Committee on Courts, Civil Liberties and the Administration of Justice of the Judiciary Committee of the House of Representatives were then occurring. These Subcommittee hearings, which were chaired by Congressman Kastenmeier the sponsor of the legislation in the House of Representatives, were most thorough. As I indicated then, testimony favoring the legislation had been provided to the Committee by representatives of industrial organizations, individual companies and universities. Written submissions in support of the legislation had been made to the Subcommittee by the American Patent Law Association and the Patent Trademark and Copyright Law Section of the American Bar Association. In hearings which occurred subsequent to our meeting, representatives of the Food and Drug Administration, the Environmental Protection Agency and the United States Patent and Trademark Office testified in favor of the legislation.

Testimony in opposition to the legislation was presented by the Generic Pharmaceutical Industry Association and by various consumer organizations associated with Ralph Nader such as Public Citizens Litigation Group, Public Citizen's Congress Watch and Public Interest Research Group.

More importantly, since our last meeting these groups have mounted major lobbying efforts and sought champions of their cause in other members of the United States Congress. These were successful in soliciting the aid of Congressmen Waxman of California and Gore of Tennessee. Congressman Gore held oversight hearings on the legislation in his capacity as Chairman of the Subcommittee on Investigations and Oversight of the House Committee on Science and Technology which hearings were designed to create a negative atmosphere in the House of Representatives with respect to the legislation.

In our legislative process in the House of Representatives, after hearings are completed on a particular bill, the Subcommittee meets in what is called a "mark-up session" to consider the legislation in the light of the hearings and to amend the originally introduced legislation in manners the Subcommittee deems appropriate. In this mark-up session significant changes in the text of the Patent Term Restoration Act of 1982 were made. I mentioned in my presentation to you last year two relatively technical changes that we anticipated would occur and, in fact, did occur. The portion of the legislation that would have expanded the scope beyond chemicals subject to the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA") 1947 and the Toxic Substances Control Act 1976 and to products subject to the Food and Drug laws was eliminated. Provision was made in the legislation for the extension of patents claiming processes for making products subject to premarketing regulatory review. When including such process patents the Subcommittee added to the legislation the principle that only one patent relating to any particular product for which regulatory approval was secured may be extended.

Several other significant amendments were offered by Congressman Kastenmeier and accepted by the Subcommittee. They were:

(1) The extension of the patent would be granted to the sponsor of the drug through the regulatory agency rather than to the patentee.

(2) The period of extension would be measured by a formula which would provide year to year extension for the period of regulatory review occurring prior to 10 years after the original patent filing date anywhere in the world and a 6 month extension for every year of regulatory review period subsequent to that time. The amendment also established that the total patent term after extension may not exceed 27 years from the filing of the first patent application anywhere in the world.

(3) The measurement of the regulatory review period for pharmaceuticals would date from the first use of the product in man rather than the filing with the regulatory agency of a petition for permission to use the product in man.

(4) The bill was made applicable only to patents which were granted subsequent to the date of enactment of the

Patent Term Restoration Act of 1982 which results in the bill being applicable only to patents which will expire in the year 2000 or later.

These amendments in total severely limited the benefits of the legislation to those innovators for whom the legislation was designed as an inducement to investment in innovation.

The first and the third amendments are the least innocuous but have the difficulty of diminishing the term of extension and complicated the administration of the law. For example, it is apparent that with such provisions a patentee in licensing his patent will be obliged to extract commitments from the licensee to seek extension of the licensed product and require diligence in insuring early use of the product in man.

The second amendment, while designed to insure early developmental activities of a patented invention to maximize the extension period, does severely cut back on the period of extension which will be available for a pharmaceutical product. Review of products currently under development in any individual firm will indicate that completion of the development activity and regulatory approval will often occur more than 10 years subsequent to the initial filing date of the concerned patent.

By far the most damaging amendment to the principles on which the legislation is founded is the amendment which limits the application of the law to patents granted subsequent to its enactment. I referred in my earlier presentation to the issue of the applicability of the legislation to products currently under development for which investment decisions remain to be made. Quite apart from the issue of the equity of providing patent extension for such products merely because they have so grievously suffered from loss of patent life, the loss of patent term restoration for products entering development or in early stages thereof, inevitably must adversely affect decisions on the investment of development funds when an inadequacy of return will be demonstrated by deficient patent life.

After the Subcommittee's action, the legislation was reported by the Subcommittee to the full Judiciary Committee of the House of Representatives for their acceptance. In mid-summer the full Judiciary Committee met to consider the bill as reported by the Kastenmeier Subcommittee. In the course of their deliberations several additional amendments to the legislation were offered, all of which were specifically oriented to detract from the benefits of the legislation to pharmaceutical companies. One amendment was introduced by

Congressmen Shaw of Florida and Frank of Massachusetts, with an allegation that they favored the principle of patent term restoration to induce innovation investment "but the bill went too far". They proposed to cut the period of extension for drug patents to the period measured by the filing of a complete New Drug Application (NDA) and its approval by the Food and Drug Administration. The result of such an amendment would, as is apparent to anyone in the pharmaceutical industry, completely destroy the purpose of the bill by providing so little period of extension as to be meaningless so far as investment decisions are concerned. From its early drafting, the legislation has tried to develop a reasonable relationship between the period of patent extension and the actual delays which have become the deterrent to innovation. This amendment while purportedly supporting the principle of the bill is clearly designed to destroy its desired effect.

A second amendment offered by Mr. Frank is non-germane to patent legislation and was designed to permit the copying of the color, shape and size of an innovator's pharmaceutical product by subsequent copies of the product, a matter currently in litigation in the United States. Both amendments were rejected by vote in the full Judiciary Committee.

The full Judiciary Committee favorably reported the bill as amended by the Kastenmeier Subcommittee to the full House of Representatives on August 4, 1982 and recommended its enactment.

At this point, I must digress from the chronology of my report to explain some relevant rules of the proceedings of our House of Representatives. Before a bill may reach the floor of the House of Representatives for debate, a hearing on the proposed legislation must be held by the House Rules Committee, which may be looked upon as a branch of the management of the House of Representatives. With respect to any legislation proposed for floor action, the House Rules Committee holds a hearing where the proponents of the legislation (usually the sponsors of the bill and the relevant committee chairpersons) testify as to the need for the legislation and the benefits to the public from its enactment. Opponents of the legislation are also permitted to testify, and the Rules Committee solicits information as to amendments to the reported legislation that might be proposed by various members of the House. The Rules Committee may grant an "open rule" which permits any germane amendment to be offered by any member of the House during floor debate of the bill. The Rules Committee may also grant a "closed rule" which permits no amendment, or it may grant a

"modified closed rule" which will permit only those amendments it specifies in its grant. The Rules Committee also specifies the amount of time which will be available for the floor debate on the bill.

There is a proceeding which avoids the necessity of the grant of a rule by the Rules Committee. Any Congressman (usually a subcommittee or committee chairman) may bring a motion on the floor of the House that the rules of the House of Representatives be suspended and a particular bill be enacted. Such a motion to suspend the rules limits the period of debate on the legislation and the legislation may not be amended during the debate. Such an amendment to suspend requires a two-thirds majority of those Congressmen present and voting. As you might expect, this procedure is normally reserved for non-controversial legislation.

Now back to the chronology.

After the favorable report of the House Judiciary Committee, Congressman Kastenmeier indicated that he believed the legislation to be non-controversial and announced his intention to bring the legislation forward to the House of Representatives under a motion to suspend the rules. The House of Representatives had scheduled a summer recess to commence August 19 and Congressman Kastenmeier in mid-August indicated that he did not plan for full floor action on the bill prior to the recess but would propose action when Congress reconvened subsequent to our Labor Day holiday in early September. On Monday, September 13, Congressman Kastenmeier rose on the floor of the House of Representatives and offered his motion to suspend the rules and enact the Patent Term Restoration Act of 1982 as reported by the full Judiciary Committee. In floor debate, Mr. Kastenmeier was supported by a number of other Congressmen including Congressman Rodino, Chairman of the Full Judiciary Committee. Strong statements of opposition to the legislation were given by Congressmen Waxman, Gore, Shaw and Frank. When the time for debate had been completed, the vote on the motion to suspend the rules was postponed to the morning of September 15 based on an earlier agreement of the members of the House to postpone voting on any issue until that date. (The reason for the postponement was the number of primary elections being held throughout the nation on Tuesday, September 14.) On September 15th Mr. Kastenmeier's motion to suspend the rules was brought to a vote and it failed to carry the necessary two-thirds majority by a vote of 250 affirmative and 132 negative. The vote was a bitter disappointment to the proponents of the legislation. While you may hear of reasons

such as supporting Congressmen fog-bound in airplanes that morning, the fact is the vote was lost by 5 votes.

Subsequent to the defeat of the motion to suspend the Rules, Subcommittee Chairman Kastenmeier and Judiciary Committee Chairman Rodino made a formal request to the House Rules Committee of the grant of a normal rule for the Patent Term Restoration Act of 1982. The request was placed on the agenda of the House Rules Committee which was then faced with an adjournment of the House of Representatives scheduled for October 1. The House Rules Committee scheduled a hearing on the rule for the legislation on the morning of Thursday, September 30, 1982. The hearing proceeded with appearances before the Rules Committee by Congressman Kastenmeier and other supporters of the bill and by Congressmen Frank and Shaw testifying with respect to their proposed amendments. The Rules Committee was required to suspend their hearings on the bill at noon in order to address other matters and did not return the hearings on this bill prior to the Congressional adjournment on October 1.

That is the position we find ourselves in today.

The crystal ball for predicting the future of the Patent Term Restoration Act of 1982 is very murky. Our Congress will reconvene - reluctantly - on November 30 in what is called a "lame duck" session. The session has been called by the President and the leadership of the Senate and the House of Representatives for the specific purpose of enacting appropriation legislation that is necessary to keep the administrative offices of the Federal government operating. During such a session other legislation pending in the Congress may be considered by either body.

Efforts continue looking towards the grant by the House Rules Committee of a rule permitting debate of the Patent Term Restoration Act by the House during the lame duck session. If the House enacts the legislation, there will be a requirement that members of the Senate and members of the House of Representatives meet in a "Conference Committee" to reconcile the differences between the legislation as enacted by the Senate and that enacted by the House. After the Conference Committee reconciles the bills and agrees on a single text, that specific text must be enacted by both the Senate and the House in a procedure which permits the legislation to be raised for floor vote without Rules Committee action. The murkiness of the crystal ball prevents one from forecasting whether such actions will occur and, more realistically, whether such actions can occur within the very narrow time frame of the projected three week period of the "lame duck" session.

As we have indicated in earlier presentations, if the current Congress adjourns without enactment by both Houses of the Patent Term Restoration Act of 1982, the legislation must be reintroduced into the next Congress. Then the proceedings in both the Senate and House of Representatives must start all over again with hearings, Subcommittee action, full committee action, Senate and House floor action and Presidential assent.

We had, of course, hoped to be able to present to you in today's paper a report of the enactment of the Patent Term Restoration Act of 1982 and its significance to innovative industry. I hope we may be able to do that as Chapter IV on this subject at the next meting of this group in the fall of 1983. Whether the presentation will be on the Patent Term Restoration Act of 1982 or 1983 remains to be seen.

Reasons for a Large Number of Patent Applications in Japan

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Abstract

Over 400,000 patent applications (including utility model applications) were filed in Japan in 1981. It was a number which was about 1.5 times larger than ten years before, while the number of the patent applications filed in any other major country remained on the same level, or even showed a tendency to decrease during the same period.

The change in the number of patent applications in Japan is closely correlated to that in the amount of its GNP. The number of patent applications is regarded as one of the indexes reflecting the industrial activities in Japan, particularly the activities of private enterprises.

This report discusses the reasons for the filing of such a large number of patent applications in Japan from three angles, i.e., (1) the patent system, (2) the policy of the individual enterprises, and (3) the national background.

The first reason resides in the incentive given to inventors by the patent system which is intended for promoting technological innovation and thereby contributing to the development of industry. In order to win its competition with other enterprises, each enterprise attaches great importance to the patent system granting exclusive rights, adopts improved patent management as a part of its operating strategy, and takes the necessary measures to encourage its employees to make inventions, and secure the patent protection thereof. This is the second reason. The common character of Japanese is the third reason which should not be overlooked, as it gives the individual Japanese an incentive to propose inventions.

Reasons for a Large Number of Patent Applications in Japan

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1. Introduction

According to the Japanese Patent Office Annual Report, over 400,000 patent and utility model applications were filed in Japan in 1981. More precisely, there were filed 216,208 patent applications with an increase of 14.1% over the previous year, and 198,979 utility model applications with an increase of 3.8%. The statistics indicate a continuously increasing tendency for both the patent and utility model applications.

The number of the patent and utility model applications filed in Japan in 1981 was about 1.5 times larger than ten years before, while the number of the applications in any other major country remained on the same level, or even showed a tendency to decrease during the period of 1972 to 1981. Why are such a large number of applications filed in Japan? Prior to discussing its reasons, we would like to make a brief review of the environment of business in Japan.

Since the Meiji era, Japan has always been aiming at catching up with advanced countries. The reinforcement

of domestic industry in international competitive power, and the acquisition of foreign money for the importation of the resources required by the growth of economy can be said to have been a national duty in order to enable people to become economically independent and achieve a high standard of living in a country having a population of over 110,000,000 in an area of only 380,000 km^2. The technological innovation achieved by the introduction of technology from advanced Western countries was particularly beneficial to us Japanese in order to realize the growth of economy after the Second World War. One of the important factors which facilitated the introduction of technology and promoted the technological innovation resided in the existence of the patent system which had already been a firmly established system as it was started in 1885. The introduction of technology enhanced investment on plant and equipment with a resultant increase in the competition among the enterprises in Japan. Every enterprise became more aware of the fact that its fate would depend on the development of technology, and was urged to cultivate a market for its products more aggressively, resulting in further promotion of industrial development in Japan. Under these circumstances, each enterprise recognized the importance of patent management, and expanded its organization for education and training on patents, in addition to making every endeavor for the rationalization of its operations as a whole.

We would now like to discuss the reasons which have served as an incentive to inventions and the filing of a

large number of patent and utility model applications in Japan, from three angles, (1) the patent system, (2) the policy of the individual enterprises, and (3) the national background.

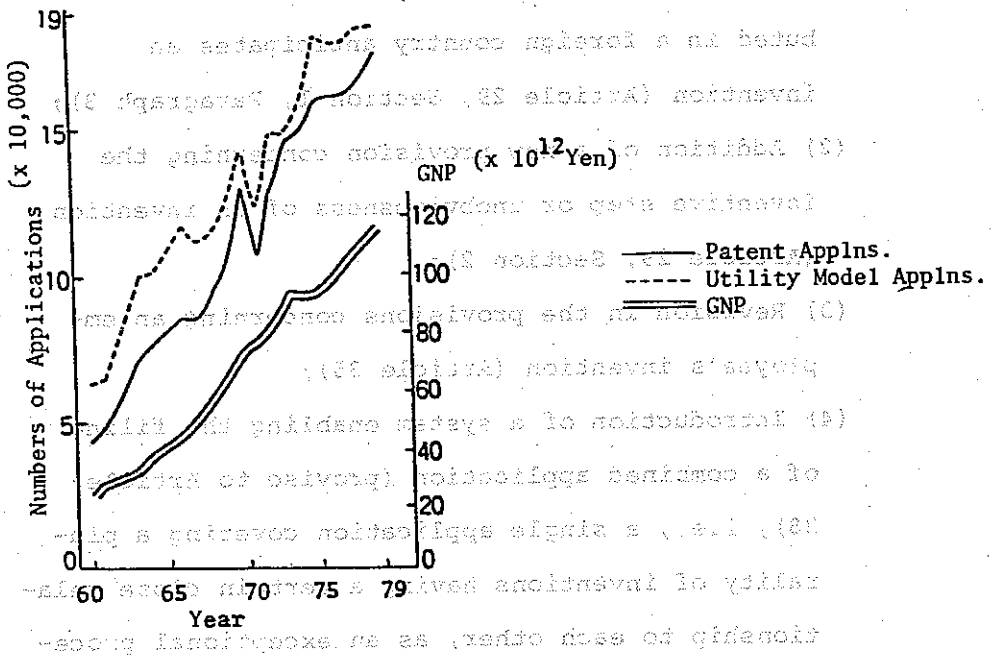
2. Reasons for a Large Number of Patent Applications in Japan

2-1 Reasons Relating to the Patent System

(1) Existence of the Patent System

We must, first of all, mention the existence of the patent system as a factor serving as an incentive to inventions. Article 1 of the Japanese Patent Law reads: "It is the object of this Law to protect inventions and promote the utilization thereof to give stimulus to inventions and thereby contribute to the development of industry." This indicates that Japan has adopted the patent system as a part of her industrial policy. FIGURE 1 graphically shows the changes in the numbers of patent and utility model applications in Japan, and her GNP.[1] Although it may not be fully correct to conclude that the numbers of the applications and the growth of economy had a definite correlation to each other, it appears that the numbers of the applications were closely related to the growth of economy during the period in which the economy of Japan grew remarkably and caught up with that of advanced countries. It may be correct to conclude from FIGURE 1 that the object of the patent system in Japan, which is to contribute to the development of industry, has so far been achieved satisfactorily.

FIG. 1 Numbers of Patent and Utility Model Application, and GNP



The Japanese Patent Law has, however, been revised a number of times in order to enable the patent system to fully function for the development and internationalization of industry. The principal revisions made after 1945 will be summarized below.

Law of 1959:

The remarkable technological progress and economical development after the war rendered the existing law of 1921 out of date, and called for an overall revision thereof. It was in those days that Japan entered upon the period of fast growth of her economy.

The principal revisions were as follows (see the extracts of several articles of the law at the end of this paper):

(1) Introduction of a new paragraph providing that the disclosure of a publication distributed in a foreign country anticipates an invention (Article 29, Section 1, Paragraph 3);

(2) Addition of a new provision concerning the inventive step or unobviousness of an invention (Article 29, Section 2);

(3) Revision in the provisions concerning an employee's invention (Article 35);

(4) Introduction of a system enabling the filing of a combined application (proviso to Article 38), i.e., a single application covering a plurality of inventions having a certain close relationship to each other, as an exceptional procedure to the principle of 'one invention in one application';

(5) Restriction to the term of a patent so that it may not exceed 20 years from the date of filing of the application (Article 67); and

(6) Addition of new provisions concerning infringement.

Revisions of 1970:

Although they were partial revisions of the law of 1959, they were important revisions altering the past patent system basically. The environment of business began to change greatly about 1965. The Japanese companies were confronted with the necessity of competing directly with leading foreign companies as a result of the liberalization

of capital import, and for other reasons, and the difficulty in introducing new technology. As they had already accumulated a lot of technology, however, the Japanese companies were able to engage actively in the development of their own technology. As a consequence, the number of the patent applications in Japan showed an increase of about 100% during ten years from 1960 to 1970. This, however, brought about a delay in the examination of the applications at the Patent Office. This delay not only caused inconvenience to the applicants, but also brought about overlapping research and investment by third parties, and therefore, overlapping applications which added to the number of outstanding applications in the Patent Office. Legal measures were taken to eliminate those problems.

The principal revisions were as follows (see the end of this paper for the relevant provisions):

(1) Introduction of a system for the early disclosure or laying open of applications to the public (Article 65 bis);

(2) Introduction of a system for the request for examination (Article 48 bis);

(3) Enlarged scope of prior applications (Article 29 bis); and

(4) Introduction of a system for the reexamination of an amended application prior to trial proceedings (Article 161 bis). If in a finally rejected application, any amendment for the specification or drawings has been filed within 30 days from

the date of a demand for trial, the application is reconsidered by the Examiner in the Examination Department prior to trial proceedings.

Revisions of 1975:

The law was partially revised again in 1975 to adapt itself to the internationalization of the patent system, particularly in view of the participation of Japan in PCT. The principal revisions were as follows:

(1) Introduction of a system for the patenting of inventions concerning substances, i.e., inventions relating to (a) food, drink or table luxuries, (b) medicines or a process for mixing them, and (c) chemical substances; and

(2) Introduction of the multiple claiming system (proviso to Article 36, Section 5). The multiple claiming system in Japan satisfies Rules 13.1 to 13.4 for PCT, as it allows a subclaim or subclaims to depend from one or more of claims conforming to the proviso to Article 38 of the Patent Law, without deviating from the concept or principle relative to the unity of invention.

Revisions of 1978:

The law was partially revised in 1978 in accordance with the ratification of PCT.

(2) Utilization of the Utility Model Law

In Japan, the creations of technical ideas are protected by two laws, the Patent Law and the Utility Model Law. The two laws are very closely related to each other,

and systematically highly analogous to each other. The Utility Model Law protects the creations of technical ideas relating to the shape or construction of an article or a combination thereof, and does not apply to any method or process. The creations do not need to be of any highly advanced level. Accordingly, the Utility Model Law is widely utilized for protecting improvements in the articles with which we are familiar. For example, 15.2% of the utility model applications filed in 1980 were concerned with daily commodities, while only 6.4% of the patent applications were.

Both big and small enterprises utilize the utility model registration system, partly because of the lower cost of filing. The official filing fee for a utility model application is at present ¥4,700, or $19.60 if $1.00 is equal to ¥240. There had been more utility model applications than patent applications until recently (see FIGURE 1).

Moreover, the lower the capital level is, the more utility model applications increase. In Japan, 99.4% of the enterprises are small and medium-sized enterprises which are capitalized at less than 100 million yen, and 81.1% of the salaried workers work for such small and medium-sized companies. The amount of shipment by small and medium-sized manufacturers occupies 53.2% of the total shipment of the manufacturers in Japan. Thus, those small and

medium-sized companies play a major role in the Japanese economy, and the utility model registration system which those companies can easily utilize is a very useful system. With an elevation in the international competitive power of the Japanese industry, however, there is an opinion to the effect that the Utility Model Law gives an unreasonable stimulus to petty inventions notwithstanding the international competition, and provides them with undue protection, resulting in an obstacle to industrial development rather than an incentive thereto.

(3) Narrow Interpretation of an Invention as to Unity

According to the multiple claiming system in the U.S. or West German Patent Act, EPC or PCT, the concept on the unity of invention, i.e., the scope of an invention, is in agreement with the concept on the unity of application, i.e., the scope of invention which can be covered by a single application. In Japan, however, inventions of different categories are, in principle, considered as separate inventions, as stipulated by Section 3 of Article 2 of the Patent Law (see the end of this paper). It can be said that the Japanese Patent Law adopts a narrower interpretation of an invention as to unity. When patent protection is desired for a particular technological concept, therefore, it is sometimes the case to look it upon as constituting a plurality of inventions, and file separate applications in respect of those inventions. As an exception to the principle of 'one invention in one application', however, the so-called combined application system enables

a plurality of inventions having a specific close relationship to each other to be incorporated into a single application (proviso to Article 38). Moreover, Article 36 of the Patent Law has in Section 5 thereof a proviso reading: "provided, however, that the claim or claims may further contain a statement of a specific mode or modes in which the invention shall be carried out" so that the Patent Law may conform to the Rules of PCT concerning multiple claiming. The combined application system is not compulsory, but is optional. A combined application has the advantage that its filing, examination and issue fees are lower than those for an ordinary application. It, however, has disadvantages, too. If one of the inventions has any reason for rejection, the application is, as a whole, rejected, even if no reason for rejection is found in any other invention. Any patent issuing from a combined application can be transferred only in its entirety. These complications often result in the filing of a plurality of applications even in case a combined application is possible. Table 1 shows changes in the proportion of combined applications filed in Japan based on the data appearing in the relevant Annual Reports of the Patent Office. As is noted therefrom, the applications filed from abroad showed a constant proportion of about 40%, but the proportion of the combined applications filed by domestic applicants showed a decrease year after year. The number of the combined applications by the domestic applicants remained substantially on the same level from 1977 to 1980, and showed even

an increase in 1981, but the proportion dropped to 10.4% in 1981, since the total number of applications increased greatly.

Table 1 Proportion of Combined Patent Applications

Year		1977	1978	1979	1980	1981
Total number of applications		(100.0) 161,006	(103.2) 166,092	(105.1) 174,569	(109.4) 191,020	(114.3) 218,261
By residents		(100.0) 135,991	(104.1) 141,517	(106.4) 150,623	(110.0) 165,730	(115.6) 191,645
By non-residents		(99.1) 25,015	(98.2) 24,575	(97.4) 23,946	(105.6) 25,290	(105.2) 26,616
Number of combined applications		(95.9) 27,706	(98.8) 27,361	(99.2) 27,149	(101.7) 27,605	(109.5) 30,241
By residents		(94.4) 17,599	(99.1) 17,433	(101.0) 17,612	(101.5) 17,876	(111.0) 19,838
By non-residents		(98.5) 10,107	(98.2) 9,928	(96.1) 9,537	(102.0) 9,729	(106.9) 10,403
Proportion (%)	Total	17.2	16.5	15.6	14.5	13.9
	By residents	12.9	12.3	11.7	10.8	10.4
	By non-residents	40.4	40.4	39.8	38.5	39.1

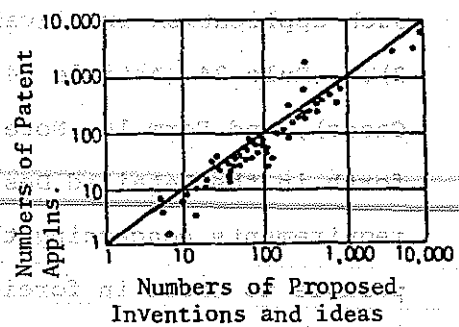
(As compared with the preceding year)

(4) Difficulty in the Judgment of Inventive Step

The judgment of inventive step or unobviousness of a particular invention is said to be a judgment on the possibility of concluding that it is not easily contemplated, or obvious from any prior invention when they are compared with each other comprehensively. Under the Patent Law, an invention can usually be discussed in three aspects, i.e., object, constitution and effect; therefore, its inventive step or unobviousness is usually determined by consideration on the foreseeability of those aspects from the prior art. In practice, however, the criterion is indefinite with a resultant issuance of a patent from an invention which is close to the prior art. This brings about difficulty in the evaluation of an invention by a person who is thinking of applying for a patent, and he goes ahead to file an application for patent on a proposed invention without evaluating it in any strict sense.

FIGURE 2 [2] compares the number of inventions proposed in Japanese enterprises and the number of their patent applications. It indicates that patent applications are filed on almost all of the inventions and ideas proposed in the enterprises. It appears, therefore, that a considerably large proportion of protective applications are filed on an invention or idea for which the applicant is not thinking of

FIG. 2 Inventions and Patent Applications of Japanese Enterprises



securing a patent, simply because its inventive step is difficult to determine. Moreover, there may be not a few companies whose staff members in charge of patent work are afraid of a problem arising from their conclusion that the invention lacks unobviousness, and is not worthy of any application for a patent. This tendency has, however, come to be corrected little by little recently, apparently because the enterprises have come to review carefully the technical report which The Invention Association started to publish in 1976 in order to lay protective inventions open to the public. The report laid open 6,793 applications in 1981. An increasing number of companies have been starting to review it year by year.

(5) Simple Specification Acceptable

Section 4 of Article 36 of the Patent Law reads: "The detailed description part of the specification shall set forth the object, constitutional features and effect of the invention to the extent enabling it to be worked easily by anybody of ordinary skill in the art to which the invention pertains." Any and all applications failing to satisfy the requirement are rejected (Article 49, Paragraph 3), and any and all patents issuing from any such application are invalidated (Article 123, Paragraph 3). Rule 24 (Article 24 of Rules of Practice in Patent Cases), and Form 16, Note 13 specify what should be set forth in the Detailed Description of the Invention. These requirements concerning the specification appear to be comparable to those in foreign countries, excluding the United

States. On the other hand, the U.S. Patent Act calls for a specification containing a complete and specific example or examples of the invention. The specification required in Japan is easier to prepare than the specification required in the United States. A simple comparison reveals that a specification prepared by a Japanese contains a smaller number of pages than a specification filed by an American in Japan.

The average number of pages was counted in the 50 published specifications prepared each by residents and non-residents (persons residing in the United States), and picked up at random from among those published in each of the chemical, mechanical and electrical fields during the period of January to July, 1982. The results are shown in Table 2.

Table 2. Comparison of specifications filed by residents and non-residents in number of pages.

Field / Inventor	Electrical	Mechanical	Chemical
Resident	2.42 pages	2.46	5.76
Non-resident	5.76	4.50	8.00

Even such a short specification is considered by the Patent Office as satisfying the disclosure requirements. A short specification is easy to prepare, and it is for this reason that an application is often filed in respect of what is still nothing but an idea, as shown in FIGURE 2.

Such a short specification is, needless to say, inexpensive.

(6) Early Disclosure Causing an Increase of Protective Applications

The early disclosure system is a system adopted by a lot of countries in Europe. In view of the trend of applications in those countries, the system per se does not always appear to serve as an incentive to inventions. In Japan, however, the system gives stimulus to protective applications, since it lays open to the public a lot of applications which are filed even in respect of what is nothing but an idea, as pointed out before. The laid-open applications form a source of information which gives stimulus to the promotion of activity for the proposal of new ideas and thereby the filing of more applications.

(7) Relatively Low Costs of Filing

In Japan, the official filing fee is at present ¥6,300 or $25.25 (if $1.00 is ¥240) in the case of a patent application, and ¥4,700 or $19.59 in the case of a utility model application, while the official filing fee in the United States was $65 even before the recent revision. It, however, costs about 328,500 or $1,368.75 in Japan to obtain a patent and maintain it in force until it expires, while the sum of only $175 was required in the United States until recently. Although it is in fact necessary to consider a considerably large amount of money payable to an attorney and for the preparation of application documents, too, it is still believed that the relatively low official filing fee in Japan serves an incentive to applications.

2-2 Reasons Relating to the Policy of Enterprises

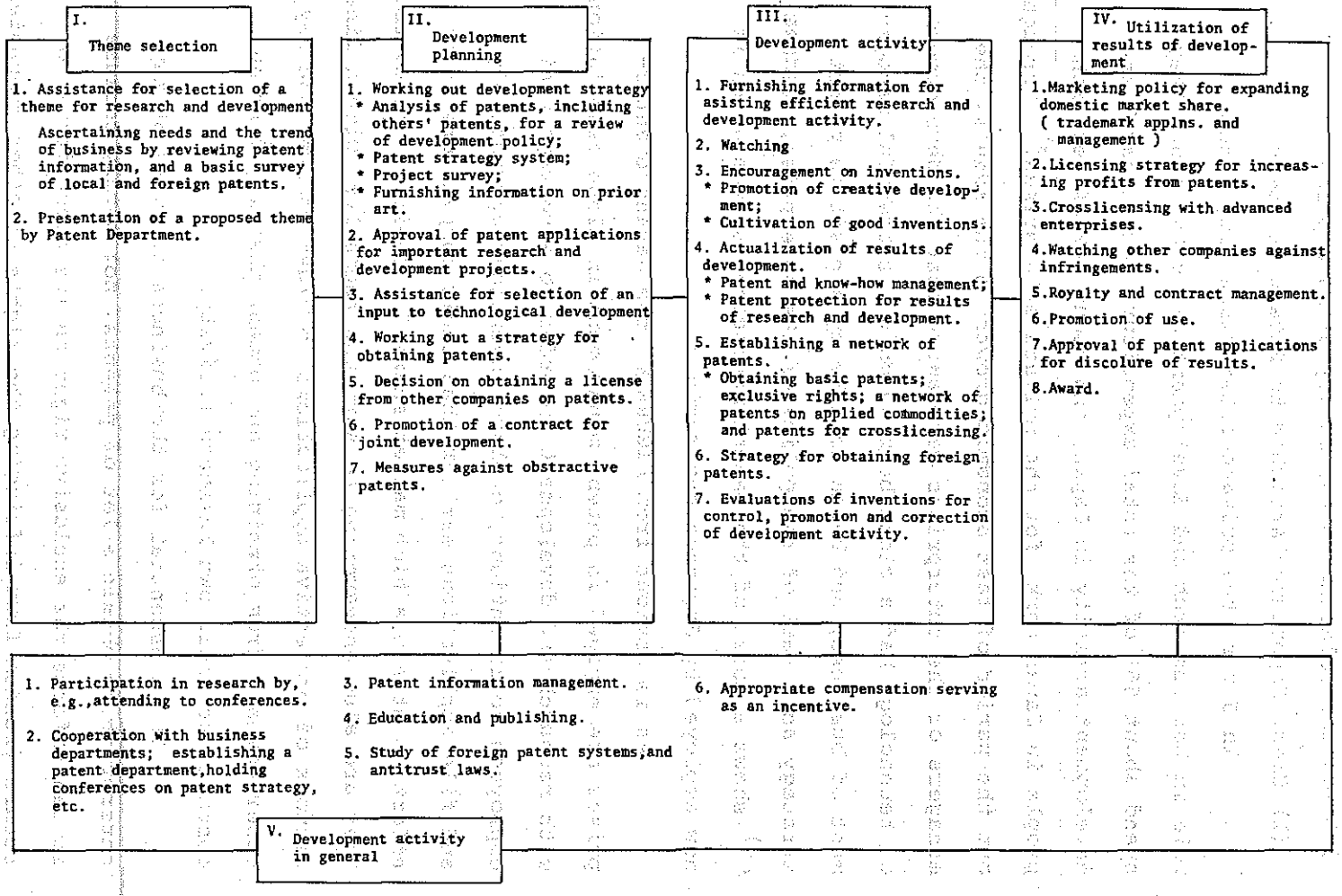
(1) Great Importance Attached to Patent Strategy

In Japan, the private enterprises play a major role in her research and development activity, since they spend about 65% of the total expenditure for research and development activity in Japan, and about 56% of research people in Japan work for the private enterprises.[3] Throughout the period of fast economic growth in the 1960's, the managers of the enterprises were aware that the development of technology had a close bearing on the successful management of business, and began to take up a positive patent strategy as a part of the policy of the enterprise. FIGURE 3[4] shows a model of the patent management system which is now employed by Japanese enterprises.

As is obvious from FIGURE 3, the Japanese enterprises are engaged in patent management in close association with research and development in order to encourage their employees to inventions, explore inventions aggressively and file applications earlier than their competitors in an effort to attain a high market share for their own products. They are also endeavoring to surround themselves with a fine network of protective applications in order to preclude any other company from obtaining any patent that may form an obstacle to their own business activity.

It is essential for the business activity of any enterprise to obtain a lot of patents, not merely because it can enforce the exclusive right on its competitors, or secure freedom from infringing the rights of other companies.

FIG 3. Contribution of patents to management for research and development.



They must also earn royalties from their patents to recover the money invested on research and development activity. They also need a lot of patents as a support for their business activity, since the number of the patents which a particular company owns is one of the criteria for its technological power. Moreover, they must secure patents for disposal in their crosslicensing arrangements with other companies which are essential as a result of the recent expansion in the scale and complication of technological development activity.

Table 3[5] shows the percentage of the patent and utility model applications of which examination was requested prior to the expiration of the statutory term. This table indicates the eagerness of many of the applicants to obtain patent protection. The remaining 30% or so of the applicants either abandoned obtaining a patent, or were the applicants of the so-called protective applications filed without any intention of obtaining a patent. It is a considerably large proportion, however, in view of the large number of applications as a whole. Incidentally, the request for examination is made for about 60% of the applications filed from abroad.

Table 4 shows the inventive population, etc. as classified by the scale of enterprises. The number of the applications handled per annum by each technical staff member in charge of patent work shows an increase with an increase in the scale of the enterprise. This is apparently due to the fact that a large enterprise has a well-powered

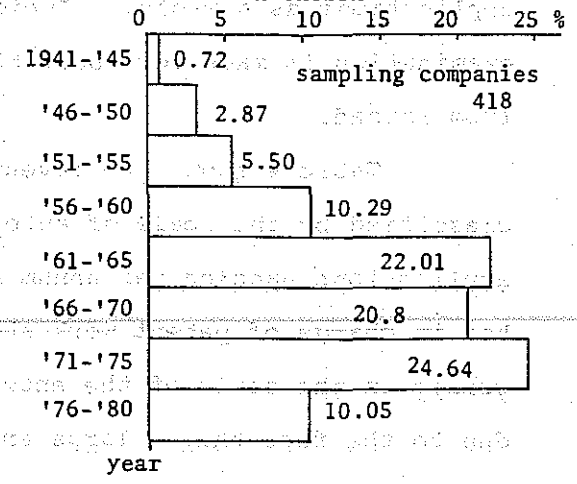
Table 4. Inventive population, etc. as classified by scale of enterprise (average), based on data obtained from 397 companies in Japan.

Number of employees	Number of inventors (A)	Number of staff member in charge of patents	Number of patent and utility model applns. per annum. (B)	B/A
300	36	1.5	12	0.32
500	60	2.3	22	0.36
700	84	3.0	32	0.38
1,000	120	4.0	49	0.41
2,000	240	6.9	113	0.47
3,000	360	9.5	185	0.51
5,000	600	14.2	340	0.57
7,000	840	18.5	510	0.61
10,000	1,200	24.6	783	0.65
20,000	2,400	42.5	1,799	0.75
50,000	6,000	87.6	5,401	0.90
70,000	8,400	114.3	8,087	0.96

Table 3. Final percentage of applications of which examination was requested.

Year filed	Patent	Utility model
1971	70.4 %	69.1 %
1972	70.5	69.1
1973	69.0	67.3
1974	-	66.1
1975	-	67.1
1976	-	65.7

FIG. 4 Percentage of companies having specific rules concerning empolyees' inventions



patent department, a complete patent management system, and a large inventive population composed of research and development engineers having a highly cultivated mind for patents.

(2) Award Encouranging Employees to Inventions

The Japanese Patent Law contains provisions which are intended for achieving a balance of benefits between an employer and an employee in connection with the handling of an invention made by an employee, particularly in respect of transfer from the inventor to the employer of the right to obtain a patent, and the compensation payable by the employer to the employee for any such transfer (Article 35). In this connection, a lot of enterprises maintain explicit rules concerning an employee's invention, and encourage the employees to inventions.

FIGURE 4[7] shows the time during which various companies introduced explicit rules concerning an employee's invention. As is obvious therefrom, many of the companies established explicit rules, and began to encourage their employees to inventions during the period of fast growth of economy in Japan. For details on the type and amount of the award and the time for its payment, see the last year's PIPA report entitled "Actual Condition of Organization and Function of Patent Division in Japanese Companies".

Among the remaining 26.8% of companies which do not have any specific rule concerning an employee's invention, there are 40.52% of companies which provide some kind of compensation or other by way of a proposal or awarding system. Accordingly, about 84% of companies provide some kind

of compensation or other to the inventors to encourage the employees to inventions.

(3) Training and Education on Patents

Although the patent department is now an important department of a company, its present position has only been achieved by the continuous efforts of the staff members and the education of people in the other departments of the company with respect to the importance of patents. There are a lot of enterprises which provide education on patents to, among others, engineers in charge of technological development by mainly the staff members of the Patent Department. The education covers a wide range of subjects, including the function of the patent system, the exploration of inventions, the drafting of a specification, and the search and utilization of information on patents. There are also a lot of companies furnishing the staff members of their patent department with training on patent work by an outside organization. A typical course for such training is held by The Japan Patent Association composed of 477 principal enterprises in Japan. Table 5[8] shows the changes in the number of participants in the training courses held by the association during the last five years. As is obvious therefrom, the number of the participants showed an increase year by year, which indicates the importance attached by those companies to education on patents. It is worthy of special notice that a lot of people not belonging to the patent department participated in Courses A (for beginners) and B (junior course), as shown in FIGURE 5.[9] This may

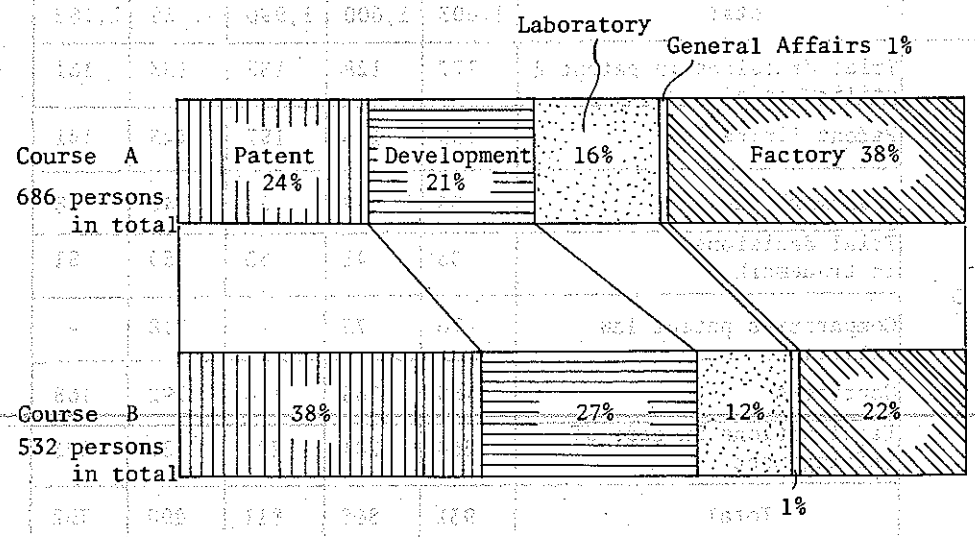
Table 5. Changes in the number of participants in training course.

Course	Contents	1977	1978	1979	1980	1981
A	Basic knowledge of industrial property	657	797	938	1014	1150
B	Basic knowledge of practice	430	403	432	360	403
C	Patent management	212	195	275	269	255
	Patent & Utility Model Laws	229	233	244	275	320
	Design Law	98	86	110	101	96
	Trademark Law	107	113	130	109	132
	Convention	68	111	161	140	152
	Foreign patents		200	225	248	249
	International trade	68	52	64	59	77
	Civil Code	165	136	150	178	184
	Code of Civil Procedure	107	121	116	119	106
	Specifications	253	207	306	338	383
	Information on patents	181	146	209	232	208
	Total	1,603	1,600	1,990	2,068	2,162
D	Trial decisions in patent & utility model cases	177	128	135	133	161
	Patent litigation	159	128	157	123	141
	Trademark Law	55	52	51	42	48
	Trial decisions in trademark	35	41	63	50	51
	Comparative patent law	76	73	-	118	-
	Contracts	165	165	184	192	168
	Legal actions in case of infringement	264	281	221	232	223
	Total	931	868	811	890	792

(Cont'd)

Course	Contents	1977	1978	1979	1980	1981
E	Trial decisions in patent & utility model cases	76	81	82	72	77
	Court decisions in civil cases	27	15	18	18	16
	Specifications in English	101	72	93	107	65
	Trademark practice	14	19	16	11	10
	Trial and court decisions on foreign patents	25	22	23	16	13
	Total	246	209	232	224	181
Grand total		3,867	3,877	4,400	4,556	4,688

FIG. 5 Departments to which participants in Course A and B belong.



be interpreted to indicate the intention of many enterprises to furnish their employees with a general knowledge of industrial property, though they are not engaged in patent work.

(4) Proposal System Serving as an Incentive to Inventions

A lot of companies in Japan maintain with a considerable degree of success a proposal system which encourages the employees to form a QC circle and propose improvements on jobs, while the company adopts constructive proposals actively. Table 6 [10] shows the recent changes in the number of the QC circles registered with the Union of Japanese Scientists and Engineers. It indicates a sharp increase year after year, and confirms the presence of vigorous activity of those circles.

Table 7 [10] shows the results of proposal activity.

Table 6. Number of QC circles registered.

Year	Number
1965	4,930
1970	33,499
1973	57,599
1976	78,395
1979	103,644

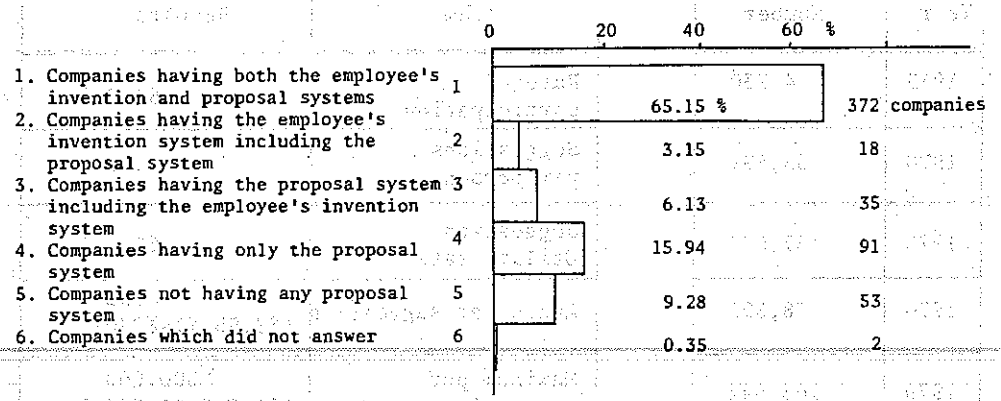
Table 7. Results of proposals.

Item	Results
Rate of participation	54.2 %
Suggestions per person	4.73
Suggestion Utility rate	60.7 %
Award per suggestion	¥852 ($3.55, $1=¥240)
Maximum per suggestion award	¥300,000 ($1,250, $1=¥240)
Economic effect per suggestion	¥15,823 ($66, $1=¥240)

The proposal system serves in the first place for cost reduction, in the second place for elevating the consciousness of employees for participation in management, and in the third place for enabling the employees to cultivate a mind for research and development. The third function of the system appears to be also effective for encouraging the employees to proposals on inventions. A lot of enterprises motivate their employees in the proposal activity by actively taking up inventive proposals and applying for patents or utility model registrations thereon. It appears that a lot of utility model applications originate from the proposal activity.

FIGURE 6 [7] shows the results of a survey on the relationship between the employee's invention system and the proposal system in Japanese companies. As many as 90.37% of the companies employ some form of the proposal system.

FIG. 6 Employees' inventions and proposals.
(based on data collected from 571 companies)



2-3 Reasons Associated with the National Background[11)]

(1) Geographical Conditions

Japan, an island country far away from the center of world economy and short of resources, was in a great disadvantage for industrial development. Her severe geographical conditions, however, created a national consensus that a technological innovation will make a reinforcement of domestic industry in international competitive power. The private enterprises were urged to endeavor for drastic rationalization. There were born activities by small groups, including the QC circles and ZD movement, and the proposal system which have grown into vigorous activity as a result of the great importance attached to ideas to satisfy the employees and create in their minds a highly elevated consciousness of partioipation in management. Japanese people are diligent, and good at working in accordance with a particular plan. This is a character cultivated by the environmental conditions of the country. Since Japan is situated in a region having a typical monsoon, the people have for a long time been forced to engage in agricultural work in accordance with a very tight schedule. That is why Japanese is a hard-working people respecting order, and this character of Japanese people appears to be closely related to the accurately programmed management of patent applications in Japanese enterprises.

(2) Social Structure

Japan is one of a very few countries who people consist of a single race speaking a single language. The

Meiji Restoration and the policy of democratization introduced after the Second World War gave birth to a mobile social structure in Japan. It is a social structure which enables everybody to have an opportunity to acquire a social position which deserves his efforts. Accordingly, young people have been willing to receive a high level of education, and devoting themselves to their jobs aggressively. The employees of Japanese companies are highly desirous of participating in inside or outside education or training courses on patents. In Japan, where communities were formed based on rice culture, the people are inclined to consider themselves as members of a group, rather than as individuals independent of one another. This nature of Japanese people is effectively utilized by Japanese enterprises in the form of the lifelong employment system. The employees work for their company very seriously, since their social position often depends decisively on the fate of their company.

(3) Investment for Technological Development

In the beginning of 1955, there was a strong demand for the renewal of plant/equipment, since the majority of plant/equipment in Japanese enterprises was still old equipment which they had been using since the end of the war. It was also necessary to expand facilities to meet the expansion of the market which was under way as a result of the progress of Japan's postwar rehabilitation. Moreover, Japan was behind other countries of the world in the world-wide trend for technological development during and after the war. Therefore, the productivity of the Japanese industry was, in those days,

greatly lower than an international level.

Under these circumstances, Japanese companies elected to introduce high-capacity equipment having a high level of productivity, while relying also on the importation of technology. The new equipment was, in most cases, innovational against the past process for manufacture. They were unable to compete with other companies without introducing new equipment. This gave rise to a successive competition among the enterprises on equipment investment. This competition naturally brought about a competition for technological development which in turn promoted the acquisition of patents as one of the indexes for the evaluation of the technological capacity of the enterprise.

(4) Industrial Policy

The safety of investment and the possibility of acquisition of the funds define an important factor which enables a particularly enterprise to decide to invest money on equipment. In this connection, the success of Japanese enterprises in aggressive investment on equipment was largely attributable to the industrial policy of the Japanese Government and the original financial mechanism in Japan.

Due to the shortage of foreign money in those days, the Government established a foreign currency allocation system which imposed a strict restriction on the foreign competitors of the Japanese industry. This was apparently a factor of the industrial policy which had a direct bearing on the boom for investment on equipment after 1945. In the

1960's and thereafter, the economic program of the Government served as an incentive to investment. During the period of fast growth of economy, the aggressive management of an enterprise had a high probability of success, and the management boom caused a lot of enterprises to attach great importance to a long-range management plan. The incentive long-range vision of the Government added to the aggressiveness of the individual enterprises.

The Ministry of International Trade and Industry published a guideline entitled "Policy Required for International Trade and Industry in the 1980's" in March 1980. It expressed three objects, as follows:

(1) Contribution of Japan on an international scale as a "great economic power";

(2) Elimination of the restrictions to which Japan, which is a country short of resources, is subjected; and

(3) Coexistence of "vitality" and "latitude".

The second object was, among others, an important element of the postwar economic policy in Japan. Technology is greatly expected to contribute to attaining these three objects, since it can produce the motive power for industrial development, and also create the possibility of new culture. In Japan, it is the private enterprises that promote the realization of the people's expectations for technology, as is obvious from 2-2 (1) above. The patent system is indispensable for such a technologically oriented country, as is obvious from the foregoing discussion. As a result,

Japan has seen the unique tendency that the number of patent applications increases substantially in harmony with an increase in GNP.

(5) Measures for the Promotion and Assistance of Inventions and Development [12)]

Technological innovation is a basic source of energy for an economic society, and is expected to contribute greatly to satisfying the people's needs which are versatile and directed to qualitative improvement. In Japan, above all, there is a national consensus to the effect that Japan has to establish herself as a "technologically established country". In accordance with this consensus, the government and private organizations take the measures for the promotion and assistance of inventions and technological development to support technological innovation.

The government takes various measures, including tax reduction or exemption, financial assistance and the payment of a subsidy, for promoting research and development activity, industrialization of new technology, and the patent protection thereof. More specifically, the measures connected with taxation include the exemption of tax for an increase in the costs of experimentation and research, and special depreciation for the machinery and equipment for use in the industrialization of new technology. The financial assistance includes special financing by the national technology promotion fund of the Japan Development Bank, and financing by Small and Medium Enterprise Finance Corporation. The subsidies which are presently available include a subsidy for research and development on important technology (Ministry of International Trade and Industry), a sub-

sidy for the experimental working of an invention (Agency of Science and Technology), a subsidy for technological improvement (Small and Medium Enterprises Agency), and a subsidy for research employing science and technology (Ministry of Transportation).

There are also subsidies available from local governmental authorities, for example, a subsidy available from the Government of Tokyo Metropolis for the promotion of inventions.

Promotional measures, such as invention contests and awarding systems for inventions, are also active. They include measures taken by the Small and Medium Enterprises Agency, such as awarding for distinct inventions, awarding for a person who has done a distinguished job in the field of science and technology, research, or the promotion of scientific and technological development, and rewarding of a person who has greatly contributed to the promotion of creations in his place of employment, awarding by The Invention Association for inventions on both a national and a local scale, invention contests held by The Invention Association and NHK, and All-Japan Exhibition of Inventions by Students and Pupils and All-Japan Exhibition of Inventions by Teachers which are both held by The Mainichi Press.

In addition, The Association of Patent Attorneys in Japan hold regular consultations on inventions. All of these measures contribute to the active cultivation and promotion of scientific and inventive minds.

3. Movements Resulting from the Increase of Applications

3-1 Measures Taken by the Patent Office for the Rationalization of Requests for Examination of Applications

The Patent Office has been considering that a large number of patent and utility model applications in Japan give birth to a tremendous volume of patent documents containing both valuable and valueless inventions, add difficulty to information management, bring about a delay in examination proceedings, and hinder the speedy granting of a right on a truly useful invention. In order to ensure the sound implementation of the patent and utility model systems, therefore, the Patent Office has been promoting the measures for the rationalization of patent and utility model applications and requests for examination thereof since 1976.

The principal measures include:

(1) Establishment of a system for cooperation between the government and the industry;

(2) Preparation of full data as classified by the field of industry, and ensuring of a prior search;

(3) Consolidation and improvement of the standards for examination; and

(4) Active utilization of technical reports for laid-open applications.

3-2 Movement for Revision of the Patent Law[14)]

The Law of 1959 and the Revisions of 1970 as hereinbefore explained can be said to have been introduced for a minimum of changes required to adapt the Patent Law to international changes without altering the existing legal system. The international position of the Japanese industry and the

rapid changes in the new age have given rise to a desire for an internationally applicable system for industrial property, and a request for revisions of the law.

The principal proposed revisions include:

(1) Reconsideration of the multiple claiming system. Bringing the system into complete conformation to Rule 13.1 for PCT, and discontinuing the handling of an originally single invention as a multiplicity of inventions.

(2) Introduction of the principle of absolute novelty. Maintaining a balance of protection between the general public and the inventor, and adopting the criteria which is prevalent throughout the world.

(3) Deletion of the term beyond which any trial for invalidation is rejected (Article 124).

(4) Revision or abolition of the utility model system. Reconsideration is required for the merits and demerits of the system which was originally intended for protecting petty inventions.

(5) Introduction of the right of domestic priority for the effective patenting of continually arising results of research.

4. Conclusion

Although there is now a movement for rectifying the trend for the filing of a large number of patent applications in Japan, we have newly recognized during our study that the patent system is closely related to the industrial activity in Japan, and effectively utilized for the benefit of busi-

ness management. The reasons or factors which we have picked up do not necessarily explain the filing of a large number of applications in Japan by themselves, but have a close bearing on one another. We also suppose that there are other reasons or factors which we have not mentioned.

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7) Questionnaire on the actual status of the employee's invention system, June 1980, Invention Association.

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9) Data of Japan Patent Association, 1976.

10) Journal of Japanese Trade & Industry, No. 2, 1982.

11) "Japanese Industry in the 1970's", Japan Economic Press.

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Extracts from the Patent Law

2 - (1) "Invention" in this Law means the highly advanced creation of technical ideas by which a law of nature is utilized.

(2) "Patented invention" in this Law means an invention for which a patent has been granted.

(3) "Working" of an invention in this Law means the following acts:
(i) in the case of an invention of a product, acts of manufacturing, using, assigning, leasing, displaying for the purpose of assignment or lease, or importing, the product;
(ii) in the case of an invention of a process, acts of using the process;
(iii) in the case of an invention of a process of manufacturing a product, acts of using, assigning, leasing, displaying for the purpose of assignment or lease, or importing, the product manufactured by the process, in addition to the acts mentioned in the preceding paragraph.

29 - (1) Any person who has made an invention which is industrially applicable may obtain a patent therefor, except in the case of the following inventions:
(i) inventions which were publicly known in Japan prior to the filing of the patent application;
(ii) inventions which were publicly worked in Japan prior to the filing of the patent application;
(iii) inventions which were described in a publication distributed in Japan or elsewhere prior to the filing of the patent application.

(2) Where an invention could easily have been made, prior to the filing of the patent application, by a person with ordinary skill in the art to which the invention pertains, on the basis of an invention or inventions referred to in any of the paragraphs of subsection (1), a patent shall not be granted for such an invention notwithstanding subsection (1).

29bis - Where an invention claimed in a patent application is identical with an invention or device (not being an invention or device made by the inventor of the invention claimed in the patent application) that has been described in the specification or drawings originally attached to the request of another application for a patent or for a utility model registration and where such other application was filed earlier than the patent application concerned and underwent publication (Kohkoku) or laying-open for pubic inspection (Kohkai) after the filing of the patent application concerned, a patent shall not be granted for the first-mentioned invention notwithstanding Section 29(1). However, this provision shall not apply where, at the time of filing of the patent application concerned, the applicant in the case of such application and the applicant in the case of the other application for a patent or utility model registration are the same person.

35 - (1) An employer, a legal entity or a state or local public entity (hereinafter referred to as the "employer etc.") shall have a non-exclusive license on the patent right concerned, where an employee, an executive officer of a legal entity or a national or local public official (hereinafter referred to as the "employee etc.") has obtained a patent for an invention which by reason of its nature falls within the scope of the business of the employer etc. and an act or acts resulting in the invention were part of the present or past duties of the employee etc. performed on behalf of the employer etc. (hereinafter referred to as an "employee's invention") or where a successor in title to the right to obtain a patent for an employee's invention has obtained a patent therefor.

(2) In the case of an invention made by an employee etc. which is not an employee's invention, any contractual provision, service regulation or other stipulation providing in advance that the right to obtain a patent or the patent right shall pass to the employer etc. or that he shall have an exclusive license on such invention, shall be null and void.

(3) The employee etc. shall have the right to a reasonable remuneration when he has enabled the right to obtain a patent or the patent right with respect to an employee's invention to pass to the employer etc. or has given the employer etc. an exclusive right to such invention in accordance with the contract, service regulations or other stipulations.

(4) The amount of such remuneration shall be decided by reference to the profits that the employer etc. will make from the invention and to the amount of contribution the employer etc. made to the making of the invention.

(Applications for patent)

36 - (1) Any person desiring a patent shall submit a request to the President of the Patent Office stating the following:

(i) the name and the domicile or residence of the applicant for the patent and, in the case of a legal entity, the name of an officer entitled to represent it;

(ii) the date of submission;

(iii) the title of the invention;

(iv) the name and the domicile or residence of the inventor.

(2) The request shall be accompanied by the specification and, if necessary, drawings stating the following:

(i) the title of the invention;

(ii) a brief explanation of the drawings;

(iii) a detailed explanation of the invention;

(iv) a claim or claims.

(3) Where a patent of addition is sought, the specification shall state the relationship of the addition to the invention for which an application for a patent of addition is made.

(4) The detailed explanation of the invention under subsection (2) (iii) shall state the purpose, constitution and effect of the invention in such a manner that it may easily be earned out by a person having ordinary skill in the art to which the invention pertains.

(5) In the claim or claims under subsection (2) (iv) there shall be stated only the indispensable constituent features of the invention or inventions described in the detailed explanation of the invention. However, in addition, stating specific forms of the invention or inventions is not precluded.

(6) Statements in the claim or claims under the preceding subsection shall be made as provided for in an ordinance of the Ministry of International Trade and Industry.

38 - A patent application shall relate to a single invention. Provided, however, that even in the case of two or more inventions, the following inventions having the relationship indicated below with one such invention (hereinafter referred to as "the specified invention") may be the subject of a patent application in the same request as the specified invention;

(i) inventions which have, as a substantial part of their indispensable constituent features, the whole or a substantial part of the indispensable constituent features of the specified invention and which have the same purpose as the specified invention;

(ii) where the specified invention relates to a product, inventions of processes of manufacturing the product, inventions of processes of using the product, inventions of machines, instruments, equipment or other devices for manufacturing the product, or inventions of products solely utilizing the specific properties of the product;

(iii) where the specified invention relates to a process, inventions of machines, instruments, equipment or other devices used directly in the working of the specified invention.

48bis - The examination of patent applications shall be earned out upon a request for examination.

49 - The examiner shall make a decision that a patent application is to be refused where it falls under any of the following paragraphs:

(i) the invention claimed in the patent application is not patentable in accordance with Section 25, 29, 29bis, 31, 32, 37 or 39 (1) to (4);

(ii) the invention claimed in the patent application is not patentable in accordance with the provisions of a treaty;

(iii) the patent application does not comply with the requirements of Section 36 (4) to (6) or 38;

(iv) the applicant for a patent who is not the inventor has not succeeded to the right to obtain a patent for the invention concerned.

65bis - (1) After one year and six months from the filing date of an application for a patent, the President of the Patent Office shall lay the application open for public inspection, unless the application has already been published.

(2) The laying-open for public inspection of a patent application shall be effected by publishing the following in the Patent Gazette:

(i) the name and the domicile or residence of the applicant;

(ii) the number and the date of the application;

(iii) the name and the domicile or residence of the inventor;

(iv) the particulars of the specification and the contents of the drawings attached to the request (with the exception of those whose publication in the Patent Gazette is, in the view of the President of the Patent Office, liable to conrtavene public order or morality);

(v) the number and the date of the laying-open of the application;

(vi) other necessary particulars.

67 - (1) The term of the patent right shall be 15 years counted from the date of publication of the patent application. Provided however that such term shall not exceed 20 years from the filing date of the patent application.

(2) Where a patent application is deemed to have been filed at the time of submission of an amendment in accordance with Section 40 or Section 53 (4) [including its application under Section 159 (1) (including its application under Section 174 (1)) and under Section 161ter (1)], the 20 years fixed in the proviso to the preceding subsection shall be counted from the day following the filing date of the original patent application, notwithstanding the said proviso.

(3) Where a patent right of addition has become an independent patent right in accordance with Section 75 (1), the term of the independent patent right shall be the remainder of the term of the principal patent right.

123 - (1) In the following cases, an trial may be demanded for the invalidation of a patent. In this context, if there are two or more inventions claimed, a trial may be demanded for each invention. The cases referred to are:

(i) where the patent has been granted contrary to Section 25, 29, 29bis, 32, 37 or 39 (1) to (4);

(ii) where the patent has been granted contrary to the provisions of a treaty;

(iii) where the patent has been granted on a patent application which does not comply with the requirements of Section 36 (4) or (5);

(iv) where the patent has been granted on a patent application filed by a person who is not the inventor and has not succeeded to the right to obtain a patent for the invention concerned;

(v) where, after the grant of the patent, the patentee has become a person who can no longer enjoy a patent right under Section 25 or the patent no longer complies with a treaty.

(2) Even after the extinguishment of a patent right, a trial under the preceding subsection may be demanded.

(3) Where a trial under subsection (1) has been demanded, the trial examiner-in-chief shall notify the exclusive licensee with respect to the patent right and other persons who have any registered rights relating to the patent.

124 - Where a patent has been granted for an invention which was described in a publication distributed in a foreign country prior to the filing of the patent application or for an invention which could easily have been made on the basis of such invention by a person with ordinary skill in the art to which such invention pertains, a trial on the patent under Section 123 (1) may not be demanded after five years from the registration of the establishment of the patent right.

161bis - Where, in the case of a demand for trial under Section 121 (1), an amendment has been made to the specification or drawings attached to the request in the patent application concerned within 30 days of such demand, the President of the Patent Office shall cause the examiner to examine the demand. The same shall apply in the case of opposition under Section 55 (1) as applied under Section 161ter (3).

SPEAKER: WILLIAM T. MCCLAIN
STANDARD OIL COMPANY (INDIANA)

COMMITTEE NO. 1

THE NEW U. S. PATENT AND TRADEMARK OFFICE FEES

WILLIAM T. MCCLAIN

ABSTRACT

THE UNITED STATES PATENT AND TRADEMARK OFFICE HAS EMBARKED UPON A PLAN TO UPGRADE ITS OPERATIONS, SO AS TO BETTER SERVE APPLICANTS FOR PATENTS AND TRADEMARKS. IN ORDER TO UPGRADE THE PTO, INCREASED FUNDS ARE REQUIRED AND RECENT LEGISLATION, PUBLIC LAW 97-247, HAS NOW BEEN ENACTED WHICH WILL SUBSTANTIALLY INCREASE THE PTO FEES PAID BY APPLICANTS FOR U. S. PATENTS AND TRADEMARKS, EFFECTIVE OCTOBER 1, 1982. SINCE THE TOTAL MINIMUM FEES FOR FILING, ISSUING AND MAINTAINING A U. S. PATENT WILL INCREASE ABOUT TENFOLD, APPLICANTS MAY DESIRE TO GIVE MORE CAREFUL CONSIDERATION IN THE FUTURE TO THE DESIRABILITY OF FILING U. S. PATENT APPLICATIONS AND MAINTAINING RESULTING PATENTS.

The New U. S. Patent and Trademark Office Fees

The United States Patent and Trademark Office (PTO) has embarked upon a plan to upgrade its operations, so as to better serve applicants for patents and trademarks. According to Commissioner Gerald J. Mossinghoff, the PTO goals include the following:

1. Better manage the 218,000-case backlog of pending patent applications by, among other things, hiring additional patent examiners.

2. Reduce the average time from filing to issue of patent applications to eighteen months by 1987.

3. In trademarks, to reduce the time for issuing a first opinion on registrability to three months and for completing the application process to thirteen months, both by 1985.

4. To move toward a fully automated PTO by the use of computerized records to replace paper documents.

5. To improve the searching capabilities of patent examiners by the use of computers.

In order to upgrade the PTO, increased funds are required, and recent legislation has now been enacted which will substantially increase the PTO fees paid by applicants for U. S. patents and trademarks. Prior to 1982 the PTO was funded totally by appropriations from the Congress, with PTO fees going to miscellaneous receipts or the general fund of the U. S. Treasury. Under the new statute the PTO fees are designed to provide "adequate and stable funding for the PTO" and will be held by the PTO and used for achieving its goals, while the Congress will appropriate funds only for the public support portion of the PTO budget.

As of October 1, 1982 the new statute, Public Law 97-247, amends Section 41 of Title 35 of the United States Code and Section 31 of the Trademark Act of 1946 (15 U.S.C. 1113) to achieve full cost recovery for patent and trademark application processing as follows:

PATENT PROCESS	50%
MAINTENANCE	50%
DESIGN PROCESS	100%
TRADEMARK PROCESS	100%
SERVICES	100%
RE-EXAMINATION	100%

THIS STATUTE SUPERSEDES THE FEE PROVISIONS OF PUBLIC LAW 96-517 WHICH WOULD HAVE RAISED PATENT AND TRADEMARK FEES TO A 50% COST RECOVERY LEVEL.

THE NEW PATENT FEES ARE SET BY STATUTE, BUT MAY BE ADJUSTED BY THE PTO COMMISSIONER ON OCTOBER 1, 1985 AND EVERY THIRD YEAR THEREAFTER, TO REFLECT ANY FLUCTUATIONS OCCURRING DURING THE PREVIOUS 3 YEARS IN THE CONSUMER PRICE INDEX. THIS IS DESIGNED TO PERMIT THE PTO TO KEEP UP WITH OPERATIONAL COSTS WITHOUT THE NEED FOR FURTHER CONGRESSIONAL ACTION. WITH RESPECT TO TRADEMARK FEES, THE NEW STATUTE GRANTS THE PTO COMMISSIONER DISCRETION TO ADJUST FUTURE FEES TO PERMIT FULL COST RECOVERY AS COSTS RISE, AND THESE FEES MAY ONLY BE USED TO FUND TRADEMARK OPERATIONS.

THERE ARE A NUMBER OF OTHER AMENDMENTS TO THE PATENT AND TRADEMARK LAWS CONTAINED IN THE NEW STATUTE, WHICH, FOR THE MOST PART, I WILL NOT COVER TODAY. HOWEVER, SEVERAL PARTS ARE WORTH COMMENTING ON. FIRST, THE NEW STATUTE PROVIDES FOR A TWO-TIER PATENT FEE SYSTEM IN THAT INDEPENDENT AND SMALL BUSINESS INVENTORS, AS WELL AS NON-PROFIT ORGANIZATIONS WILL PAY ONLY 50% OF THE ACTUAL PATENT PROCESSING COSTS. ALSO, THE NEW LAW REQUIRES SIGNIFICANT FEES FOR EXTENSIONS OF TIME FOR RESPONDING TO AN OFFICE ACTION IN A PATENT APPLICATION AND OF PERIODIC FEES FOR MAINTAINING A PATENT IN FORCE. UNRELATED TO FEES, BUT OF SIGNIFICANCE, IS THE PROVISION FOR VOLUNTARY BINDING ARBITRATION OF PATENT VALIDITY AND INFRINGEMENT ISSUES, AND FOR CORRECTION OF INVENTORSHIP SO AS TO PERMIT SUBSTITUTION OF ONE SOLE INVENTOR FOR ANOTHER. THESE FEATURES ARE INTENDED TO IMPROVE THE PATENT SYSTEM AND ENCOURAGE INNOVATION, AS WELL AS TO HELP RELIEVE THE BURDEN ON THE FEDERAL COURTS. AS TO TRADEMARKS, THE CONTINUED USE REQUIRED TO BE SHOWN ON THE SIXTH YEAR UNDER SECTION 8(A) OF THE TRADEMARK ACT WILL HAVE TO BE USE "IN COMMERCE," AND SECTION 15

OF THE TRADEMARK ACT IS AMENDED TO PROVIDE THAT THE DATE OF REGISTRATION IS THE CRITICAL DATE FOR PURPOSES OF INCONTESTABILITY.

FOR YOUR INFORMATION, I HAVE ATTACHED A COPY OF THE "PTO RULES THAT WILL GO INTO EFFECT OCTOBER 1ST" PUBLISHED BY THE U. S. PTO AND BASED UPON PUBLIC LAW 97-247. THE ATTACHMENT GIVES MORE DETAILED INFORMATION REGARDING THE NEW RULES AND PTO FEES FOR THOSE OF YOU WHO ARE INTERESTED.

FOR THE PURPOSE OF COMPARISON, THE FOLLOWING CHART SHOWS TYPICAL PTO FEES IN EFFECT PRIOR TO OCTOBER 1, 1982 AND ALSO SIMILAR FEES UNDER THE NEW STATUTE WHICH ARE APPLICABLE TO MOST PIPA MEMBER COMPANIES:

	Prior to 10/1/82	After 10/1/82
Utility Patents		
Base Filing Fee	$ 65	$ 300
Each Independent Claim Greater Than 1	$ 10	$ 30/claim in excess of three
Each Claim Over 10	$ 2	$ 10/claim in excess of twenty
Multiple Dependent Claim(s)	-	$ 100
Base Issue Fee	$ 100	$ 500
Per Page of Printed Specification	$ 10	-
Per Sheet of Drawings	$ 2	-
Re-examination Request Fee	$ 1500	$ 1500
Appeal Fee	$ 50	$ 115
- Brief	$ 50	$ 115
- Oral Hearing	0	$ 100
Maintenance Fee	None	3½ years after grant $ 400 7 " " " $ 800 11½ " " " $1200
Design Patents		
Filing Fee	$ 20	$ 125
Issue Fee		
3½ year term	$ 10	
7 " "	$ 20	
14 " "	$ 30	$ 175 (14 year term for all)
Trademark		
Filing Fee (per class)	$ 35	$ 175
Renewal Fee (per class)	$ 25	$ 300

REGARDING THE PAYMENT OF MAINTENANCE FEES, NOTE THAT THERE IS A PROVISION FOR A GRACE PERIOD OF SIX MONTHS AFTER THE DUE DATE, OR EVEN LATER IF THE DELAY IN PAYMENT IS SHOWN TO THE SATISFACTION OF THE PTO COMMISSIONER TO HAVE BEEN UNAVOIDABLE.

MAINTENANCE FEES WILL BE REQUIRED ONLY FOR UTILITY PATENTS BUT NOT FOR DESIGN OR PLANT PATENTS. THESE FEES ARE REQUIRED FOR PATENTS MATURING FROM PATENT APPLICATIONS FILED AFTER DECEMBER 12, 1980. HOWEVER, FOR PATENT APPLICATIONS FILED AFTER THE ABOVE DATE, BUT PRIOR TO AUGUST 27, 1982, THE MAINTENANCE FEES ARE ONE-HALF THOSE FOR APPLICATIONS FILED AFTER AUGUST 27, 1982.

THE NEW LAW ALSO PROVIDES THAT ABANDONED PATENT APPLICATIONS MAY BE REVIVED AS A PENDING APPLICATION IF IT CAN BE SHOWN THAT THE ABANDONMENT WAS UNAVOIDABLE OR UNINTENTIONAL. IF THE ABANDONMENT WAS UNAVOIDABLE, A $50 PETITION FEE AND SHOWING WOULD BE REQUIRED AS UNDER THE PRACTICE PRIOR TO OCTOBER 1, 1982. IF THE ABANDONMENT IS UNINTENTIONAL THE APPLICATION CAN BE REVIVED

BY FILING A STATEMENT THAT THE ABANDONMENT WAS UNINTENTIONAL AND BY PAYMENT OF $500.

THE TWO-TIER FEE SYSTEM FOR PATENT APPLICATION PROCESSING, PATENT ISSUANCE AND PATENT MAINTENANCE APPLIES ONLY TO UTILITY PATENTS AND NOT TO DESIGN OR PLANT PATENTS. SMALL ENTITIES PAY ONLY ONE-HALF THE NORMAL FEES. SUCH SMALL ENTITIES ARE INDEPENDENT INVENTORS AND NON-PROFIT ORGANIZATIONS, AS WELL AS SMALL BUSINESS CONCERNS DEFINED BY SECTION 3 OF THE SMALL BUSINESS ACT AND REGULATIONS ESTABLISHED BY THE SMALL BUSINESS ADMINISTRATION. THE PTO COMMISSIONER HAS BEEN GIVEN AUTHORITY TO ESTABLISH REGULATIONS DEFINING INDEPENDENT INVENTORS AND NON-PROFIT ORGANIZATIONS, BUT THESE REGULATIONS WERE NOT AVAILABLE TO THE WRITER AT THE TIME OF THIS WRITING. NON-PROFIT ORGANIZATIONS PROBABLY WILL BE DEFINED AS UNIVERSITIES OR OTHER INSTITUTIONS OF HIGHER LEARNING AND CONCERNS WHICH ARE TAX-EXEMPT UNDER CERTAIN SECTIONS OF THE INTERNAL REVENUE SERVICE CODE. FOR PTO PURPOSES, IT IS EXPECTED THAT SUCH A SMALL BUSINESS CONCERN WILL LIKELY BE

DEFINED AS A CONCERN WHICH, TOGETHER WITH ITS AFFILIATES, DOES NOT HAVE MORE THAN 500 EMPLOYEES. IN ORDER TO CLAIM THE BENEFIT OF THE LOWER FEES A VERIFIED STATEMENT WILL PROBABLY BE REQUIRED AS TO THE STATUS OF THE APPLICANT, TOGETHER WITH AN ACKNOWLEDGEMENT OF THE DUTY TO FILE A NOTIFICATION OF ANY CHANGE IN STATUS RESULTING IN LOSS OF ENTITLEMENT TO SMALL ENTITY STATUS PRIOR TO PAYMENT OF ANY ISSUE FEE OR MAINTENANCE FEE. MISREPRESENTATIONS MAY JEOPARDIZE THE VALIDITY OF THE APPLICATION OR PATENT TO WHICH THE VERIFIED STATEMENT IS DIRECTED. THIS ALSO IS TO BE CLARIFIED BY THE PTO IN THE FUTURE.

UNDER THE 1965 FEE SYSTEM THE AVERAGE FEE FOR FILING A PATENT APPLICATION HAS BEEN $85 AND THE AVERAGE ISSUE FEE HAS BEEN $145. UNDER THE NEW STATUTE THESE FEES WILL BE, FOR THE MOST OF OUR COMPANIES, A MINIMUM OF $300 PLUS $500 FOR FILING AND ISSUE FEES, RESPECTIVELY, PLUS MAINTENANCE FEES OF UP TO $1200 MINIMUM. IN VIEW OF THE SUBSTANTIAL INCREASE IN PTO FEES,

ALL OF US MAY WANT TO GIVE CAREFUL CONSIDERATION TO THE DESIRABILITY OF FILING CERTAIN PATENT APPLICATIONS, TO THE NUMBER AND TYPES OF CLAIMS TO BE INCLUDED, AND TO THE TIMELENESS OF RESPONSES. THEN, LATER ON, IT WILL ALSO BE IMPORTANT TO REVIEW THE DESIRABILITY OF MAINTAINING ISSUED U. S. PATENTS, AS WE NOW DO WITH PATENTS OF CERTAIN OTHER COUNTRIES.

that which is shown in his Federal registration of the mark.

Trademarks are among the most valuable assets of modern business. In addition to identifying and distinguishing the goods or services of one individual from those of another, a trademark lets consumers continue to purchase those goods and services which they have found to be satisfactory.

H.R. 5154 would protect this dual role which trademarks have of protecting both the interests of businesses and those of consumers from improper State regulation. It is particularly important that businesses should not have to bear the burden of divergent State regulations concerning the display of federally registered marks where nationwide advertising and promotion of the marks are involved.

I urge my colleagues to vote in favor of H.R. 5154.●

The SPEAKER pro tempore. The question is on the motion offered by the gentleman from Wisconsin (Mr. KASTENMEIER) that the House suspend the rules and pass the bill, H.R. 5154, as amended.

The question was taken; and (two-thirds having voted in favor thereof) the rules were suspended and the bill, as amended, was passed.

A motion to reconsider was laid on the table.

GENERAL LEAVE

Mr. KASTENMEIER. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days in which to revise and extend their remarks on the bills, H.R. 6872 and H.R. 5154, both having just been passed.

The SPEAKER pro tempore. Is there objection to the request of the gentleman from Wisconsin?

There was no objection.

"PTO RULES THAT WILL GO INTO EFFECT OCTOBER 1ST"

DEPARTMENT OF COMMERCE

Patent and Trademark Office

37 CFR Parts 1 and 2

[Docket No. 2714-129]

Revision of Patent and Trademark Fees Confirmation

AGENCY: Patent and Trademark Office, Commerce.

ACTION: Confirmation of rules.

SUMMARY: This document confirms certain rule changes for patent and trademark fees and fee-related procedures which take effect on October 1, 1982. These rule changes implement H.R. 6260 which was enacted as Pub. L. 97-247 on August 27, 1982.

EFFECTIVE DATE: October 1, 1982.

FOR FURTHER INFORMATION CONTACT:

As to the patent rules contact: R. Franklin Burnett, by telephone at (703) 557-3054 or by mail addressed to the Commissioner of Patents and Trademarks, Attention: R. Franklin Burnett, Room 3-11A13, Washington, D.C. 20231.

As to the trademark rules contact: Miss Maude Williams, by telephone at (703) 557-2222 or by mail addressed to the Commissioner of Patents and Trademarks, Attention: Miss Maude Williams, Room 3-11C17, Washington, D.C. 20231.

SUPPLEMENTARY INFORMATION: The Patent and Trademark Office is required by law to publish a notice in the Federal Register of its fees at least 60 days before the effective date thereof (35 U.S.C. 41 (g)). Thus, on July 30, 1982 a final rule document was published at 47 FR 33088 setting forth rule changes for patent and trademark fees and procedures which take effect on October 1, 1982. The document was based on the public law in effect at that time, Pub. L. 96-517 and on H.R. 6260, which was then pending but is now Pub. L. 97-247.

The final rule document published on July 30, 1982, in the Federal Register sets out—

(1) Rules that are common to both Pub. L. 96-517 and H.R. 6260 (now Pub. L. 97-247);

(2) Alternative A which contains rule changes implementing Pub. L. 96-517 alone; and

(3) Alternative B which contains rule changes implementing H.R. 6260 (now Pub. L. 97-247).

H.R. 6260 was enacted as Public Law 97-247 on August 27, 1982, and the Patent and Trademark Office hereby confirms that the rule changes common to both Pub. L. 96-517 and H.R. 6260 and Alternative B are those which go into effect on October 1, 1982. The rules under Alternative A are hereby withdrawn. Additional rule changes required by Pub. L. 97-247 will be made the subject of separate rulemakings.

List of Subjects in 37 CFR Parts 1 and 2

Administrative practice and procedure, Courts, Inventions and patents, Lawyers, Nonprofit organizations, Small businesses, Trademarks.

Amendment of Regulations

For the reasons set out in the preamble, 37 CFR Parts 1 and 2 are confirmed as being amended by the final rule published on July 30, 1982 at 47 FR 33086 as set forth below.

Dated: September 14, 1982.

Gerald J. Mossinghoff,

Commissioner of Patents and Trademarks.

1. The rule changes made in Alternative A relating to patents which begin at 47 FR 33107 and in Alternative A relating to trademarks which begin at 47 FR 33112 are hereby withdrawn.

2. Confirmed as effective October 1, 1982 are the rule changes published July 30, 1982 common to Pub. L. 96-517 and H.R. 6260 (now Pub. L. 97-247) and Alternative B. The rule changes relating to patents common to Pub. L. 96-517 and H.R. 6260 (now Pub. L. 97-247) were published on July 30, 1982 at 47 FR 33099. The rule changes relating to patents under Alternative B were published at 47 FR 33108. The rule changes relating to trademarks common to Pub. L. 96-517 and H.R. 6260 (now Pub. L. 97-247) were published on July 30, 1982 at 47 FR 33111. The rule changes relating to trademarks under Alternative B were published at 47 FR 33112. Corrections to the July 30, 1982 publication were published on August 4 and 5, 1982 at 47 FR 33088 and 33959.

3. For the convenience of the user, the rule changes common to Pub. L. 96-517 and H.R. 6260 and Alternative B have been integrated into numerical order and are reprinted below:

For the reasons indicated above and pursuant to the authority given to the Commissioner of Patents and Trademarks by 35 U.S.C. 6, and under Sections 31 and 41 of the Trademark Act of July 5, 1946, 15 U.S.C. 1113, and 1123, Parts 1 and 2 of Title 37, Code of Federal Regulations, are amended as set forth below.

PART 1—RULES OF PRACTICE IN PATENT CASES

1. Section 1.11 is amended by revising paragraph (c) to read as follows:

§ 1.11 Files open to the public.

* * * * * *

(c) All requests for reexamination for which the fee under § 1.20(c) has been paid, will be announced in the *Official Gazette.* Any reexaminations at the initiative of the Commissioner pursuant to § 1.520 will also be announced in the *Official Gazette.* The announcement shall include at least the date of the request, if any, the reexamination request control number or the Commissioner initiated order control number, patent number, title, class and subclass, name of the inventor, name of the patent owner of record, and the

examining group to which the reexamination is assigned.

* * * * *

2. Section 1.12 is revised to read as follows:

§ 1.12 Assignment records open to public inspection.

(a) The assignment records, relating to original or reissue patents, including digests and indexes, and assignment records relating to pending or abandoned trademark applications and to trademark registrations, are open to public inspection and copies of any instrument recorded may be obtained upon request and payment of the fee set forth in § 1.19(a)(5).

(b) Assignment records, digests, and indexes, relating to any pending or abandoned patent application are not available to the public. Copies of any such assignment records and information with respect thereto shall be obtainable only upon written authority of the applicant or applicant's assignee or attorney or agent or upon a showing that the person seeking such information is a bona fide prospective or actual purchaser, mortgagee, or licensee of such application, unless it shall be necessary to the proper conduct of business before the Office or as provided by these rules.

(c) Any request by a member of the public seeking copies of any assignment records of any pending or abandoned patent application preserved in secrecy under § 1.14, or any information with respect thereto, must (1) be in the form of a petition accompanied by the petition fee set forth in § 1.17(i) or (2) include written authority granting access to the member of the public to the particular assignment records from the applicant or applicant's assignee or attorney or agent of record.

(d) An order for a copy of an assignment should give the identification of the record. If identified only by the name of the patentee and number of the patent, or in the case of a trademark registration by the name of the registrant and number of the registration, or by name of the applicant and serial number or international application number of the application, an extra charge as set forth in § 1.21(f) will be made for the time consumed in making a search for such assignment.

3. Section 1.14 is amended by adding a new paragraph (e) to read as follows:

§ 1.14 Patent applications preserved in secrecy.

* * * * *

(e) Any request by a member of the public seeking access to, or copies of, any pending or abandoned application preserved in secrecy pursuant to paragraphs (a) and (b) of this section, or of any papers relating thereto, must (1) be in the form of a petition and be accompanied by the petition fee set forth in § 1.17(i) or (2) include written authority granting access to the member of the public in that particular application from the applicant or the applicant's assignee or attorney or agent of record.

4. A new § 1.16 is added which reads as follows:

§ 1.16 National application filing fees.

(a) Basic fee for filing each application for an original patent, except design or plant cases:	
By a small entity (§ 1.9(f))	$150.00
By other than a small entity	300.00
(b) In addition to the basic filing fee in an original application, for filing or later presentation of each independent claim in excess of 3:	
By a small entity (§ 1.9(f))	15.00
By other than a small entity	30.00
(c) In addition to the basic filing fee in an original application, for filing or later presentation of each claim (whether independent or dependent) in excess of 20 (Note that § 1.75(c) indicates how multiple dependent claims are considered for fee calculation purposes.):	
By a small entity (§ 1.9(f)	5.00
By other than a small entity	10.00
(d) In addition to the basic filing fee in an original application, if the application contains, or is amended to contain, a multiple dependent claim(s), per application:	
By a small entity (§ 1.9(f))	50.00
By other than a small entity	100.00
(if the additional fees required by paragraphs (b), (c) and (d) are not paid on filing or on later presentation of the claims for which the additional fees are due, they must be paid or the claims cancelled by amendment, prior to the expiration of the time period set for response by the Office in any notice of fee deficiency.)	
(e) Surcharge for filing the basic filing fee or oath or declaration on a date later than the filing date of the application:	
By a small entity (§ 1.9(f))	50.00
By other than a small entity	100.00
(f) For filing each design application:	
By a small entity (§ 1.9(f))	62.50
By other than a small entity	125.00
(g) Basic fee for filing each plant application:	
By a small entity (§ 1.9(f))	100.00
By other than a small entity	200.00
(h) Basic fee for filing each reissue application:	
By a small entity (§ 1.9(f))	150.00
By other than a small entity	300.00
(i) In addition to the basic filing fee in a reissue application, for filing or later presentation of each independent claim which is in excess of the number of independent claims in the original patent:	
By a small entity (§ 1.9(f))	15.00
By other than a small entity	30.00
(j) In addition to the basic filing fee in a reissue application, for filing or later presentation of each claim (whether independent or dependent) in excess of 20 and also in excess of the number of claims in the original patent. (Note that § 1.75(c) indicates how multiple dependent claims are considered for fee purposes.):	
By a small entity (§ 1.9(f))	5.00
By other than a small entity	10.00
(Note, see § 1.445 for international application filing and processing fees.)	

5. A new § 1.17 is added which reads as follows:

§ 1.17 Patent application processing fees.

(a) Extension fee for response within first month pursuant to § 1.136(a):	
By a small entity (§ 1.9(f))	$25.00
By other than a small entity	50.00
(b) Extension fee for response within second month pursuant to § 1.136(a):	
By a small entity (§ 1.9(f))	75.00
By other than a small entity	150.00
(c) Extension fee for response within third month pursuant to § 1.136(a):	
By a small entity (§ 1.9(f))	175.00
By other than a small entity	350.00
(d) Extension fee for response within fourth month pursuant to § 1.136(a):	
By a small entity (§ 1.9(f))	275.00
By other than a small entity	550.00
(e) For filing a notice of appeal from the examiner to the Board of Appeals:	
By a small entity (§ 1.9(f))	57.50
By other than a small entity	115.00
(f) In addition to the fee for filing a notice of appeal, for filing a brief in support of an appeal:	
By a small entity (§ 1.9(f))	57.50
By other than a small entity	115.00
(g) For filing a request for an oral hearing before the Board of Appeals:	
By a small entity (§ 1.9(f))	50.00
By other than a small entity	100.00
(h) For a filing a petition to the Commissioner under a section of this part listed below which refers to this paragraph:	120.00
§ 1.45—for correction of inventorship	
§ 1.47—for filing by other than all the inventors or a person not the inventor	
§ 1.182—for decision on questions not specifically provided for	
§ 1.183—to suspend the rules	
§ 1.268—for late filing of interference settlement agreement	
(i) For filing a petition to the Commissioner under a section of this part listed below which refers to this paragraph:	50.00
§ 1.12—for access to an assignment record	
§ 1.14—for access to an application	
§ 1.55—for entry of late priority papers	
§ 1.102—to make application special	
§ 1.103—to suspend action in application	
§ 1.177—for divisional reissues to issue separately	
§ 1.268—for access to interference settlement agreement	
§ 1.312—for amendment after payment of issue fee	
§ 1.313—to withdraw an application from issue	
§ 1.314—to defer issuance of a patent	
§ 1.334—for patent to issue to assignee, assignment recorded late	
(j) For filing a petition to institute a public use proceeding under § 1.292	750.00
(k) For processing an application filed with a specification in a non-English language (§ 1.52(d))	20.00
(l) For filing a petition (1) for the revival of an abandoned application under 35 U.S.C. 133, or (2) for delayed payment of the issue fee under 35 U.S.C. 151:	
By a small entity (§ 1.9(f))	25.00
By other than a small entity	50.00
(m) For filing a petition (1) for revival of an unintentionally abandoned application or (2) for the unintentionally delayed payment of the fee for issusing a patent:	
By a small entity (§ 1.9(f))	250.00
By other than a small entity	500.00

6. A new § 1.18 is added which reads as follows:

§ 1.18 Patent issue fees.

(a) Issue fee for issuing each original or reissue patent, except a design or plant patent:	
By a small entity (§ 1.9(f))	$250.00
By other than a small entity	500.00

(b) Issue fee for issuing a design patent:
By a small entity (§ 1.9(f)) 87.50
By other than a small entity 175.00
(c) Issue fee for issuing a plant patent:
By a small entity (§ 1.9(f)) 125.00
By other than a small entity 250.00

7. A new § 1.19 is added which reads as follows:

§ 1.19 Document supply fees.

The Patent and Trademark Office will supply copies of the following documents upon payment of the fees indicated:

(a) Uncertified copies of Office documents:
(1) Printed copy of a patent, including a design patent, or defensive publication document, except color plant patent $1.00
(2) Printed copy of a plant patent in color 8.00
(3) Copy of patent application as filed, each 50 pages or fraction thereof 18.00
(4) Copy of patent file wrapper and contents, each 100 pages or fraction thereof .. 30.00
(5) Copy of Office records, except as provided in paragraphs (a) (1) through (4) of this section, per page 0.30
(6) Microfiche copy of microfiche, per microfiche 2.00
(b) Certified copies of Office documents:
(1) For certifying Office records, per certificate 3.90
(2) For a search of assignment records, abstract of title and certification, per patent 12.00
(3) For comparing copies not prepared by the Office with the original, prior to certification of the copies, per page 0.10
(c) Subscription services:
(1) Subscription orders for printed copies of patents as issued, annual service charge for entry of order and one subclass 4.00
(2) For annual subscription to each additional subclass in addition to the one covered by the fee under paragraph (c)(1) of this section, per subclass 0.40
(d) Library service (35 U.S.C. 13): For providing to libraries copies of all patents issued annually, per annum 50.00
(e) Lists of patents in subclass:
(1) For list of all United States patents in a subclass, per 100 patent numbers or fraction thereof 2.00
(2) For list of United States patents in a subclass limited by date or patent number, per 50 patent numbers or fraction thereof 2.00

8. A new § 1.20 is added which reads as follows:

§ 1.20 Post-issuance fees.

(a) For providing a certificate of correction of applicant's mistake (§ 1.323) $40.00
(b) Petition for correction of inventorship in patent (§ 1.324) 120.00
(c) For filing a request for reexamination (§ 1.510(a)) 1,500.00
(d) For filing each statutory disclaimer (§ 1.321):
By a small entity (§ 1.9(f)) 25.00
By other than a small entity 50.00
(e) For maintaining an original or reissue patent, except a design patent, based on an application filed on or after December 12, 1980 and before August 27, 1982, in force beyond 4 years; the fee is due by three years and six months after the original grant 200.00
(f) For maintaining an original or reissue patent, except a design patent, based on an application filed on or after December 12, 1980 and before August 27, 1982, in force beyond 8 years; the fee is due by seven years and six months after the original grant 400.00
(g) For maintaining an original or reissue patent, except a design patent, based on an application filed on or after December 12, 1980 and before August 27, 1982, in force beyond 12 years; the fee is due by eleven years and six months after the original grant 600.00
(h) For maintaining an original or reissue patent, except a design or plant patent, based on an application filed on or after August 27, 1982, in force beyond 4 years; the fee is due by three years and six months after the original grant:
By a small entity (§ 1.9(f)) 200.00
By other than a small entity 400.00
(i) For maintaining an original or reissue patent, except a design or plant patent, based on an application filed on or after August 27, 1982, in force beyond 8 years; the fee is due by seven years and six months after the original grant:
By a small entity (§ 1.9(f)) 400.00
By other than a small entity 600.00
(j) For maintaining an original or reissue patent, except a design or plant patent, based on an application filed on or after August 27, 1982, in force beyond 12 years; the fee is due by eleven years and six months after the original grant:
By a small entity (§ 1.9(f)) 600.00
By other than a small entity 1200.00

9. Section 1.21 is revised to read as follows:

§ 1.21 Miscellaneous fees and charges.

The Patent and Trademark Office has established the following fees for the services indicated:

(a) Registration of attorneys and agents:
(1) For admission to examination for registration to practice, fee payable upon application $75.00
(2) On registration to practice 50.00
(3) For reinstatement to practice 25.00
(4) For certificate of good standing as an attorney or agent 10.00
(b) Deposit accounts:
(1) For establishing or reinstating a deposit account 10.00
(2) Service charge for each month when the balance at the end of the month is below $40 ..... 2.00
(c) Disclosure document: For filing a disclosure document 10.00
(d) Delivery box: Local delivery box rental, per annum 24.00
(e) International-type search reports: For preparing an international-type search report of an international-type search made at the time of the first action on the merits in a national patent application 25.00
(f) Search of Office records: For searching Patent and Trademark Office records for purposes not otherwise specified, per one-half hour or fraction thereof 10.00
(g) Copy machine tokens: Token for copying machine, each 0.20
(h) Recording of documents:
(1) For recording each assignment, agreement or other paper relating to the property in a patent or application 20.00
(2) Where a document to be recorded under paragraph (h)(1) of this section refers to more than one patent or application, for each additional patent or application 5.00
(i) Publication in *Official Gazette*: For publication in the *Official Gazette* of a notice of the availability of an application or a patent for licensing or sale, each application or patent 6.00
(j) For a duplicate or replacement of a permanent Office user pass (There is no charge for the first permanent user pass) 5.00
(k) For items and services, that the Commissioner finds may be supplied, for which fees are not specified by statute or by this section, such charges as may be determined by the Commissioner with respect to each such item or service ..... actual cost

10. Section 1.24 is revised to read as follows:

§ 1.24 Coupons.

Coupons in denominations of forty cents and one dollar are sold by the Patent and Trademark Office for the convenience of regular purchasers of U.S. patents and trademark registrations; these coupons may not be used for any other purpose. The 40-cent coupons are sold individually and in books of 50 with stubs for record for $20. The one dollar coupons are sold individually and in books of 50 with stubs for record for $50. These coupons are good until used; they may be transferred but cannot be redeemed.

11. Section 1.25 is revised to read as follows:

§ 1.25 Deposit accounts.

(a) For the convenience of attorneys, agents, and the general public in paying any fees due, in ordering services offered by the Office, copies of records, etc., deposit accounts may be established in the Patent and Trademark Office upon payment of the fee for establishing a deposit account (§ 1.21(b)(1)). A minimum deposit of $50 or more, depending on the activity of the individual account, is required. At the close of each month's business, a statement will be rendered. A remittance must be made promptly upon receipt of the statement to cover the value of items or services charged to the account and thus restore the account to its established normal deposit value. An amount sufficient to cover all services, copies, etc., requested must always be on deposit. A service charge (§ 1.21(b)(2)) will be assessed for each month that the balance at the end of the month is below $40.

(b) Filing, issue, appeal, international-type search report, international application processing, petition, and post-issuance fees may be charged against these accounts. A general

authorization to charge all fees, or only certain fees, set forth in §§ 1.16 to 1.18 to a deposit account may be filed in an individual application, either for the entire pendency of the application or with respect to a particular paper filed. An authorization to charge to a deposit account the fee for a request for reexamination pursuant to § 1.510 and any other fees required in a reexamination proceeding in a patent may also be filed with the request for reexamination.

12. Section 1.26 is revised to read as follows:

§ 1.26 Refunds.

(a) Money paid by actual mistake or in excess, such as a payment not required by law, will be refunded, but a mere change of purpose after the payment of money, as when a party desires to withdraw an application, an appeal, or a request for oral hearing, will not entitle a party to demand such a return. Amounts of one dollar or less will not be returned unless specifically demanded within a reasonable time, nor will the payer be notified of such amount; amounts over one dollar may be returned by check or, if requested, by credit to a deposit account.

(b) [Reserved]

(c) If the Commissioner decides not to institute a reexamination proceeding, a refund of $1,200.00 will be made to the requester of the proceeding. Reexamination requesters should indicate whether any refund should be made by check or by credit to a deposit account.

13. Section 1.45 is amended by revising paragraphs (b) and (c) to read as follows:

§ 1.45 Joint inventors.

* * * * *

(b) If an application for patent has been made through error and without any deceptive intention by two or more persons as joint inventors when they were not in fact joint inventors, the application may be amended to remove the names of those not inventors upon filing of a petition including a statement of the facts verified by all of the original applicants, the required fee (§ 1.17(h)), and an oath or declaration as required by § 1.65 by the applicant who is the actual inventor, provided the amendment is diligently made. Such amendment must have the written consent of any assignee.

(c) If an application for patent has been made through error and without any deceptive intention by less than all the actual joint inventors, the application may be amended to include all the joint inventors upon filing of a petition including a statement of the facts verified by, and an oath or declaration as required by § 1.65 executed by all the actual joint inventors, along with the required fee (§ 1.17(h)), provided the amendment is diligently made. Such amendment must have the written consent of any assignee.

14. Section 1.47 is revised to read as follows:

§ 1.47 Filing when an inventor refuses to sign or cannot be reached.

(a) If a joint inventor refuses to join in an application for patent or cannot be found or reached after diligent effort, the application may be made by the other inventor on behalf of himself or herself and the omitted inventor. The oath or declaration in such an application must be accompanied by a petition including proof of the pertinent facts and by the required fee (§ 1.17(h)) and must state the last known address of the omitted inventor. The Patent and Trademark Office shall forward notice of the filing of the application to the omitted inventor at said address. Should such notice be returned to the Office undelivered, or should the address of the omitted inventor be unknown, notice of the filing of the application shall be published in the *Official Gazette*. The omitted inventor may subsequently join in the application on filing an oath or declaration of the character required by § 1.65. A patent may be granted to the inventor making the application, upon a showing satisfactory to the Commissioner, subject to the same rights which the omitted inventor would have had if he or she had been joined.

(b) Whenever an inventor refuses to execute an application for patent, or cannot be found or reached after diligent effort, a person to whom the inventor has assigned or agreed in writing to assign the invention or who otherwise shows sufficient proprietary interest in the matter justifying such action may make application for patent on behalf of and as agent for the inventor. The oath or declaration in such an application must be accompanied by a petition including proof of the pertinent facts and a showing that such action is necessary to preserve the rights of the parties or to prevent irreparable damage, and by the required fee (§ 1.17(h)) and must state the last known address of the inventor. The assignment, written agreement to assign or other evidence of proprietary interest, or a verified copy thereof, must be filed in the Patent and Trademark Office. The Office shall forward notice of the filing of the application to the inventor at the address stated in the application. Should such notice be returned to the Office undelivered, or should the address of the inventor be unknown, notice of the filing of the application shall be published in the *Official Gazette*. The inventor may subsequently join in the application on filing an oath or declaration of the character required by § 1.65. A patent may be granted to the inventor upon a showing satisfactory to the Commissioner.

15. Section 1.51 is amended by revising paragraph (a)(4) and by adding a new paragraph (c) to read as follows:

§ 1.51 General requisites of an application.

(a) * * *

(4) The prescribed filing fee, see § 1.16.

* * * * *

(c) Applicants may desire and are permitted to file with, or in, the application an authorization to charge, at any time during the pendency of the application, any fees required under any of §§ 1.16 to 1.18 to a deposit account established and maintained in accordance with § 1.25.

16. Section 1.52 is amended by revising paragraph (a) and by adding a new paragraph (d) to read as follows:

§ 1.52 Language, paper, writing, margins.

(a) The application, any amendments or corrections thereto, and the oath or declaration must be in the English language except as provided for in § 1.69 and paragraph (d) of this section, or be accompanied by a verified translation of the application and a translation of any corrections or amendments into the English language. All papers which are to become a part of the permanent records of the Patent and Trademark Office must be legibly written, typed, or printed in permanent ink or its equivalent in quality. All of the application papers must be presented in a form having sufficient clarity and contrast between the paper and the writing, typing, or printing thereon to permit the direct reproduction of readily legible copies in any number by use of photographic, electrostatic, photo-offset, and microfilming processes. If the papers are not of the required quality, substitute typewritten or printed papers of suitable quality may be required.

* * * * *

(d) An application including a signed oath or declaration may be filed in a language other than English if it is accompanied by the fee set forth in § 1.17(k). A verified English translation of the non-English language application is required to be filed with the

application or within such time as may be set by the Office.

17. Section 1.55 is amended by revising paragraph (b) to read as follows:

§ 1.55 Serial number and filing date of application.

* * * * *

(b) An applicant may claim the benefit of the filing date of a prior foreign application under the conditions specified in 35 U.S.C. 119. The claim to priority need be in no special form and may be made by the attorney or agent if the foreign application is referred to in the oath or declaration as required by § 1.65. The claim for priority and the certified copy of the foreign application specified in the second paragraph of 35 U.S.C. 119 must be filed in the case of interference (§ 1.224); when necessary to overcome the date of a reference relied upon by the examiner; or when specifically required by the examiner; and in all other cases they must be filed not later than the date the issue fee is paid. If the papers filed are not in the English language, a translation need not be filed except in the three particular instances specified in the preceding sentence, in which event a sworn translation or a translation certified as accurate by a sworn or official tranalator must be filed. If the priority papers are submitted after the date the issue fee is paid, they must be accompanied by a petition requesting their entry and the fee set forth in § 1.17(i).

* * * * *

18. Section 1.66 is revised to read as follows:

§ 1.66 Officers authorized to administer oaths.

(a) The oath or affirmation may be made before any person within the United States authorized by law to administer oaths. An oath made in a foreign country may be made before any diplomatic or consular officer of the United States authorized to administer oaths, or before any officer having an official seal and authorized to administer oaths in the foreign country in which the applicant may be, whose authority shall be proved by a certificate of a diplomatic or consular officer of the United States, or by an apostille of an official designated by a foreign country which, by treaty or convention, accords like effect to apostilles of designated officials in the United States. The oath shall be attested in all cases in this and other countries, by the proper official seal of the officer before whom the oath or affirmation is made. Such oath or affirmation shall be valid as to execution if it complies with the laws of the State or country where made. When the person before whom the oath or affirmation is made in this country is not provided with a seal, his official character shall be established by competent evidence, as by a certificate from a clerk of a court of record or other proper officer having a seal.

(b) When the oath is taken before an officer in a country foreign to the United States, any accompanying application papers, except the drawings, must be attached together with the oath and a ribbon passed one or more times through all the sheets of the application, except the drawings, and the ends of said ribbon brought together under the seal before the latter is affixed and impressed, or each sheet must be impressed with the official seal of the officer before whom the oath is taken. If the papers as filed are not properly ribboned or each sheet impressed with the seal, the case will be accepted for examination, but before it is allowed, duplicate papers, prepared in compliance with the foregoing sentence, must be filed.

19. Section 1.75 is amended by revising paragraph (c) to read as follows:

§ 1.75 Claim(s).

* * * * *

(c) One or more claims may be presented in dependent form, referring back to and further limiting another claim or claims in the same application. Any dependent claim which refers to more than one other claim ("multiple dependent claim") shall refer to such other claims in the alternative only. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim. For fee calculation purposes under § 1.16, a multiple dependent claim will be considered to be that number of claims to which direct reference is made therein. For fee calculation purposes, also, any claim depending from a multiple dependent claim will be considered to be that number of claims to which direct reference is made in that multiple dependent claim. In addition to the other filing fees, any original application which is filed with, or is amended to include, multiple dependent claims must have paid therein the fee set forth in § 1.16(d). Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim. A multiple dependent claim shall be construed to incorporate by reference all the limitations of each of the particular claims in relation to which it is being considered.

* * * * *

20. Section 1.85 is revised to read as follows:

§ 1.85 Informal drawings.

The requirements of § 1.84 relating to drawings will be strictly enforced. A drawing not executed in conformity thereto, if suitable for reproduction, may be admitted but in such case the drawing must be corrected or a new one furnished, as required.

§ 1.86 [Removed]

21. Section 1.86 is removed.

22. Section 1.102 is amended by revising paragraph (a) and adding new paragraphs (c) and (d) to read as follows:

§ 1.102 Advancement of examination.

(a) Applications will not be advanced out of turn for examination or for further action except as provided by this part, or upon order of the Commissioner to expedite the business of the Office, or upon filing of a request under paragraph (b) of this section or upon filing a petition under paragraphs (c) or (d) of this section with a verified showing which, in the opinion of the Commissioner, will justify so advancing it.

* * * * *

(c) A petition to make an application special may be filed without a fee if the basis for the petition is the applicant's age or health or that the invention will materially enhance the quality of the environment or materially contribute to the development or conservation of energy resources.

(d) A petition to make an application special on grounds other than those referred to in paragraph (c) of this section must be accompanied by the petition fee set forth in § 1.17(i).

23. Section 1.103 is amended by revising paragraphs (a) and (b) to read as follows:

§ 1.103 Suspension of action.

(a) Suspension of action by the Office will be granted for good and sufficient cause and for a reasonable time specified upon petition by the applicant and, if such cause is not the fault of the Office, the payment of the fee set forth in § 1.17(i). Action will not be suspended when a response by the applicant to an Office action is required.

(b) If action by the Office on an application is suspended when not

requested by the applicant, the applicant shall be notified of the reasons therefor.

* * * * *

24. Section 1.104 is amended by revising paragraph (d) to read as follows:

§ 1.104 Nature of examination; examiner's action.

* * * * *

(d) Any national application may also have an international-type search report prepared thereon at the time of the national examination on the merits, upon specific written request therefor and payment of the international-type search report fee. See § 1.21(e) for amount of fee for preparation of international-type search report.

* * * * *

25. Section 1.134 is added and reads as follows:

§ 1.134 Time period for response to an Office action.

An Office action will notify the applicant of any non-statutory or shortened statutory time period set for response to an Office action. Unless the applicant is notified in writing that response is required in less than six months, a maximum period of six months is allowed.

26. Section 1.135 is amended by revising paragraphs (a), (b) and (c) to read as follows:

§ 1.135 Abandonment for failure to respond within time period.

(a) If an applicant of a patent application fails to respond within the time period provided under §§ 1.134 and 1.136, the application will become abandoned unless an Office action indicates otherwise.

(b) Prosecution of an application to save it from abandonment pursuant to paragraph (a) of this section must include such complete and proper action as the condition of the case may require. The admission of an amendment not responsive to the last Office action, or refusal to admit the same, and any proceedings relative thereto, shall not operate to save the application from abandonment.

(c) When action by the applicant is a bona fide attempt to respond and to advance the case to final action, and is substantially a complete response to the Office action, but consideration of some matter or compliance with some requirement has been inadvertently omitted, opportunity to explain and supply the omission may be given before the question of abandonment is considered.

* * * * *

27. Section 1.136 is revised to read as follows:

§ 1.136 Filing of timely responses with petition and fee for extension of time and extensions of time for cause.

(a) If an applicant is required to respond within a non-statutory or shortened statutory time period, applicant may respond up to four months after the time period set if a petition for an extension of time and the fee set in §1.17 are filed prior to or with the response, unless (1) applicant is notified otherwise in an Office action or (2) the application is involved in an interference declared pursuant to § 1.207. The date on which the response, the petition, and the fee have been filed is the date of the response and also the date for purposes of determining the period of extension and the corresponding amount of the fee. The expiration of the time period is determined by the amount of the fee paid. In no case may an applicant respond later than the maximum time period set by statute, or be granted an extension of time under paragraph (b) of this section when the provisions of this paragraph are available.

(b) When a response with petition and fee for extension of time cannot be filed pursuant to paragraph (a) of this section, the time for response will be extended only for sufficient cause, and for a reasonable time specified. Any request for such extension must be filed on or before the day on which action by the applicant is due, but in no case will the mere filing of the request effect any extension. In no case can any extension carry the date on which response to an Office action is due beyond the maximum time period set by statute or be granted when the provisions of paragraph (a) of this section are available. See § 1.245 for extension of time in interference proceedings.

28. Section 1.137 is revised to read as follows:

§ 1.137 Revival of abandoned application.

(a) An application abandoned for failure to prosecute may be revived as a pending application if it is shown to the satisfaction of the Commissioner that the delay was unavoidable. A petition to revive an abandoned application must be promptly filed after the applicant is notified of, or otherwise becomes aware of, the abandonment, and must be accompanied by a showing of the causes of the delay, by the proposed response unless it has been previously filed, and by the petition fee set forth in § 1.17(l). Such showing must be a verified showing if made by a person not registered to practice before the Patent and Trademark Office.

(b) An application unintentionally abandoned for failure to prosecute may be revived as a pending application if the delay was unintentional. A petition to revive an unintentionally abandoned application must be filed within one year of the date on which the application became abandoned or be filed within three months of the date of the first decision on a petition to revive under paragraph (a) of this section which was filed within one year of the date of abandonment of the application. A petition to revive an unintentionally abandoned application must be accompanied by (1) a statement that the abandonment was unintentional, (2) a proposed response unless it has been previously filed, and (3) a petition fee as set forth in § 1.17(m). Such statement must be a verified statement if made by a person not registered to practice before the Patent and Trademark Office. The Commissioner may require additional information where there is a question whether the abandonment was unintentional. The three month period set forth in this paragraph may be extended under the provisions of § 1.136(a), but no further extensions under § 1.136(b) will be granted. Petitions to the Commissioner under § 1.183 to waive any time periods for requesting revival of an unintentionally abandoned application will not be considered, but will be returned to the applicant.

(c) Any petition pursuant to paragraph (a) of this section not filed within six months of the date of abandonment must be accompanied by a terminal disclaimer with fee under § 1.321 dedicating to the public a terminal part of the term of any patent granted thereon equivalent to the period of abandonment of the application.

29. Section 1.155 is revised to read as follows:

§ 1.155 Issue and term of design patents.

(a) If, on examination, it shall appear that the applicant is entitled to a design patent under the law, a notice of allowance will be sent to the applicant, or applicant's attorney or agent, calling for the payment of the issue fee (§ 1.18(b)). If this issue fee is not paid within 3 months of the date of the notice of allowance, the application shall be regarded as abandoned.

(b) The Commissioner may accept the payment of the issue fee later than three months after the mailing of the notice of allowance as though no abandonment had ever occurred if upon petition the delay in payment is shown to have been

unavoidable. The petition to accept the delayed payment must be promptly filed after the applicant is notified of, or otherwise becomes aware of, the abandonment, and must be accompanied by (1) the issue fee, unless it has been previously submitted, (2) the fee for delayed payment (§ 1.17(l)), and (3) a showing that the delay was unavoidable. Such showing must be a verified showing if made by a person not registered to practice before the Patent and Trademark Office.

(c) The Commissioner may, upon petition, accept the payment of the issue fee later than three months after the mailing of the notice of allowance as though no abandonment had ever occurred if the delay in payment was unintentional. The petition to accept the delayed payment must be filed within one year of the date on which the application became abandoned or be filed within three months of the date of the first decision on a petition under paragraph (b) of this section which was filed within one year of the date of abandonment of the application. The petition to accept the delayed payment must be accompanied by (1) the issue fee, unless it has been previously submitted, (2) the fee for unintentionally delayed payment (§ 1.17(m)), and (3) a statement that the delay was unintentional. Such statement must be a verified statement if made by a person not registered to practice before the Patent and Trademark Office. The Commissioner may require additional information where there is a question whether the abandonment was unintentional. The three-month period from the date of the first decision referred to in this paragraph may be extended under the provisions of § 1.136(a), but no further extensions under § 1.136(b) will be granted. Petitions to the Commissioner under § 1.183 to waive any time periods for requesting revival of an unintentionally abandoned application will not be considered, but will be returned to the applicant.

(d) Any petition pursuant to paragraph (b) of this section not filed within six months of the date of abandonment must be accompanied by a terminal disclaimer with fee under §1.321 dedicating to the public a terminal part of the term of any patent granted thereon equivalent to the period of abandonment of the application.

30. Section 1.165 is amended by revising paragraph (b) to read as follows:

§ 1.165 Drawings.

* * * * *

(b) The drawing may be in color and when color is a distinguishing characteristic of the new variety, the drawing must be in color. Two copies of color drawings must be submitted. Color drawings may be made either in permanent water color or oil, or in lieu thereof may be photographs made by color photography or properly colored on sensitized paper. Permanently mounted color photographs are acceptable. The paper in any case must correspond in size, weight and quality to the paper required for other drawings. See § 1.84.

31. Section 1.171 is revised to read as follows:

§ 1.171 Application for reissue.

An application for reissue must contain the same parts required for an application for an original patent, complying with all the rules relating thereto except as otherwise provided, and in addition, must comply with the requirements of the rules relating to reissue applications. The application must be accompanied by a certified copy of an abstract of title or an order for a title report accompanied by the fee set forth in § 1.19(b)(2), to be placed in the file, and by an offer to surrender the original patent (§ 1.178).

32. Section 1.177 is revised to read as follows:

§ 1.177 Reissue in divisions.

The Commissioner may, in his or her discretion, cause several patents to be issued for distinct and separate parts of the thing patented, upon demand of the applicant, and upon payment of the required fee for each division. Each division of a reissue constitutes the subject of a separate specification descriptive of the part or parts of the invention claimed in such division; and the drawing may represent only such part or parts, subject to the provisions of §§ 1.83 and 1.84. On filing divisional reissue applications, they shall be referred to the Commissioner. Unless otherwise ordered by the Commissioner upon petition and payment of the fee set forth in § 1.17(i), all the divisions of a reissue will issue simultaneously; if there be any controversy as to one division, the others will be withheld from issue until the controversy is ended, unless the Commissioner shall otherwise order.

33. Section 1.181 is amended by revising paragraphs (d) and (g) to read as follows:

§ 1.181 Petition to the Commissioner.

* * * * *

(d) Where a fee is required for a petition to the Commissioner the appropriate section of this part will so indicate. If any required fee does not accompany the petition, the petition will be dismissed.

* * * * *

(g) The Commissioner may delegate to appropriate Patent and Trademark Office officials the determination of petitions.

34. Section 1.182 is revised to read as follows:

§ 1.182 Questions not specifically provided for.

All cases not specifically provided for in the regulations of this part will be decided in accordance with the merits of each case by or under the authority of the Commissioner, and such decision will be communicated to the interested parties in writing. Any petition seeking a decision under this section must be accompanied by the petition fee set forth in § 1.17(h).

35. Section 1.183 is revised to read as follows:

§ 1.183 Suspension of rules.

In an extraordinary situation, when justice requires, any requirement of the regulations in this part which is not a requirement of the statutes may be suspended or waived by the Commissioner or the Commissioner's designee, sua sponte, or on petition of the interested party, subject to such other requirements as may be imposed. Any petition under this section must be accompanied by the petition fee set forth in § 1.17(h).

36. Section 1.191 is amended by revising paragraph (a) to read as follows:

§ 1.191 Appeal to Board of Appeals.

(a) Every applicant for a patent or for reissue of a patent, or every owner of a patent under reexamination, any of the claims of which have been twice rejected, or who has been given a final rejection (§ 1.113), may, upon the payment of the fee set forth in § 1.17(e), appeal from the decision of the examiner to the Board of Appeals within the time allowed for response.

* * * * *

37. Section 1.192 is amended by revising paragraph (a) to read as follows:

§ 1.192 Appellant's brief.

(a) The appellant shall, within 2 months from the date of the notice of appeal under § 1.191 in an application, reissue application, or patent under reexamination, or within the time

§ 1.292 Public use proceedings.

(a) When a petition for the institution of public use proceedings, supported by affidavits or declarations and the fee set forth in § 1.17(j) is filed by one having information of the pendency of an application and is found, on reference to the primary examiner, to make a prima facie showing that the invention involved in an interference or claimed in an application believed to be on file had been in public use or on sale one year before the filing of the application, or before the date alleged by an interfering party in his or her preliminary statement or the date of invention established by such party, a hearing may be had before the Commissioner to determine whether a public use proceeding should be instituted. If instituted, times may be set for taking testimony, which shall be taken as provided by §§ 1.271 to 1.286. The petitioner will be heard in the proceedings but after decision therein will not be heard further in the prosecution of the application for patent.

* * * * *

46. Section 1.304 is amended by revising paragraph (a) to read as follows:

§ 1.304 Time for appeal or civil action.

(a) The time for filing the notice and reasons of appeal to the U.S. Court of Appeals for the Federal Circuit (§ 1.302) or for commencing a civil action (§ 1.303) is sixty days from the date of the decision of the Board of Appeals or the Board of Patent Interferences. If a request for rehearing or reconsideration, or modification of the decision, is filed within the time provided pursuant to § 1.197(b) or § 1.256(b), the time for filing an appeal or commencing a civil action shall expire at the end of the sixty-day period or thirty days after action on the request, whichever is later. The time periods set forth herein are subject to the provisions of § 1.136.

* * * * *

47. Section 1.311 is revised to read as follows:

§ 1.311 Notice of allowance.

(a) If, on examination, it shall appear that the applicant is entitled to a patent under the law, a notice of allowance will be sent to applicant at the correspondence address indicated in § 1.33, calling for the payment of a specified sum constituting the issue fee (§ 1.18), which shall be paid within 3 months from the date of the mailing of the notice of allowance.

(b) An authorization to charge the issue fee (§ 1.18) to a deposit account may be filed in an individual application, either before or after mailing of the notice of allowance. Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of the notice of allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance.

48. Section 1.312 is revised to read as follows:

§ 1.312 Amendments after allowance.

(a) No amendment may be made as a matter of right in an application after the mailing of the notice of allowance. Any amendment pursuant to this paragraph filed before the payment of the issue fee may be entered on the recommendation of the primary examiner, approved by the Commissioner, without withdrawing the case from issue.

(b) Any amendment pursuant to paragraph (a) of this section filed after the date the issue fee is paid must be accompanied by a petition including the fee set forth in § 1.17(i) and a showing of good and sufficient reasons why the amendment is necessary and was not earlier presented.

49. Section 1.313 is revised to read as follows:

§ 1.313 Withdrawal from issue.

(a) Applications may be withdrawn from issue for further action at the initiative of the Office or upon petition by the applicant. Any such petition by the applicant must include a showing of good and sufficient reasons why withdrawal of the application is necessary and, if the reason for the withdrawal is not the fault of the Office, must be accompanied by the fee set forth in § 1.17(i). If the application is withdrawn from issue, a new notice of allowance will be sent if the application is again allowed. Any amendment accompanying a petition to withdraw an application from issue must comply with the requirements of § 1.312.

(b) When the issue fee has been paid, and the patent to be issued has received its issue date and patent number, the application will not be withdrawn from issue for any reason except (1) mistake on the part of the Office, (2) a violation of § 1.56 or illegality in the application, (3) unpatentability of one or more claims, or (4) for interference.

50. Section 1.314 is revised to read as follows:

§ 1.314 Issuance of patent.

If payment of the issue fee is timely made, the patent will issue in regular course unless (a) the application is withdrawn from issue (§ 1.313) or (b) issuance of the patent is deferred. Any petition by the applicant requesting deferral of the issuance of a patent must be accompanied by the fee set forth in § 1.17(i) and must include a showing of good and sufficient reasons why it is necessary to defer issuance of the patent.

51. Section 1.316 is revised to read as follows:

§ 1.316 Application abandoned for failure to pay issue fee.

(a) If the issue fee is not paid within 3 months from the date of the notice of allowance, the application will be regarded as abandoned. Such an abandoned application will not be considered as pending before the Patent and Trademark Office.

(b) The Commissioner may accept the payment of the issue fee later than three months after the mailing of the notice of allowance as though no abandonment had ever occurred if upon petition the delay in payment is shown to have been unavoidable. The petition to accept the delayed payment must be promptly filed after the applicant is notified of, or otherwise becomes aware of, the abandonment, and must be accompanied by (1) the issue fee, unless it has been previously submitted, (2) the fee for delayed payment (§ 1.17(l)), and (3) a showing that the delay was unavoidable. Such showing must be a verified showing if made by a person not registered to practice before the Patent and Trademark Office.

(c) The Commissioner may, upon petition, accept the payment of the issue fee later than three months after the mailing of the notice of allowance as though no abandonment had ever occurred if the delay in payment was unintentional. The petition to accept the delayed payment must be filed within one year of the date on which the application became abandoned or be filed within three months of the date of the first decision on a petition under paragraph (b) of this section which was filed within one year of the date of abandonment of the application. The petition to accept the delayed payment must be accompanied by (1) the issue fee, unless it has been previously submitted, (2) the fee for unintentionally delayed payment (§ 1.17(m)), and (3) a statement that the delay was unintentional. Such statement must be a verified statement if made by a person not registered to practice before the Patent and Trademark Office. The Commissioner may require additional information where there is a question whether the abandonment was unintentional. The three-month period from the date of the first decision referred to in this paragraph may be

extended under the provisions of § 1.136(a), but no further extensions under § 1.136(b) will be granted. Petitions to the Commissioner under § 1.183 to waive any time periods for requesting revival of an unintentionally abandoned application will not be considered, but will be returned to the applicant.

(d) Any petition pursuant to paragraph (b) of this section not filed within six months of the date of abandonment must ba accompanied by a terminal disclaimer with fee under § 1.321 dedicating to the public a terminal part of the term of any patent granted thereon equivalent to the period of abandonment of the application.

52. Section 1.317 is revised to read as follows:

§ 1.317 Lapsed patents; delayed payment of balance of issue fee.

(a) If the issue fee was paid prior to October 1, 1982, any remaining balance of the issue fee is to be paid within three months from the date of notice thereof and, if not paid, the patent will lapse at the termination of the three month period.

(b) The Commissioner may accept the payment of the remaining balance of the issue fee later than three months after the mailing of the notice thereof as though no lapse had ever occurred if upon petition the delay in payment is shown to have been unavoidable. The petition to accept the delayed payment must be promptly filed after the applicant is notified of, or otherwise becomes aware of, the lapse, and must be accompanied by (1) the remaining balance of the issue fee, unless it has been previously submitted, (2) the fee for delayed payment (§ 1.17(1)), and (3) a showing that the delay was unavoidable. Such showing must be a verified showing if made by a person not registered to practice before the Patent and Trademark Office.

(c) The Commissioner may, upon petition, accept the payment of the remaining balance of the fee later than three months after the mailing of the notice thereof as though no lapse had ever occurred if the delay in payment was unintentional. The petition to accept the delayed payment must be filed within one year of the date on which the patent lapsed or be filed within three months of the date of the first decision on a petition under paragraph (b) of this section which was filed within one year of the date of lapse of the patent. The petition to accept the delayed payment must be accompanied by (1) the remaining balance of the issue fee, unless it has been previously submitted, (2) the fee for unintentionally delayed payment (§ 1.17(m)), and (3) a statement that the delay was unintentional. Such statement must be a verified statement if made by a person not registered to practice before the Patent and Trademark Office. The Commissioner may require additional information where there is a question whether the delay in payment was unintentional. The three-month period from the date of the first decision referred to in this paragraph may be extended under the provisions of § 1.136(a), but no further extensions under § 1.136(b) will be granted. Petitions to the Commissioner under § 1.183 to waive any time periods for requesting acceptance of an unintentionally delayed payment will not be considered, but will be returned to the applicant.

(d) Any petition pursuant to paragraph (b) of this section not filed within six months of the date of lapse must be accompanied by a terminal disclaimer with fee under § 1.321 dedicating to the public a terminal part of the term of the patent equivalent to the period of lapse of the patent.

53. Section 1.321 is revised to read as follows:

§ 1.321 Statutory disclaimer.

(a) A disclaimer under 35 U.S.C. 253 must be accompanied by the fee set forth in § 1.20(d) and identify the patent and the claim or claims which are disclaimed, and be signed by the person making the disclaimer, who shall state therein the extent of his or her interest in the patent. A disclaimer which is not a disclaimer of a complete claim or claims may be refused recordation. A notice of the disclaimer is published in the *Official Gazette* and attached to the printed copies of the specification. In like manner any patentee or applicant may disclaim or dedicate to the public the entire term, or any terminal part of the term, of the patent granted or to be granted.

(b) A terminal disclaimer, when filed in an application to obviate a double patenting rejection, must be accompanied by the fee set forth in § 1.20(d) and include a provision that any patent granted on that application shall be enforceable only for and during such period that said patent is commonly owned with the application or patent which formed the basis for the rejection.

54. Section 1.324 is revised to read as follows:

§ 1.324 Correction of inventorship in patent.

Whenever a patent is issued and it appears that there was a misjoinder or nonjoinder of inventors and that such misjoinder or omission occurred by error and without deceptive intention, the Commissioner may, on petition of all the parties and the assignees and satisfactory proof of the facts and payment of the fee set forth in § 1.20(b), or on order of a court before which such matter is called in question, issue a certificate deleting the misjoined inventor from the patent or adding the non-joined inventor to the patent.

55. Section 1.331 is amended by revising paragraph (a) to read as follows:

§ 1.331 Recording of assignments.

(a) Assignments, including grants and conveyances, of patents, national applications, or international applications which designate the United States of America, will be recorded in the Patent and Trademark Office under 35 U.S.C. 261. Other instruments affecting title to a patent, a national application, or an international application which designates the United States of America, and licenses, even though the recording thereof may not serve as constructive notice under 35 U.S.C. 261, will be recorded as provided in this section or at the discretion of the Commissioner. Any instrument to be recorded, except those under Part 7 of this title, must be accompanied by the fee set forth in § 1.21(h).

* * * * *

56. Section 1.332 is revised to read as follows:

§ 1.332 Receipt and recording.

Assignments are recorded in regular order as promptly as possible, and then transmitted with the date and identification of the record stamped thereon to the persons entitled to them. The date of the record is the date of the receipt of the assignment at the Office in proper form and accompanied by the fee set forth in § 1.21(h).

57. Section 1.334 is revised to read as follows:

§ 1.334 Issue of patent to assignee.

(a) In case of an assignment of the entire interest in the invention and application, or of the entire interest in the patent to be granted, the patent will normally issue to the assignee. If the assignee should hold an undivided part interest, the patent will normally issue jointly to the inventor and the assignee. If it is desired that the patent so issue, the assignment in either case must first

have been recorded, and at a day not later than the date payment is made of the issue fee.

(b) At the time of payment of the issue fee, a statement must be furnished indicating whether or not an assignment has been filed with the Patent and Trademark Office. In the event an assignment has been filed, such statement must include the name and address of the assignee and indicate whether or not an acknowledgement of a recorded assignment has been received from the Patent and Trademark Office.

(c) If the assignment is recorded after the date of payment of the issue fee, the assignee may petition that the patent issue to the assignee as recorded. Any such petition must be accompanied by the fee set forth in § 1.17(i).

58. Section 1.341 is amended by revising paragraph (h) to read as follows:

§ 1.341 Registration of attorneys and agents.

* * * * *

(h) *Oath and registration fee.* Before his or her name may be entered on the register of attorneys or on the register of agents, every applicant for registration must, after his or her application is approved, subscribe and swear to an oath or make a declaration prescribed by the Commissioner of Patents and Trademarks and pay the prescribed registration fee. (See § 1.21(a)(2).)

* * * * *

59. Section 1.347 is revised to read as follows:

§ 1.347 Removing names from registers.

Attorneys and agents, registered to practice before the Patent and Trademark Office, should notify the Office of any change of address for entry on the register, by letter separate from any notice of change of address filed in individual applications. The Office may address e letter to any person on the registers, at the address of which separate notice for the register was last received, for the purpose of ascertaining whether such person desires to remain on the register. The name of any person failing to reply and give the information requested within a time limit specified will be removed from the register, and the names so removed published in the *Official Gazette.* Any name so removed may be reinstated, either on the register of attorneys or the register of agents, as may be appropriate. Any request for reinstatement must be accompanied by the fee set forth in § 1.21(a)(3).

60. Section 1.445 is amended by revising paragraphs (a) (1) through (4) to read as follows:

§ 1.445 International application filing and processing fees.

(a) * * *

(1) A transmittal fee (see 35 U.S.C. 361(d) and PCT Rule 14)	$125.00
(2) A search fee (see 35 U.S.C. 361(d) and PCT Rule 16) where:	
(i) No corresponding prior United States national application with fee has been filed	$500.00
(ii) Corresponding prior United States national application with fee has been filed	250.00
(3) A supplemental search fee when required (see PCT Art. 17(3)(a) and PCT Rule 40.2)	[1]$125.00
(4) The national fee, that is, the amount set forth as the filing fee under § 1.16 (a) through (d) credited by an amount of $250 where an international search fee has been paid on the corresponding international application to the United States as an International Searching Authority. Where the amount of the credit is in excess of that required for the national fee, a request for a refund of the excess under § 1.446(b) may be filed at the time of paying the national fee. Only one such credit is permitted based on a single international search fee.	

[1]Per additional invention.

* * * * *

61. Section 1.446 is amended by revising paragraph (b) to read as follows:

§ 1.446 Refund of international application filing and processing fees.

* * * * *

(b) Refund of a portion of the search fee may be made to the extent set forth in § 1.445(a)(4) if requested at the time of paying the national fee.

* * * * *

62. Section 1.451 is amended by revising paragraph (b) to read as follows:

§ 1.451 The priority claim and priority document in an international application.

* * * * *

(b) Whenever the priority of an earlier United States national application is claimed in an international application, the applicant may request in a letter of transmittal accompanying the international application upon filing with the United States Receiving Office, that the Patent and Trademark Office prepare a certified copy of the national application for transmittal to the International Bureau (PCT Art. 8 and PCT Rule 17). The fee for preparing a certified copy is stated in § 1.19(a)(4) and (b)(1).

* * * * *

63. Section 1.510 is amended by revising paragraph (a) to read as follows:

§ 1.510 Request for reexamination.

(a) Any person may, at any time during the period of enforceability of a patent, file a request for reexamination by the Patent and Trademark Office of any claim of the patent on the basis of prior art patents or printed publications cited under § 1.501. The request must be accompanied by the fee for requesting reexamination set in § 1.20(c).

* * * * *

PART 2—RULES OF PRACTICE IN TRADEMARK CASES

64. Section 2.6 is revised to read as follows:

§2.6 Trademark fees.

The following fees and charges are established by the Patent and Trademark Office for trademark cases:

(a) For filing an application, per class	$175.00
(b) For filing an application for renewal of a registration, per class	300.00
(c) For filing to publish a mark under section 12(c), per class	100.00
(d) For issuing a new certificate of registration upon request of assignee	100.00
(e) For a certificate of correction of registrant's error	100.00
(f) For filing a disclaimer to a registration	100.00
(g) For filing an amendment to a registration	100.00
(h) For filing an affidavit under §8 of the Act, per class	100.00
(i) For filing an affidavit under §15 of the Act, per class	100.00
(j) For filing a combined affidavit under §§8 and 15 of the Act, per class	200.00
(k) For petitions to the Commissioner	100.00
(l) For filing petition to cancel or notice of opposition, per class	200.00
(m) For ex parte appeal to the Trademark Trial and Appeal Board, per class	100.00
(n) For printed copy of registered mark	
Copy only	1.00
Copy showing title and/or status	6.50
(o) For certifying trademark records, per certificate	3.50
(p) For photocopies or other reproductions of records, drawings, or printed material, per page of the material copied	0.30
(q) For recording trademark assignments, per document	100.00
For each mark in addition to one assigned in the same document	20.00
(r) For abstracts of title to each registration or application, including the search	12.00
(s) For special service handling of late filed fees in connection with a renewal	100.00
(t) For items and services that the Commissioner finds may be supplied, for which fees are not specified, such charges as may be determined by the Commissioner with respect to each such item or service	actual cost.

65. Section 2.85 is amended by revising paragraph (e) to read as follows:

§ 2.85 Classification schedules.

* * * * *

(e) Where the amount of the fee received on filing an appeal in connection with an application or on an application for renewal or in connection with a petition for cancellation is sufficient for at least one class of goods or services but is less than the required amount because multiple classes in an application or registration are involved, the appeal or renewal application or petition for cancellation will not be refused on the ground that the amount of

the fee was insufficient if the required additional amount of the fee is received in the Patent and Trademark Office within the time limit set forth in the notification of this defect by the Office, or if action is sought only for the number of classes equal to the number of fees submitted.

* * * * *

66. Section 2.101 is amended by revising paragraph (c) to read as follows:

§ 2.101 Filing an opposition.

* * * * *

(c) If no fee, or a fee insufficient to cover at least one class, is filed within 30 days after publication of the mark to be opposed or within an extension of the time for filing an opposition, the opposition will not be refused if the required fee(s) (See § 2.6) are filed in the Patent and Trademark Office within the time limit set forth in the notification of this defect by the Office.

* * * * *

67. Section 2.146 is amended by revising paragraph (b) to read as follows, and by removing paragraph (f):

§ 2.146 Petition to the Commissioner.

* * * * *

(b) Any such petition must contain a statement of the facts involved and the point or points to be reviewed and the action requested and the requisite fee (See § 2.6). Any brief in support thereof should accompany or be embodied in the petition; in contested cases any brief in opposition shall be filed within fifteen days after service of the petition. Where facts are to be proved in ex parte cases (as in petition to revive an abandoned application), the proof in the form of affidavits or declarations in accordance with § 2.20 (and exhibits, if any) must accompany the petition.

* * * * *

68. Section 2.162 is amended by revising paragraph (d) to read as follows:

§ 2.162 Requirements for affidavit or declaration during sixth year.

* * * * *

(d) Include the required fee for each class to which the affidavit or declaration pertains in the registration. If no fee, or a fee insufficient to cover at least one class, is filed before the expiration of the sixth year following the date of registration or of publication under Section 12(c) of the Act, the affidavit or declaration will not be refused if the required fee(s) (See § 2.6) are filed in the Patent and Trademark Office within the time limit set forth in the notification of this defect by the Office. If insufficient fees are included to cover all classes in the registration, the particular class or classes to which the affidavit or declaration pertains should be specified.

* * * * *

69. Section 2.167 is amended by adding a paragraph (g) as follows:

§ 2.167 Affidavit or declaration under Section 15.

* * * * *

(g) Include the required fee for each class to which the affidavit or declaration pertains in the registration. If no fee, or a fee insufficient to cover at least one class, is filed at an appropriate time, the affidavit or declaration will not be refused if the required fee(s) (See § 2.6) are filed in the Patent and Trademark Office within the time limit set forth in the notification of this defect by the Office. If insufficient fees are included to cover all classes in the registration, the particular class or classes to which the affidavit or declaration pertains should be specified.

[FR Doc. 82-25631 Filed 9-16-82; 8:45 am]

BILLING CODE 3510-16-M

"TEXT OF S.2881 AND FLOOR REMARKS"

STATEMENTS ON INTRODUCED BILLS AND JOINT RESOLUTIONS

By Mr. SPECTER (for himself and Mr. HEFLIN):

S. 2881. A bill to amend the copyright law respecting the limitations on exclusive rights to secondary transmissions; to the Committee on the Judiciary.

RETRANSMISSION CARRIER COPYRIGHT STATUS

Mr. SPECTER. Mr. President, I am today introducing a bill to bring needed precision to our copyright laws by clarifying the status of retransmission carriers, companies that utilize satellites or terrestrial microwave repeater stations to retransmit television signals to cable operators.

Although the Copyright Act Amendments of 1976 included an exemption from copyright liability for passive carriers, companies that provide the link to secondary transmissions by cable systems, recent court decisions have placed this congressional policy in doubt.

In March 1982, the U.S. District Court for the Northern District of New York held that Eastern Microwave's retransmission of broadcast signals was not entitled to the exemption from copyright liability for retransmission carriers established by the 1976 Copyright Act amendments (17 U.S.C. sec. 111(a)(3)). An appeal from this ruling is currently pending before the U.S. Court of Appeals for the Second Circuit. This ruling has created substantial confusion in the cable industry; confusion and uncertainty that can best be eliminated by congressional action to clarify the reach of the law.

Virtually every cable system in the country uses one or more of the so-called distant signals to supplement local television services. There are more than 50 companies delivering such signals nationwide with three firms utilizing satellite for nationwide distribution. This activity has been greatly facilitated by the compromise embodied in the 1976 Copyright Reform Act and by the Federal Communications Commission rules being relaxed to encourage cable systems to utilize distant signals.

In 1976 Congress adopted the compulsory license with royalty fee approach to the use of distant signals. Critical to that mechanism is the role of retransmission carriers who facilitate the opportunities of cable systems to receive and utilize distant signals. Almost one-quarter of the American public receives its television programing via cable. Almost 400 cable systems operate in Pennsylvania. Without the services of retransmission carriers to relay television signals over great distances the variety of viewing opportunities for cable subscribers will be severely limited.

In recognition of this passive and facilitating role, retransmission carriers were granted an exemption from copyright royalties. The cable systems that are the intermediate recipients of the secondary transmission and beneficiaries of the relay are not covered by this statutory exemption. Thus, copyright owners are not left uncompensated, but recover according to the compulsory license and royalty compromise embodied in the law. Indeed, without proper recognition of the exemption of retransmission carriers, the 1976 compromise can be significantly undermined.

While I am anxious to pursue our inquiry into the continuing viability of the 1976 compulsory license and royalty compromise, until we decide to adopt an alternative solution to the distant signal problem I think the current law must be allowed to govern. The amendment I offer today is intended to clarify that law and uphold the working compromise agreed upon in 1976.

The language I offer today is included in the Cable Television Copyright Act Amendments, H.R. 5949, recently reported favorably by the House Committee on the Judiciary. In its report, the House committee explained the need for this amendment:

It is the intent of the Committee that this subsection clarify the copyright law regarding the intent of 17 U.S.C. 111(a)(3) which provides an exemption of copyright liability for common carriers.

In the course of Committee deliberations on this legislation, a decision was issued in a case involving an interpretation of Section 111(a)(3) *Eastern Microwave, Inc.* v. *Doubleday Sports, Inc.*, 81-CV-303 (N.D., N.Y., March 12, 1982), which leaves the cable industry in a state of turmoil. The holding of that case was that the carrier, Eastern Microwave, Inc., failed to qualify for the Section 111(a)(3) exemption. In the Committee's view, the decision incorrectly construed the carrier exemption. If the decision is applied to other parties, all satellite resale carriers could be held liable for copyright infringement when they deliver distant signals to cable systems. Further, terrestrial microwave carriers could also be in danger of losing their exemption. These carriers are the primary means whereby cable systems receive distant signals for retransmission to cable subscribers; rather than face copyright liability, they may suspend broadcast retransmission. As a result, the signal carriage standards of the FCC could be undone, and the entire compulsory licensing scheme undercut, which would be antiethical to the intent of this committee and the public interest.

There has never been any doubt by this Committee that carriers are exempt from copyright liability when retransmitting television signals to cable systems via terrestrial microwave or satellite facilities. Although the *Eastern Microwave* case is presently on appeal, in view of the significance of the ruling and the chaotic state in which it leaves the 1976 cable legislation, the committee believes it is useful to clarify the existing language of Section 111(a)(3) by certain technical amendments, thereby restating its intent that the exemption apply to all such carriers. With these changes, qualifying carriers may engage in business promotion and marketing of their services and retransmit one or more television signal via statellite to cable systems pursuant to their FCC tariff without fear of loss of the exemption.

The bill I am introducing, parallels the language adopted by the House Committee on the Judiciary. It would make three technical changes in the current language of section 111(a)(3) of title 17, United States Code, and thereby clarify congressional intent with respect to the limited exemption from copyright liability for retransmission carriers.

Mr. President, I ask unanimous consent that the bill be printed in the RECORD.

There being no objection, the bill was ordered to be printed in the RECORD, as follows:

S. 2881

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 111(a)(3) of title 17, United States Code is amended to read as follows:

"(3) the secondary transmission is made by any carrier who has no direct or indirect control over the content of the primary transmission or over the ultimate recipients of the secondary transmission, and whose activities with respect to the secondary transmission consist primarily of providing wires, cables, or other communications channels for the use of others: *Provided,* That the provisions of this clause extend only to the activities of said carrier or like entity with respect to secondary transmissions and do not exempt from liability the activities of others with respect to their own primary or secondary transmissions.".

RECENT APPEAL CASES REGARDING TRADEMARKS IN JAPAN

PIPA Japanese Group
Committee No. 1
Nagahisa Yuasa

Abstract

Trademark appeals have been growing in number in recent years, particularly appeals against rejection and claiming cancellation of a prior trademark for non-use.

The reasons for the increase in appeals against rejection (e.g. 5000 in 1981; 1800 in 1979) are not clear. However, the revised examination guidelines and the introduction of an automated retrieval system seem to be major factors. The former is aimed at clarification of phonetic similarity whereas the latter is directed to acceleration of the examination process. Trademark examinations have been made on these basis without thorough consideration of the realities of the business sector, resulting in mechanical determination of similarity. Seemingly, these caused an increase of appeal cases.

Apart from arguments concerning examination practice, this paper presents possible measures available to applicants at the time of rejection, with further reference to suggestions as to how to make the appeal procedures less time-consuming. Consideration should be given to the business sector as well as an employment of a "consent" system in the examination to ensure earlier registration.

With respect to appeals claiming cancellation for non-use, this paper refers, a major reason for the increase, to the 1976 Revision, which put the liability to disprove non-use on the owner, and to the tactical use of appeals to avoid rejection.

Incidentally, the paper also comments on the determination of goods to be cancelled as well as premarketing transactions as measures to avoid the possibility of future appeals.

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I. Introduction

Articles 44, 45, 46 and 50 of the Japanese Trademark Law provide for appeals against rejection, dismissed amendments, invalidation of defective trademarks and cancellation of trademarks respectively.

The number of appeals against dismissed amendments and invalidation of defective trademarks has remained fairly static during the past several years. On the other hand, appeals against rejection and cancellation for non-use have shown a steady increase in number since 1977. The rapid increase of appeals against rejection since 1980 is particularly notable.

In this report we shall discuss the increase in these two forms of appeal with particular reference to the possible causes and potential problems. We hope that our discussion will be of assistance to practitioners in coping with trademark issues.

II. Appeals Against Rejection

The Japanese system ensures that applicants have an opportunity to appeal against rejection of their trademark applications during examination. Under this system, applicants are entitled to file an appeal before the Board of Appeal of the Patent Office within 30 days of receipt of notice of rejection. (N.B. a 2 months extention is available for foreign applicants).

1. Appeal Cases

Appeals against rejection account for 78% of the total number of appeal cases filed during the past five years. Of the rest 17% were against cancellation for non-use, 4% against invalidation of defective trademarks and 1% against dismissed amendments.

Usually appeals against rejection are appeals against an examiner's decision to refuse registration on the ground that the applicant's application is similar to a prior trademark registration. This type of appeal accounts for 70% of the total number of appeals against rejection. The numbers of applications and appeals against rejection for the past 6 years are shown in Table 1. The number of applications has fluctuated little whereas the number of appeals shows an increase since 1977 with further sharp rise since 1980. The number of appeals in 1981 is four times that in 1976. Apart from the case of rejection based on similarity to prior registrations, it is difficult to find good reasons to explain the recent increase in appeal cases. It can be seen that, in the majority of cases, appeals call for the reversal of a rejection by the examiner based on the ground that filed trademark is confusingly similar to cited trademark.

An average of 55% of appeals against original rejection were unsuccessful over the past 5 years.

This figure becomes 60% in the case of appeals where the reason for rejection was specifically stated to be similarity. No substantial change in this trend can be seen in the latest figures for appeal cases.

2. Reasons for the Increase in Appeals

There are several factors which are considered major reasons:

a) Revision of examination guidlines by which more specific definition has been made concerning phonetic similarity to prior trademarks.

In response to argument from the business sector that the protection of well-known trademarks was insufficient and that such trademarks should be allowed a broader scope, an industrial property right council submitted a report in 1974 suggesting clarification in the area of phonetic similarity. The Patent Office, following this suggestion, made a partial revision of its examination guidelines. In accordance with the revised guidelines, the following have been held to be phonetically similar. The examples cited include actual appeal cases:

i) trademark consisting of same number of syllables, including different letters, where the material difference is between two shounds in the same

vowel sound group of Japanese characters (kana)
e.g. VANCOCIN (ba-n-ko-shi-n) - BUNCOMIN (ba-n-ko-mi-n) (N.G. In Japanese the distinction between VA and BU is minimal.)

ii) trademarks consisting of the same number of syllables, including different letters, where the material difference is between two sounds in the same consonant family of Japanese characters (kana).
e.g. ATOMIN (a-to-mi-n) - ATAMIN (a-ta-mi-n)

iii) trademarks consisting of the same number of syllables, where the difference is merely one between voiced, un-voiced, plosive or fricative sound.
e.g. HETRON (he-to-ro-n) - PETRON (pe-to-ro-n)

iv) trademarks consisting of letters where the material difference in sound is existance of weakly pronounced consonants.
e.g. DANNEL (da-n-ne-ru) - DYNEL (da-i-ne-ru)
ELIX (e-ri-ku-su) - ERIC (e-ri-kku)

v) trademarks consisting of letters where the material difference in sound is between long vowels or between long and weakly pronounced vowels.
e.g. ANNEL (a-n-ne-ru) - ARNEL (aa-ne-ru)

vi) trademarks consisting of the same number of syllables where the material difference is between two unrelated sounds, but the trademark is relatively long.

e.g. CONGATE (ko-n-ge-i-to) - COLGATE (ko-ru-ge-i-to)

vii) relatively long trademark with one additional letter sound,

e.g. CAMPBEL (kya-m-pu-be-ru) - CAMBELL (kya-m-be-ru)

viii) overall phonetic resemblance

e.g. CAMPA (kya-m-pa) - Cambell (kya-m-be-ru)

However, if the difference in sound or intonation in any of the above cases is great or substantial, or if the overall spoken sounds are commonly distinguished, the guidelines are not applicable.

These guidelines were in fact regarded as criteria for trademark examinations prior to their official publication in 1977. However, whereas a difference in prefix had previously been considered a sufficient difference to support a claim of non-similarity, it is a recent trend that a difference in prefix will not necessarily preclude possible rejection by the examiner.

Another reason for the increase in appeals is the application of the revised guidelines to trademark applications without thorough consideration of business conditions and the scope of a well-known mark. This will be discussed further under III-1.

b) Introduction of Automated Retrieval System

In 1971 the Patent Office formed an in-office committee to develop an automated retrieval system to facilitate searches by examiners. This system was substantially completed in 1977 and has been available for use in all except a few classes since 1980. Automated retrieval allows a more extensive search thereby increasing the examiners' ability to provide citations. In addition, the revised examination guidelines tend to be applied in a uniform manner. These factors may also provide major reasons for the increase in appeal cases.

3. Revised Examination Guidelines

The provision of guidelines has the advantage of avoiding confusion with prior trademarks and facilitating examinations. However, mechanical application of the guidelines has the following disadvantages in practice.

a) The examination criteria do not always appropriately reflect real business situations. Thus, strict application of the revised guidelines tends to unnecessarily restrict the registration and thereby use of trademarks.

b) The scope of registered trademarks extends to areas of similarity in which two trademarks may indirectly conflict. This is referred to in Japanese as "keri-ai". Where there is a case of "keri-ai", an application for an associated trademark (a mark which is similar to its parent trademark but not to others, as provided for in the Trademark Law, Article 7), this application is likely to be rejected on the ground that the proposed associated trademark is similar to other trademarks with which the parent mark is in "keri-ai" conflict.

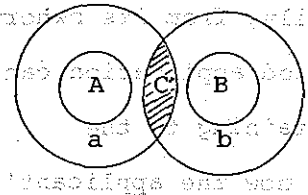
The "keri-ai" rejection makes it difficult to achieve a minor modification within the scope of a registered trademark, in order, for example, to increase its consumer appeal, because of the existance of other parties' trademarks with which it is in indirect "keri-ai" conflict. Mechanical application of the guidelines has therefore further increased the possibility of rejection of new applications and associated applications under Art. 7

seeking a minor modification of an existing parent trademarks.

The concept of "keri-ai" not only increases the risk of rejection by the examiner but may also restrict the scope and use of an existing trademarks.

If there is an overlapping area covered by two trademarks, both trademarks are considered to be infringing each other.

The "keri-ai" situation may be illustrated as follows:



A, B: Scope of original trademarks
a, b: Area of similarity
c: Overlapping area - "keri-ai"

Neither proprietor has a right to file associated trademark applications related to their own parent trademarks nor to use them within the area C.

4. Remedies For Applications Rejected Because of Similarity

(1) Acknowledgement of Similarity

a) The applicant may acknowledge the similarity of his own trademark but file a request for cancellation of a cited trademark on the ground of non-use. Upon cancellation, partial or whole, a trademark can be filed in the applicant's favor.

b) The applicant may seek the assignment of cited trademark, partially or wholly, from its owner. Upon assignment, an associated application can be filed to cover areas pertaining to the assigned trademark which is now the applicant's own parent trademark.

c) The applicant may assign his own application to the owner of a cited trademark. Upon registeration of the assigned mark as a registered trademark, a license for use could be obtained from the assignee.

Apart from these three cases a trademark may not be registered or used where rejection is assumed on the ground that it is similar to a registered mark.

However, these methods involve procedures and/or examination and are thus not available for some actual cases.

(2) Claim of Non-Similarity

a) An appeal against rejection must first be filed asserting non-confusion and non-similarity between the subject trademark application and the examiner's citations.

b) Alternatively an appeal against rejection may be filed together with another appeal against cancellation for non-use.

5. Revision of the Examination System

Despite the discussion in 4-(1) above, these means can not always be employed in actual business transactions, and this inevitably causes applicants whose trademark applications have been rejected to seek a reversal of the rejection by appeal. In this section, we further discuss problems of the current trademark system with emphasis on the examination and appeal systems. In particular we shall look at the measures necessary to improve the effectiveness of trademark registration and prevent any further increase in the number of appeals.

(1) Problems of the Current Examination System

a) Under the current practice, the test of similarity tends to be made somewhat mechanically. Uniform criteria in this area are desirable in order to accelerate the process of examination. However, these criteria should always be construed subject to the general test of whether there is a real likelihood of confusion in actual business transactions. Take the case of a well-known mark and a trademark not used in practice for instance. The scope of similarity in a well-known mark must be greater than that in an unused trademark. However, such factors as the extent of use or knowledge on a trademark in the business sector are not necessarily reflected in the examination of trademarks.

Conversely, the scope of a particular trademark is seemingly determined by a mechanical application of the guidelines without reference to the real business situation. As a result, rejection by the examiner sometimes follows automatically without thoroughly considering the true probability of confusion amongst the business community.

b) The Trademark Law provides for the rejection of trademark applications which are similar or identical to prior trademarks (Art. 4-11). This provision aims at protecting goodwill and profits of the trademark owner. However, later applications are refused even where the owner of the prior trademarks consents to the later applications being filed and registered.

These points will be discussed in further detail in the following section, with reference to speeding up the process of trademark examination and its reasonable registration.

(2) Review of Entire Trademark System

The following are suggestions which it is felt provide solutions to outstanding problems.

a) The consideration of information from the business sector in trademark examinations. To make this possible, both examiner and applicant must be aware, more than ever, of market information such as the supply and distribution of goods, market availability, etc.

b) Introduction of a "consent" system. The Trademark Law provides for the licensing of third parties to use a registered trademark

in a business area other than that designated. As an extension of this, it is felt that a "consent" system should be introduced at the examination stage, allowing the registration of a trademark application with consent of the parties concerned with respect to non-confusion with prior similar trademarks. No doubt, some extreme cases where consumer interests would be adversely affected should be excluded from this system.

As mentioned above, this system is worth considering from the point of view of speeding up trademark examination and its reasonable registration.

Countermeasures

The increase of appeals against rejection occurred, as discussed beforehand, partly in response to an increase in the rejection of trademark applications. For a possible improvement of the trademark examination procedure, we would direct the attention of trademark practitioners to the following points in order to anticipate potential problems.

a) A trademark search should be made even if a new application is similar to the applicant's own trademark(s).

b) The search area should be as extensive as possible. There are some cases which may represent a bar to registration even though a different prefix is used.

c) When an application is rejected, the possibility of seeking cancellation of the cited patent for non-use should be examined as well as a single appeal asserting non-similarity.

III. Appeal Claiming Cancellation of Prior Trademark For Non-Use

In the case where a registered trademark has not used for the designated goods for more than three years in Japan, third parties may appeal seeking cancellation of the trademark (Trademark Law, Art. 50-1). This provision includes use not only by a trademark owner but also by licensees, exclusive or non-exclusive. An appeal claiming cancellation is also available in respect of trademarks which have been unfairly used or which were filed by an attorney without appropriate power from a genuine applicant in a foreign country.

Appeals claiming cancellation of trademarks account for 17% of all appeal cases. Of these the majority are claims based on the ground of non-use.

As can be seen in Table 2, appeals claiming cancellation have shown a rapid increase since 1976.

1. Possible Causes of the Increase

There are several reasons for the increase since 1976 in appeals claiming cancellation. Among them the following are thought to be major causes.

a) The revision of the Trademark Law in 1975. Under this amendment, the burden of proof in case of cancellation for non-use of a trademark was shifted from the appellant to the trademark owner.

b) The increase in trademark applications rejected by the examiners. Applicants are likely to seek a reversal of rejection by appeal.

2. Suggested Remarks for Cancellation

Appellants seeking cancellation of a trademark for non-use should take note of the following.

a) Cancellation should be sought in relation not only to goods of direct interest, but also to other similar products. Even if partial cancellation in relation to the designated goods is sought successfully,

the right to use the trademark on other similar goods may nevertheless prohibit others from using the subject trademark on goods in relation to which the trademark has been cancelled.

b) It is not possible for appellants to include in their claim for cancellation goods which did not exist at the time of registration, even in the case where all the goods are designated in corresponding trademark classes.

Take, for example, a trademark "ABC" registered in 1930 designating all goods in Class 69 of the Old Japanese Classification. This class covers goods pertaining to electrical and mechanical instruments. Since computers did not exist at that time, an applicant whose trademark has been rejected might want to exclude the computer from the designated goods and file an appeal claiming cancellation of the trademark in relation thereto. This appeal will not succeed. However, if a device similar to a computer was available in 1930, the owner may exclude others' use for the computer.

This being the case a party wanting to use "ABC" for his computers should file an appeal claiming cancellation in respect of all the goods in Old

Class 69 that were originally designated, provided that the trademark "ABC" is not used on goods covered by Class 69.

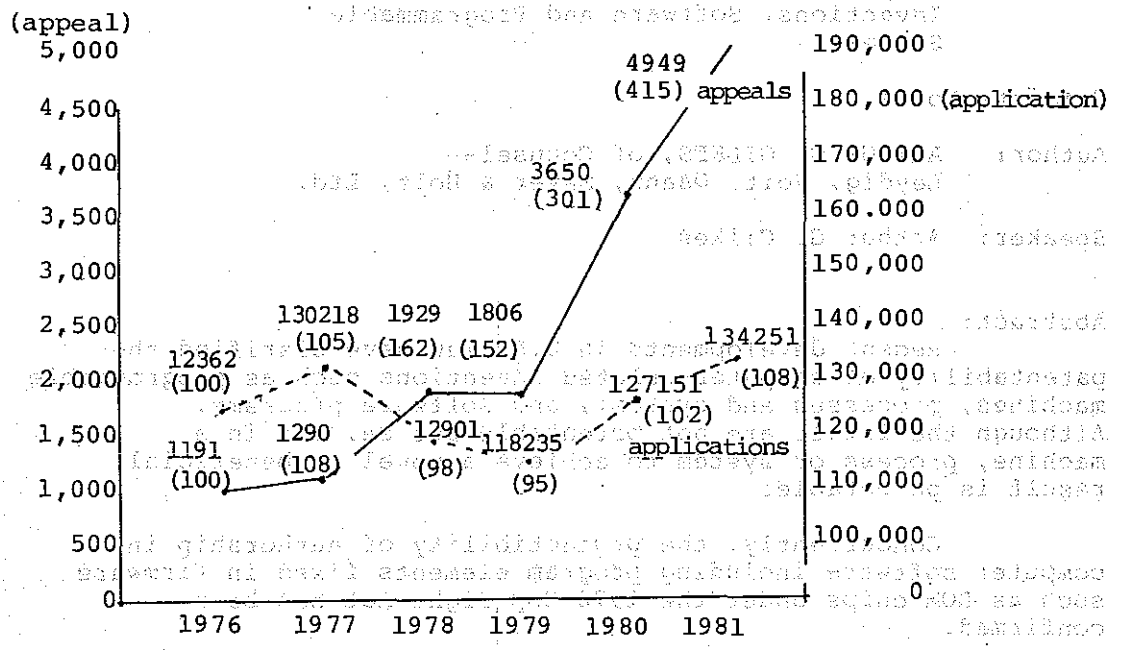
Where the owner uses its "ABC" mark for products unrelated to computers, appellants should exclude products in use or similar products thereto from their target goods or they should aim computer-related products available in 1930 which relate to computers for cancellation.

3. Means of Avoiding Appeals

It is important for trademark holders to take appropriate measures in order to avoid the possibility of future appeals concerning their own trademarks. Even if mass production of products is not yet feasible, or if the trademark bearing products are not yet imported into Japan, advertising, publicity or sample distribution should be undertaken beforehand. Advertising or publicity in foreign language publications, if available in Japan, will be sufficient for the purpose of proving actual use.

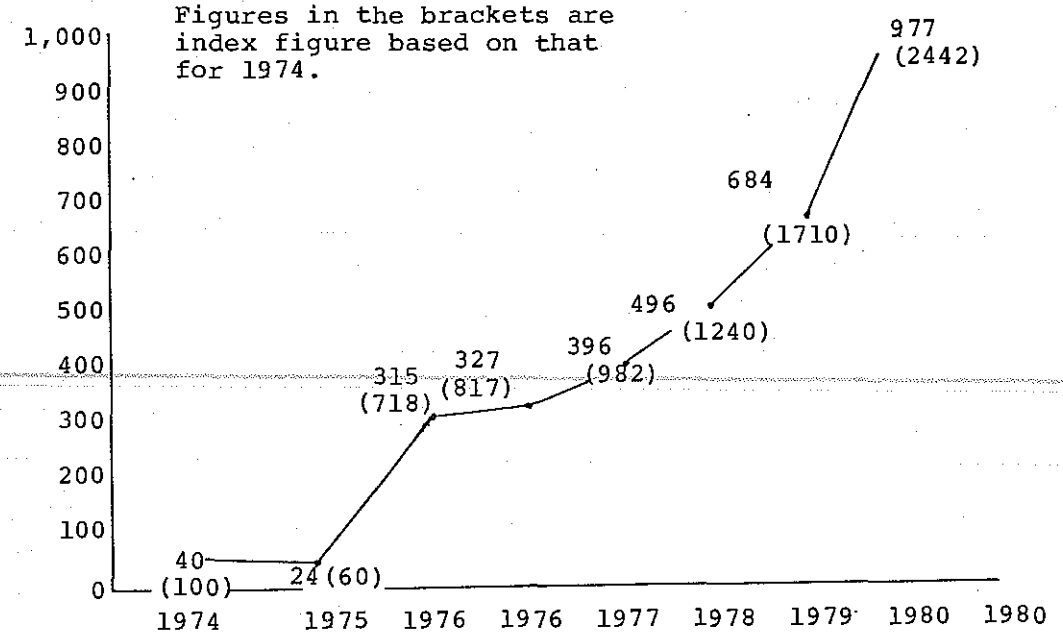
In our discussion, we have listed various factors regarding two types of trademark appeal with particular reference to the reasons for increased appeals and current problems. We conclude by expressing our sincere wish that this discussion will be of some assistance to trademark practitioners in handling trademark cases in japan.

Table 1 The Numbers of Appeals against Rejection and Trademark Application for past 6 years



* Figures in the brackets are index based on that for 1976.

Table 2 The Number of Appeals Claiming Cancellation of Trademarks for Non-Use for past 8 years



Title: Proprietary Protection of Computer-related Inventions, Software and Programmable Systems

Committe No. 1

Author: ARTHUR G. GILKES, of Counsel—
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Speaker: Arthur G. Gilkes

Abstract:

Recent developments in U.S. law have clarified the patentability of computer-related inventions such as programmable machines, processes and systems, and software programs. Although the latter are not patentable per se, use in a machine, process or system to achieve a novel or beneficial result is patentable.

Concurrently, the protectibility of authorship in computer software including program elements fixed in firmware such as ROM chips under the 1976 Copyright Act has been confirmed.

Accordingly, decision making by management in planning protection strategy in this field should give careful consideration in the first instance to the value of patent protection as an alternative to maintaining trade secrecy. The potential value of copyright protection as an optional supplement for software, particularly in situations where secrecy control is difficult or slight, should not be overlooked.

The purpose of this paper is to review the state of the law in respect of potential patent protection and other proprietary means for protecting computer-related inventions and scientific developments dependent upon programming and processing techniques in programmable machines, processes and systems. With this as a back-drop, the paper will focus on the decision making process in establishing policy and choosing avenues of legal protection.

The importance of this area of technology and its impact on industrial innovation and advance are well known. Indeed it is well recognized that a new industrial revolution in effect is taking place and that computerization and related processing techniques pervade every aspect of technical and commercial activity. The awareness of technical and business managements to the structural and operational changes occurring should take into account as well the emerging law that is beginning to reflect these changes. I propose therefore to focus on the decisions that must be confronted by technical management, and patent department management and staff, in analyzing the availability and effectiveness of alternate methods for achieving proprietary protection of developments in the field.

The technical, production and financial operations of business are ordinarily conducted in secret. It is not surprising, therefore, that the initial approach of industry

to assimilation of computer processing techniques in operational phases has been to treat these as the subject of trade secrets. Marketing operations to a greater extent are by necessity conducted more openly and often disclosure must be made to customers. In marketing, including licensing, therefore, alternative legal means of protection have been sought. For a time, the only feasible alternative to trade secret protection seemed to be by copyright while an international debate as to the patentability of inventions involving programming under patent law progressed with emphasis initially on the negative side.[1]

In the past year, however, important decisions by the United States Supreme Court, supplemented by decisions of the Court of Customs and Patent Appeals, (CCPA) have begun to clarify the potential of patent protection in the area. The clouds of uncertainty are beginning to be dispersed. Although computer programs and related elements of computer sofeware as such may not be patentable, the utilization of computer software and elements thereof as a part of apparatus or a process may constitute patentable subject matter.

Because patent protection provides the potential of proprietary control far transcending in a fundamental and conceptual sense that available from copyrights and further provides a potential exclusionary power alien to trade secrets,

[1]Note the adverse recommendation by the 1966 Report of the President's Commission on the Patent System, largely because of classification and examination difficulties for the Patent Office.

it would seem that logical analysis of means for protection of advances in the field of computer programming and programable systems should begin with consideration of the feasibility of patent procurement and enforcement. The analysis and the decision making process, however, are complicated by numerous factors inherent in obtaining and enforcing patents. Patent protection requires disclosure. The extent and burdens of disclosure must be taken into account as well as the enforceable scope of patent claims granted, and ultimately the cost of patent protection vis-a-vis alternative forms such as trade secrets and copyrights. Accordingly, this paper will approach the subject stepwise in terms of

I. Patentability and value of patent protection for computer related inventions, programs and programmable systems

II. Role of trade secret protection; advantages and disadvantages.

III. Copyrights as supplements or alternatives to patent and trade secret protection.

Any analysis of an appropriate route to protection must also take into account the nature of the business involved, the area of application involving the computer or procedsing technology; e.g. computer systems, industrial production systems, systems using microprocessing for simulation and modeling for control or design, consumer devices or specialized

applications of microprocessing, and the balance achievable in practice between elective secrecy and necessary disclosure. Many factors such as cost and complexity of programming, processing and interfacing architecture and techniques as well as the development and use environment respecting employe publications and mobility, access by suppliers, contractors, customers and licensees may be important practical determinants affecting protection policy. To the extent feasible, these will be summarized in conclusion.

I.A Patentability - U.S. Code, Title 35, Section 101 - Statutory Subject Matter

At the risk of over-simplification, I am going to confine this discussion to the more recent major court decisions without engaging in an extended discussion of the development of the law. This has already been treated extensively in scores of law review articles, many articles in professional journals and in many papers presented at symposia and meetings of professional societies. The attached bibliography, although not intended to be exhaustive, is representative of the contributions in this area.

The initial challenge to patentability of computer software and programmed machines, processes and systems was under 35 U.S. Code Section 101 on the ground that subject matter dependent upon the computer program or elements thereof did not constitute statutory subject matter, i.e., a process,

machine, manufacture or composition of matter. On this issue , the Patent and Trademark Office took the position that an effort was being made to patent abstract ideas in the form of mathamatical formulas or algorithms, or principles or phenomena of nature. As cases proceeded from the PTO on appeal to the Court of Customs and Patent Appeals, (CCPA) this court took a much more liberal position and held various programmed machines and processes patentable. Certain of these cases were taken by the PTO to the U.S. Supreme Court. The resulting decisions, together with the more recent decisions of the CCPA are reasonably difinitive of the state of the law respecting patentability of computer related inventions under Section 101.

The Benson Case

In 1972, the United States Supreme Court[2] held that a method for programming a general purpose digital computer to convert binary-coded-decimal numbers into binary numerals was not a "process" within the meaning of Section 101 and thus could not be patented. The court relied on a long line of older cases of the court which held that an abstract idea, a principle or phenomena of nature, a natural law or a series of mental processes were not patentable. The court in a unamanimous opinion by Justice Douglas recognized however that the application of such ideas or principles could be patentable. Thus the court citing older case stated:

[2]Gottschalk v. Benson et al., 409 US 63, 34 L. Ed. 2d 273 (1972)

"Mackay Co. v. Radio Corp. 306 US 86, 94, 83 L Ed 506, 59 S Ct 427 that '[w]hile a scientific truth, or the mathematical expression of it, is not a patentable invention, a novel and useful structure created with the aid of knowledge of scientific truth may be.' That statement followed the long standing rule that '[a]n idea of itself is not patentable.' Rubber Tip Pencil Co. v. Howard, 20 Wall 498, 507, 22 L Ed 410."

"As we stated in Funk Bros. Seed Co. v. Kalo Co. 333 US 127, 130, 92 L Ed. 588, 68 S Ct 440, 'He who discovers a hitherto unknown phenomenon of nature has no claim to a monopoly of it which the law recognizes. If there is to be invention from such a discovery, it must come from the application of the law of nature to a new and useful end.' We dealt there with a 'product' claim, while the present case deals with 'process' claim. But we think the same principle applies."

In discussing patentability of a process, the court referred to Cochrane v. Deener, 94 US 780 in which a process for manufacturing flour had been patented irrepective of the particular form of the instrumentalities used and without limitation to any particular tool or machine. The court

stated:

> "Transformation and reduction of an article 'to a different state or thing' is the clue to the patentability of a process claim that does not include particular machines".

After disclaiming any intention of "freezing" process technology or computer-related technology, the court summarized its holding succinctly.

> "It is conceded that one may not patent an idea. But in practical effect that would be the result if the formula for converting BCD numerals to pure binary numerals were patented in this case. The mathematical formula involved here has no substantial practical application except in connection with a digital computer, which means that if the judgment below is affirmed, the patent would wholly pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself."

The Flook Case

Following Benson the PTO issued new guidelines based upon the holding in Benson and the criteria of Cochrane v. Deener for patentability of a process. For a brief period, the CCPA seemed to acquiesce but then began to interpret the restrictive holding in Benson more and more narrowly. Mr. Justice Stevens in his dissent in Diamond v. Diehr et al. 450 US 175, 67 L Ed 2d 155 (1981) has outlined in considerable

detail the handling of computer related cases by the CPA both before and following Benson. As Justice Stevens has pointed out, the CCPA developed a two-step procedure for analyzing program-related inventions in the light of Benson. First such inventions should be examined to determine whether a mathematical algorithm is directly or indirectly claimed. If an algorithm is claimed, the question then is whether the claim would wholly pre-empt use of the algorithm. In re Freeman 573 F 2d 1237 (1978).

In Parker v. Flook 437 US 584, 57 L Ed 2d 451 (1978), the patent claims in issue defines a method for up-dating alarm limits during catalytic conversion processes in which the only novel feature was a mathematical formula. Although the claims did not cover every conceivable application of the mathematical formula, limited as they were to use in catalytic chemical conversion of hydrocarbons, the claims did cover any use of the formula for up-dating the value of an alarm limit on any process variable involved in such processes. The PTO had rejected the claims on the ground that the mathematical formula constituted the only difference between the claims and the prior art and therefore would be in practical effect a patent on the formula or mathamatics itself. The "point of novelty" lay in the formula or algorithm of the claims, subject matter that according to Benson was unpatentable. The CCPA reversed, reasoning that since the mere solution of the algorithm would not consitutute infringement of the claims, a patent on the method would not pre-empt the

formula, and therefore Benson was distinguished. Justice Stevens for the court defined the question in the case as "whether the identification of a limited catagory of useful, though conventional, post-solution applications" of a mathematical formula would make the method patentable.

In reversing the CCPA, the Supreme Court again reviewed the line between a patentable process and an unpatentable principle by reference to the classic line of older cases cited in Benson. Again as in Benson, the court concedes that a process is not unpatentable simply because it contains a law of nature or a mathematical algorithm. However, the court states that

> "The notion that post-solution activity, no matter how conventional or obvious in itself, can transform an unpatentable principle into a patentable process exalts form over substance. A competent draftsman could attach some form of post-solution activity to almost any mathematical formula;"

The court further summarizes its holding:

> "Mackay Radio and Funk Bros. point to the proper analysis for this case: The process itself, not merely the mathematical algorithm, must be new and useful. Indeed, the novelty of the mathematical algorithm is not a determining factor at all. Whether

the algorithm was in fact known or unknown at the time of the claimed invention, as one of the 'basic tools of scientific and technological work,' see Gottschalk v. Benson, 409 US, at 67, 34 L Ed 2d 273, 93 S Ct 253, it is treated as though it were a familiar part of the prior art."

In its holding, the court rejects arguments that its approach improperly confuses Section 101 with considerations of novelty and obviousness which are covered by Sections 102 and 103 and that it is dissecting the claim to find the novel feature outside Section 101. The courts position, as stated is:

"Our approach to respondent's application is, however, not at all inconsistent with the view that a patent claim must be considered as a whole. Respondent's process is unpatentable under §101, not because it contains a mathematical algorithm as one component, but because once that algorithm is assumed to be within the prior art, the application, considered as a whole, contains no patentable invention. Even though a phenomenon of nature or mathematical formula may be well known, an inventive application of the principle may be patented. Conversely, the discovery of

such a phenomenon cannot support a patent unless there is some other inventive concept in its application."

In a footnote (18) the court paraphrases its holding in these words:

"Very simply, our holding today is that a claim for an improved method of calculation, even when tied to a specific end use, is unpatentable subject matter under §101."

The Diehr and Bradley Decisions

Once again the dialog resumed between the PTO and the CCPA in endeavoring to interpret the state of the law following Flook, with the PTO applying the holding of Flook in the light of Benson more restrictively. As indicated earlier, Justice Stevens in his dissent in Diehr took exception to the CCPA's approach stating with some petulance:

"In my judgement, this reading of Flook - although entirely consistent with the lower court's expansive approach to §101 during the past 12 years - trivializes the holding in Flook, the principle that underlies Benson, and the settled line of authority reviewed in those opinions".

Nonetheless, the Supreme Court in Diehr[3] by a 5-4 decision,

[3] 450 US 175, 67 L Ed 2d 155 (1981)

in what may prove to be the water-shed decision dealing with requirements of Section 101 in respect of computer related inventions, held that a process for curing synthetic rubber employing a mathematical formula and programmed digital computer was patentable subject matter under 35 USC §101. The process in Diehr related to the problem in industry of obtaining uniformly accurate cures in the molding of raw uncured synthetic rubber into cured precision products. The invention resided in a process of constantly measuring the actual temperature within the curing mold, automatically feeding these temperature measurements into a computer which recalculated the cure time by use of a mathematical equation (based on the Arrhenius relationship) and ultimately signaled the device to open the mold press at the correct time.

After recognizing that the court had previously prescribed limits to patentability of discoveries under Section 101, excluding "laws of nature, natural phenomena and abstract ideas", the court likened the algorithm in Benson to a law of nature. Flook similarly was concerned simply with a formula for computing an updated alarm limit. The Court further pointed out that a claim otherwise statutory "does not become non-statutory simply because it uses a mathematical formula, computer program or digital computer." The court then goes on to state that in determining the eligibility of a claimed process for patent protection under Section 101, the claims must be considered as a whole.

"In determining the elgibility of respondents' claimed process for patent protection under §101, their claims must be considered as a whole. It is inappropriate to dissect the claims into old and new elements and then to ignore the presence of the old elements in the analysis. This is particularly true in a process claim because a new combination of steps in a process may be patentable even though all the constituents of the combination were well known and in common use before the combination was made. The 'novelty' of any element or steps in a process, or even of the process itself, is of no elevance in determining whether the subject matter of a claim falls within the §101 categories of possibly patentable subject matter."

The court in a footnote stated that a fallacy in so in the PTO's argument is:

"...we did not hold in Flook that the mathematical algorithm could not be considered at all when making the §101

determination. To accept the analysis proffered by the petitioner would, if carried to its extreme, make all inventions unpatentable because all inventions can be reduced to underlying principles of nature which, once known, make their implementation obvious."

In conclusion the Court held:

"On the other hand, when a claim containing a mathematical formula implements or applies that formula in a structure or process which, when considered as a whole, is performing a function which the patent laws were designed to protect (e.g., transforming or reducing an article to a different state or thing), then the claim satisfies the requirements of §101. Because we do not view respondents' claims as an attempt to patent a mathematical formula, but rather to be drawn to an indusrial process for the molding of rubber products, we affirm the judgment of the Court of Customs and Patent Appeals".

The Bradley case[4] related to a multi-programming computer system which has a main memory and which has scratchpad registers accessible to an operating system for controlling the computer system. A data structure stores and communicates coded signals between certain control processes and the operating system in response to a programmed read-only memory (ROM) interposed between the main memory and the scratchpad registers for altering or repositioning information in the computer's system base.

The PTO rejected the claims even though they did not recite a mathematical algorithm as mathematical in nature. The CCPA reversed holding that the claimed system did not involve mathematical calculations but were directed to "a combination of tangible hardware elements - a machine including some hardware elements which contain microprogrammed information termed firmware."

The Supreme Court was evenly divided (Chief Justice Burger not participating) as to whether the claimed invention constituted patentable subject matter under Section 101; the result of course was to affirm the decision of the CCPA.

Recent decisions of the CCPA -

In re Pardo and Landau[5] was decided by the CCPA August 5, 1982. In re Taner et al.[6] was decided June 10, 1982 and

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4 450 US 381, 67 L. Ed. 2d 311 (1981), per curiam, afirming 600 F 2d 807 (CCPA-1979)
5 214 USPQ 673 (CCPA 1982)
6 214 USPQ 679 (CCPA 1982)

in re Abele et al.[7] was decided August 5, 1982. All three cases are reported in Volume 214 of the USPQ beginning at Page 673. In Pardo, the claimed invention related to a method for controlling the internal operations of a computer by use of programmed instructions which convert from sequential processing to processing of data regardless of the order in which data are received. Although the specification described the invention as involving an algorithm, the court held that since there was no indication that a mathematical algorithm was intended, this was not an admission that they were claiming non-statutory subject matter.

Relying upon its Bradley[4] opinion the Court upheld patentability under Section 101. The claims were directed to executing programs in a computer, and the method would operate on any program and any formula input regardless of mathemathical content. That a computer controlled according to the invention was capable of handling mathematics was irrelevant to the question of whether a mathematical algorithm was recited by the claims.

The court also reversed the PTO's rejection of the claims under Section 103 for obviousness since this was based on opinion rather than following the stepwise approach of Graham v. Deere 383 US 1 (1966).

The Taner et al. case related to a method of seismic exploration by simulating substantially plane or substantially cylindrical seismic energy waves by summing the reflectional signals of conventional spherical seismic waves. Although

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4 supra
7 214 USPQ 683 (CCPA 1982) 16

the claims directly recited an algorithm, summing, this was not in the abstract. The claims also set forth a process, involving "the taking of substantially spherical seismic signals obtained in conventional seismic exploration and converting ('simulating from') those signals into another form, i.e., into a form representing the earth's response to cylindrical or plane waves."

In addition to reversing the rejection on Section 101 the court reversed the PTO's rejection on Section 103 for obviousness, finding nothing in the reference relied upon as suggestive of the claimed invention.

The third case, the Abele case, involved an invention in the field of image processing particularly as applied to computerized axial tomography or CAT scans. Referring in its analysis, to a two-part test discussed in re Walter 618 F 2d 758, 205 USPQ 397 (CCPA 1980), the court concluded that all of the claims in issue presented a mathematical formula or sequence of mathematical operations, it was concluded that invention was not simply a mathematical algorithm which would be improper subject matter, but presented an application of the algorithm. Certain claims were held proper as applying the algorithm to attenuation data in a particular relationship of process steps. On the other hand the broadest method claim (5) was rejected as providing no more than a matrix of numbers regardless of by what method generated so that the algorithm was neither explicitly nor implicitly applied to any certain process.

On the issue of obviousness under Section 103, the Supreme Court case of Dann v. Johnston[8] is also of interest. This case related to a computer system for automatic record keeping of bank checks and deposits, using machine readable coding to provide subtotals to customers of transactions by various categories. The system provided a flow chart of a program compatible with a general purpose computer (IBM 1400). The CCPA in a 3-2 decision had reversed the PTO rejections under Sections 101, 102, 103 and 112. The Supreme Court by a vote of 7 to 0 held the claims unpatentable for obviousness under Section 103. They were deemed obvious to one reasonably skilled in the art in view of 1) the current use of data processing equipment and computer programs in banking and 2) an earlier analygous patent for using a programmed digital computer in a large business organization to break down transsactions by departments and areas within each department of the business.

I-B. Value of Patent Protection - Enforceability

The foregoing cases involving ex parte appeals on patentability issues indicate many of the obstacles that may be presented in inter parties infringement proceedings or declaratory judgment actions raising issues of validity. In addition, it may be anticipated in my opinion that serious issues under 35 USC §112 will be raised with respect to the sufficiency of disclosure of computer-related inventions in the specification,

8 425 US 219, 47 L Ed. 2d 692 (1976)

both from the standpoint of whether the disclosure is an enabling disclosure and whether it sets forth the best mode contemplated by the inventor of carrying out the invention. If computer programs and other elements of computer software are assumed to be unpatentable per se, the extent of disclosure of programming essential or reasonably necessary to provide an enabling disclosure, and also the best mode, may present in addition to a practical problem for applicants a policy problem for patent management. The PTO probably is still in a process of developing expertise in determining the sufficiency of disclosure required for computer related inventions. Even though the PTO may be satisfied, I believe that it is important in looking to the future enforceability of patent grants to fully meet the statutory disclosure requirements of Section 112. The trend in the law seems to be to place increasing emphasis on full disclosure.

There may be a special problem with regard to certain types of computer-related inventions in establishing infringement under 35 USC §271. Where the invention involves equipment or systems which are placed on sale or are widely marketed or licensed, this should present no special problem. Custom design or specialized systems for in-house processing or manufacturing operations as well as sophisticated simulation or modeling techniques for guiding or conducting in-house design or engineering operations or for providing guidance in the conduct of external operations, for example, seismic methods employed in oil and gas exploration and production,

may present difficult and special problems. The detection of unauthorized use of patented subject matter may be difficult. This problem however is analogous to the problems that have faced the chemical process industry; usually, it is possible to develop a prima facie case so as to be able to confront the suspected infringer or to bring an action and develop the necessary information through pre-trial discovery methods. Perhaps in the computer field, techniques appearing in the press in the context of industrial espionage for gaining access to computer data banks and their operations may become detection devices of the future.

In any event, it would seem that the procurement of patent protection and enforcement of patent rights computer-related inventions may well be more costly than more conventional types. Consequently, from the view point of managements it will be important to evaluate the cost justification for the patent procurement program, taking into account the scope of the claims in covering technical features of practical industrial value or presenting identifiable competitive advantage.

II. Role of Trade Secret Protection

Trade secret protection has from the outset been the most widely adopted legal method for preserving the propriety of computer-related inventions and software. The use of trade secrecy as a legally cognizable method for protection of industrial property rights has been affirmed countless times in the state and federal courts in the statutes of

many of the states, and has been most recently been strongly upheld by the United States Supreme Court in the cases of Kewanee v. Bicron, 416 US 470, 181 USPQ 673 (1974) and Aaronson v. Quickpoint Pencil Co. 440 US 257 (1979). Compared to patenting, trade secret protection avoids the costly burdens and the uncertainties of patent procurement and enforcement. Moreover, there is no required trade-off between disclosure and scope of protection as in the case of patents and copyrights. Trade secret protection operates on the entire body of technical and proprietary information and know-how developed and used in R & D, design, engineering, operating and maintenance and to some extent marketing support operations. Thus, there is no need to identify for separate handling inventive concepts and techniques nor the particular forms of expression for ideas or data involved in programming, data handling and compilation as would be required to obtain copyright protection.

On the other hand, there are obvious limits to protectibility by trade secrecy. If the proprietary information is to be embodied in designs, programs, equipment or systems which are to be sold in the market place or broadly licensed, the critical design and operating parameters may be disclosed. If the information is not directly or indirectly revealed, it may very well be susceptible to so-called reverse engineering. Programming codes, program elements, rasters, pixels and matrices of data, even data banks may be duplicated or tagged. Hence, the alternatives of patent protection and copyright

should be routinely considered in cases where secrecy cannot be maintained or can be controlled only for a limited period of time.

Even in situations where highly sophisticated techniques and systems are employed in-house under conditions amenable to security procedures and maintainance of secrecy, the patentability of inventive concepts and the susceptibility of programming elements and methods to copyright protection, (discussed below), should be carefully considered. Despite all the precautions routinely employed in industry to maintain security and confidentiality, the nature of many if not most commercial enterprises and technical operations make maintenance of secrecy for any significantly extended period of time very difficult if not impossible. Employed scientists and engineers tend to be highly mobile, in some industries more than others, and often move from one employer to another. Moreover, there are incentives in scientific and technical circles to disseminate information rather than confine it according to proprietary procedures. Technical publication is often important for the individual and may even be important for a company endeavoring to establish and maintain a reputation for scientific and technical excellence. Attendance at technical meetings and symposia provide many opportunities for cross-communication and leaks of information. Large industrial concerns are not self contained or monolithic even in their research and development activities. The conduct of nearly all areas of business involve exposure to

suppliers and vendors of materials, equipment and even technology, disclosures to consultants, engineering contractors and subcontractors, to customers and potential customers, to licensees and potential investors or partners. Even small businesses will have difficulty in maintaining a strict facade of secrecy for any extended period of time in respect of manufacturing concepts or processing techniques that have substantial technical and commercial value.

Confidentiality agreements, employee and other fiduciary agreements as well as standards and measures for establishing, policing and monitoring security procedures are important and helpful. Nevertheless, it has been my experience that it is very difficult to maintain secrecy, apart from the underlying data and work product from which inventive concepts derive, as to ideas which are significantly innovative or valuable in industrial operations for any extended period of time. For this reason, I think the potential value of patents for inventive ideas as well as the use of supplementary copyright protection, apart from routine maintenance of secrecy for data and know-how should be realistically assessed in decision making by technical and patent management. The putative value of such protection should be weighed against the potential risk and adverse effect of premature disclosure or loss of secrecy control.

With trade secret protection, competitive advantage is maintained only through continuing secrecy. If secrecy is

breached by theft or other tortions misappropriation, violation of fiduciary obligation or by breach of contractual obligation, legal action in the courts will lie against the wrong-doer (or privies) through injunction, damages or both. Of course, however, there is no action available against innocent third parties who may receive the information without notice or against independent development or vitiation of the secrecy by methods such as reverse engineering.

The general non-availability of the information to the public must be established and this often requires proof of security safeguards. In the computer programming and processing area, this may require suitable encoding or cryptology in protecting data and procedures.

By contrast, the patent grant represents a power to sue and exclude any third party from use or appropriation of the subject matter of the patent claims. Although the question is not entirely clear, public policy might well permit patent action by a later inventor against an earlier user in secret. Notwithstanding the burdens, costs and uncertainties of patent litigation, the very existance of the power to bring suit to exclude is a powerful proprietary asset.

III. Copyrights

Under the new copyright law of 1976, Title 17 of the U.S. Code, computer programs and data bases as original works of authorship are subject to protection. Section 101 as amended December 1980 (P.L. 76-517) defines a computer program as "a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result." Doubt as to the scope of protection was removed by the December 1980 amendment of Section 117 which had been designed to preserve the "status quo" respecting infringement of copyrights by use of programs in machines. Programs in machine-readable form (object code, ROM's) are now fully protected under the 1976 Copyright Law and the distinction between visually readable or perceptible form deriving from the player-piano perforated roll case[9] has been eliminated.

I shall not attempt to go into the ramifications of copyright in any detail except to point out that Section 102(b) of the Act makes it clear that copyright protection extends only to the form of expression and not to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in a work of authorship. Copyright protection prevents the unauthorized copying of a work and automatically comes into effect when

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[9] White-Smith v. Apollo 209 US 1 (1908)

the work is written or otherwise created. The work need not be published but copyright protection is lost by publication of the work without a copyright notice in the prescribed statutory form giving the year of first publication and the name of the owner.

One of the chief advantages of copyright protection then is that copyright is quickly obtained with little or no expense. Although deposit, and thus at least limited disclosure, and registration are required if the copyright is to be enforced by an infringement action in the courts, there seems to be no incompatibility between maintenance of the copyrighted material in confidence or secret and potential enforcement. Hence, computer software which is created as part of a proprietary development involving computer technology can be appropriately marked with the customary notices of proprietorship and confidentiality. However, opinion is divided as to whether the statutory notice of copyright or instead notice of reservation of copyright in some form establishing date of origin, ownership and that it is unpublished should be affixed. The problem is that a judge might confuse use of the notice with publication, and of course the latter and secrecy are mutually exclusive. On the other hand, publication is not required and deposit and registration need not be made unless and until an infringement action is to be brought so that the actual situation should be susceptible of clarification by appropriate labeling. Licensors and vendors of programs and software often employ both confidentiality agreements and notice of copyright on the material provided under license.

There has been a great deal of litigation in this field and it is beyond the scope of this paper to attempt its review. However, appropos of the above, the Court of Appeals for the Ninth Circuit in Twentieth Century Fox v. Donahue (2/2/81) has held that the deposit requirement of the Copyright Act "has no effect whatsoever on the validity or enforceability of a copyright". The court upheld an infringement ruling and determined that it is only necessary that works be deposited at any time prior to the initiation of the infringement suit.

Another recent case of special interest, decided by the Court of Appeals for the Third Circuit on August 2, 1982, deals with problems of protecting programs and audiovisual works used in video games, a subject that has been discussed at considerable length both in the literature and in court cases. The case, Williams Electronics v. Artic International[10] involved an appeal from the District Court's entry of a final injunction order permanently restraining and enjoining Artic from infringing plaintiff's copyrights on audio-visual works and a computer program relating to an electronic video game "Defender". The court in its opinion refers to a large number of cases which have dealt with copyright infringement for electronic audiovisual games. In upholding the District

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10 U.S. Court of Appeals, 3rd Circuit, No. 81-2407 opinion filed August 2, 1982

Court's injunction, the Court of Appeals rejected Artic's claim that the images in the audiovisual game were transient and therefore could not be "fixed" as required by the copyright statute. The court further rejected the contention that the interaction of the player of the game withdrew the audiovisual work from copyright eligibility because there is no set or fixed performance and the player becomes a co-author of what appears on the screen. Perhaps the most interesting part of the case, in which it appears to be of first impression, is the rejection of Artic's arguments that there can be no copyright protection for ROM's because they are utilitarian objects or hardware or firmware, are machine readable rather than human readable, and because duplication of an ROM is not copying within the meaning of the Copyright Act. Artic argued that in considering copyright on a computer program, a distinction should be drawn between "source code" and "object code", and a "copy" must be intelligible to human beings and be intended as a medium of communication to human beings. The court found the answer to Artic's contentions in the statute itself 17 USC Section 101 "A 'copy' is defined to include a material object in which a work is fixed 'by any method now known or later developed, and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device."

Although petition for certiorari may be filed with the Supreme Court, the decision appears sound. Thus, it now

appears clear that patentees are provided with an optional and supplemental method of protecting those parts of computer software which must be partially or wholly revealed in a patent application and which cannot be patented as such under existing patent law.

Although copyright protection is limited to the expression of the idea and not the idea, it has the advantage that judicial enforcement can be secured more readily without the bias that courts sometimes affect in the patent field, with more likelihood of preliminary injunctions being obtained, and at considerably less expense than actions brought under the patent laws.

IV. Summary re Decision Making

1. The first step recommended is an analysis of the subject matter to determine whether inventive concepts susceptible of protection under patent law can be identified.

2. The extent of novelty and scope of claim then should be presumptively assessed to determine whether effective proprietary control of the improved or new technical result can be achieved.

3. An economic evaluation should be made to determine whether the putative value of the innovative concept and patentable features from the standpoint of competitive advantage or realization of licensing income justify the costs and

burdens of patent procurement and the requisite disclosure involved.

4. Alternatively, or in parallel an assessment should be made as to the susceptibility of maintaining the subject matter in secrecy and the feasibility of doing so taking into account technical and industrial practices in the field involved. It is assumed that all background and underlying technical data as well as design, engineering and operating information and know-how will be maintained as confidential technical information.

5. Regardless of whether the patent route or the trade secret route is undertaken, consideration should be given to the potential value of copyright protection for the software components and programming elements involved in application of the inventive concept or technique.

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COMMITTEE NO. 2

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Recent Trend of JFTC's "Antimonopoly Act Guidelines for International Licensing Agreements"

Japanese Group
Committee No.2

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Abstract

1) "Antimonopoly Act Guidelines for International Licensing Agreements" was announced in 1968 as the basis of the administrative guidance by Japan's Fair Trade Commission (JFTC). Since then, these Guidelines have been actively applied by JFTC to eliminate restrictive provisions in licensing agreements which are liable to come under the Unfair Business Practices of the Antimonopoly Act.

2) The number of cases of JFTC's administrative guidance issued to licensing agreements based on these guidelines amounts to 21% of the total licensing agreements filed and this occurrence rate is about three times that of the total international agreements. Especially, the rate is remarkably high as regards the restrictive provisions on improvement (Item (7), Section I of the JFTC Guidelines) and on competitive goods and technology (Item (3), Section I of the JFTC Guidelines). It is assumed that this is because JFTC upon screening applies the Guidelines to the language of each provision quite strictly from the viewpoint of preventive measure.

3) We can enumerate as the current problems of the Guidelines:

(a) Necessity to correspond to the transition of the international circumstances,

(b) Necessity to take into consideration the substantial obstruction to the competition,

(c) Necessity to amend the screening procedure, and

(d) Possibility of the extention of application to technology agreements other than licensing agreements.

4) We attempted to compare each restrictive item of the Guidelines with the Nine No-No's of the Antitrust Division of U.S. Department of Justice. We also analyzed the future of the Guidelines taking into consideration the present trend in U.S.A. and so forth.

1. Introduction

In 1968, Japanese Government liberalized the introduction of foreign capital, and concurrently took the liberalization measures for the introduction of foreign technology. The pre-screening of international licensing agreement by Foreign Investment Council under the Foreign Investment Law was abolished and then the post-notification of international agreements (subsection 2 of Section 6 of Antimonopoly Act) was introduced. On this occasion, the Japan Fair Trade Commission (JFTC) announced the "Antimonopoly Act Guidelines for International Licensing Agreements". This announcement was made in accordance with an advice of the Experts Sub-committee of The Foreign Investment Council in the preceding year.

The advice stated:

"Considering that the international licensing agreements involve foreign investors as one party, it is necessary that JFTC should establish the Guidelines under which JFTC might find Unfair

Business Practices and make the Guidelines well known to the public, standardizing types of those restrictions in the Guidelines so that JFTC could provide them with as much predictability of and preventive measures against the occurrence of violating cases."

Following this advice, JFTC expressed the policy that it should keep control over the International Licensing Agreement including undue restriction items, and thereafter international agreements which did not comply with these Guidelines became subject to the administrative guidance (Gyosei Shido) by JFTC as being liable to come under Unfair Business Practices stipulated in the Antimonopoly Act.

For more than 10 years since then, the JFTC Guidelines have played a leading role to the prevention and the elimination of unfair results which might otherwise have occurred due to the substantial unequality between parties of international agreements deriving from the inferior standpoint of Japan's technology. We also cannot overlook its influence as a precedent on the guidelines of many developing countries which have been recently formulated to control the introduction of foreign technology. Recent guidelines and regulations of these countries, however, tend to give too much preference to the national benefit with less consideration to the interests of the licensors or know-how owners of the advanced countries. The JFTC

Guidelines, on the other hand, were established as authoritative criteria for the interpretation of the Antimonopoly Act. They were drafted taking the legislation and judicial precedents of advanced countries into consideration and were also grounded on the well-settled precedents of JFTC's past judgement or administrative guidance. They are constructed to keep good balance of rights and obligations of both licensors and licensees. All these explain why the JFTC Guidelines did not seem to diminish Japan entrepreneurs' vigor in introducing foreign technology.

PIPA Licensing Committee realized the significance of the JFTC Guidelines in quite an early stage and the report was made two times; in 1971 at Washington in the 2nd International Congress, and in 1972 at Tokyo in the 3rd Congress. Especially in his report of 1972 entitled "Antimonopoly Act Guidelines for International Licensing Agreements", Mr. Shozo Saotome of Mitsubishi Chemical Industries not only introduced the JFTC Guidelines to the PIPA members but also pointed out problems over "Multi-License" caused by so-called "Gyosei Shido" where the Ministry of International Trade and Industry played a leading role. Further, he also introduced the "Arbitration of Disputes" in Japan. I find it quite meaningful to review the significance of the Guidelines over again 10 years after Mr. Saotome's report and to brief on the analysis of the recent conditions of JFTC's

administrative guidances, which is also a great honor to me.

2. Recent Tendency of JFTC's Administrative Guidance (Gyosei Shido)

Please see the attached table for the detailed statistics of JFTC's guidance to the international licensing agreements in these 5 years (1976 through 1980).

Table 1 indicates how many international agreements were filed with JFTC and how many of such agreements field were occupied by licensing agreements during each year. It also shows how often JFTC issued administrative guidance during same year. The reason why the number of guidance exceeds the number of agreements which became subject of JFTC's guidance is that each guidance is counted separately when an agreement including more than one restriction items was subjected to the guidance of JFTC. The occurrence rate is calculated by dividing the number of guided agreements by that of the total agreements filed. What is outstanding is that the averaged occurrence rate of the licensing agreements comes to be as high as 20.8% while the rate of whole international agreements comes down to 7.3%. This tells us that one out of five licensing agreements filed was guided by JFTC. It may be gathered from this fact that JFTC is applying its Guidelines quite strictly.

Table 2 stands for JFTC's attempt to classify its guidance by arranging in matrix way the undue restriction items as categorized by JFTC according to the nature of undue restriction in the agreements filed based on each industry the licensed technology belongs to. This shows us that JFTC's guidances are not evenly given to each restriction on the Unfair Business Practices. Its guidance remarkably concentrates on the restriction on improvement (item (7), Section I of the JFTC Guidelines) occupying more than one half of the total guidances given. This tendency may be partly due to the fact that the grant-back of improvement is usually deemed lawful in the antitrust administration of U.S.A., which is the mother-country of most of the technology introduced to Japan, and the criterion for judging the grant-back of improvement to be illegal differs from that adopted by JFTC. Namely, what is required in JFTC is the balance of rights and obligations between licensors and licensees, whereas in U.S.A. they attach more importance to the substantial restraint of competition laid by licensor and the presence of licensor's intention to monopolize; and they seldom take it into account whether rights and obligations of improvement are one-sided or reciprocal, balanced or not.

The JFTC Guidelines expressly exclude from their subject the agreements in which "obligation of both parties is equally balanced in substance" and JFTC is assumed to make judgement based on the standard of substantiality. But in reality JFTC tends to direct its attention to the

ostensible unbalance seen in the language of the grant-back provision. This gives to the foreign licensors the impression that Japanese government protects their home industries which could cause unnecessary frictions.

Next to the restriction on improvement, the guidances on the restrictions on competitive goods (item 3 of the JFTC Guidelines) occupy the second position. The occurrence rate constantly exceeds 10% from 1976 through 1980. What is common to the guidance to competitive goods and improvement is that the JFTC's judgements in the guidance are grounded on "the theory of balance between rights and obligations" mentioned above. On the other hand, in some countries like U.S.A., they attach more importance to whether or not a restriction affects the substantial competition placing their judgement on "the theory of maintenance of free competition". In view of the difference between Japan and such countries in the criterion for judgement on illegality, JFTC's application of the Guidelines which focuses only on the "balance" of rights and obligations may appear too rigid in the eyes of the licensors of such countries.

In the following sections, I am going to brief on the current problems over the JFTC Guidelines and also to review it in comparison with the Nine No-No's in U.S.A., taking actual condition of JFTC's guidance for the past 5 years into consideration. At the end of 1981, the

Antitrust Division of the United States Department of Justice expressed their opinions that there were contained many errors from the viewpoint of rational economic policy in the restrictions classified into the nine categories which they had previously contended illegal per se. Also in Japan there recently have prevailed opinions that we should consider the amendment of the JFTC Guidelines to cope with the changing conditions of the nation's technology and economy as well as the transition of international situations since the Guidelines were established. Under these circumstances, I believe that it is quite beneficial for us to exchange our frank opinions making best use of this friendship conference of major American and Japanese companies so as to prepare for the possible changes in the future.

3. Problems Contained in the JFTC Guidelines

The Licensing Committee of Japan Patent Association issued in March, 1982 the data under the title of "Study of the Guidelines". These data are product of a laborious work comsuming two years of discussions attempting the systematic and comprehensive analysis of the JFTC Guidelines from the standpoint of Japanese enterprises. In this section, I would like to introduce to you such current problems of the JFTC Guidelines with the emphasis on those items that are pointed out to be general problems in such data.

(1) Necessity to Correspond to the Change of International Situation

The decisions of U.S. Courts on Antitrust cases in the late 60's were referred to by JFTC in establishing its Guidelines. But the recent decisions of them teach us that their position on Antitrust cases has greatly changed. The so-called Christmas Message by EC Commission and BIRPI's Model Law for Developing Countries on Inventions (1965) have undergone significant revisions. These transitions have materialized, for example, in the increase of per se illegal types in U.S.A., in the announcement of the Block Exemption Draft by EC, and in WIPO's New Model Law for Developing Countries on Inventions and Know-How (1979-80). In the meantime, UNCTAD is now engaged in a hard-hitting campaign toward the adoption of Code of Conduct for the Technology Transfer.

The tone underlying the legislation in the developing countries, however, is the attempt to protect and develop the technology of their own countries at the expense of the reasonable right of the licensor over the forefront technology, while the antimonopoly regulations of the advanced countries including Japan aim at maintaining the fair competition with reasonable protection of the licensors' right on patent and know-how. The

purpose of regulations is substantially different. We cannot accept the regulations of the developing countries which are extremely stringent or which only aim at the interests of their own countries.

However, when we consider those changes in international societies and the rapid progress of Japan's technology and economy, we cannot deny the requirement to review the consitency of the JFTC Guidelines with the international situations so as to make it more flexible to such drastic changes and realities reconsidering the nature of the Guidelines.

(2) Necessity to Consider the Substantial Obstruction to Competition

Japan's antimonopoly regulations are said to be constructed on three pillars; namely regulation of "Monopoly", "Unreasonable Restraint of Trade" and "Unfair Business Practices". The JFTC Guidelines are only criteria for the judgement of "Unfair Business Practices". Judging from the way JFTC applies its Guidelines, it appears to have the view that the investigation of the effect which the subject activity on trade might have over the substantial competition in the market is an element not relevant to the judgement of Unfair Business Practices. This explains why it applies its

Guidelines focussing on the ostensible "balance" as seen in the regulation of grant-back clause, which give rises to an impression on the part of licensor that JFTC makes rigid judgement lacking consideration to the presence of substantial "maintenance of competition". On the other hand, many companies have regarded the Guidelines as indulgence assuming that restrictions not specified in the Guidelines are lawful. It is therefore desired that JFTC should avoid the fixation of interpretation by applying the Guidelines with more flexibility from the viewpoint of econo-industrial policy. We apprehend that too much weight on the formality might lead JFTC to a result of overlooking the phase of substantial regulation toward "Monopoly" or "Unreasonable Restraint of Trade" which gives more unreasonable effect over the market from the viewpoint of the original purpose of the Antimonopoly Act.

From its birth, the Guidelines have been characterized as JFTC's in-house criteria. This character should be maintained in the future as well. And if JFTC applies the Guidelines with more flexibility, it will be able to consider the presence of substantial obstruction to competition in the screening of every agreement filed. We expect that if JFTC makes most of such flexibility, it may be able to establish an unitary regulation

which covers also "Monopoly" and "Unreasonable Restraint of Trade". The Guidelines inherently have the flexibility not found in laws or ordinances, and this advantage will enable JFTC to apply the Guidelines in conformity to the policy of substantial maintenance of competition.

(3) Necessity to Revise the Screening Procedure

Article 6, Item 2 of the Antimonopoly Act requires that some designated international agreements be filed with JFTC within 30 days of the conclusion of both parties and in most cases the screening by JFTC completes within about a couple of months after the filing. If JFTC detects problems, first it will give the administrative guidance, the so-called "Gyosei Shido". If the matter will not settle at this stage, JFTC can resort to advice in trial, judgement in trial and judicial proceeding in that order. The guidance is issued orally only to the Japanese party and often causes trouble making such Japanese party subject to criticism and skepticism on the part of foreign partner. Though difficult it may be by legislative reasons, we hope that JFTC will revise its procedures to avoid unnecessary misunderstanding on the part of foreign partner, taking it in good consideration that they are not included in the addressee of the JFTC judgement.

(4) Possibility of the Extended Application of the Guidelines to Other Technological Agreements

There are pros and cons as to the extended application of the JFTC Guidelines to the category of agreements such as licensing agreements for technology export, domestic licensing agreements and other agreements such as for joint development, secrecy undertaking and so forth.

The present JFTC Guidelines concerning "Unfair Business Practices" cannot fully cover some particular agreements outside the category of the technology introduction agreements like cross-licensing agreements or patent-pool agreements.

So JFTC is now under review to make more specified and substantial judgement of such agreements as to whether they comes under "Monopoly" and/or "Unreasonable Restraint of trade". As to the domestic licensing agreements, there have settled the practice to apply the present JFTC Guidelines mutatis mutandis. Therefore we don't have the necessity to devise new guidelines intended only for domestic application. Regarding the license agreements to technology export, there are many complicated problems like coordination with the regulation of the importing party's country or enforceability of Japan's law in such country and it

will be quite difficult to formulate new appropriate guidelines.

Taking these discussions into consideration, we think JFTC should be discreet in expanding the application of the present Guidelines or in making new guidelines.

Through their long experience of administration, JFTC has made available to itself a pile of antimonopoly cases which can serve as good criterion for their judgement. These cases may be classified into two categories; one where JFTC's application of the Antimonopoly Act is objectively foreseeable and the other where not. It is our opinion that guidance under the JFTC Guidelines should be limited to the cases of the first category, and that JFTC should take a discreet attitude to the formulation of a guideline intended to be applied in a field which is premature or rich in mobility.

We can evaluate highly the role the JFTC Guidelines have played against violation of the Antimonopoly Act. On the other hand, as to the legal investigation of the regulation covered by the Guidelines, it is true that neither JFTC nor court has little chance to accumulate judgement or decision, and we cannot deny the fact that, in the system of the Antimonopoly Act, this field has

undergone no legal scrutiny or seen no significant theoretical development to date.

We can highly value the historical significance of the JFTC Guidelines but it is strongly required that JFTC apply them with more flexibility and take more consideration to the adaptation to new circumstances in order to correspond to the change of antimonopoly regulations in advanced countries including U.S.A., the strengthened regulation on restrictive business practices in the developing countries; and the emergence of the technology agreements of new types.

4. Relation between the JFTC Guidelines and the Nine No-No's

We would like to review each restriction outlined in the JFTC Guidelines in comparison with the Nine No-No's of the Antitrust Division of the U.S. Department of Justice. Unlike Nine No-No's, the guidelines are not the enumeration limiting per se illegal types of restrictions. But both have many items in common and the comparison may help the American members to understand our Guidelines. At the same time, the comparison would mark out the difference of each approach and will make it easy to understand the way each country practices the antimonopoly policy from a comparative-law perspective. All these would be of any help in the future to the harmonized application of both countries' application of antimonopoly laws.

Before going into the discussion of each item, please see the comparison table of the JFTC Guidelines and Nine No-No's in Table 3. We can see that seven out of Nine No-No's have their equivalent in the JFTC Guidelines. Two items have no counterpart in the Guidelines. Namely, Item 5 (denial of license to third parties) and Item 6 (mandatory package license). The former may come under the category of "monopoly" as defined in our Antimonopoly Act, Article 2, Item 5. The latter theoretically is one of tie-in arrangements under licensing agreement and may correspond in our Antimonopoly Act to the Item 13 of General Designation (tie-in arrangement) of "Unfair Business Practices" as defined in Article 2, Item 9; though there may be much to be discussed to the appropriateness of such comparison. Item 6 of Nine No-No's also covers the problem of "excessive royalty" and may be considered to be included virtually in Item (8) of the JFTC Guidelines.

(1) Restriction on Export Areas

(Item (1) of the JFTC Guidelines, not provided in Nine No-No's)

The JFTC Guidelines' approach is to judge presence of unreasonable restraint directing its attention to the unbalance of bargaining position between licensors and licensees. This restraint should be more essentially recognized and regulated as one type of "Unreasonable Restraint of Trade" which

threatens to result in international market sharing or international cartel.

In this respect, we find the approach by U.S.A. more to the point which proceeds to the regulation after the judgement of the actual effect on the competition from the viewpoint of "Unreasonable Restraint of Trade". This approach is reflected in the issuance by the U.S. Department of Justice of the "Antitrust Guide For International Operations (Jan. 26, 1977) which should be studied in devising any guideline.

(2) Restriction on Export Price and Quantity

(Item (2) of the JFTC Guidelines, Item 9 of Nine No-No's)

These two restriction items, namely (1) Restriction on Export Areas, and (2) Restriction on Export Price and Quantity, might be put together into a single item under the title of "Restriction on Export" in line with the international trend such as of UNCTAD's Code of Conduct. In that case, it is highly probable that they delete the exclusion clause (b) which allows the licensors to restrict export to a country where he is engaged in sales activity.

There are prevailing opinions in Japan that, considering the sufficient competitiveness Japan has

acquired in various industries, JFTC may as well employ the basic policy to stand on the viewpoint of substantial maintenance of competition, as is seen in the regulation of some advanced countries based on such policy under which it is entirely up to the licensee whether to accept the restriction on export or not. Such policy is also reflected in Nine No-No's which regulate the restriction on sales price, especially the requirement for the other party of an agreement to maintain the lowest price of goods. This will offer much data for the adoption of such basic policy.

(3) Restriction of Competitive Goods

(Item (3) of the JFTC Guidelines, Item 4 of Nine No-No's)

The JFTC Guidelines are grounded on the theory of balance between licensors and licensees. But the regulation concerning ground for justification specified in its proviso is unique to Japan in its way and forms a striking contrast to the regulation in many foreign countries including U.S.A. which is based on the theory of maintenance of competition with the emphasis on the public interests. It is probable that this Japanese regulation will change itself in American ways considering the doctrine and the trend as is seen in the transition in the antimonopoly laws. For example, restriction on the

competitive goods may be judged as lawful based on the rule of reasons if a licensee under the licensing agreement of a trademark makes use of a licensed trademark on its certain goods and threatens to cause confusion of identity between licensor's goods and licensee's goods.

(4) Restriction on Supply Source of Materials

(Item (4) of JFTC Guidelines, Item 1 of Nine No-No's)

This has been considered in U.S.A. a typical per se illegal restriction of the tie-in arrangements and is listed up at the head of Nine No-No's. However, just as the Americans have recently given Nine No-No's a second thought based on the rule of reasons, we think it worth considering to admit the restriction of this type in some particular cases; for example, when there is good technical reason to designate the supply source; or the use of designated materials belongs to the licensor's know-how; or, in license agreement with the license of a trademark, the goodwill of the trademark is so great that the quality of the goods is maintained only with the designated materials, providing that the justification of the regulation should be strictly limited to the cases mentioned above.

(5) Restriction on Sales

(Item (5) of the JFTC Guidelines, Item 8 of Nine No-No's)

(6) Restriction on Resale Price

(Item (6) of the JFTC Guidelines, Item 3 of Nine No-No's)

Though there is a little difference in the way of regulation, the regulation of these items (5) and (6) are essentially the same in Japan and U.S.A. What is worth noting, however, is that with respect to Item (6), which is partly related to Item 9 of Nine No-No's, many countries including U.S.A. are adopting the policy to deem even the restriction on licensee's selling price illegal. To the contrary, JFTC is of the opinion that restriction on licensee's selling price should not be held illegal per se so long as it is reasonable for the exercise of licensor's right. Under the present circumstances, we would like to support this JFTC's view.

(7) Restriction on Improvement and Invention

(Item (7) of the JFTC Guidelines, Item 2 of Nine No-No's)

As I have already explained, this restriction is causing most of JFTC's administrative guidance and reveals many problems inherent in JFTC's formality

oriented application of the Guidelines based on the balance theory. It will be JFTC's future task to undertake the study of general situations over the grant-back arrangement and the detailed theoretical analysis over existence of the intention of monopolization. As to the adequacy of grant-back provision in a non-exclusive licensing agreement for patent abone, there seems to be room for thorough reconsideration in the comparison with the affairs that, after the publication of the patented technology, any third party is likely to have the chance of obtaining improved innovation.

(8) Excessive Collection of Royalty

(Item (8) of the JFTC Guidelines, Item 7 of Nine No-No's)

The Guidelines are too simple and may be too abstract in their expressions as guidelines are to regulate various restrictions including the package licensing. What is called the coercive package licensing being regulated by Nine No-No's is deemed illegal under the JFTC Guidelines.

(9) Restriction on the Quality of Raw Materials or Parts (Item (9) of the JFTC Guidelines, Not provided in Nine No-No's)

Item (9) of the Guidelines regulate the restriction on quality of raw materials and parts and on quality of patented goods. It seems to us that U.S.A. and some other countries deal with the restriction on quality of raw materials and parts as a matter in the tie-in arrangement and the restriction on quality of patented goods as a matter in quality control. We hear that in U.S.A. the quality control is permissible so long as it is necessary to avoid the product liability. In this context, the Guidelines will need amendment if the legal principle of product liability is established in Japan as well in future.

(10) Other Restrictions

The restrictions enumerated in Items (1) through (9) of the JFTC Guidelines are only "representative ones which are liable to come under unfair business practices" and we should note that it is not necessarily meant that the restrictions not covered by such nine items are outside the coverage of regulation.

In his book entitled "International Agreements and Antimonopoly Act", Mr. K. Kawai, the former head of International Section of JFTC, lists out the followings as examples of the other restrictions.

(1) Restriction on usage of licensed technology after termination of the agreements.

(2) Unilateral termination of the patent licensing agreement by the licensor.

(3) General tie-in clause.

(4) Obligation by licensee to bear the cost for publicity and propaganda.

(5) Others: Prohibition of Sales to clients not satisfying the standard of the Guidelines designated by licensor; licensor's right to approve the sales promotion data such as for publicity or propaganda; licensor's right to prohibit to develop similar goods; licensor's preference right to participate in the joint venture company which produces similar goods; licensor's right to reject a plan; licensor's right to withdraw a plan.

There seems to have been few cases of administrative guidance on these restriction items and much remains

to be studied for the establishment of the ground, extent, degree and procedure of the regulation.

5. Conclusion

On June 15, 1982 JFTC announced the amendment of the so-called "General Designation of Unfair Business Practices" (FTC Notification No. 11, 1953). This new designation (FTC Notification No. 15, 1982) came into force as from September 1. The old designation categorized twelve types. These 30 years after its promulgation have found significant changes in economy and commerce and, among others, the systematization of marketing industry has greatly progressed. As the result, some types have come to include various sub-types of unfair business practices. To cope with such situation the new Designation have re-classified these types into 16 categories. JFTC explained that this amendment neither intends to strengthen nor relax the regulation to unfair business practices but that it attempts to clarify each category. The Guidelines which I have examined in this thesis is closely related to the General Designation but no amendment is expected to the Guidelines themselves.

Further, JFTC has come to regulate the kind of agreements to be filed in the Regulations of its own in accordance with the revision of Items 2 and 3 of Article 6 of Antimonopoly Act, which has been made effective as from

July 23, 1982, although the kind was stipulated by the Act so far. So that JFTC on the same date executed "the Revised Regulation" (FTC Notification No. 3, 1982) to exclude the agreements, major ones of which are agreements for export or import of Plant, and agreements for providing services, being unlikely to violate the Antimonopoly Act. According to JFTC, the agreements of these kinds had occupied so far about one third of the total agreements filed (about 2,000 per year).

I now wish to conclude the report of the present situation and issues of Section I of the JFTC Guidelines (Guidelines to Concrete Restriction Items) in comparison with U.S.A.'s Nine No-No's. I hope that this will be of any help in coping with the expected amendment of the JFTC Guidelines in the future and the change of Nine No-No's now taking place in U.S.A. I could not touch various extensive and profound problems regarding Section II (Analogy to Know-How Licensing) and Section III (Execution of Right under Patent Law, etc.) due to the purpose of this thesis and the restricted pages and time. I want to report on them on another occasion.

- End -

Table 1
1st Theme
Japan Committee No.2
PIPA, 1982

Number of International/Licensing Agreements Filed with JFTC
and Number of Administrative Guidance by JFTC

(5 years through 1976 - 1980)

	Number of Agreements Filed		Number of Administrative Guidance					
			International Agreements			Licensing Agreements		
	International Agreements	Licensing Agreements	Number of Agreements Guided	Number of Guidance	Occurrence Rate	Number of Agreements Guided	Number of Guidance	Occurrence Rate
1976	5,990	1,260	380	453	7.6%	241	289	22.9%
1977	4,777	1,211	314	395	8.3%	212	254	21.0%
1978	5,768	1,356	375	499	8.7%	228	295	21.8%
1979	7,163	1,499	359	482	6.7%	224	320	21.3%
1980	6,138	1,522	274	348	5.7%	200	263	17.3%
Total	29,836	6,848	1,702	2,177	7.3%	1,105	1,421	20.8%

CATEGORIZED SUMMARY OF FTC'S ADMINISTRATIVE GUIDANCES
GIVEN TO TECHNOLOGY INTRODUCTION AGREEMENTS DURING LAST 5 FISCAL YEARS

Table 2
1st Theme
Japan Committee No.2
PIPA, 1982

Fiscal Year 1980

Total Agreements reported to FTC: 1,522

Category of Guidance / Category of Industry	Unfair Business Practices												Unreasonable Restriction on Trade	Total	Percentage
	Restrictions on						Charge on Unutilized Technology	Prohibition of Parallel Importation	Other Resctrictions						
	Improvements	Competitive Goods	Supply Sources	Market Route	Resale Prices	Quality of Materials			Public Release	Manner of Sale	Business Activity	Other			
Mining															
Construction	4													4	1.5
Manufacturing	134	31	4	33	15	10	8		5	2	1	12		255	97.3
-Food															
-Texture	9	1		23	10	1	1		5	2		4		56	21.3
-Wood Timber	1	1				1	1							4	1.5
-Paper Pulp	2													2	
-Publication Printing															
-Chemical	32	4			1							2		39	14.8
-Petroleum Coal	1													1	0.4
-Rubber Leather	2	1		6	4							1		14	5.3
-Pottery	3													3	1.1
-Metal	18	2	2			1						1		24	9.1
-General Instr.	33	13		1		5	5				1	1		59	22.4
-Precision Instr.	2													2	0.8
-Electric Instr.	13	4		1		1								19	7.2
-Transportation Inst.	12	3	1	2										18	6.8
-Others	6	2	1			2						3		14	5.3
Wholesale Retail															
Finance Insurance															
Real Estate															
Transportation Communication															
Electricity Gas Water	1													1	0.4
Service Industry	1	1							1					3	1.1
Others															
Total	140	32	4	33	15	10	8		6	2	1	12		263	100.0
Percentage	53.2	12.1	1.5	12.5	5.7	3.8	3.0		2.3	0.8	0.4	4.6		100.0	

Source: Annual Reports of Fair Trade Commission (1977 through 1981)

Fiscal Year 1979

Total Agreements reported to FTC: 1,499

Category of Guidance / Category of Industry	Unfair Business Practices												Unreasonable Restriction on Trade	Total	Percentage
	Improvements	Restrictions on Competitive Goods	Restrictions on Supply Sources	Restrictions on Market Route	Restrictions on Resale Prices	Restrictions on Quality of Materials	Charge on Unutilized Technology	Prohibition of Parallel Importation	Other Restrictions: Public Release	Other Restrictions: Manner of Sale	Other Restrictions: Business Activity	Other Restrictions: Other			
Mining															
Construction	1													1	0.3
Manufacturing	140	39	6	39					9		1	31		303	94.7
-Food	3	3			20	15	3					1		8	2.5
-Texture	5	3	1	33	1				8		1	17		85	26.6
-Wood Timber					17										
-Paper Pulp	2													2	0.6
-Publication Printing	1													1	0.3
-Chemical	22	5	1	1	1	2	1					2		35	10.9
-Petroleum Coal															
-Rubber Leather	1				1				1					3	0.9
-Pottery	2					1								3	0.9
-Metal	19	3	2				2					1		27	8.4
-General Instr.	38	15	1	1		8	5					2		65	20.3
-Precision Instr.	7	1		2								2		12	3.8
-Electric Instr.	14	1										1		16	5.0
-Transportation Inst.	17	6	1	2		4						2		32	10.0
-Others	9	2										3		14	4.4
Wholesale Retail															
Finance Insurance															
Real Estate															
Transportation Communication															
Electricity Gas Water															
Service Industry	8	5										2		16	5.0
Others															
Total	149	44	6	39	20	15	3		10		1	33		320	100.0
Percentage	46.6	13.8	1.9	12.2	6.3	4.7	0.9		3.1		0.3	10.3		100.0	

Total Agreements reported to FTC: 1,356

Category of Guidance / Category of Industry	Unfair Business Practices												Unreasonable Restriction on Trade	Total	Percentage
	Restrictions on						Charge on Unutilized Technology	Prohibition of Parallel Importation	Other Resctrictions						
	Improvements	Competitive Goods	Supply Sources	Market Route	Resale Prices	Quality of Materials			Public Release	Manner of Sale	Business Activity	Other			
Mining															
Construction	10	3	3	1										17	5.8
Manufacturing	158	41	17	12		6	2		8		1	19		264	89.5
-Food	2	1		3										6	2.0
-Texture	1	3	1	4					6		1	2		18	6.1
-Wood Timber	1													1	0.3
-Paper Pulp	1													1	0.3
-Publication Printing	1														
-Chemical	33	3	1	1					1			3		42	14.3
-Petroleum Coal	4													4	1.4
-Rubber Leather	2	1		1										4	1.4
-Pottery	5													5	1.7
-Metal	16	2	2									1		21	7.1
-General Instr.	43	21	5	1		2	2					3		77	26.1
-Precision Instr.	3	2				1						1		26	8.8
-Electric Instr.	19	3				3						2		21	7.1
-Transportation Inst.	13	2	2	2					1			6		31	10.5
-Others	15	3	6												
Wholesale Retail															
Finance Insurance															
Real Estate															
Transportation Communication															
Electricity Gas Water															
Service Industry	2	2							1			1		6	2.0
Others	3	1	2									2		8	2.7
Total	173	47	22	13		6	2		9		1	22		295	100.0
Percentage	58.6	15.9	7.5	4.4		2.0	0.7		3.1		0.3	7.5		100.0	

Fiscal Year 1977

Total Agreements reported to FTC: 1,211

Category of Guidance / Category of Industry	Unfair Business Practices: Restrictions on: Improvements	Restrictions on: Competitive Goods	Restrictions on: Supply Sources	Restrictions on: Market Route	Restrictions on: Resale Prices	Restrictions on: Quality of Materials	Charge on Unutilized Technology	Prohibition of Parallel Importation	Other Restrictions: Public Release	Other Restrictions: Manner of Sale	Other Restrictions: Business Activity	Other Restrictions: Other	Unreasonable Restriction on Trade	Total	Percentage
Mining															
Construction	9	1												10	3.9
Manufacturing	160	35	12	8			1	1	2		8	9		236	92.9
-Food	5	2					1				1			9	3.5
-Texture	5	2		6				1	2		3			19	7.5
-Wood Timber	2		1									1		4	1.6
-Paper Pulp	3	1	1											5	2.0
-Publication Printing															
-Chemical	25	3	4								2	3		37	14.5
-Petroleum Coal															
-Rubber Leather	1													1	0.4
-Pottery	3	1												4	1.6
-Metal	18	4	1									1		24	9.4
-General Instr.	50	13	4											67	26.4
-Precision Instr.	3	1												4	1.6
-Electric Instr.	21	3	1								1	3		29	11.4
-Transportation Inst.	13	3										1		17	6.7
-Others	11	2		2							1			16	6.3
Wholesale Retail															
Finance Insurance															
Real Estate															
Transportation Communication															
Electricity Gas Water															
Service Industry	4	1												5	2.0
Others	1	2												3	1.2
Total	174	39	12	8			1	1	2		8	9		254	100.0
Percentage	68.5	15.3	4.7	3.1			0.4	0.4	0.8		3.1	3.5		100.0	

Total Agreements reported to FTC: 1,260

Category of Guidance / Category of Industry	Unfair Business Practices													Total	Percentage
	Restrictions on						Charge on Unutilized Technology	Prohibition of Parallel Importation	Other Restrictions				Unreasonable Restriction on Trade		
	Improvements	Competitive Goods	Supply Sources	Market Route	Resale Prices	Quality of Materials			Public Release	Manner of Sale	Business Activity	Other			
Mining															
Construction	9	2												4	1.4
Manufacturing	196	47	6	5	2		4	2	2		13	5		282	97.6
-Food	4	2							1		1			8	2.8
-Texture	1			2	2		1	2			4			12	4.2
-Wood Timber	2											1		3	1.0
-Paper Pulp	1													1	0.3
-Publication Printing		1												1	0.3
-Chemical	34	8	5									4		51	17.7
-Petroleum Coal	1								1					2	0.7
-Rubber Leather		1	1	3							3			8	2.8
-Pottery	5													5	1.7
-Metal	9													9	3.1
-General Instr.	93	23					1				2			119	41.2
-Precision Instr.	4	5												9	3.1
-Electric Instr.	21						1							22	7.6
-Transportation Inst.	14	2									22			17	5.9
-Others	7	5					1				1			15	5.2
Wholesale Retail															
Finance Insurance															
Real Estate															
Transportation Communication															
Electricity Gas Water															
Service Industry															
Others	1						1					1		3	1.0
Total	199	49	6	5	2		5	2	2		13	6		289	100.0
Percentage	68.8	17.0	2.1	1.7	0.7		1.7	0.7	0.7		4.5	2.1		100.0	

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Table 3
1st Theme
Japan Committee No.2
PIPA, 1982

Antimonopoly Act Guidelines For International Licensing Agreements Fair Trade Commission May 24, 1968 (Translated by the Staff Office of the Fair Trade Commission)	Nine No-No's "Department of Justice Luncheon Speach Law on Licensing Practices: Myth or Reality?" Remarks by Deputy Asst. Atty. Gen., Bruce B. Wilson, Jan. 21, 1975
I. Among the restrictions which are liable to come under unfair business practices in international licensing agreements on patent rights or utility model rights (hereinafter referred to as patent rights, etc.) the following are the outstanding: (1) To restrict the area to which the license may export the goods covered by patent rights, etc. (hereinafter referred to as patented goods). However, cases coming under a, b, or c listed below are excluded. a. In case the licensor has patent rights, etc. which have been registered in the area to which the licensee's export is restricted (hereinafter referred to as the retricted area);	

b. In case the licensor is selling patented goods in the restricted area in his continuous business; c. In case the licensor has granted to a third party an exclusive license to sell in the restricted area.	
(2) To restrict the licensee's export prices or quantities of patented goods, or to make it obligatory for the licensee to export patented goods through the licensor or a person designated by the licensor. However, such cases are excluded where the licensor grants license to export to the area coming under either of the preceding a, b, or c and the said restrictions or obligations imposed are of reasonable scope.	9. The Department considers it unlawful for a patentee to require a licensee to adhere to any specified or minimum price respecting the licensee's sales of the patented product.
(3) To restrict the licensee from manufacturing, using or selling goods, or employing technology which are in competition with the licensed subject. However, such cases are excluded where the licensor grants an exclusive license and imposes no restriction on goods already being manufactured, used or sold, or technology already being utilized by the licensee.	4. A patentee may not restrict his licensee's freedom to deal in the product or services not within the scope of the patent.
(4) To make it obligatory for the licensee to purchase raw materials, parts, etc. from the licensor or a person designated by the licensor.	1. It is unlawful to require a licensee to purchase unpatented materials from the licensor.

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(5) To make it obligatory for the licensee to sell patented goods through the licensor or a person designated by the licensor.	8. It is "pretty clearly" unlawful for the owner of a process patent to attempt to place restrictions on his licensee's sales of products made by use of the patented process.
(6) To restrict the resale prices of patented goods in Japan.	3. The Department believes it is unlawful to attempt to restrict a purchaser of a patented product in the resale of that product.
(7) To make it obligatory for the licensee to inform the licensor of knowledge or experience newly obtained regarding the licensed technology, or to assign the right with respect to an improved or a applied invention by the licensee to the licensor or to grant the licensor a license thereon. However, such cases are excluded where the licensor bears similar obligations and the obligations of both parties are equally balanced in substance.	2. The Department views it as unlawful for a patentee to require a licensee to assign to the patentee any patent which may be issued to the licensee after the licensing agreement is executed.
(8) To charge royalties on goods which do not utilize licensed technology.	7. The Department believes it is unlawful for a patentee to insist, as a condition of the license, that his licensee pay royalties in an amount not reasonably related to the licensee's sales of products covered by the patent, for example, royalties on total sales of products of the general type covered by the licensed patent.
(9) To restrict the quality of raw materials, parts, etc. or of patented goods. However, such cases are excluded where such restrictions are necessary to maintain the creditability of the registered trademark or to insure the effectiveness of the licensed technology.	

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II. The aforementioned guidelines shall apply to international know-how licensing agreements.	
III. In international licensing agreements on patent rights, etc., the following acts shall be regarded as the exercise of rights under the Patent Act or the Utility Model Act: (1) To grant license to manufacture, use, sell, etc. separately; (2) To grant license for a limited period within the life of patent rights, etc. or for a limited area within the whole area covered by patent rights, etc.; (3) To restrict the manufacture of patented goods to a limited field of technology or to restrict the sale thereof to a limited field of sales; (4) To restrict the use of patented processes to a limited field of technology; (5) To restrict the amount of output or the amount of sales of patented goods or to restrict the frequency of the use of patented processes.	

	5. The Department believes that it is unlawful for a patentee to agree with this licensee that he will not, without the licensee's consent, grant further licenses to any other person.
	6. The Department believes that mandatory package licensing is an unlawful extension of the patent grant.

CHANGES IN ATTITUDE TOWARD PATENT LICENSING BY U.S. DEPARTMENT OF JUSTICE: ELIMINATION OF NO-NO'S!

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ABSTRACT

In past years, the U.S. Department of Justice through its Antiturst Division has set forth rules by which they believe the legality of patent license agreements should be determined in all situations. These rules have become known as the "Nine No-No's" of patent licensing. The "Nine No-No's" set forth situations which are to be avoided in all cases because they supposedly would lead to "per se" violations of U.S. antitrust laws.

In November of 1981, Assistant Attorney General of the U.S. Department of Justice, William F. Baxter, indicated that he disagrees with the prior administration's policy of applying the rules of the "Nine No-No's" to all patent licensing situations. The Department now takes the view that the legitimately acquired patent monopoly should be respected, and that the economic effect of each patent licensing arrangement should be examined to determine if unlawful conspiracies are at work to unreasonably restrain competition.

The Federal Courts in the United States have previously decided many cases which supported the theory of applying "per se" rules, such as the "Nine No-No's" to hold illegal many patent licensing arrangements. More recently however, some of the courts have rejected the concept of always applying "per se" rules to find violations of our antitrust laws in favor of carefully analyzing the real economic effects of a challenged restraint on a rule of reason approach.

The dilemma we face is whether we have the courage in counselling our respective companies to follow the newly announced opinions of our Department of Justice which are not yet supported by decided case law. It is our courts, not the Department of Justice, that decide whether a particular patent license arrangement is violative of our antitrust laws. Until certain prior court decisions are overruled, we are in a quandary.

CHANGES IN ATTITUDE TOWARD PATENT LICENSING BY U.S. DEPARTMENT OF JUSTICE: ELIMINATION OF NO-NO'S!

by PAUL M. ENLOW
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INTRODUCTION

In the United States the legality of licensing arrangements concerning intellectual property rights, such as patents, is finally determined by the courts. Until recently, the courts have been unduly harsh in criticizing licensing practices which in any way endangered competition. Our courts have strained to find that various patent licensing arrangements were violative of our antitrust laws. Thus, our courts have labelled certain licensing practices as "per se" violations of our antiturst laws.

Consequently, a licensor that willingly chooses to license its patented product or process may be exposed to potentially disastrous consequences in the event that its licensing arrangement is found to violate our antitrust laws. Under previous court decisions, such a licensor could be compelled to license anyone who seeks to use the patented process or product at reasonable royalty rates or even royalty free. The net result could be that the licensor loses all benefits of the legal monopoly granted by our patent laws.

Many of the law suits which have resulted in loss of the benefits of patents have been instituted by the Antitrust Division of the U.S. Department of Justice. Hence, lawyers are very interested in the comments of spokesmen for the Department of Justice on the subject of the licensing of patents. However, one difficulty which we experience is that the leadership of the Department of Justice changes with each U.S. Presidential administration, and thus their views as to the type of patent licensing arrangements that should be prosecuted under our antitrust laws are subject to change.

It is the purpose of this paper to discuss recently announced views of the Antitrust Division of the U.S. Department of Justice concerning patent licensing arrangements and their viability under our antitrust laws. But you must be aware of the following warning:

> THE LEGALITY OF PARTICULAR PATENT LICENSING PRACTICES IS DETERMINED IN THE UNITED STATES BY THE COURTS, NOT THE DEPARTMENT OF JUSTICE.

Thus, while the Antitrust Division of the Department no longer believes that certain patent licensing practices are improper, many of them have previously been held illegal by the courts under our antitrust laws. Nevertheless, as I will discuss hereinafter, the attitudes of our courts are also beginning to change.

FORMER VIEWS OF THE DEPARTMENT OF JUSTICE

During the past decade, the Department has articulated its enforcement policy towards the licensing of patents by what is known as a list of "Nine No-No's", or nine licensing arrangements which the Department believed to be subject to challenge under our antiturst laws.[1] In fact, the Department expressed the opinion that each of the nine no-no's was inherently anticompetitive and thus per se illegal. However, as discussed below, the current leadership of the Antitrust Division of the Department expresses the opinion that the nine no-no's are not proper expressions of guidelines for patent licensing practices under our antitrust laws.[2]

Briefly, the former "Nine No-No's" are as follows:

1. It is unlawful to require a licensee to purchase unpatented materials from the licensor.

2. It is unlawful to require a licensee to assign to the licensor any patent issued after the agreement is executed.

3. It is unlawful to restrict a purchaser of a patented product in the resale of that product.

4. It is unlawful to restrict a licensee's freedom to deal in the products or services not within the scope of the patent.

5. It is unlawful to agree with a licensee that you will not grant other licenses without the licensee's consent.

6. It is unlawful to require mandatory package licensing of patents.

7. It is unlawful to insist, as a condition of the license, that the licensee pay royalties in an amount not reasonably related to sales of products covered by the patent - for example, royalty on total sales.

8. It is unlawful to place restrictions on a licensee's sales of products made by use of a patented process.

9. It is unlawful to require a licensee to set a specified or minimum price with respect to sales of licensed products.

PRESENT VIEW OF THE DEPARTMENT

Beginning in November, 1981, the Antitrust Division of the U.S. Department of Justice endorsed the opinion that the "Nine No-No's" are not adequate guidelines as to patent licensing arrangements because "they are overinclusive or contain at least some element of irrationality," and that "... analysis of those situations will not be aided ... by using simple rules whose reality might be unquestioned in occasional isolated circumstances."

Briefly, the D.O.J.'s present position can be summarized as follows:

1. There is nothing inherently wrong or anti-competitive about the market power conferred by a patent.

2. The value of the patent monopoly arises from the ability to exploit the patent-based market power.

3. In order for a product distribution process (as governed by a licensing practice) to be anticompetitive, it must somehow implicate the sellers relationship to other sellers; that is, it must include a collusive arrangement which in itself is violative of our antitrust laws.

The D.O.J.'s current analysis starts from the premise that a lawfully acquired patent gives the exclusive right to make use or sell the results of the inventive activity. So long as the market power obtained through the exploitation of the patent arose from the inventive effort and not some other collusive arrangement, there is no antitrust problem. The Department's new bottom line is that "the antitrust legality of the means chosen for exploitation of a patent ought to be subject to the same general antitrust standards as other commercial transactions.

The Department now seems to recognize that, if there is no deception in the grant of a patent, such patent represents a property right which should be respected as any other property right - and further, that the licensing or use of a patent right should be governed by antitrust laws in the same manner as other commercial transactions. Stated another way, the Department now believes that patent licensing arrangements should not be governed by a special set of rules (the Nine No-No's) applicable only to the patent/antitrust interface. Rather than articulate that nine different licensing situations are always illegal, the Department is postulating that the "rule of reason" should be employed with respect to each factual situation in order to determine if the commercial transaction, including the licensing arrangement, is sufficiently anticompetitive as to be violative of our antitrust laws.

In explaining its new position, the Department has stated that in analyzing patent licensing arrangements, it will employ the type of analysis which it uses in analyzing normal product distribution arrangements employed in commerce. The Department has stated:

> "In most respects, the intellectual property protected by a patent represents an input to a productive process. As such, it must be combined with numerous other inputs before assuming the form of an article of commerce that can be traded for money because it has value to the consumer. Even where the patented item is a product that does not become recognizable until a relatively late stage in the chain of manufacture, that item must still be packaged, distributed, transported, insured, advertised, retailed, financed, and sold, perhaps subject to warranties or other promises of post-sale performance and the availability of maintenance or other assistance."

The Department goes on to say:

> "... there is no inherent competitive significance to the decision of a single seller to select the number of outlets for his product, their locations and methods of doing business, or the prices and terms on which trade occurs. ..."
>
> "This same general discussion applies with equal if not greater force to the patent field. ... Thus, the independent decisions of the patentee regarding the means by which an invention is to be combined with other productive inputs ought to be regarded as having no inherent anti-competitive import."

In summary, the Department's present position is that the "Nine No-No's" should be disregarded because no set of simple rules will work in all situations, and if always applied, will cause harm in some circumstances.

A RECENT COURT DECISION

In a recent law suit brought by the Department of Justice, the U.S. Court of Appeals for the District of Columbia rejected the Department's arguments as to No-No number 8 listed above. In U.S. v. Studiengescellschaft Kohle, m.b.H.,[3] the court struck down the eighth No-No which stated that it was unlawful to place restrictions on the licensee's sale of products made by use of the patented process.

The Kohle case involved a patent on a new process to produce ATA, an aluminum alkyl. The process was the only commercially viable process to produce ATA, which was a previously known chemical compound. Thus, the patent covered the process but not the product.

The licensor granted one company a nonexclusive license to use the patented process and an exclusive license to sell ATA produced by the process. Licenses were granted to other companies to use the process to manufacture ATA for their internal consumption, but not for sale to others.

The Department brought a law suit alleging that the licensing arrangement granting an exclusive license to sell an unpatented product made by a patented process was an unreasonable restraint of trade and an attempt to monopolize in violation of our antitrust laws.

The lower court[4] held that the limitations placed on sales of the unpatented product, ATA, were outside of the patent monopoly which only covered the process of manufacture. The Court of Appeals overruled the lower court, saying that the application of a "per se" rule (such as No-No number 8) was improper, and that a rule of reason approach carefully analyzing "the real economic effects of the particular challenged restraint," was necessary.[5]

Briefly, the Court of Appeals noted that since the patented process was so superior to all other processes for producing ATA, the patentee had a de facto monopoly over the product. Because the license agreements did not affect competition in products other than ATA manufactured by the patented process, the licenses were protected by the patent monopoly. In addition, the Court found that the actual license agreements were given "an import badge of reasonableness" because the licensor had chosen a less anticompetitive means to license the process than he lawfully could have used. That is, the licensor could have given an exclusive license to only one company with the result that others could not use the process.

CONCLUSIONS

The present leadership of the Antitrust Division of the U.S. Department of Justice has announced that it rejects the application of simple rules such as the

"Nine No-No's" to all patent/antitrust licensing situations. Rather, the Department prefers analyzing each fact situation carefully to determine the real economic effect of the licensing arrangement. Also, at least one court has adopted a similar approach.

The question must be asked - "Where does this leave us when we are counselling our respective companies?" The answer is - very confused, until we have additional new court decisions which treat the various "No-No's".

We must keep in mind that, while the opinions of the Department of Justice are helpful in planning our licensing strategies, the Department does not make the laws. The courts make the laws concerning the validity of various patent licensing arrangements. The problem is that the law books are full of older court decisions that have in fact upheld all of the old "No-No's". Only a brave and courageous warrior will adopt the opinions of our Department of Justice.

FOOTNOTES

1. "Department of Justice Luncheon Speech Law on Licensing Practices: Myth or Reality?" Remarks by Bruce Wilson, Jan. 21, 1975.

2. Current Antitrust Division Views on Patent Licensing Practices. Remarks by Abbott B. Lipsky, Jr., Nov. 5, 1981.

3. 670 F.2d 1122, 212 USPQ 889 (D. Cir. 1981).

4. U.S. v. Studiengesellschaft Kohle, m.b.H., 426 F. Supp. 143 (D.D.C. 1976).

5. Citing, Continental T.V. Inc. v. GTE Sylvania, Inc., 433 U.S. 36 (1977).

A CASE OF ANTIMONOPOLY ACT VIOLATION INVOLVING AN INTERNATIONAL LICENSING AGREEMENT

Japanese Group
Committee No.2
Chairman: Juro Ichimura
Shin-Etsu Chemical Co., Ltd.
Speaker: Kuniharu Atake
Mitsui Petrochemical
Industries, Ltd.

Abstract

In 1962, Komatsu Limited, a Japanese corporation, entered into a licensing agreement with Bucyrus Erie Company, a U.S. corporation, for power shovel manufacturing technology. By this agreement, Komatsu was restricted from terminating the agreement of its own will to relieve itself of payment of royalty, and was also precluded from dealing in competitive products. The Fair Trade Commission instituted proceedings against the parties on the ground that the agreement was suspected of violating the provisions of the Antimonopoly Act. This procedure, however, was ended last October upon termination of the entire agreement by consent among the parties. The following presentation gives an outline of the case and reviews the Commission's position as reflected in the specific case involving an international licensing agreement.

Contents

1. Introduction

Twenty years ago, Komatsu Ltd., a Japanese construction machinery manufacturer (hereinafter called "Komatsu") entered into a set of agreements relating to licensing of power shovel manufacturing technology, with Bucyrus Erie Company, a U.S. manufacturer of construction machinery (hereinafter called "Bucyrus").

Subsequently, the two companies established a joint venture company for manufacture of power shovels (hereinafter called the "Product") by using Bucyrus's technology.

The Product was sold primarily in the Japanese market. (For some time after the establishment of JV, the sale of the Product was undertaken by Mitsui & Co., Ltd. (hereinafter called "Mitsui"), but the distributorship was later taken over by Komatsu.)

Recently, however, the Fair Trade Commission (hereinafter called "FTC") instituted proceedings against the parties on the ground that the agreements were suspected of violating the provisions concerning unfair business practices under the Antimonopoly Act. The proceedings were concluded in October last year.

As one of the subjects of presentation at this Kobe Congress of PIPA, the 2nd Committee decided to take up the Komatsu/ Bucyrus case. As you are well aware, this subject matter relates to the application of the Antimonopoly Act Guidelines for International Licensing Agreements as reported by Mr. Norichika. In my presentation, I would like to review the FTC's position reflected in a specific case, which I hope will serve as a useful reference for those of you who are responsible for licensing agreements.

2. Outline of the Case

First of all, in order to facilitate your understanding of my presentation, I would like to give a rather detailed account of the case.

1) Back in the early 1960's, in anticipation of a growing demand for power shovels in Japan, Komatsu contemplated to expedite its plans to go into the manufacture and sale of the Product by acquiring manufacturing technology from abroad. Komatsu then made a proposal to Bucyrus, one of the world's leading manufacturers of the Product, for technical assistance.

   In response to this proposal, Bucyrus agreed to provide the technical assistance to Komatsu, though not directly but through a joint venture that Bucyrus proposed to establish jointly with Komatsu and another party, Mitsui (which had been Bucyrus's sole agent in Japan since prewar days).

   Prompted by the urgency of its plan to start manufacturing the Product, Komatsu accepted this proposal.

2) In April, 1962, a joint venture agreement was concluded among the three companies, under which Komatsu-Bucyrus, (hereinafter called "JV") was established in August, 1963

and, at the same time, the following agreements were made. (Komatsu and Bucyrus respectively held a 40% equity share in JV and Mitsui 20%. It was provided in the agreement that important business matters of JV shall be decided upon by a unanimous vote of the board of directors to be designated respectively by the three parties.)

a. Technical Assistance Agreement (between Bucyrus and Komatsu)

The agreement set forth that Bucyrus should provide JV with technical assistance for the manufacture of the Product and JV should pay royalty to Bucyrus.

This agreement was to continue in effect for a period of 10 years and thereafter to be renewed automatically from year to year unless either party notified the other to the contrary. It also contained a provision concerning minimum royalty payable by JV to Bucyrus.

b. Manufacturing Agreement (between JV and Komatsu)

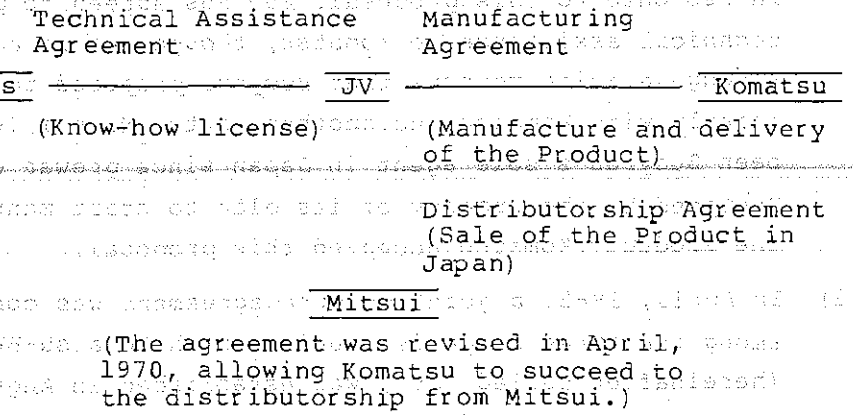
Under this agreement, Komatsu was entrusted with the manufacture of the Product to be delivered to JV.

c. Distributorship Agreement (between JV and Mitsui)

The agreement called for JV to sell the Product in Japan through Mitsui as its distributor.

Later in April, 1970, Mitsui renounced its distributorship to be taken over by Komatsu. Mitsui, however, continued to remain as a shareholder in JV.

The relationship can be illustrated as follows.



3) January, 1977: (Discussion was underway among the parties at that time for revision of some provisions of the agreements.)

Komatsu filed a copy of all the said agreements with FTC pursuant to Article 6, paragraph 2* of the Antimonopoly Act.

June, 1977:

Upon examination of the agreements, FTC asked the four parties (Bucyrus, Komatsu, Mitsui, and JV) to take corrective measures with respect to the following items which were found to fall under unfair business practices in violation of Article 6, paragraph 1* of the Antimonopoly Act.

a. Restriction on termination of agreement
b. Prohibition of handling of competitive products
c. Restriction on export channels
d. Inequality in the obligation to disclose technological improvements to the other party and in the proprietorship thereof

The parties to the agreement, then, had discussions with FTC on several occasions but failed to arrive at a conclusion complying with the request of FTC.

* Antimonopoly Act, Article 6

1) No entrepreneur shall enter into an international agreement or an international contract which contains therein such matters as coming under the purview of unreasonable restraint of trade, or unfair business practices.

2) In the event that an international agreement or an international contract is concluded, every entrepreneur shall file a report of the said effect, together with a copy of the said agreement or contract (in the case of a verbal agreement or contract, a statement demonstrating the contents thereof), with the Fair Trade Commission within thirty (30) days as from the day of its conclusion pursuant to the provisions of its Regulation.

January, 1979:

Consequently, FTC issued a complaint against the three parties excluding JV pursuant to the provisions of the Antimonopoly Act, and subsequently instituted the procedure for hearings.

May, 1981:

An agreement was reached among the parties to terminate all of the said agreements including the joint venture agreement and filed this termination agreement with FTC.

October, 1981:

FTC determined that all facts in violation of the Antimonopoly Act ceased to exist. Accordingly, the proceedings were ended.

3. Provisions in Violation of the Antimonopoly Act

Based on the said agreements, JV is the principal party in respect of the business concerning the Product in Japan. That is, JV is the party who receives the technical assistance from Bucyrus for the manufacture and sale of the Product. Komatsu acts only as JV's subcontractor in the manufacture of the Product and as distributor for the sale of the Product. Nevertheless, FTC found that under these agreements, Komatsu was virtually the recipient of Bucyrus's technical assistance and was actually engaged in the manufacture and sale of the Product, for which FTC cited the following reasons.

a. JV has, all together, only a few directors and employees working full time and its business transaction is substantially limited to such clerical work normally required for payment of royalty to Bucyrus. Moreover, the expenses involved in such business transaction are in effect borne exclusively by Komatsu.

b. The technical assistance is provided by Bucyrus directly to Komatsu in line with Komatsu's request.

c. The manufacture and sale of the Product contractually entrusted to Komatsu by JV are unsubstantial, with the transaction shown only on the books. The manufacture and

sale of the Product are actually carried out by Komatsu on its own responsibility.

These are the findings on the ground of which FTC instituted the proceedings against the three companies excluding JV.

The finding as such may probably be a contentious issue but, without going into further details, I will refer to it as needed in my explanation of the provisions in violation of the Antimonopoly Act.

Incidentally, in connection with application of the Antimonopoly Act Guidelines for International Licensing Agreements (hereinafter called the "Guidelines"), it was announced previously (before the said proceedings were taken) by FTC to the effect that the Guidelines could also be applied to joint venture agreements in the event they were found to be actually intended for licensing of technology, upon overall assessment of such agreements including the role of each of the parties involved.

1) Restriction on Termination of Agreement

As mentioned previously, the life of the technical agreement was 10 years, which was to be extended thereafter from year to year unless either party notified the other of its desire to terminate it.

Therefore, in the event where Komatsu finds Bucyrus's technology to be no longer of outstanding value to the company and desires to terminate the agreement between JV and Bucyrus, the procedure required to be followed by Komatsu is to have JV's board of directors adopt a resolution to that effect and have JV notify Bucyrus of its desire to terminate the agreement.

However, as mentioned already, a unanimous vote is required for the JV's board of directors to act on such important matters, which preclude Komatsu from terminating the agreement without consent of Bucyrus.

Such circumstances obligate JV to continue in its payment of royalty to Bucyrus for an indefinite period of time.

Note: It was, however, possible for Komatsu to terminate both the manufacturing and distributorship agreements concluded with JV. In fact, Komatsu notified JV in mid-1980 of its desire to terminate the agreements. Even then, the technical assistance agreement between Bucyrus and JV remained in force, thus binding JV to continue to pay minimum royalty to Bucyrus.

FTC found that the provisions of these agreements allowed Bucyrus as licensor to deal with Komatsu virtually as licensee "under conditions which are unreasonably disadvantageous to the other party", and they were in violation of Article 6, paragraph 1 of the Antimonopoly Act.

In licensing of patent rights, it is generally deemed an unfair business practice to impose on the licensee the obligation to continue to pay royalty even after the expiration of the patent rights. In know-how licensing agreements, it would also constitute an unfair business practice, except for some special cases, to impose obligations on the licensee to limitlessly continue paying considerations, even though we realize that this question cannot be discussed in general terms, partly because it is often difficult to define the useful life of know-how and also, there may be cases where the licensee is provided with improvements of the know-how.

In the case under review, the lack of established facts as to the kind of value retained by Bucyrus's know-how 10-odd years after the conclusion of the agreements and as to whether or not the licensee was provided with any know-how improvement, prevents us from making conclusive comments on it. FTC, however, found that the restriction on the right to terminate the agreement itself constituted a condition unjustly disadvantageous to Komatsu.

2) Prohibition of Handling of Competitive Products

The manufacturing agreement contained a provision prohibiting Komatsu to manufacture, sell or deal in products in competition with the Product, whereas the distributorship agreement provided that Komatsu shall not

sell, other than those purchased from JV, any product of the same type as or similar to the Product. In fact, when Komatsu proposed in 1970 to manufacture and sell a different type of power shovel developed by the company on its own, Bucyrus turned it down on the ground that the proposed manufacture and sale of such equipment by Komatsu came in conflict with the agreements and were contrary to the spirit of the joint venture agreement, despite the fact that Bucyrus itself reserved the right to sell, in the markets throughout the world including Japan, the power shovel that it manufactures.

FTC found that the provisions contained in the said agreement came under unfair restrictions on dealing in competitive products in the case where an exclusive license is not granted to the licensee (Refer to the Guidelines, Item 1-3)**, and that they constituted conditions unduly disadvantageous to Komatsu.

Bucyrus, on the other hand, maintained that said provisions should be deemed admissible even in the light of the Guidelines, Item 1-3**, for which reasons it cited that Komatsu was entrusted with the manufacture of the Product under exclusive arrangements and the fact that Bucyrus reserved the right to sell its equipment in Japan would not, for all practical purposes, affect the exclusive license granted to Komatsu.

3) Restriction on Export Channels

In the distributorship agreement entered into among Bucyrus, Komatsu, and JV in April, 1970, it was provided that for export of the Product to the Republic of Korea, Taiwan, and Philippines, the distributor should be designated by JV and that the designation of distributor should be one of the matters to be decided upon by JV's board of directors. Therefore, it was impossible for Komatsu to have a distributor of its own choice for export of the Product to these areas without the consent of Bucyrus. FTC concluded that this provision was in conflict with the Guidelines, Item 1-2** under which it is stipulated as one of unfair business practices to make it

obligatory for the licensee to export patented goods through a person designated by the licensor.

4) Inequality in the Obligation to Disclose Technological Improvements to the Other Party and in the Proprietorship Thereof

Under the technical assistance agreement, Bucyrus was required to disclose to Komatsu only such relevant inventions, improvements, etc. that were actually used in the manufacture of the Product, but it was obligatory for Komatsu, under the manufacturing agreement, to disclose to Bucyrus of all of its inventions, improvements, etc. relating to the Product.

Moreover, in the manufacturing agreement it was provided that such technology disclosed by Komatsu shall belong to JV and that if such technology is patented, it shall be assigned to Bucyrus upon request by the latter.

The Guidelines, Item 1-7** provides that to make it obligatory for the licensee to inform the licensor of knowledge or experience newly obtained regarding the licensed technology, falls under unfair business practices, except for the cases where licensor bears similar obligations, and the obligations of both parties are equally balanced in substance. In the case of the agreements under study, the provisions are bilateral in respect of the obligation to disclose information on proprietary technology, but imbalanced in the scope of technology disclosure and in the proprietorship thereof, which FTC found unduly disadvantageous to Komatsu.

**Antimonopoly Act Guidelines for International Licensing Agreements

I. Among the restrictions which are liable to come under unfair business practices in international licensing agreements on patent rights or utility model rights (hereinafter referred to as "Patent rights, etc.") the following are the outstanding.

2) To restrict the licensee's export prices or quantities of patented goods, or to make it obligatory

for the licensee to export patented goods through the licensor or a person designated by the licensor.

However, such cases are excluded where the licensor grants a license to export to the area coming under either of the preceding a, b, or c and the said restrictions or obligations imposed are of reasonable scope.

3) To restrict the licensee from manufacturing, using or selling goods, or employing technology which are in competition with the licensed subject.

However, such cases are excluded where the licensor grants an exclusive license and imposes no restriction on goods already being manufactured, used or sold, or technology already being utilized by the licensee.

7) To make it obligatory for the licensee to inform the licensor of knowledge or experience newly obtained regarding the licensed technology, or to assign the right with respect to an improved or applied invention by the licensee to the licensor or to grant the licensor a license thereon.

However, such cases are excluded where the licensor bears similar obligations and the obligations of both parties are equally balanced in substance.

On these 4 points, FTC found the agreements to be in violation of Article 6, paragraph 1 of the Antimonopoly Act and instituted the proceedings, whereas Komatsu admitted most of the facts as pointed out by FTC without contention. By then, Mitsui had already withdrawn from its distributorship to remain only as one of the shareholders in JV and did not make its attitude clear on this issue including admission or denial of facts. Bucyrus, however, indicated its position to object to the FTC's decision.

Bucyrus's contentions were to be stated first on the matters relating to the procedure and later on the substantial matters of the proceedings, which, however, were not laid before the hearing court since the case was dropped.
On the procedural matters, Bucyrus claimed as follows.

1) The procedure prescribed in the Antimonopoly Act fails to give due consideration to the respondent's rights, therefore, it is unconstitutional.

2) FTC has no jurisdiction over Bucyrus which is a U.S. juridical person having no branch office or place of business in Japan.

3) Bucyrus's attorney to whom the transcript of written complaints was served by FTC, is not authorized to lawfully receive the document for Bucyrus. Therefore, the transcript is not deemed to have been served formally to Bucyrus.

These three points of its contention respectively involves some interesting questions from the legal point of view but, I am afraid, I must leave the details for some other occasion because of the limited time.

However, in connection with the second point, I would like to give a brief account of a case involving Amano Pharmaceutical Company which I hope will serve as a helpful aid in your understanding of the Komatsu/Bucyrus case. (For details of this case, please refer to Mr. Tomita's report given at the 1976 Congress held in Hakone.)

This case relates to an international agreement concerning continuous purchasing and sale of a product, entered into between Amano Pharmaceutical Company (hereainfter called "Amano") and Novo Industry Co., Ltd., a Danish company. A provision contained in the agreement which obligated Amano not to handle competitive products even after the expiration of the life of the agreement, was found to be violative of Article 6, paragraph 1 of the Antimonopoly Act.

In this case, FTC had no jurisdiction over Novo having no basis of business activity such as a subsidiary and branch office in Japan; therefore, FTC made recommendations only to Amano for correction of the acts in accordance with Article 48 of the Antimonopoly Act. Upon acceptance of the recommendations by Amano, FTC rendered a recommendation decision to the company. Novo, on the other hand, claimed such recommendation decision to be unlawful in that the company was

not given any opportunity to make its representation prior to such decision which would affect the company's interest, and appealed to a higher court seeking its revocation.

Although Novo's contention was not accepted, there have been some critical views expressed in the academic circles and among other interested observers about the court decision.

Likewise, in the Komatsu/Bucyrus case, it would have been possible for FTC, under the Antimonopoly Act, to institute proceedings only gainst the Japanese parties as in the case of Amano. In such event, it is assumed, the court decision would necessarily be rendered without allowing Bucyrus an opportunity to make a statement on its position. This in turn would cause Bucyrus to litigate the case over the question of validity of the court decision after it has been rendered.

In making a decision to institute proceedings against not only the Japanese parties but also Bucyrus, FTC is believed to have taken this point into consideration.

4. Conclusion

This case was settled by consent among the parties concerned before the proceedings had been carried through to the end. That is, the proceedings have been closed with no counterargument presented by Bucyrus, no formal decision by FTC, and no judgment given by a higher court. The fact that the case was not carried through was rather disappointing to us as it involves a number of legal questions of interest to us who are dealing with such matters that concern international licensing agreements and application of the Antimonopoly Act.

However, we can draw some valuable lessons from the particular case at least on the following points.

1) That there is a possibility of application of the Antimonopoly Act and the Guidelines to such joint venture agreements that contain provisions on the transfer of technology in the same way as is applied to technical assistance agreements.

2) That the proceedings can be instituted against a foreign juridical person who is a party to a joint venture

agreement even when the party has no branch office or place of business under its control in Japan.

It should also be added that with respect to agreements likely to remain in effect over a long period of time, this case indicates the possibility of application of the Antimonopoly Act by FTC to such agreements if deemed necessary, for example, by taking advantage of the time of its renewal. The pertinent provisions of the Antimonopoly Act could also be applied to such items in existing agreements on which no problem was pointed out by the authorities at the time when the agreements were made. This implies the need for us in charge of international licensing agreements to review our existing agreements from time to time as they are enforced or renewed, from the standpoint of ensuring conformity to the provisions of the Antimonopoly Act prohibiting unfair business practices.

Thank you.

PACIFIC INDUSTRIAL PROPERTY ASSOCIATION

November, 1982 Kobe, Japan

AN ANALYSIS OF THE STANFORD UNIVERSITY GENE SPLICING LICENSE

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Committee: No. 2

ABSTRACT

Pertinent provisions of the Stanford University recombinant DNA license agreement concerning the Cohen/Boyer "gene splicing" process claimed in U. S. Patent No. 4,237,224 and plasmids claimed in related U. S. Patent Application Serial No. 959,288 are summarized. Also included are comments and illustrations relating to Stanford's intrepretation of the basic agreement terms, as well as recent developments regarding the licensed patent and patent application.

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AN ANALYSIS OF THE STANFORD UNIVERSITY GENE SPLICING LICENSE

On December 2, 1980 U. S. Patent No. 4,237,224 for a "Process for Producing Biologically Functional Molecular Chimeras" issued to Stanley N. Cohen and Herbert W. Boyer, assigned to the Board of Trustees of the Leland Stanford Junior University (Stanford, California, U.S.A.). This is the now famous Cohen/Boyer "gene splicing" patent which claims the basic process of genetic engineering technology and which is reproduced as Appendix A. A related patent application, U. S. Serial No. 959,288, claiming certain biologically functional recombinant plasmids capable of selection and replication in a unicellular microorganism cell as compositions of matter is still pending; representative claims, which originally were found allowable, are reproduced in Appendix B.

By April of 1982 Stanford University had seventy-three (73) licensees (see listing in Appendix C) under the gene-splicing patent and related application, including fifty-eight (58) United States based concerns, six (6) Japanese companies and nine (9) organizations based in Europe and the rest of the world.

This paper will review the basic terms of the Stanford license agreement, relate Stanford's interpretations of certain of these terms and summarize recent developments within the U. S. Patent and Trademark Office concerning U. S. Patent No.

4,237,224 and U. S. Serial No. 959,288.

I. The License Agreement

Stanford has issued two versions of the license agreement, differing in terms as will be indicated, one of which is applicable to licenses signed on or before December 15, 1981 and the other to licenses signed afterwards. For convenience and information, these agreements are reproduced as Appendices D and E. Pertinent provisions follow:

- LICENSOR - Although the research from which the inventions arose was carried out at both Stanford University (Dr. Cohen's work) and the University of California (Dr. Boyer's work) and was supported, at least in part, by U. S. Government funds, the Universities and the funding agencies agreed that Stanford University would administer the intellectual property rights concerning the inventions in accordance with the terms of Stanford's Institutional Patents Agreement with the United States Government, Department of Health and Human Services. Income from licensing is to be shared between Stanford and the University of California, and is designated for use in educational and research purposes.
- LICENSED SUBJECT MATTER - The license agreement transfers rights under U. S. Patent No. 4,237,224 (see Appendix A) and the patent issuing from U. S. patent

application Serial No. 959,288 (see Appendix B), as well as any divisions, continuations, continuations-in-part, reissues or extensions of either. Additional comments on these patents will be found in the final section of this paper.

- PRODUCTS SUBJECT TO ROYALTY - Four (4) categories of products subject to royalty are designated:

(1) "End Products", defined as goods sold in a form for utilization by an ultimate consumer, such as vaccines, final dosage form pharmaceuticals, microorganisms used for animal or human food or biodegradation or mineral leaching, or industrial process enzymes;

(2) "Basic Genetic Products", defined as products sold primarily for further processing or genetic manipulation which are not in the other product categories, such as plasmids, unicellular organism transformants or nucleic acid segments;

(3) "Process Improvements Products", defined as products developed and used by the licensee in its manufacturing processes to enhance production efficiency, such as enzymes or antibodies for chemical manufacturing, microorganisms for production of pharmaceuticals or chemicals, or nitrogen-fixing microorganisms used to reduce fertilizer consumption; and

(4) "Bulk Products", defined as materials intended for further formulation, processing or chemical transformation, such as antibodies or hormones sold to a pharmaceutical company, dipeptides sold to a beverage company as a sweetener, bulk amino acids sold to a health care firm, or chemical intermediates produced by microorganisms and sold in bulk.

- SCOPE OF LICENSE - The license granted is a non-exclusive, non-transferrable right and license to make, have made, use and sell the licensed products under the licensed patents. It should be noted that only U. S. patent applications have been filed or patents issued, as a prior publication, not a statutory bar in the United States, served to preclude Stanford's obtaining foreign rights.
- FINANCIAL TERMS - Royalties are payable as advances and as earned royalties:

(1) Advance royalties are $10,000 per year minimum, the first payment due on execution of the agreement and thereafter on each February 1st. The advance payments are creditable against future earned royalties in excess of the annual minimum up to fifty percent (50%) of such sum in any one year. For licenses signed prior to December 15, 1981 only, the total available credit is increased to five times the

cumulative amount of advance royalties paid in years prior to the calendar year in which a first sale of an End Product occurs. Minimum payments made for 1987 and years following are not accorded this treatment, but are creditable in the amount of the advance royalty.

(2) Earned royalties are payable on annual net sales made by a licensee. For End Products sold in the United States, the royalty rate is 1% of net sales up to $5 million (U.S.), 0.75% of net sales from $5 to $10 million and 0.50% of net sales over $10 million. For production of End Products in the United States for sale outside the United States, the royalty rate is 0.5% of net sales regardless of sales volume.

For Basic Genetic Products, the royalty is 10% of net sales, regardless of sales volume.

For Process Improvement Products, the royalty rate is 10% of the cost savings and economic benefits enjoyed by the licensee.

And, for Bulk Products, the royalty for products sold in the United States is 3% of net sales up to $5 million, 2% of net sales from $5 to $10 million and 1% of net sales over $10 million. For production of Bulk Products in the United States for sale outside the United States, the royalty is 1% of

net sales, regardless of sales volume.

The license also provides that a lower royalty may be negotiated for Basic Genetic Products, Bulk Products or Process Improvement Products in the event that the royalty otherwise due would be greater than the corresponding royalty if such products were End Products. Licensees who have entered into the agreement prior to December 15, 1981 may also elect to obtain a paid-up non-exclusive license for a term beginning on the effective date of the license agreement and continuing until December 31, 1986 concerning sales of Bulk Products, Basic Genetic Products or Process Improvement Products. The determination of such paid-up amount is specified as not being subject to arbitration and as not being considered in "more favored terms" treatment of third party licensees.

In the event a licensee supplies licensed products to another licensee or to an affiliate, which is defined as "any corporation or other business entity controlled by, controlling, or under common control with licensee", with control meaning "direct or indirect beneficial ownership of at least fifty percent (50%) of the voting stock or at least fifty percent (50%) interest in the income of such corporation or other business", no earned royalties

shall be due provided that such other licensee or affiliate is obligated to pay a royalty to Stanford on use or sale of such products.

- TERM AND TERMINATION - The agreement is effective from the date entered into until expiration of the last viable licensed patent. Stanford has termination rights in the event a licensee breaches or defaults under its obligations and the licensees have the right to terminate at any time upon giving ninety (90) days written notice to Stanford.
- NIH rDNA GUIDELINES - Licensees are bound to comply with the National Institutes of Health Guidelines for Research Involving Recombinant DNA Molecules promulgated by the United States government in producing licensed products.
- REPORTING - Licensees are obliged to make annual reports to Stanford concerning progress during the previous calendar year toward commercializing the licensed inventions.
- ASSIGNMENT - The license agreement is not assignable without first obtaining the prior written consent of Stanford or unless substantially the entire business of a licensee relating to the agreement has been sold or transferred.
- DISCLAIMERS AND WAIVERS - Stanford has disclaimed all warranties or representations, express or implied,

concerning the validity or scope of any of the patents licensed, regarding practice of the licensed rights free of infringement of third party patents and relating to the merchantability or fitness for a particular purpose of the licensed subject matter. The obligation to bring or prosecute actions or suits against third parties for infringment is also waived. Each licensee is obliged to defend, indemnify and hold Stanford harmless from and against any liabilities, claims and damages arising from such licensee's use or sale of the licensed products.

- RESOLUTION OF DISPUTES - Arbitration is stated to be the preferred medium for resolving disputes connected with the license agreement, including royalty determination in appropriate instances.
- "MOST FAVORED LICENSEE" - As Stanford's purpose is to provide uniform licensing of the subject inventions, the agreement provides for substitution of more favorable terms contained in subsequent licenses, prospective as to royalties and excepting the incentives given to licensees who entered in agreements prior to December 15, 1981.

II. STANFORD'S INTERPRETATION OF THE AGREEMENT

As an aid to interpreting the basic license agreement, Stanford has provided its licensees with supplemental materials concerning classification of licensed products and example

scenarios of applications of the technology for purposes of determining royalties. In all communications with its licensees, the University has been careful to indicate that such materials are not to be construed as being part of the agreement, but only used to aid in its understanding and interpretation. Stanford's summary sheet of licensed product classification/royalties is reproduced as Appendix F; its examples of product categories and illustrative scenarios is reproduced as Appendix G.

Basically, it is the University's policy that only one royalty payment is due along a manufacturing chain for a given end product, with appropriate reductions of the royalty payable by a "down-stream" licensee by the amount paid by an "up-stream" licensee for a given precursor on intermediate. With respect to intermediate products, Stanford contemplates that, although the purchaser of such is free to sell the intermediate or to use it to produce other licensed products free of royalty, a royalty obligation to the University would arise if further genetic manipulation has been carried out on or with such intermediate after the first royalty bearing transaction.

Stanford has stated that it interprets "Licensed Products" as being materials, including organisms, which in the course of manufacture, use or sale would infringe one or more claims of the licensed patents if such manufacture, use or sale had occurred in the United States in the absence of the license,

thus making all categories of licensed products produced outside the United States subject to royalties in accordance with the provisions of the license agreement if imported into the United States for sale there. The University has commented that it intends to rely on Section 337 of the United States Tariff Act of 1930 concerning unfair competition to protect its interests, but that it will not, however, institute an International Trade Commission proceeding against any licensee respecting such imported materials for which royalties have been paid, presumably at some point along the manufacturing chain. Remedies available through the International Trade Commission are limited; a discussion of such is beyond the scope of this paper.

With respect to contract research for commercial purposes, Stanford interprets any royalty obligation as resting on the party which is funding the research and has indicated that the party performing the research actually need not be a licensee if the funding party is a licensee.

III. RECENT DEVELOPMENTS CONCERNING THE LICENSED PATENTS

U. S. Patent Application Serial No. 959,288 was scheduled to issued July 13, 1982 as U. S. Patent No. 4,339,538. On June 30, 1982 the United States Patent and Trademark Office withdrew the application from issue and reopened prosecution. Subsequently, all the claims were rejected on three principal bases: (1) whether the described and claimed plasmids are

sufficiently described in the manner required by statute to enable a scientist skilled in the relevant art to reproduce the invention; (2) whether the prior art, particularly a prior disclosure by one of the inventors, may bar patentability; and (3) whether the correct inventors have been named.

Although Stanford has taken an optimistic stance, it remains to be seen what the outcome of the United States Patent and Trademark Office's action will be and whether the recent developments in application Serial No. 959,288 will prompt a challenge, by way of a request for reexamination or assumption of the risk of litigation, to already issued U. S. Patent No. 4,237,224. This action may well be, in the biotechnology world, akin to the historical "shot heard 'round the world" with which the 18th century American colonists commenced their War of Independence from "Mother England". At least two universities and seventy-three (73) business entities worldwide will be carefully and closely monitoring future developments.

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The author acknowledges and appreciates the cooperation and assistance of members of the Office of Technology Licensing of Stanford University in preparation of this paper. However, this paper does not purport to be a statement of policy by Stanford University or by SmithKline Beckman Corporation.

United States Patent [19] [11] 4,237,224
Cohen et al. [45] Dec. 2, 1980

[54] PROCESS FOR PRODUCING BIOLOGICALLY FUNCTIONAL MOLECULAR CHIMERAS

[75] Inventors: Stanley N. Cohen, Portola Valley; Herbert W. Boyer, Mill Valley, both of Calif.

[73] Assignee: Board of Trustees of the Leland Stanford Jr. University, Stanford, Calif.

[21] Appl. No.: 1,021

[22] Filed: Jan. 4, 1979

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 959,288, Nov. 9, 1978, which is a continuation-in-part of Ser. No. 687,430, May 17, 1976, abandoned, which is a continuation-in-part of Ser. No. 520,691, Nov. 4, 1974.

[51] Int. Cl.³ C12P 21/00
[52] U.S. Cl. ..... 435/68; 435/172; 435/231; 435/183; 435/317; 435/849; 435/820; 435/91; 435/207; 260/112.5 S; 260/27R; 435/212
[58] Field of Search ..... 195/1, 28 N, 28 R, 112, 195/78, 79; 435/68, 172, 231, 183

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[57] ABSTRACT

Method and compositions are provided for replication and expression of exogenous genes in microorganisms. Plasmids or virus DNA are cleaved to provide linear DNA having ligatable termini to which is inserted a gene having complementary termini, to provide a biologically functional replicon with a desired phenotypical property. The replicon is inserted into a microorganism cell by transformation. Isolation of the transformants provides cells for replication and expression of the DNA molecules present in the modified plasmid. The method provides a convenient and efficient way to introduce genetic capability into microorganisms for the production of nucleic acids and proteins, such as medically or commercially useful enzymes, which may have direct usefulness, or may find expression in the production of drugs, such as hormones, antibiotics, or the like, fixation of nitrogen, fermentation, utilization of specific feedstocks, or the like.

14 Claims, No Drawings

PROCESS FOR PRODUCING BIOLOGICALLY FUNCTIONAL MOLECULAR CHIMERAS

The invention was supported by generous grants of NIH, NSF and the American Cancer Society.

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuatin-in-part of applicatin Ser. No. 959,288, filed Nov. 9, 1978, which is a continuation of application Ser. No. 687,430 filed May 17, 1976, now abandoned, which was a continuation-in-part of application Ser. No. 520,691, filed Nov. 4, 1974, now abandoned.

BACKGROUND OF THE INVENTION

1. Field of the Invention

Although transfer of plasmids among strains of *E. coli* and other Enterobacteriaceae has long been accomplished by conjugation and/or transduction, it has not been previously possible to selectively introduce particular species of plasmid DNA into these bacterial hosts or other microorganisms. Since microorganisms that have been transformed with plasmid DNA contain autonomously replicating extrachromosomal DNA species having the genetic and molecular characteristics of the parent plasmid, transformation has enabled the selective cloning and amplification of particular plasmid genes.

The ability of genes derived from totally different biological classes to replicate and be expressed in a particular microorganism permits the attainment of interspecies genetic recombination. Thus, it becomes practical to introduce into a particular microorganism, genes specifying such metabolic or synthetic functions as nitrogen fixation, photosynthesis, antibiotic production, hormone synthesis, protein synthesis, e.g. enzymes or antibodies, or the like—functions which are indigenous to other classes of organisms—by linking the foreign genes to a particular plasmid or viral replicon.

BRIEF DESCRIPTION OF THE PRIOR ART.

References which relate to the subject invention are Cohen, et al., Proc. Nat. Acad, Sci., USA, 69, 2110 (1972); ibid, 70, 1293 (1973); ibid, 70, 3240 (1973); ibid, 71, 1030 (1974); Morrow, et al., Proc. Nat. Acad. Sci., 71, 1743 (1974); Novick, Bacteriological Rev., 33, 210 (1969); and Hershfeld, et al., Proc. Nat. Acad. Sci., in press; Jackson, et al., ibid, 69, 2904 (1972);

SUMMARY OF THE INVENTION

Methods and compositions are provided for genetically transforming microorganisms, particularly bacteria, to provide diverse genotypical capability and producing recombinant plasmids. A plasmid or viral DNA is modified to form a linear segment having ligatable termini which is joined to DNA having at least one intact gene and complementary ligatable termini. The termini are then bound together to form a "hybrid" plasmid molecule which is used to transform susceptible and compatible microorganisms. After transformation, the cells are grown and the transformants harvested. The newly functionalized microorganisms may then be employed to carry out their new function; for example, by producing proteins which are the desired end product or metabolities of enzymic conversion, or be lysed and the desired nucleic acids or proteins recovered.

DESCRIPTION OF THE SPECIFIC EMBODIMENTS

The process of this invention employs novel plasmids, which are formed by inserting DNA having one or more intact genes into a plasmid in such a location as to permit retention of an intact replicator locus and system (replicon) to provide a recombinant plasmid molecule. The recombinant plasmid molecule will be referred to as a "hybrid" plasmid or plasmid "chimera." The plasmid chimera contains genes that are capable of expressing at least one phenotypical property. The plasmmid chimera is used to transform a susceptible and competent microorganism under conditions where transformation occurs. The microorganism is then grown under conditions which allow for separation and harvesting of transformants that contain the plasmid chimera.

The process of this invention will be divided into the following stages:

I. preparation of the recombinant plasmid or plasmid chimera;

II. transformation or preparation of transformants; and

III. replication and transcription of the recombinant plasmid in transformed bacteria.

Preparation of Plasmid Chimera

In order to prepare the plasmid chimera, it is necessary to have a DNA vector, such as a plasmid or phage, which can be cleaved to provide an intact replicator locus and system (replicon), where the linear segment has ligatable termini or is capable of being modified to introduce ligatable termini. Of particular interest are those plasmids which have a phenotypical property, which allow for ready separation of transformants from the parent microorganism. The plasmid will be capable of replicating in a microorganism, particularly a bacterium which is susceptible to transformation. Various unicellular microorganisms can be transformed, such as bacteria, fungii and algae. That is, those unicellular organisms which are capable of being grown in cultures of fermentation. Since bacteria are for the most part the most convenient organisms to work with, bacteria will be hereinafter referred to as exemplary of the other unicellular organisms. Bacteria, which are susceptible to transformation, include members of the Enterobacteriaceae, such as strains of *Escherichia coli;* Salmonella; Bacillaceae, such as *Bacillus subtilis;* Pneumococcus; Streptococcus, and *Haemophilus influenzae.*

A wide variety of plasmids may be employed of greatly varying molecular weight. Normally, the plasmids employed will have molecular weights in the range of about 1×10^6 to 50×10^6d, more usually from about 1 to 20×10^6d, and preferably, from about 1 to 10×10^6d. The desirable plasmid size is determined by a number of factors. First, the plasmid must be able to accommodate a replicator locus and one or more genes that are capable of allowing replication of the plasmid. Secondly, the plasmid should be of a size which provides for a reasonable probability of recircularization with the foreign gene(s) to form the recombinant plasmid chimera. Desirably, a restriction enzyme should be available, which will cleave the plasmid without inactivating the replicator locus and system associated with the replicator locus. Also, means must be provided for providing ligatable termini for the plasmid, which are

complementary to the termini of the foreign gene(s) to allow fusion of the two DNA segments.

Another consideration for the recombinant plasmid is that it be compatible with the bacterium to be transformed. Therefore, the original plasmid will usually be derived from a member of the family to which the bacterium belongs.

The original plasmid should desirably have a phenotypical property which allows for the separation of transformant bacteria from parent bacteria. Particularly useful is a gene, which provides for survival selection. Survival selection can be achieved by providing resistance to a growth inhibiting substance or providing a growth factor capability to a bacterium deficient in such capability.

Conveniently, genes are available, which provide for antibiotic or heavy metal resistance or polypeptide resistance, e.g. colicin. Therefore, by growing the bacteria on a medium containing a bacteriostatic or bactericocidal substance, such as an antibiotic, only the transformants having the antibiotic resistance will survive. Illustrative antibiotics include tetracycline, streptomycin, sulfa drugs, such as sulfonamide, kanamycin, neomycin, penicillin, chloramphenicol, or the like.

Growth factors include the synthesis of amino acids, the isomerization of substrates to forms which can be metabolized or the like. By growing the bacteria on a medium which lacks the appropriate growth factor, only the bacteria which have been transformed and have the growth factor capability will clone.

One plasmid of interest derived from *E. coli* is referred to as pSC101 and is described in Cohen, et al., Proc. Nat. Acad. Sci., USA, 70, 1293 (1972), (referred to in that article as Tc6-5). Further description of this particular plasmid and its use is found in the other articles previously referred to.

The plasmid pSC101 has a molecular weight of about 5.8×10^6d and provides tetracycline resistance.

Another plasmid of interest is colicinogenic factor EI (ColE1), which has a molecular weight of 4.2×10^6d, and is also derived from *E. coli*. The plasmid has a single EcoRI substrate site and provides immunity to colicin E1.

In preparing the plasmid for joining with the exogenous gene, a wide variety of techniques can be provided, including the formation of or introduction of cohesive termini. Flush ends can be joined. Alternatively, the plasmid and gene may be cleaved in such a manner that the two chains are cleaved at different sites to leave extensions at each end which serve as cohesive termini. Cohesive termini may also be introduced by removing nucleic acids from the opposite ends of the two chains or alternatively, introducing nucleic acids at opposite ends of the two chains.

To illustrate, a plasmid can be cleaved with a restriction endonuclease or other DNA cleaving enzyme. The restriction enzyme can provide square ends, which are then modified to provide cohesive termini or can cleave in a staggered manner at different, but adjacent, sites on the two strands, so as to provide cohesive termini directly.

Where square ends are formed such as, for example, by HIN (Haemophilus influenzae RII) or pancreatic DNAse, one can ligate the square ends or alternatively one can modify the square ends by chewing back, adding particular nucleic acids, or a combination of the two. For example, one can employ appropriate transferases to add a nucleic acid to the 5' and 3' ends of the DNA. Alternatively, one can chew back with an enzyme, such as a λ-exonuclease, and it is found that there is a high probability that cohesive termini will be achieved in this manner.

An alternative way to achieve a linear segment of the plasmid with cohesive termini is to employ an endonuclease such as EcoRI. The endonuclease cleaves the two strands at different adjacent sites providing cohesive termini directly.

With flush ended molecules, a T_4 ligase may be employed for linking the termini. See, for example, Scaramella and Khorana, J. Mol. Biol. 72: 427–444 (1972) and Scaramella, DNAS 69: 3389 (1972), whose disclosure is incorporated herein by reference.

Another way to provide ligatable termini is to leave employing DNAse and Mn^{++} as reported by Lai and Nathans, J. Mol. Biol. 89: 179 (1975).

The plasmid, which has the replicator locus, and serves as the vehicle for introduction of a foreign gene into the bacterial cell, will hereafter be referred to as "the plasmid vehicle."

It is not necessary to use plasmid, but any molecule capable of replication in bacteria can be employed. Therefore, instead of plasmid, viruses may be employed, which will be treated in substantially the same manner as the plasmid, to provide the ligatable termini for joining to the foreign gene.

If production of cohesive termini is by restriction endonuclease cleavage, the DNA containing the foreign gene(s) to be bound to the plasmid vehicle will be cleaved in the same manner as the plasmid vehicle. If the cohesive termini are produced by a different technique, an analogous technique will normally be employed with the foreign gene. (By foreign gene is intended a gene derived from a source other than the transformant strain.) In this way, the foreign gene(s) will have ligatable termini, so as to be able to covalently bonded to the termini of the plasmid vehicle. One can carry out the cleavage or digest of the plasmids together in the same medium or separately, combine the plasmids and recircularize the plasmids to form the plasmid chimera in the absence of active restriction enzyme capable of cleaving the plasmids.

Descriptions of methods of cleavage with restriction enzymes may be found in the following articles: Greene, et al., *Methods in Molecular Biology*, Vol. 9, ed. Wickner, R. B., (Marcel Dekker, Inc., New York), "DNA Replication and Biosynthesis"; Mertz and Davis, 69, Proc. Nat. Acad. Sci., USA, 69, 3370 (1972);

The cleavage and non-covalent joining of the plasmid vehicle and the foreign DNA can be readily carried out with a restriction endonuclease, with the plasmid vehicle and foreign DNA in the same or different vessels. Depending on the number of fragments, which are obtained from the DNA endonuclease digestion, as well as the genetic properties of the various fragments, digestion of the foreign DNA may be carried out separately and the fragments separated by centrifugation in an appropriate gradient. Where the desired DNA fragment has a phenotypical property, which allows for the ready isolation of its transformant, a separation step can usually be avoided.

Endonuclease digestion will normally be carried out at moderate temperatures, normally in the range of 10° to 40° C. in an appropriately buffered aqueous medium, usually at a pH of about 6.5 to 8.5. Weight percent of total DNA in the reaction mixture will generally be about 1 to 20 weight percent. Time for the reaction will

vary, generaly being from 0.1 to 2 hours. The amount of endonuclease employed is normally in excess of that required, normally being from about 1 to 5 units per 10 μg of DNA.

Where cleavage into a plurality of DNA fragments results, the course of the reaction can be readily followed by electrophoresis. Once the digestion has gone to the desired degree, the endonuclease is inactivated by heating above about 60° C. for five minutes. The digestion mixture may be worked up by dialysis, gradient separation, or the like, or used directly.

After preparation of the two double stranded DNA sequences, the foreign gene and vector are combined for annealing and/or ligation to provide for a functional recombinant DNA structure. With plasmids, the annealing involves the hydrogen bonding together of the cohesive ends of the vector and the foreign gene to form a circular plasmid which has cleavage sites. The cleavage sites are then normally ligated to form the complete closed and circularized plasmid.

The annealing, and as appropriate, recircularization can be performed in whole or in part in vitro or in vivo. Preferably, the annealing is performed in vitro. The annealing requires an appropriate buffered medium containing the DNA fragments. The temperature employed initially for annealing will be about 40° to 70° C., followed by a period at lower temperature, generaly from about 10° to 30° C. The molar ratio of the two segments will generally be in the range of about 1-5:5-1. The particular temperature for annealing will depend upon the binding strength of the cohesive termi. While 0.5 hr to 2 or more days may be employed for annealing, it is believed that a period of 0.5 to 6 hrs may be sufficient. The time employed for the annealing will vary with the temperature employed, the nature of the salt solution, as well as the nature of the cohesive termini.

The ligation, when in vitro, can be achieved in conventional ways employing DNA ligase. Ligation is conveniently carried out in an aqueous solution (pH 6–8) at temperatures in the range of about 5° to 40° C. The concentration of the DNA will generally be from about 10 to 100 g/ml. A sufficient amount of the DNA ligase or other ligating agent e.g. T_4 ligase, is employed to provide a convenient rate of reaction, generally ranging from about 5 to 50 U/ml. A small amount of a protein e.g. albumin, may be added at concentrations of about 10 to 200 g/ml. The ligation with DNA ligase is carried out in the presence of magnesium at about 1–10 mM.

At the completion of the annealing or ligation, the solution may be chilled and is ready for use in transformation.

It is not necessary to ligate the recircularized plasmid prior to transformation, since it is found that this function can be performed by the bacterial host. However, in some situations ligation prior to transformation may be desirable.

The foreign DNA can be derived from a wide variety of sources. The DNA may be derived from eukaryotic or prokaryotic cells, viruses, and bacteriophage. The fragments employed will generally have molecular weights in the range of about 0.5 to 20×10^6d, usually in the range of 1 to 10×10^6d. The DNA fragment may include one or more genes or one or more operons.

Desirably, if the plasmid vehicle does not have a phenotypical property which allows for isolation of the transformants, the foreign DNA fragment should have such property. Also, an intact promoter and base sequences coding for initiation and termination sites should be present for gene expression.

In accordance with the subject invention, plasmids may be prepared which have replicons and genes which could be present in bacteria as a result of normal mating of bacteria. However, the subject invention provides a technique, whereby a replicon and gene can coexist in a plasmid, which is capable of being introduced into a unicellular organism, which could not exist in nature. The first type of plasmid which cannot exist in nature is a plasmid which derives its replicon from one organism and the exogenous gene from another organism, where the two organisms do not exchange genetic information. In this situation, the two organisms will either be eukaryotic or prokaryotic. Those organisms which are able to exchange genetic information by mating are well known. Thus, prior to this invention, plasmids having a replicon and one or more genes from two sources which do not exchange genetic information would not have existed in nature. This is true, even in the event of mutations, and induced combinations of genes from different strains of the same species. For the natural formation of plasmids formed from a replicon and genes from different microorganisms it is necessary that the microorganisms be capable of mating and exchanging genetic information.

In the situation, where the replicon comes from a eukaryotic or prokaryotic cell, and at least one gene comes from the other type of cell, this plasmid heretofore could not have existed in nature. Thus, the subject invention provides new plasmids which cannot naturally occur and can be used for transformation of unicellular organisms to introduce genes from other unicellular organisms, where the replicon and gene could not previously naturally coexist in a plasmid.

Besides naturally occurring genes, it is feasible to provide synthetic genes, where fragments of DNA may be joined by various techniques known in the art. Thus, the exogenous gene may be obtained from natural sources or from synthetic sources.

The plasmid chimera contains a replicon which is compatible with a bacterium susceptible of transformation and at least one foreign gene which is directly or indirectly bonded through deoxynucleotides to the replicon to form the circularized plasmid structure. As indicated previously, the foreign gene normally provides a phenotypical property, which is absent in the parent bacterium. The foreign gene may come from another bacterial strain, species or family, or from a plant or animal cell. The original plasmid chimera will have been formed by in vitro covalent bonding between the replicon and foreign gene. Once the originally formed plasmid chimera has been used to prepare transformants, the plasmid chimera will be replicated by the bacterial cell and cloned in vivo by growing the bacteria in an appropriate growth medium. The bacterial cells may be lysed and the DNA isolated by conventional means or the bacteria continually reproduced and allowed to express the genotypical property of the foreign DNA.

Once a bacterium has been transformed, it is no longer necessary to repeat the in vitro preparation of the plasmid chimera or isolate the plasmid chimera from the transformant progeny. Bacterial cells can be repeatedly multiplied which will express the genotypical property of the foreign gene.

One method of distinguishing between a plasmid which originates in vivo from a plasmid chimera which originates in vitro is the formation of homoduplexes between an in vitro prepared plasmid chimera and the plasmid formed in vivo. It will be an extremely rare event where a plasmid which originates in vivo will be the same as a plasmid chimera and will form homoduplexes with plasmid chimeras. For a discussion of homoduplexes, see Sharp, Cohen and Davidson, J. Mol. Biol., 75, 235 (1973), and Sharp, et al, ibid, 71, 471 (1972).

The plasmid derived from molecular cloning need not homoduplex with the in vitro plasmid originally employed for transformation of the bacterium. The bacterium may carry out modification processes, which will not affect the portion of the replicon introduced which is necessary for replication nor the portion of the exogenous DNA which contains the gene providing the genotypical trait. Thus, nucleotides may be introduced or excised and, in accordance with naturally occurring mating and transduction, additional genes may be introduced. In addition, for one or more reasons, the plasmids may be modified in vitro by techniques which are known in the art. However, the plasmids obtained by molecular cloning will homoduplex as to those parts which relate to the original replicon and the exogenous gene.

II. Transformation

After the recombinant plasmid or plasmid chimera has been prepared, it may then be used for the transformation of bacteria. It should be noted that the annealing and ligation process not only results in the formation of the recombinant plasmid, but also in the recircularization of the plasmid vehicle. Therefore, a mixture is obtained of the original plasmid, the recombinant plasmid, and the foreign DNA. Only the original plasmid and the DNA chimera consisting of the plasmid vehicle and linked foreign DNA will normally be capable of replication. When the mixture is employed for transformation of the bacteria, replication of both the plasmid vehicle genotype and the foreign genotype will occur with both genotypes being replicated in those cells having the recombinant plasmid.

Various techniques exist for transformation of a bacterial cell with plasmid DNA. A technique, which is particularly useful with *Escherichia coli*, is described in Cohen, et al., ibid, 69, 2110 (1972). The bacterial cells are grown in an appropriate medium to a predetermined optical density. For example, with *E. coli strain* C600, the optical density was 0.85 at 590 nm. The cells are concentrated by chilling, sedimentation and washing with a dilute salt solution. After centrifugation, the cells are resuspended in a calcium chloride solution at reduced temperatures (approx. 5°-15° C.), sedimented, resuspended in a smaller volume of a calcium chloride solution and the cells combined with the DNA in an appropriately buffered calcium chloride solution and incubated at reduced temperatures. The concentration of Ca^{++} will generally be about 0.01 to 0.1 M. After a sufficient incubation period, generally from about 0.5-3.0 hours, the bacteria are subjected to a heat pulse generally in the range of 35° to 45° C. for a short period of time; namely from about 0.5 to 5 minutes. The transformed cells are then chilled and may be transferred to a growth medium, whereby the transformed cells having the foreign genotype may be isolated.

An alternative transformation technique may be found in Lederberg and Cohen, I. Bacteriol., 119, 1072 (1974), whose disclosure is incorporated herein by reference.

III. Replication and Transcription of the Plasmid

The bacterial cells, which are employed, will be of such species as to allow replication of the plasmid vehicle. A number of different bacteria which can be employed, have been indicated previously. Strains which lack indigenous modification and restriction enzymes are particularly desirable for the cloning of DNA derived from foreign sources.

The transformation of the bacterial cells will result in a mixture of bacterial cells, the dominant proportion of which will not be transformed. Of the fraction of cells which are transformed, some significant proportion, but normally a minor proportion, will have been transformed by recombinant plasmid. Therefore, only a very small fraction of the total number of cells which are present will have the desired phenotypical characteristics.

In order to enhance the ability to separate the desired bacterial clones, the bacterial cells, which have beeen subjected to transformation, will first be grown in a solution medium, so as to amplify the absolute number of the desired cells. The bacterial cells may then be harvested and streaked on an appropriate agar medium. Where the recombinant plasmid has a phenotype, which allows for ready separation of the transformed cells from the parent cells, this will aid in the ready separation of the two types of cells. As previously indicated, where the genotype provides resistance to a growth inhibiting material, such as an antibiotic or heavy metal, the cells can be grown on an agar medium containing the growth inhibiting substance. Only available cells having the resistant genotype will survive. If the foreign gene does not provide a phenotypical property, which allows for distinction between the cells transformed by the plasmid vehicle and the cells transformed by the plasmid chimera, a further step is necessary to isolate the replicated plasmid chimera from the replicated plasmid vehicle. The steps include lysing of the cells and isolation and separation of the DNA by conventional means or random selection of transformed bacteria and characterization of DNA from such transformants to determine which cells contain molecular chimeras. This is accomplished by physically characterizing the DNA by electrophoresis, gradient centrifugation or electron microscopy.

Cells from various clones may be harvested and the plasmid DNA isolated from these transformants. The plasmid DNA may then be analyzed in a variety of ways. One way is to treat the plasmid with an appropriate restriction enzyme and analyze the resulting fragments for the presence of the foreign gene. Other techniques have been indicated above.

Once the recombinant plasmid has been replicated in a cell and isolated, the cells may be grown and multiplied and the recombinant plasmid employed for transformation of the same or different bacterial strain.

The subject process provides a technique for introducing into a bacterial strain a foreign capability which is genetically mediated. A wide variety of genes may be employed as the foreign genes from a wide variety of sources. Any intact gene may be employed which can be bonded to the plasmid vehicle. The source of the gene can be other bacterial cells, mammalian cells, plant

cells, etc. The process is generally applicable to bacterial cells capable of transformation. A plasmid must be available, which can be cleaved to provide a linear segment having ligatable termini, and an interact replicator locus and system, preferably a system including a gene which provides a phenotypical property which allows for easy separation of the transformants. The linear segment may then be annealed with a linear segment of DNA having one or more genes and the resulting recombinant plasmid employed for transformation of the bacteria.

By introducing one or more exogeneous genes into a unicellular organism, the organism will be able to produce polypeptides and proteins ("poly(amino acids)") which the organism could not previously produce. In some instances the poly(amino acids) will have utility in themselves, while in other situations, particularly with enzymes, the enzymatic product(s) will either be useful in itself or useful to produce a desirable product.

One group of poly(amino acids) which are directly useful are hormones. Illustrative hormones include parathyroid hormone, growth hormone, gonadotropins (FSH, luteinizing hormone, chorionogonadatropin, and glycoproteins), insulin, ACTH, somatostatin, prolactin, placental lactogen, melanocyte stimulating hormone, thyrotropin, parathyroid hormone, calcitonin, enkephalin, and angiotensin.

Other poly(amino acids) of interest include serum proteins, fibrinogin, prothrombin, thromboplastin, globulin e.g. gamma-globulins or antibodies, heparin, antihemophilia protein, oxytocin, albumins, actin, myosin, hemoglobin, ferritin, cytochrome, myoglobin, lactoglobulin, histones, avidin, thyroglobulin, interferin, kinins and transcortin.

Where the genes or genes produce one or more enzymes, the enzymes may be used for fulfilling a wide variety of functions. Included in these functions are nitrogen fixation, production of amino acids, e.g. polyiodothyronine, particularly thyroxine, vitamins, both water and fat soluble vitamins, antimicrobial drugs, chemotheropeutic agents e.g. antitumor drugs, polypeptides and proteins e.g. enzymes from apoenzymes and hormones from prohormones, diagnostic reagents, energy producing combinations e.g. photosynthesis and hydrogen production, prostaglandins, steroids, cardiac glycosides, coenzymes, and the like.

The enzymes may be individually useful as agents separate from the cell for commercial applications, e.g. in detergents, synthetic transformations, diagnostic agents and the like. Enzymes are classified by the I.U.B. under the classifications as I. Oxidoreductsses; II. Transferases; III. Hydrolases; IV. Lyases; V. Isomerases; and VI. Ligases.

EXPERIMENTAL

In order to demonstrate the subject invention, the following experiments were carried out with a variety of foreign genes.

(All temperatures not otherwise indicated are Centrigrade. All percents not otherwise indicated are percents by weight.)

EXAMPLE A

A. Preparation of pSC101 Plasmid

Covalently closed R6-5 DNA was sheared with a Virtis stainless steel microshaft in a one milliliter cup. The R6-5 DNA was sheared at 2,000 r.p.m. for 30 minutes in TEN buffer solution (0.02 M Tris-HCl (pH 8.0)-1 mM EDTA (pH 8.0)-0.02 M NaCl), while chilled at 0°–4°.

The sheared DNA sample was subjected to sucrose gradient sedimentation at 39,500 r.p.m. in a Spinco SW 50.1 rotor at 20°. A 0.12 ml fraction was collected on a 2.3 cm diameter circle of Whatman No. 3 filter paper, dried for 20 minutes and precipitated by immersion of the disc in cold 5% trichloroacetic acid, containing 100 μg/ml thymidine. The precipitate was filtered and then washed once with 5% trichloroacetic acid, twice with 99% ethanol and dried. pSC101 was the 27S species having a calculated molecular weight of 5.8×10^6 d.

B. Generalized Transformation Procedure

E. coli strain C600 was grown at 37° in H1 medium to an optical density of 0.85 at 590 nm. At this point the cells were chilled quickly, sedimented and washed once in 0.5 volume 10 nM NaCl. After centrifugation, the bacteria was resuspended in half the original volume of chilled 0.03 M calcium chloride, kept at 0° for 20 minutes, sedimented, and then resuspended in 0.1 of the original volume of 0.03 M of calcium chloride solution. Chilled DNA samples in TEN buffer were supplemented with 0.1 M calcium chloride to a final concentration of 0.03 M.

0.2 ml of competent cells treated with calcium chloride was added to 0.1 ml of DNA solution with chilled pipets and an additional incubation was done for 60 minutes at 0°. The bacteria were then subjected to a heat pulse at 42° for two minutes, chilled, and then either placed directly onto nutrient agar containing appropriate antibiotics or, where indicated, diluted 10 times in L-broth and incubated at 37° before plating. The cell survival is greater than 50% after calcium chloride treatment and heat pulse. Drug resistance was assayed on nutrient agar plates with the ahtibiotics indicated in specific experiments.

EXAMPLE I: Construction of Biologically Functional Bacterial Plasmids in vitro

A. Covalently closed R6-5 plasmid DNA was cleaved by incubation at 37° for 15 minutes in a 0.2 ml reaction mixture containing DNA (40 μg/ml, 100 mM Tris.HCl (pH 7.4)), 5 mM $MgCl_2$, 50 mM NaCl, and excess (2 U) EcoRI endonuclease in 1 μl volume. An additional incubation at 60° for 5 minutes was employed to inactivate the endonuclease.

The resulting mixture of plasmid fragments was employed for transformation of *E. coli* strain C600 in accordance with the procedure previously described. A single clone was examined further which was selected for resistance to kanamycin and was also found to carry resistance to neomycin and sulfonamide, but not to tetracycline, chloramphenicol, or streptomycin after transformation of *E. coli* by EcoRI generated DNA fragments of R6-5. Closed circular DNA obtakined from this isolate (plasmid designation pSC102) by CsCl-ethidium bromide gradient centrifugation had an S value of 39.5 in neutral surcrose gradients.

Treatment of pSC102 plasmid DNA with EcoRI resistriction endonuclease in accordance with the above-described procedure resulted in the formation of 3 fragments that were separable by electrophoresis in agarose gels. Intact pSC102 plasmid DNA and pSC101 plasmid DNA, which had been separately purified by dye-buoyant density centrifugation, were treated with EcoRI endonuclease followed by annealing at 0°–2° for

about six hours. The mixture was then subjected to ligation with pSC101 and pSC102 in a ratio of 1:1 respectively, by ligating for 6 hours at 14° in 0.2 ml reaction mixtures containing 5 mM $MgCl_2$, 0.1 mM NAD, 100 μg/ml of bovine-serum albumin (BSA), 10 mM ammonium sulphate (pH 7.0), and 18 U/ml of DNA ligase (J. Mertz and Davis, Proc. Nat. Acad. Sci., USA, 69, 3370 (1972); and Modrich, et al., J. Biol. Chem., 248, 7495 (1973). Ligated mixtures were incubated at 37° for 5 minutes and then chilled in ice water. Aliquots containing 3.3–6.5 μg/ml of total DNA were used directly for transformation.

Transformation of *E. coli* strain C600 was carried out as previously described. For comparison purposes, transformation was also carried out with a mixture of pSC101 and pSC102 plasmid DNA, which had been subjected to EcoRI endonuclease, but not DNA ligase. The antibiotics used for selection were tetracycline (10 μg/ml) and kanamycin (25 μg/ml). The results are reported as transformants per microgram of DNA. The following table indicates the results.

TABLE I

Transformation of *E. coli* C600 by a mixture of pSC101 and pSC102 DNA

Treatment of DNA	Transformation frequency for antibiotic resistence markers		
	Tetracycline	Kanamycin	Tetracycline + kanamycin
None	2×10^5	1×10^5	2×10^2
EcoRI	1×10^4	1.1×10^3	7×10^1
EcoRI+ DNA ligase	1.2×10^4	1.3×10^3	5.7×10^2

Kanamycin resistance in the R65 plasmid is a result of the presence of the enzyme kanamycin monophosphotransferase. The enzyme can be isolated from the bacteria by known procedures and employed in an assay for kanamycin in accordance with the procedure described in Smith, et al., New England J. Medicine, 286, 583 (1972).

In the preparation for the enzyme extracts, the E. coli are grown in ML-broth and harvested in a late logarithm phase of growth. The cells are osmotically shocked (see Nossal, et al., J. Biol. Chem. 241, 3055 (1966), washed twice at room temperature with 10 ml 0.01 M Tris and 0.03 M NaCl, pH 7.3, and the pellet suspended in 10 ml 20% sucrose, 3×10^3 M EDTA and 0.033 M Tris (pH 7.5), stirred for 10 minues at room temperature and centrifuged at 16,000 g for 5 minutes. The pellet is then suspended in 2 ml of cold 5×10^{-4} M MCl_2, stirred for 10 minutes at 2° and centrifuged at 26,000 g for 10 minutes to yield a supernatant fluid referred to as the osmotic shockate. The solution should be stored at −20° or lower. (See Benveneste, et al., FEBS Leters, 14 293 (1971).

The osmotic shockate may then be used in accordance with the procedure of Smith, et al., supra.

EXAMPLE II: Genome Construction between Bacterial Species in vitro: Replication and Expression of Staphylococcus Plasmid Genes in *E. coli*

S. aureus strain 8325 contains the plasmid pI258, which expresses resistance to penicillin, erythromycin, cadmium and mercury. (Lindberg, et al., J. Bacteriol., 115, 139 (1973)). Covalently closed circular pSC101 and pI258 plasmid DNA were separately cleaved by incubation at 37° for 15 minutes in 0.2 ml reaction mixtures by EcoRI endonuclease in accordance with the procedure described previously. Aliquots of the two cleaved species were mixed in a ratio of 3 μg of pI258:1 μg of pSC101 and annealed at 2°–4° for 48 hours. Subsequent ligation was carried out for six hours at 14° as described previously and aliquots containing 3.3–6.5 μg/ml of total DNA were used directly in the transformation as described previously.

Other transformations were carried out employing the two plasmids independently and a mixture of the two plasmids. Selection of transformants was carried out at antibiotic concentrations for tetracycline (Tc, 25 μg/ml) or pencillin (Pc, 25 OU/ml). The transformation was carried out with *E. coli* strain C600 $r_K^- m_K^-$. The following table indicates the results.

TABLE III

Transformation of C600 $r_K^- m_K^-$ by pSC101 and pI258 Plasmid DNA

DNA	Transformants/μg DNA	
	Tc	Pc
PSC101 closed circular	1×10^6	<3
pI258 closed circular	<3.6	<3.6
pSC101 + pI258 untreated	9.1×10^3	<5
pSC101 + pI258 EcoRI-treated	4.7×10^3	10

The above table demonstrates that bacteria can be formed which have both tetracycline resistance and penicillin resistance. Thus, one can provide the phenotypical property penicillin resistance in bacteria from DNA, which is indigenous to another biological organism. One can thus use *E. coli* for the production of the enzyme, which imparts penicillin resistance to bacteria, and assay for penicillin in a manner similar to that employed for kanamycin. Penicillinase is used for destroying penicillin in blood serum of patients treated with penicillin in order to determine whether pathogenic organisms whose growth is inhibited by penicillin may be present.

EXAMPLE III: Replication and Transcription of Eukaryotic DNA in *E. coli*

The amplified ribosomal DNA (rDNA) codeing for 18S and 28S ribsomal RNA of the South African toad, *Xenopus laevis* was used as a source of eukaryotic DNA for these experiments. Dawid, et al., J. Mol. Biol., 51, 341 (1970). E. coli-X. laevis recombinant plasmids were constructed in vitro as follows:

The reaction mixture (60 μl) contained 100 mM Tris.HCl (pH 7.5) 50 mM NaCl, 5 mM $MgCl_2$, 1.0 μg of pSC101 plasmid DNA and 2.5 μg of *X. laevis* rDNA, and excess EcoRI restriction endonuclease (1 μl, 2 U). After a 15 minute incubation at 37°, the reaction mixture was placed at 63° for 5 minutes to inactivate EcoRI endonuclease. The product was then refrigerated at 0.5° for 24 hours, to allow association of the short cohesive termini.

The reaction mixture for ligation of phosphodiester bonds was adjusted to a total volume of 100 μl and contained in addition to the components of the endonuclease reaction, 30 mM Tris.HCl (pH 8.1), 1 mM sodium EDTA, 5 mM $MgCl_2$, 3.2 nM NAD, 10 mM ammonium sulphate, 5 μg BSA, and 9 U of *E. coli* DNA ligase. All components were chilled to 5° before their addition to the reaction mixture. The ligase reaction mixture was incubated at 14° for 45 minutes, and then at 0.5° for 48 hours. Additional NAD and ligase were added and the mixture incubated at 15° for 30 minutes and then for 15 minutes at 37°. The ligated DNA was used directly in

the plasmid transformation procedure previously described. The DNA was used to transform *E. coli* strain C600 $r_K^-m_K^-$ and tetracycline resistant transformants (3.3×10^3/μg of pSC101 DNA) were selected and numbered consecutively CD1, CD2, etc. Plasmid DNA was isolated from a number of the transformants.

^{32}P-labeled 18 S and 28 S *X. laevis* rRNA were hybridized with DNA obtained from the plasmids CD4, CD18, CD30, and CD42. CD4 DNA annealed almost equally with both the 18 S and 28 S rRNA species. CD18 plasmid DNA hybridized principally with 28 S *X. laevis* rRNA, while the DNA of plasmids CD30 and CD42 annealed primarily with 18 S rRNA. These data indicate that portions of the *X. laevis* rDNA were, in fact, incorporated into a plasmid recombinant with pSC101, which was capable of transforming *E. coli*, so as to be capable of replicating X. laevis rDNA.

Transcription of *X. laevis* DNA was also carried out in *E. coli* minicells. The minicell producing *E. coli* strain P678-54 was transformed with plasmid DNA isolated from *E. coli* strain C600 $r_K^-m_K^-$ containing CD4, CD18, or CD42. Many cells containing the plasmids were isolated and incubated with [^{3}H] uridine; RNA purified from such minicells was hybridized with *X. laevis* rDNA immobilized on nitrocellulose membranes in order to determine whether the *X. laevis* rDNA linked to the pSC101 replicon is transcribed in *E. coli*. The results in the following table show that RNA species capable of annealing with purified *X. laevis* rDNA are synthesized in *E. coli* minicells carrying the recombinant plasmids, CD4, CD18, and CD42, but not by minicells carrying the pSC101 plasmid alone.

Minicells containing plasmids were isolated as described by Cohen, et al., Nature New Biol., 231, 249 (1971). They were incubated with [^{3}H] uridine (50 μCi/ml, 30 Ci/mol) as described by Roozen, et al., J. Bacteriol., 107, 21 (1971) for 10 minutes at 37°. Minicells collected by centrifugation were resuspended in Tris.HCl (20 mM, pH 7.5)-5 mM $MgCl_2$-1 mM EDTA pH 8.0 and rapidly frozen and thawed 3 times. RNA was extracted as described in Cohen, et al., J. Mol. Biol., 37, 387 (1968). Hybridization assays were carried out in nitrocellulose membranes as described in Cohen, et al., ibid, at saturating levels of pSC101 DNA. Hybridizations involving *X. laevis* DNA were not performed at DNA excess. Counts bound to blank filters (5–10 c.p.m.) were substracted from experimentally determined values. ^{3}H count eluted from filters containing *X. laevis* DNA were rendered acid soluble by ribonuclease A 20 μg/ml, 0.30 M NaCl-0.030 M sodium citrate, 1 hour, 37°. The following table indicates the results.

TABLE III

Plasmid carried by minicells	Input cpm	[^{3}H] RNA synthesized by *E. coli* minicells: [^{3}H] RNA counts hybridized to *X. laevis* rDNA 0.2μg	*X. laevis* rDNA 0.4μg	pSC101 DNA 18μg
CD42	4810	905 (19%)	1436 (30%)	961 (20%)
CD18	3780	389 (10%)	—	1277 (34%)
CD4	5220	789 (15%)	—	1015 (19%)
pSC101	4170	0 (0%)	—	1500 (36%)

EXAMPLE IV: Plasmid ColEl as a Molecular Vehicle for Cloning and Amplification of Trp Operon

In a volume of 200 μl (100 mM Tris.HCl (pH 7.5)-5 mM $MgCl_2$-50 mM NaCl), 5.7 μg of ColEl (*E. coli* JC411Thy$^-$/ColEl) (Clewell, et al., Proc. Nat. Acad. Sci., USA, 62, 1159 (1969) and 6.0 μg DNA from bacteriophage φ80pt190 (Deeb, et al., Virology, 31, 289 (1967) were digested to completion with homogeneously purified EcoRI endonuclease, monitoring the digestion by electrophoresis of the fragments in an agarose gel. The endonuclease was inactivated by heating at 65° for 5 minutes, the digest dialyzed overnight against 5 mM Tris.HCl, pH 7.5, and the sample concentrated to 50 μl. The fragments were ligated as described in Dugaiczyk, et al., Biochemistry, 13, 503 (1974) at a concentration of 75 pmoles/ml of fragments.

Transformation was carried out as previously described except that the cells were grown to $A_{590}=0.600$ and following exposure to DNA were incubated in L-broth for 90 minutes. The cells were collected and resuspended in 10 mM NaCl before plating. Cells employed as recipients for the transformations were *E. coli* strains C600 trpR', ΔtrpE5(MV1), C600 trpR$^-$ trpE 10220 recA(MV2), C600 ΔtrpE5(MV10) and C600 ΔtrpE5 recA(MV12). (trpR$^-$ is the structural gene for the trp repressor and ΔtrpE5 is a trp operon deletion entirely within trpE and removing most of the gene.) Approximately 2 μg of the DNA was used to transform the cells.

Cultures were plated on Vogel-Bonner agar supplemented with 50 μg/ml of the non-selective amino acids, 0.2% glucose and 5 μg/ml of required vitamins. Transformants to colicin immunity were initially selected on a lawn of a culture of a mutant strain carrying ColE1. Clones were then selected for their ability to grow in the absence of tryptophan. Cells capable of producing tryptophan were isolated, which could be used for the production of exogenous tryptophan. The subject example demonstrates the introduction of a complete operon from foreign DNA to provide a transformant capable of replicating the operon and transcribing and translating to produce enzymes capable of producing an aromatic amino acid.

EX. V: Cloning of Synthetic Somatostatin Gene

The deoxyribonucleotide sequence for the somatostatin gene was prepared in accordance with conventional procedures. (Itakura et al, Science, 198 1056 (1977)). To prepare the recombinant plasmid, plasmid pBR 322 was digested with Eco RI. The reaction was terminated by extraction with a mixture of phenol and chloroform, the DNA precipitated with ethanol and resuspended in 50 μl of T_4 DNA polymerase buffer. The reaction was started by the addition of 2 units of T_4 DNA polymerase. After 30 min at 37°, the mixture was extracted with phenol and chloroform and the DNA precipitated with ethanol. The λplac5 DNA (3 μg) was digested with the endonuclease Hae III and the digested pBR 322 DNA blunt end ligated with the Hae III-digested λplac5 DNA in a final volume of 30 μl with T_4 DNA ligase (hydroxylopatite fraction) in 20 mM tris-HCl pH 7.6), 10 mM $MgCl_2$, 10 mM dithiothreitol and 0.5 mM ATP for 12 hrs at 12°. The ligated DNA mixture was dialyzed against 10 mM tris-HCl (pH 7.6) and used to transform *E. coli* strain RR1. Transformants were selected for tetracycline resistance and ampicillin resistance on antibiotic (20 μg/ml) X-gal (40 μg/ml) medium. Colonies constitutive for the synthesis of β-galactosiodase were identified by their blue color and of 45 colonies so identified, 3 of them were found to contain plasmids with 2 Eco R1 sites separated by ~200 base pairs.

The plasmid so obtained pBH10 was modified to eliminate the Eco R1 site distal to the lac operator and plasmid pBH20 was obtained.

Plasmid pBH20 (10 μg) was digested with endonucleases Eco R1 and Bam HI and treated with bacterial alkaline phosphatase (0.1 unit of BAPF, Worthington) and incubation was continued for 10 min at 65°. After extract with a phenol-chloroform mixture, the DNA was precipiated with ethanol. Somatostatin DNA (50 μl containing 4 μg/ml) was ligated with the Bam HI-Eco R1 alkaline phosphatase=treated pBH20 DNA in a total volume of 50 μl with 4 units of T_4 DNA ligase for 2 hrs at 22° and the recombinant plasmid used to transform *E. coli* RR1. Of the Tc^r transformants isolated (10), four plasmids has Eco R1 and Bam HI sites. Base sequence analysis indicated that the plasmid pSOM1 had the desired somatostatin DNA fragment inserted. Because of the failure to detect somatostatin activity from cultures carrying plasmid pSOM1, a plasmid was constructed in which the somatostatin gene could be located at the COOH-terminus of the β-galactosidase gene, keeping the translation in phase. For the construction of such a plasmid, pSOM1 (50 μg) was digested with restriction enzymes Eco RI and Pst I. A preparative 5 percent polyacrylamide gel was used to separate the large Pst I-Eco RI fragment that carries the somatostatin gene from the small fragment carrying the lac control elements (12). In a similar way plasmid pBR322 DNA (50 μg) was digested with Pst I and Eco RI restriction endonucleases, and the two resulting DNA fragments were purified by preparative electrophoresis on a 5 percent polyacrylamide gel. The small Pst I-Eco RI fragment from pBR322 (1 μg) was ligated with the large PstI-Eco RI DNA fragment (5 μg) from pSOM1. The ligated mixture was used to transform *E. coli RR1*, and transformants were selected for Ap^r on X-gal medium. Almost all the Ap^r transformants (95 percent) gave white colonies (no lac operator) on X-gal indicator plates. The resulting plasmid, pSOM11, was used in the construction of plasmid pSOM11-3. A mixture of 5 μg of pSOM11 DNA and 5 μg of λplac5 DNA was digested with Eco RI. The DNA was extracted with a mixture of phenol and chloroform; the extract was precipitated by ethanol, and the precipitate was resuspended in T4 DNA ligase buffer (50 μl) in the presence of T4 DNA ligase (1 unit). The ligated mixture was used to transform *E. coli* strain RR1. Transformants were selected for Ap^r on X-gal plates containing ampicillin aidn screened for constitutive β-galactosidase production. Approximately 2 percent of the colonies were blue (such as pSOM11-1 and 11-2). Restriction enzyme analysis of plasmid DNA obtained from these clones revealed that all the plasmids carried a new Eco RI fragment of approximately 4.4 megadaltons, which carries the lac operon control sites and most of the β-galactosidase gene (13, 14). Two orientations of the Eco RI fragment are possible, and the asymmetric location of a Hind III restriction in this fragment can indicate which plasmids had transcription proceeding into the somatostatin gene. The clones carrying plasmids SOM11-3, pSOM11-5, pSOM11-6, and pSOM11-7 contained the Eco RI fragment in this orientation.

It is evident from the above results, that both DNA from a eukaryotic source and RNA transcribed from the eukaryotic DNA can be formed in a bacterial cell and isolated. Thus, the subject process provides a simple technique for producing large amounts of eukaryotic DNA and/or RNA without requiring the reproduction and maintenance of the eukaryotic organism or cells. The employment of DNA for production of ribosomal RNA is merely illustrative of using a genome from a eukaryotic cell for formation of a recombinant plasmid for replication in a bacteria. Genomes from a eukaryotic cell for formation of genotypical properties, such as the production of enzymes, could have equivalently been used. As evidenced by the transformation with DNA from a bacteriophage, and entire operon can be introduced into a bacterial cell and the cell becomes capable of its transcription, translation, and production of a functional gene product. Thus, a wide variety of auxotrophic properties can be introduced into a bacterial cell.

In accordance with the subject invention, DNA vehicles are provided, which are covalently closed circular extrachromosomal replicons or genetic elements, including plasmids and viral DNA. The vehicles generally will have molecular weights in the range of about 1 to 20×10^6 and are characterized by having an intact replicon, which includes a replicator locus and gene. The vehicle is capable of clevage by a restriction enzyme to provide a linear segment having an intact replicon and cohesive termini, which may be directly obtained by the cleavage or by subsequent modification of the termini of the linear segment. The vehicle will be capable of transforming a bacterial cell and to that extent is compatible with the cell which will provide replication and translation. Preferably, the vehicle will have a phenotypical property which will allow for segregation of the transformant cells. Phenotypical properties include resistance to growth inhibiting materials, such as antibiotics, peptides and heavy metals, morphological properties, color, or the like, and production of growth factors, e.g. amino acids.

The vehicle is combined with DNA indigenous to a biological organism other than the cell which provides replication and provides a genotypical or phenotypical property which is alien to the cell. The source of the DNA can be prokaryotic or eukaryotic, thus including bacteria, fungi, vertebrates, e.g. mammals, and the like.

The plasmid vehicle and the alien DNA having complementary cohesive termini can be annealed together and covalently linked to provide a recombinant plasmid, which is capable of transforming a bacterial cell, so as to be capable of replication, transcription, and translation. As a result, a wide variety of unique capabilities can be readily introduced into bacteria, so as to provide convenient ways to obtain nucleic acids and to study nucleic acids from a foreign host. Thus, the method provides the ability to obtain large amounts of a foreign nucleic acid from bacteria in order to be able to study the function and nature of the nucleic acid. In addition, the subject method provides means for preparing enzymes and enzymic products from bacteria where the natural host is not as convenient or efficient a source of such product. Particularly, bacteria may allow for more ready isolation of particular enzymes, uncontaminated by undersirable contaminants, which are present in the original host. In addition, the products of the enzymic reactions may be more readily isolated and more efficiently produced by a transformant than by the original host. Besides enzymes, other proteins can be produced such as antibodies, antigens, albumins, globulins, glycoproteins, and the like.

Although the foregoing invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it will be obvious

that certain changes and modifications may be practiced within the scope of the appended claims.

We claim:

1. A method for replicating a biologically functional DNA, which comprises:

transforming under transforming conditions compatible unicellular organisms with biologically functional DNA to form transformants; said biologically functional DNA prepared in vitro by the method of:

(a) cleaving a viral or circular plasmid DNA compatible with said unicellular organism to provide a first linear segment having an intact replicon and termini of a predetermined character;

(b) combining said first linear segment with a second linear DNA segment, having at least one intact gene and foreign to said unicellular organism and having termini ligatable to said termini of said first linear segment, wherein at least one of said first and second linear DNA segments has a gene for a phenotypical trait, under joining conditions where the termini of said first and second segments join to provide a functional DNA capable of replication and transcription in said unicellular organism;

growing said unicellular organisms under appropriate nutrient conditions; and

isolating said transformants from parent unicellular organisms by means of said phenotypical trait imparted by said biologically functional DNA.

2. A method according to claim 1, wherein said unicellular organisms are bacteria.

3. A method according to claim 2, wherein said transformation is carried out in the presence of calcium chloride.

4. A method according to claim 3, wherein said phenotypical trait is resistance to growth inhibiting substance, and said growth is carried out in the presence of a sufficient amount of said growth inhibiting substance to inhibit the growth of parent unicellular organisms, but insufficient to inhibit the growth of transformants.

5. A method according to claim 1, wherein said unicellular organism is *E. coli*.

6. A method according to claim 1, wherein said predetermined termini are staggered and cohesive.

7. A method according to claim 6, wherein said joining conditions includes enzymatic ligation.

8. A method according to claim 6, wherein said cohesive ends are formed by staggered cleavage of said viral or circular plasmid DNA and a source of said second segment with a restriction enzyme.

9. A method acording to claim 6 wherein said cohesive termini are formed by addition of nucleotides.

10. A method according to claim 1, wherein said predetermined termini are blunt end and said joining conditions include enzymatic ligation.

11. A method for replicating a biologically functional DNA comprising a replicon compatible with a host unicellular organism joined to a gene derived from a source which does not exchange genetic information with said host organism, said method comprising:

isolating said biologically functional DNA from transformants prepared in accordance with claim 1;

transforming unicellular microorganisms with which said replicon is compatible with said isolated DNA to provide second transformants; and

growing said second transformants under appropriate nutrient conditions to replicate said biologically functional DNA.

12. A method for producing a protein foreign to a unicellular organism by means of expression of a gene by said unicellular organism, wherein said gene is derived from a source which does not exchange genetic information with said organism, said method comprising:

growing transformants prepared in accordance with any of claims 1 and 11 under appropriate nutrient conditions, whereby said organism expresses said foreign gene and produces said protein.

13. A method according to claim 12, wherein said protein is an enzyme.

14. A method according to claim 11, wherein said method is repeated substituting said biologically functional DNA from transformants prepared in accordance with claim 1 with second or subsequent transformants to produce additional transformants.

* * * * *

APPENDIX B

PRELIMINARILY ALLOWED REPRESENTATIVE CLAIMS OF U. S. SERIAL NO. 959,288

A. As a composition of matter, a biologically functional recombinant plasmid capable of selection and replication in a unicellular microorganism cell comprising:

a first DNA segment containing an intact replicon recognized by said cell derived by cleaving a virus or plasmid compatible with said cell at other than the replicon site, which segment is covalently jointed in vitro at its ends to the complementary ends of a second DNA segment foreign to said cell having at least one intact gene, said second DNA segment derived from a source which does not exchange genetic information with said cell.

B. As a composition of matter, a biologically functional recombinant plasmid capable of selection and replication in a unicellular microorganism cell and capable of homoduplexing with the replicon and gene portions of first and second linear segments of a biologically functional DNA, wherein said second linear DNA segment is derived from a source which does not exchange genetic information with said unicellular microorganism,

wherein said biologically functional recombinant plasmid is prepared as follows:

(1) cleaving viral or circular plasmid DNA compatible with said unicellular microorganism at other that the replicon site to produce said first linear DNA segment having an intact replicon and termini of a predetermined character;

(2) combining said first linear DNA segment with a second linear DNA segment from a source which does not exchange genetic information with said unicellular organism and has at least one intact gene and termini ligatable to said termini of said first linear DNA segment, wherein at least one of said first and second linear DNA segments has a gene for a phenotypical trait;

(3) joining the ligatable ends of said first and second segments to form a functional DNA capable of replication and transcription in said unicellular organism.

C. As a composition of matter a biologically functional recombinant plasmid having been cloned at least once and capable of selection and replication, said plasmid having first and second linear segments, wherein said first segment has an intact replicon and said second segment is a gene derived from a source which does not exchange genetic information with a unicellular host for said replicon.

APPENDIX C

LICENSEES UNDER U. S. PATENT NO. 4,237,224 AND U.S. PATENT APPLICATION SERIAL NO. 959,288

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Collaborative Research, Inc. (USA)

Corning Glass Works (USA)

DNA Plant Technology Corp. (USA)

DNAX Ltd. (USA)

E. I. DuPont de Nemours and Company (USA)

Engenics, Inc. (USA)

Genentech, Inc. (USA)

Genetics Institute (USA)

Genex Corp. (USA)

Genzyme Corporation (USA)

Gist-Brocades N.V. (Netherlands)

W. R. Grace & Co. (USA)

The Green Cross Corp. (Japan)

Hoechst Aktiengesellschaft (Germany)

Hoffman-LaRoche, Inc. (USA)

Integrated Genetics, Inc. (USA)

International Minerals & Chemical Corp. (USA)

International Plant Research Institute (USA)

Johnson & Johnson (USA)

Koppers Company, Inc. (USA)

Kyowa Hakko Kogyo Co., Ltd. (Japan)

Eli Lilly & Compnay (USA)

Microlife Fenetics (USA)

Miles Laboratories, Inc. (USA)

Mochida Pharmaceutical Co., Ltd. (Japan)

Molecular Genetics, Inc. (USA)

Monsanto Company (USA)

Montedison (Italy)

Nabisco Brands, Inc. (USA)

National Distillers & Chemical Corp. (USA)

New England Biolabs, Inc. (USA)

Novo Industri A/S (Denmark)

P-L Biochemicals, Inc. (USA)

Pfizer Inc. (USA)

Polybac Corporation (USA)

Repligen Corporation (USA)

Revlon, Inc. (USA)

Salsbury Laboratories, Inc. (USA)

Schering Aktiengesellschaft (Germany)

Schering Corp. (USA)

G. D. Serle & Co. (USA)

SmithKline Beckman Corporation (USA)

Stauffer Chemical Company (USA)

Suntory Limited (Japan)

Synergen Associates (USA)

Takeda Chemical Industries, Ltd. (Japan)

Texaco Inc. (USA)

UOP Process Division (USA)

The Upjohn Company (USA)

Virogenetics Corp. (USA)

Wyeth Laboratories (USA)

The terms of this Agreement apply only for licenses signed on or before 15 December, 1981.

LICENSE AGREEMENT

Effective as of December 2, 1980, THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY, a body having corporate powers under the laws of the State of California (STANFORD), and _____

a _____ corporation having a principal place of business at _____ (LICENSEE) agree as follows:

1. BACKGROUND

1.1 — In the course of fundamental research programs at the University of California and STANFORD (Universities), inventions were conceived jointly which relate to engineering biologically functional replicons possessing desired genetic properties of parent DNA molecules. These research programs were supported by the National Science Foundation, the American Cancer Society, and the National Institutes of Health of the Department of Health, Education and Welfare, now Health and Human Services (HHS). These agencies and the Universities agreed that the intellectual property rights resulting from these inventions (and licensed through this Agreement) would be administered pursuant and subject to the terms of STANFORD's Institutional Patent Agreement (IPA) with HHS.

1.2 — The Universities have agreed that Stanford will manage the securing of patent rights and licensing in the public interest, and that any net income arising therefrom will be shared between the Universities, and designated to be used for educational and research purposes.

1.3 — By assignment of the inventions from the inventors, STANFORD is the owner of certain U.S. patent rights and desires to grant licenses under those rights to licensees for development of products and processes for public use and benefit.

1.4 — LICENSEE desires to develop processes and methods and marketable products for public use and benefit by using Licensed Patent Rights, and it will follow good safety practices in such development work.

2. DEFINITIONS

2.1 — *Licensed Patent Rights* means U.S. Patent No. 4,237,224, issued December 2, 1980, and pending U.S. Patent Application Serial No. 959,388, filed November 9, 1978, and any divisions, continuations, and continuations-in-part based thereon, and any patents which may issue therefrom and any reissues or extension thereof.

2.2 — *Ultimate Consumer* means that person or entity whose use of the product results in its destruction or loss of activity and/or loss of value.

2.3 — *Licensed Product(s)* means materials (including organisms) which, in the course of manufacture, use, or sale would, in the absence of this license, infringe one or more claims of *Licensed Patent Rights* which have not been held invalid by a court from which no appeal may be taken.

Four categories of *Licensed Products* are designated:

End Products (Paragraph 2.4)
Basic Genetic Products (Paragraph 2.5)
Process Improvement Products (Paragraph 2.6)
Bulk Products (Paragraph 2.7)

2.4 — *End Products* means marketable goods having at least one component coming within *Licensed Products*, or produced by a *Licensed Product*, which goods are sold in a form for utilization by the *Ultimate Consumer*, and are not intended or marketed for further formulation, processing, or chemical transformation. Illustrative *End Products* include:

(a) health care products, sold for patient care and use or dispensation by medical professionals (for example, dosage forms of hormones, vaccines, and biosynthesized drugs; films, fibers or dressings; and reagents or devices used for diagnostic purposes, incorporating biochemical agents such as antibodies, enzymes, specific binding proteins or polysaccharides);

(b) products sold in a form ready for application to seeds, for addition to feed or crop treating agents, for administration to animals or for treatment of cells being cultured in order to improve agriculture, animal production, forestry or landscaping (such as fertilizers, vaccines, and nitrogen fixing or pesticidal microorganisms);

(c) microorganisms and/or their products which are suitable for use as animal or human food, for degrading substances in an environment, or for increasing the production of desired substances (such as concentrating minerals, generating gas or useful compost from low value substrates);

(d) reagents for research, such as enzymes or antibodies.

2.5 — *Basic Genetic Products* means materials having at least one component coming within *Licensed Products* which are sold or used primarily for further processing or genetic manipulation and/or are neither *End Products*, *Process Improvement Products* or *Bulk Products*. Illustrative *Basic Genetic Products* include plasmids, unicellular organism transformants, and nucleic acid segments such as expression regulators and structural gene sequences. Also, *Basic Genetic Products* include services using *Licensed Products* and which services are provided by LICENSEE to customers on a contract basis.

2.6 — *Process Improvement Products* means materials having at least one component coming within *Licensed Products* which are developed by or for the LICENSEE, as opposed to being purchased by the LICENSEE, and are used by the LICENSEE in its manufacturing processes to enhance production efficiency and where the resulting product is essentially identical to a product manufactured by the previous process. Illustrative *Process Improvement Products* include microorganisms for production of chemical intermediates, amino acids, or pharmaceuticals; enzymes for chemical manufacturing; antibodies for separation processes; and nitrogen-fixing microorganisms used by an agricultural company to reduce fertilizer consumption.

2.7 — *Bulk Products* means materials having at least one component coming within *Licensed Products*, or produced by a *Licensed Product*, which material is intended for further formulation, processing or chemical transformation by a manufacturer, formulator or the like (as distinguished from a distributor, retailer or *Ultimate Consumer*). Illustrative *Bulk Products* include an antibody or a hormone sold to a pharmaceutical company, a dipeptide sold to a beverage company to be used as a sweetener, an amino acid sold to a health care company, and a chemical intermediate sold to a chemical company for conversion into functional chemicals.

2.8 - *Net Sales* means the gross sales, royalties or fees invoiced to customers, less: returns and allowances actually granted; packing, insurance, freight out, taxes or excise duties imposed on the transaction (if separately invoiced); wholesaler discounts and cash discounts.

2.9 - *First Commercial Sale* means the initial transfer by LICENSEE of *Licensed Products* in exchange for cash or some equivalent to which value can be assigned for the purpose of determining *Net Sales*.

2.10 — "LICENSEE" is understood to include all of its *Affiliates*. An *Affiliate* of LICENSEE shall mean any corporation or other business entity controlled by, controlling, or under common control with LICENSEE. For this purpose, "control" means direct or indirect beneficial ownership of at least fifty percent (50%) of the voting stock, or at least fifty percent (50%) interest in the income of such corporation or other business.

3. GRANT

3.1 — STANFORD grants to LICENSEE a non-exclusive, non-transferable right and license to make, have made, use and sell *Licensed Products* under *Licensed Patent Rights*.

4. COMPLIANCE WITH LAWS, REGULATIONS AND STANDARDS

4.1 — LICENSEE agrees to comply with all governmental laws and regulations applicable to the use, production and/or sale of *Licensed Products*.

4.2 — With respect to operations by the LICENSEE in the United States, its territories and possessions, LICENSEE specifically expresses its intent to comply with the physical and biological containment standards set forth in the NIH Guidelines for Research Involving Recombinant DNA Molecules, dated 21 November 1980, or any subsequent amended version of U.S. Government guidelines or regulations pertaining to such activities in effect during the term of this Agreement. LICENSEE further agrees to cooperate with government agency(ies) authorized to monitor compliance with such containment standards.

5. GOVERNMENT TERMS

5.1 This Agreement is subject to the terms and conditions of the HHS IPA with STANFORD dated April 5, 1972.

6. ROYALTIES

6.1 — In consideration of the rights granted herein, LICENSEE shall pay to STANFORD upon execution of this agreement a royalty payment of Ten Thousand Dollars ($10,000). Thereafter, LICENSEE shall pay a minimum annual advance on earned royalties of Ten Thousand Dollars ($10,000) on or before the first day of February for each calendar year following execution of this agreement. Said payments are nonrefundable except that they can be credited against earned royalties to the extent provided in paragraph 6.3.

6.2 — All sales or use of *Licensed Products* by LICENSEE, excepting sales under paragraph 10.1 to an *Affiliate* or another licensee of STANFORD or sales to the United States Government, shall be subject to royalty payments as provided in paragraphs 6.3 to 6.8 inclusive.

6.3 — Earned royalty payments due under Article 8 in excess of the annual minimum may be reduced up to 50% in any one year by a credit equal in total to five (5) times the cumulative amount of the royalties paid in accordance with paragraph 6.1 in years prior to the calendar year in which the first sale takes place of an *End Product* for other than development purposes, but not for minimum payments made for 1987 and following years, so long as is necessary

during the period of royalty payment to amortize the specified multiple (five (5)) of the cumulative royalties paid under paragraph 6.1 prior to the calendar year of such first sale.

6.4 — LICENSEE shall pay earned royalties for use of *Licensed Patent Rights* for production and sale of *End Products* based on the *Net Sales* in the United States of *End Products* by LICENSEE. The earned royalty rate for *End Products* shall depend upon the total sales of *End Products* in each calendar year as specified in the following schedule.

Annual *Net Sales* of *End Products* in U.S.	Earned Royalty Rate on *Net Sales* of *End Products*
up to $5 million	1.00%
$5 - $10 million	0.75%
over $10 million	0.50%

6.5 — LICENSEE shall pay earned royalties for use of *Licensed Patent Rights* to produce in the United States *End Products* and *Bulk Products* for sale outside of the United States of 0.5% of *Net Sales* of *End Products* and 1% of *Net Sales* of *Bulk Products* regardless of sales volume.

6.6 — LICENSEE also shall pay earned royalties for use of *Licensed Patent Rights* for production and sale of *Licensed Products* that are not *End Products* as follows:

6.6.1 — The earned royalty rate for *Basic Genetic Products* shall be 10% of *Net Sales*.

6.6.2 — The earned royalty rate for *Bulk Products* shall depend upon *Net Sales* by LICENSEE of *Bulk Products* in each calendar year as specified in the following schedule.

Annual *Net Sales* of *Bulk Products* in U.S.	Earned Royalty Rate on *Net Sales* of *Bulk Products*
up to $5 million	3%
$5 - $10 million	2%
over $10 million	1%

6.6.3 — The earned royalty rate for *Process Improvement Products* shall be 10% of cost savings and economic benefits enjoyed by LICENSEE.

6.6.4 — If LICENSEE can demonstrate that the royalty payments for a product falling under *Basic Genetic Products* (paragraph 6.6.1), *Bulk Products* (paragraph 6.6.2) or *Process Improvement Products* (paragraph 6.6.3) are greater than the royalties that would result if calculated on the *End Product* (for sales in the U.S. and other territories) made from or with such product, it may request negotiation of a lower royalty comparable to the *End Product* royalty. Such negotiation will be initiated by notice in writing from LICENSEE to STANFORD giving the nature of the product(s) to be marketed by LICENSEE and expected use of the product(s).

6.7 — If the parties cannot agree after negotiation upon equitable royalty terms for the use of *Licensed Patent Rights* under subparagraph 6.6.4, then either party may submit the matter for decision by arbitration in accordance with paragraph 14.4. Fees for arbitration shall be borne by the LICENSEE, but may be credited per paragraph 8.3 against royalties payable by LICENSEE under the agreement established by means of the arbitration, until such arbitration fees are fully recovered.

6.7.1 — In arriving at a decision, the negotiators and arbitrator(s) shall consider such factors as the size of the potential market for the *Licensed Product(s)* involved, the anticipated profit margin, the royalty rates for *End Products*, the royalty that would be paid on the *End Products* most likely to be prepared for the *Ultimate Consumer* from the *Licensed Product(s)* in question, and prevailing royalty rates in the industry to which the *Licensed Product(s)* pertain.

6.8 – As an alternative to the provisions in paragraphs 6.6 through 6.7 for determination of royalties for *Licensed Products* other than *End Products*, LICENSEE may, at any time prior to June 1, 1982, obtain a paid-up, limited-term, nonexclusive license under *Licensed Patent Rights* for the period from the effective date of this Agreement until December 31, 1986, at a lump-sum royalty to be negotiated for *Licensed Products* other than *End Products*. Such negotiation shall not be subject to arbitration. Such license shall be nontransferable except as provided in Article 12. The aforementioned paid-up license fee shall reflect the parties' best collective judgment as to the likely extent of LICENSEE's anticipated engagement in production and sale of *Licensed Products* that are not *End Products*, as well as other circumstances peculiar to the LICENSEE's business at that time. Accordingly, such license fee is paid-up only for LICENSEE and it shall not be considered in "more favored terms" treatment of third-party licensees under Article 7. Said paid-up license fee shall not be considered an "earned royalty" for purposes of 6.1 and 6.3 or deductible under Article 10.

7. MORE FAVORED TERMS

7.1 – STANFORD intends that the terms of all licenses under *Licensed Patent Rights* are to be essentially similar to the terms of this license. STANFORD will advise LICENSEE as to those terms which are different in such other license agreements, unless said terms are consequent to the operation of any provision of paragraphs 6.6.4 and 6.7 through 6.8, whereupon LICENSEE may determine whether such terms are more favorable than those granted herein. LICENSEE shall, at its election, be entitled upon written notice to STANFORD to have this Agreement amended to substitute all terms of such more favorable license for all terms of this Agreement as of the date upon which such more favorable license shall have become effective. Such amendment shall, as to royalty, apply only to prospective royalties.

7.2 – In the event LICENSEE chooses to exercise its option under paragraph 7.1, LICENSEE agrees that it shall also accept and be bound by the same terms and conditions for the benefit of STANFORD as those which are a part of or shall accompany such other license granted by STANFORD to a third party. LICENSEE further agrees that in determining whether the royalty rate for a particular product or process accorded the third party licensee is more favorable, STANFORD may assign a reasonable value to any patent rights or other consideration it has or will receive in return for the grant of such other license.

8. PAYMENTS AND REPORTS

8.1 – LICENSEE agrees to notify STANFORD promptly, in writing, of the date of the *First Commercial Sale* of a *Licensed Product* and date of first transaction under paragraph 10.1.

8.2 – Beginning with the date of *First Commercial Sale*, royalties from LICENSEE hereunder (less the credits allowed by paragraphs 6.3 and 6.7 and less the minimum annual royalty paid in advance for that calendar year) shall be paid to STANFORD within ninety (90) days after the close of each subsequent calendar quarter.

8.3 – Total credits allowable by operation of paragraphs 6.3 and 6.7 shall in no case exceed 50% of the excess of current earned royalties over the minimum royalty due in any given year. Any amount so credited shall be credited only once against earned royalties payable hereunder.

8.4 – LICENSEE shall provide with each earned royalty payment of paragraph 8.2 a statement of *Net Sales* and the applicable royalties in accordance with Article 6 and a report of each transaction under paragraph 10.1. All such reports shall be held in confidence by STANFORD. Such statements and reports shall be submitted whether or not a payment in excess of the minimum is due.

8.5 — To facilitate STANFORD's conformance with its Institutional Patent Agreement, LICENSEE agrees to make an annual report to STANFORD each March 1 covering its progress during the previous calendar year toward commercialization. Such report may be general in nature and shall not include company proprietary information.

8.6 — LICENSEE also agrees to make a written report to STANFORD within ninety (90) days after the date of termination of this License Agreement, stating in such report the royalty payable hereunder which was not previously reported to STANFORD. LICENSEE shall also continue to make annual reports pursuant to the provisions of this Article 8 covering *Net Sales* and the applicable royalties in accordance with Article 6 received for sale of *Licensed Products* after termination of this License Agreement, until such time as all such sales shall have terminated. Concurrent with the submittal of each post-termination report, LICENSEE shall pay STANFORD all applicable royalties.

9. RECORDS

9.1 — LICENSEE shall keep complete, true and accurate books of account and records for the purpose of showing the derivation of all amounts payable to STANFORD under this License Agreement. Said books and records shall be kept at LICENSEE's principal place of business for at least three (3) years following the end of the calendar year to which they pertain and shall be open at all reasonable times for inspection by a representative of STANFORD for the purpose of verifying LICENSEE's royalty statements or LICENSEE's compliance in other respects to this License Agreement. This representative is obliged to treat as confidential all relevant matters and should be acceptable by LICENSEE. LICENSEE may specify that this representative be an independent Certified Public Accountant.

10. OTHER TRANSFERS OF LICENSED PRODUCTS

10.1 — It is anticipated that LICENSEE may supply *Licensed Products* to an *Affiliate* (as defined in paragraph 2.10) or to another licensee of STANFORD for further processing and/or sale by the *Affiliate* or other licensee under *Licensed Patent Rights*. No earned royalty shall be payable by LICENSEE with respect to such *Licensed Products*, so long as the *Affiliate* or second licensee shall be obligated to pay STANFORD royalty under *Licensed Patent Rights* on its use or sales thereof. However, reports made by LICENSEE as provided in paragraph 8.4 shall list each such transaction as a non-royalty bearing sale and identify such *Affiliate* or other licensee.

10.2 — If an earned royalty payment has been made to STANFORD for a *Licensed Product* used by LICENSEE to make another *Licensed Product*, that payment may be deducted by LICENSEE from the earned royalty payment for such resulting *Licensed Product*.

11. TERM AND TERMINATION

11.1 — The term of this Agreement shall extend from the above effective date until expiration of the last to expire of *Licensed Patent Rights*.

11.2 — Upon any breach of, or default under, this License Agreement by LICENSEE, STANFORD may terminate this License Agreement by ninety (90) days written notice to LICENSEE. Said notice shall become effective at the end of such period unless during said period LICENSEE shall cure such defect or default.

11.3 — LICENSEE shall have the right to terminate this Agreement at any time upon ninety (90) days written notice to STANFORD.

12. ASSIGNABILITY

12.1 — This Agreement shall not be assigned except (a) with the advance written consent of STANFORD, or (b) as part of a sale or transfer of substantially the entire business of LICENSEE relating to operations pursuant to this license.

13. NEGATION OF WARRANTIES AND INDEMNITY

13.1 — Nothing in this Agreement shall be construed as:

(a) a warranty or representation by STANFORD as to the validity or scope of any *Licensed Patent Rights;* or

(b) a warranty or representation that anything made, used, sold or otherwise disposed of under any license granted in this Agreement is or will be free from infringement of patents of third parties, or

(c) an obligation to bring or prosecute actions or suits against third parties for infringement; or

(d) conferring the right to use in advertising, publicity or otherwise any trademark, trade name, or names, or any contraction, abbreviation, simulation or adaptation thereof, of STANFORD; or

(e) conferring by implication, estoppel or otherwise any license or rights under any patents of STANFORD other than *Licensed Patent Rights,* regardless of whether such patents are dominant or subordinate to *Licensed Patent Rights* (however, STANFORD is not aware of any STANFORD patent or application dominant to *Licensed Patent Rights);* or

(f) an obligation to furnish any know-how not provided in *Licensed Patent Rights.*

13.2 — STANFORD makes no representations other than those specified in Article 1. STANFORD MAKES NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

13.3 — LICENSEE shall defend, indemnify and hold STANFORD harmless from and against all liability, demands, damages, expenses and losses for death, personal injury, illness or property damage ("claims and damages") arising (a) out of the use by LICENSEE of any method under *Licensed Patent Rights,* or (b) out of any use, sale or other disposition of *Licensed Products* by LICENSEE or its transferees. As used in this Section, "STANFORD" includes its trustees, officers, agents and employees, and "LICENSEE" includes its *Affiliates* described in paragraph 2.10. LICENSEE acknowledges that the technology licensed hereby is experimental and agrees to take all reasonable precautions to prevent death, personal injury, illness and property damage.

14. GENERAL

14.1 — Neither party may waive or release any of its rights or interests in this Agreement except in writing. Failure to assert any right arising from this Agreement shall not be deemed or construed to be a waiver of such right.

14.2 — This License Agreement constitutes the entire agreement between the parties relating to the subject matter thereof, and all prior negotiations, representations, agreements and understandings are merged into, extinguished by, and completely expressed by it.

14.3 — This Agreement and its effects are subject to and shall be construed and enforced in accordance with the laws of the State of California.

14.4 — Any dispute or controversy arising out of or relating to this License Agreement, its construction or its actual or alleged breach, shall be finally decided by arbitration conducted

in San Francisco, California, by and in accordance with the Licensing Agreement Arbitration Rules of the American Arbitration Association. Judgment upon the award rendered may be entered in the highest court or forum, state or federal, having jurisdiction; provided, however, that the provisions of this Article 14 shall not apply to decision of the validity of patent claims or to any dispute or controversy as to which any treaty or law prohibits such arbitration.

14.5 — All notices required or permitted to be given by the terms of this Agreement shall be given by prepaid registered or certified mail properly addressed to the other party at the address designated below or to such other address as may be designated in writing by such other party and shall be effective as of the date of the postmark of such mail notice.

LICENSEE:

Attention:

STANFORD: Office of Technology Licensing
Encina Hall 105
Stanford University
Stanford, CA 94305
U.S.A.

Attention: Director

This Agreement is effective as of December 2, 1980.

LICENSEE

By _____

Title _____

Date _____

THE BOARD OF TRUSTEES OF THE
LELAND STANFORD UNIVERSITY

By _____

Title _____

Date _____

LICENSE AGREEMENT

Effective as of January 1, 1982, THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY, a body having corporate powers under the laws of the State of California (STANFORD), and _____ a _____ corporation having a principal place of business at _____ (LICENSEE) agree as follows:

1. BACKGROUND

1.1 — In the course of fundamental research programs at the University of California and STANFORD (Universities), inventions were conceived jointly which relate to engineering biologically functional replicons possessing desired genetic properties of parent DNA molecules. These research programs were supported by the National Science Foundation, the American Cancer Society, and the National Institutes of Health of the Department of Health, Education and Welfare, now Health and Human Services (HHS). These agencies and the Universities agreed that the intellectual property rights resulting from these inventions (and licensed through this Agreement) would be administered pursuant and subject to the terms of STANFORD's Institutional Patent Agreement (IPA) with HHS.

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1.4 — LICENSEE desires to develop processes and methods and marketable products for public use and benefit by using Licensed Patent Rights, and it will follow good safety practices in such development work.

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Licensed Patent Rights which have not been held invalid by a court from which no appeal may be taken.

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(a) health care products, sold for patient care and use or dispensation by medical professionals (for example, dosage forms of hormones, vaccines, and biosynthesized drugs; films, fibers or dressings; and reagents or devices used for diagnostic purposes, incorporating biochemical agents such as antibodies, enzymes, specific binding proteins or polysaccharides);

(b) products sold in a form ready for application to seeds, for addition to feed or crop treating agents, for administration to animals or for treatment of cells being cultured in order to improve agriculture, animal production, forestry or landscaping (such as fertilizers, vaccines, and nitrogen fixing or pesticidal microorganisms);

(c) microorganisms and/or their products which are suitable for use as animal or human food, for degrading substances in an environment, or for increasing the production of desired substances (such as concentrating minerals, generating gas or useful compost from low value substrates);

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6.3 — Earned royalty payments due under Article 8 in excess of the annual minimum ($10,000) may be reduced up to 50% in any one year by a credit. This credit is equal to the

unreimbursed cumulative excess of the advance royalties paid in accordance with paragraph 6.1 over the total of the earned royalties due under paragraphs 6.4 to 6.6 inclusive. This reduction in earned royalty payments may continue so long as is necessary to fully amortize the credit.

6.4 — LICENSEE shall pay earned royalties for use of *Licensed Patent Rights* for production and sale of *End Products* based on the total royalty bearing *Net Sales* of *End Products* by LICENSEE. The earned royalty rate for *End Products* sold in the U.S. shall depend upon the total royalty bearing sales of *End Products* in each calendar year as specified in the following schedule.

Annual Royalty Bearing *Net Sales* of *End Products*	Earned Royalty Rate on *Net Sales* in U.S. of *End Products*
up to $5 million	1.00%
$5 - $10 million	0.75%
over $10 million	0.50%

6.5 — LICENSEE shall pay earned royalties for use of *Licensed Patent Rights* to produce in the United States *End Products* and *Bulk Products* for sale outside of the United States of 0.5% of *Net Sales* of *End Products* and 1% of *Net Sales* of *Bulk Products* regardless of sales volume.

6.6 — LICENSEE also shall pay earned royalties for use of *Licensed Patent Rights* for production and sale of *Licensed Products* that are not *End Products* as follows:

6.6.1 — The earned royalty rate for *Basic Genetic Products* shall be 10% of *Net Sales*.

6.6.2 — The earned royalty rate for *Bulk Products* sold in the U.S. shall depend upon total royalty bearing *Net Sales* by LICENSEE of *Bulk Products* in each calendar year as specified in the following schedule.

Annual Royalty Bearing *Net Sales* of *Bulk Products*	Earned Royalty Rate on *Net Sales* in U.S. of *Bulk Products*
up to $5 million	3%
$5 - $10 million	2%
over $10 million	1%

6.6.3 — The earned royalty rate for *Process Improvement Products* shall be 10% of cost savings and economic benefits enjoyed by LICENSEE.

6.6.4 — If LICENSEE can demonstrate that the royalty payments for a product falling under *Basic Genetic Products* (paragraph 6.6.1), *Bulk Products* (paragraph 6.6.2) or *Process Improvement Products* (paragraph 6.6.3) are greater than the royalties that would result if calculated on the *End Product* (for sales in the U.S. and other territories) made from or with such product, it may request negotiation of a lower royalty comparable to the *End Product* royalty. Such negotiation will be initiated by notice in writing from LICENSEE to STANFORD giving the nature of the product(s) to be marketed by LICENSEE and expected use of the product(s).

6.7 — If the parties cannot agree after negotiation upon equitable royalty terms for the use of *Licensed Patent Rights* under subparagraph 6.6.4, then either party may submit the matter for decision by arbitration in accordance with paragraph 14.4. Fees for arbitration shall be borne by the LICENSEE, but may be credited per paragraph 8.3 against royalties payable by LICENSEE under the agreement established by means of the arbitration, until such arbitration fees are fully recovered.

6.7.1 — In arriving at a decision, the negotiators and arbitrator(s) shall consider such factors as the size of the potential market for the *Licensed Product(s)* involved, the anticipated profit margin, the royalty rates for *End Products*, the royalty that would be paid on the *End Products* most likely to be prepared for the *Ultimate Consumer* from the *Licensed Product(s)* in question, and prevailing royalty rates in the industry to which the *Licensed Product(s)* pertain.

7. MORE FAVORED TERMS

7.1 — STANFORD intends that the terms of all licenses under *Licensed Patent Rights* are to be essentially similar to the terms of this license. STANFORD will advise LICENSEE as to those terms which are different in such other license agreements, unless said terms are consequent to the operation of any provision of paragraphs 6.6.4, 6.7, and 6.7.1, whereupon LICENSEE may determine whether such terms are more favorable than those granted herein. LICENSEE shall, at its election, be entitled upon written notice to STANFORD to have this Agreement amended to substitute all terms of such more favorable license for all terms of this Agreement as of the date upon which such more favorable license shall have become effective. Such amendment shall, as to royalty, apply only to prospective royalties.

7.2 — In the event LICENSEE chooses to exercise its option under paragraph 7.1, LICENSEE agrees that it shall also accept and be bound by the same terms and conditions for the benefit of STANFORD as those which are a part of or shall accompany such other license granted by STANFORD to a third party. LICENSEE further agrees that in determining whether the royalty rate for a particular product or process accorded the third party licensee is more favorable, STANFORD may assign a reasonable value to any patent rights or other consideration it has or will receive in return for the grant of such other license.

7.3 — STANFORD has entered into one other form of license agreement for *Licensed Patent Rights* which was effective December 2, 1980. This Article 7 does not apply with respect to these other license agreements.

8. PAYMENTS AND REPORTS

8.1 — LICENSEE agrees to notify STANFORD promptly, in writing, of the date of the *First Commercial Sale* of a *Licensed Product* and date of first transaction under paragraph 10.1.

8.2 — Beginning with date of *First Commercial Sale*, royalties from LICENSEE hereunder (less the credits allowed by paragraphs 6.3 and 6.7 and less the minimum annual royalty paid in advance for that calendar year) shall be paid to STANFORD within ninety (90) days after the close of each subsequent calendar quarter.

8.3 — Total credits allowable by operation of paragraphs 6.3 and 6.7 shall in no case exceed 50% of the excess of current earned royalties over the minimum royalty due in any given year. Any amount so credited shall be credited only once against earned royalties payable hereunder.

8.4 — LICENSEE shall provide with each earned royalty payment of paragraph 8.2 a statement of *Net Sales* and the applicable royalties in accordance with Article 6 and a report of each transaction under paragraph 10.1. All such reports shall be held in confidence by STANFORD. Such statements and reports shall be submitted whether or not a payment in excess of the minimum is due.

8.5 — To facilitate STANFORD's conformance with its Institutional Patent Agreement, LICENSEE agrees to make an annual report to STANFORD each March 1 covering its

progress during the previous calendar year toward commercialization. Such report may be general in nature and shall not include company proprietary information.

8.6 — LICENSEE also agrees to make a written report to STANFORD within ninety (90) days after the date of termination of this License Agreement, stating in such report the royalty payable hereunder which was not previously reported to STANFORD. LICENSEE shall also continue to make annual reports pursuant to the provisions of this Article 8 covering *Net Sales* and the applicable royalties in accordance with Article 6 received for sale of *Licensed Products* after termination of this License Agreement, until such time as all such sales shall have terminated. Concurrent with the submittal of each post-termination report, LICENSEE shall pay STANFORD all applicable royalties.

9. RECORDS

9.1 — LICENSEE shall keep complete, true and accurate books of account and records for the purpose of showing the derivation of all amounts payable to STANFORD under this License Agreement. Said books and records shall be kept at LICENSEE's principal place of business for at least three (3) years following the end of the calendar year to which they pertain and shall be open at all reasonable times for inspection by a representative of STANFORD for the purpose of verifying LICENSEE's royalty statements or LICENSEE's compliance in other respects to this License Agreement. This representative is obliged to treat as confidential all relevant matters and should be acceptable by LICENSEE. LICENSEE may specify that this representative be an independent Certified Public Accountant.

10. OTHER TRANSFERS OF LICENSED PRODUCTS

10.1 — It is anticipated that LICENSEE may supply *Licensed Products* to an *Affiliate* (as defined in paragraph 2.10) or to another licensee of STANFORD for further processing and/or sale by the *Affiliate* or other licensee under *Licensed Patent Rights*. No earned royalty shall be payable by LICENSEE with respect to such *Licensed Products*, so long as the *Affiliate* or second licensee shall be obligated to pay STANFORD royalty under *Licensed Patent Rights* on its use or sales thereof. However, reports made by LICENSEE as provided in paragraph 8.4 shall list each such transaction as a non-royalty bearing sale and identify such *Affiliate* or other licensee.

10.2 — If an earned royalty payment has been made to STANFORD for a *Licensed Product* used by LICENSEE to make another *Licensed Product*, that payment may be deducted by LICENSEE from the earned royalty payment for such resulting *Licensed Product*.

11. TERM AND TERMINATION

11.1 — The term of this Agreement shall extend from the above effective date until expiration of the last to expire of *Licensed Patent Rights*.

11.2 — Upon any breach of, or default under, this License Agreement by LICENSEE, STANFORD may terminate this License Agreement by ninety (90) days written notice to LICENSEE. Said notice shall become effective at the end of such period unless during said period LICENSEE shall cure such defect or default.

11.3 — LICENSEE shall have the right to terminate this Agreement at any time upon ninety (90) days written notice to STANFORD.

12. ASSIGNABILITY

12.1 — This Agreement shall not be assigned except (a) with the advance written consent of STANFORD, or (b) as part of a sale or transfer of substantially the entire business of LICENSEE relating to operations pursuant to this license.

13. NEGATION OF WARRANTIES AND INDEMNITY

13.1 — Nothing in this Agreement shall be construed as:

(a) a warranty or representation by STANFORD as to the validity or scope of any *Licensed Patent Rights;* or

(b) a warranty or representation that anything made, used, sold or otherwise disposed of under any license granted in this Agreement is or will be free from infringement of patents of third parties; or

(c) an obligation to bring or prosecute actions or suits against third parties for infringement; or

(d) conferring the right to use in advertising, publicity or otherwise any trademark, trade name, or names, or any contraction, abbreviation, simulation or adaptation thereof, of STANFORD; or

(e) conferring by implication, estoppel or otherwise any license or rights under any patents of STANFORD other than *Licensed Patent Rights,* regardless of whether such patents are dominant or subordinate to *Licensed Patent Rights* (however, STANFORD is not aware of any STANFORD patent or application dominant to *Licensed Patent Rights);* or

(f) an obligation to furnish any know-how not provided in *Licensed Patent Rights.*

13.2 — STANFORD makes no representations other than those specified in Article 1. STANFORD MAKES NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

13.3 — LICENSEE shall defend, indemnify and hold STANFORD harmless from and against all liability, demands, damages, expenses and losses for death, personal injury, illness or property damage ("claims and damages") arising (a) out of the use by LICENSEE of any method under *Licensed Patent Rights,* or (b) out of any use, sale or other disposition of *Licensed Products* by LICENSEE or its transferees. As used in this Section, "STANFORD" includes its trustees, officers, agents and employees, and "LICENSEE" includes its *Affiliates* described in paragraph 2.10. LICENSEE acknowledges that the technology licensed hereby is experimental and agrees to take all reasonable precautions to prevent death, personal injury, illness and property damage.

14. GENERAL

14.1 — Neither party may waive or release any of its rights or interests in this Agreement except in writing. Failure to assert any right arising from this Agreement shall not be deemed or construed to be a waiver of such right.

14.2 — This License Agreement constitutes the entire agreement between the parties relating to the subject matter thereof, and all prior negotiations, representations, agreements and understandings are merged into, extinguished by, and completely expressed by it.

14.3 — This Agreement and its effects are subject to and shall be construed and enforced in accordance with the laws of the State of California.

14.4 — Any dispute or controversy arising out of or relating to this License Agreement, its construction or its actual or alleged breach, shall be finally decided by arbitration conducted

in San Francisco, California, by and in accordance with the Licensing Agreement Arbitration Rules of the American Arbitration Association. Judgment upon the award rendered may be entered in the highest court or forum, state or federal, having jurisdiction: provided, however, that the provisions of this Article 14 shall not apply to decision of the validity of patent claims or to any dispute or controversy as to which any treaty or law prohibits such arbitration.

14.5 — All notices required or permitted to be given by the terms of this Agreement shall be given by prepaid registered or certified mail properly addressed to the other party at the address designated below or to such other address as may be designated in writing by such other party and shall be effective as of the date of the postmark of such mail notice.

LICENSEE:

Attention:

STANFORD: Office of Technology Licensing
Encina Hall 105
Stanford University
Stanford, CA 94305
U.S.A.

Attention: Director

This Agreement is effective as of the date first given above.

LICENSEE

By _____

Title _____

Date _____

THE BOARD OF TRUSTEES OF THE
LELAND STANFORD JUNIOR UNIVERSITY

By _____

Title _____

Date _____

APPENDIX F 43

SUMMARY SHEET

Licensed Product Classification & Royalties

	Licensed Product Category			
	End Products	Bulk Products	Basic Genetic Products	Process Improvement Products
Brief Description	Goods sold in a form for utilization by the Ultimate Consumer	A material intended for further formulation, processing or chemical transformation	Products which are sold for further processing or genetic manipulation and/or are neither end, bulk, or process improvement products	Products developed and used by Licensee in its manufacturing processes to enhance production efficiency
Examples	• final dosage form pharmaceuticals • animal vaccines • microorganisms used for: -animal or human food - biodegradation - mineral leaching • industrial process enzymes	• antibody or hormone sold to pharmaceutical company • dipeptide sold to beverage company as sweetener • amino acid sold in bulk to a health care firm • chemical intermediates produced by microorganisms and sold in bulk	• plasmid • unicellular organism transformants • nucleic acid segments	• enzymes or antibodies for chemical manufacturing • microorganisms for production of pharmaceuticals or chemicals • nitrogen-fixing microorganisms used by agricultural company to reduce fertilizer consumption
Earned Royalty Rates				
Net Sales Volume				
Up to $5 million	1.00%	3%	10%	10% of cost savings and economic benefit
$5-$10 million	0.75%	2%	10%	
over $10 million	0.50%	1%	10%	

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MICROORGANISMS (TRANSFORMANTS)

EXAMPLES OF PRODUCT CATEGORIES

End Products: Microorganisms which are sold in large quantities essentially in a form for consumption or use.

Examples:
- o Microorganisms sold to enhance oil recovery.
- o Mircoorganisms sold for the purpose of leaching minerals from low grade ores.
- o Microorganisms sold to biodegrade organic wastes or petroleum by-products.
- o Single-cell protein sold in a form suitable for animal or human consumption.

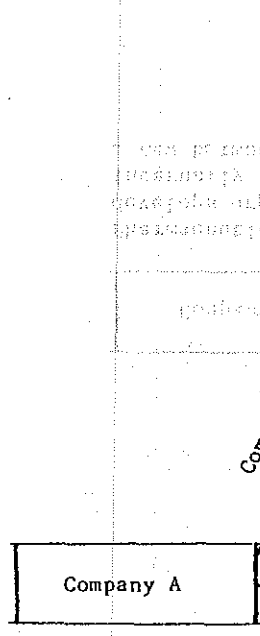
Basic Genetic Products: Microorganisms sold in small quantities for further propagation and/or genetic engineering work.

Examples:
- o Microorganism developed by a Licensee and sold to a pharmaceutical company for use in antibiotic production.
- o Microorganism developed by a Licensee and sold to a chemical company to be used in the production of chemical intermediates.
- o Microorganism having nitrogen fixing capabilities which is sold by a Licensee to an agricultural seed company for combination with seed.

Process Improvement Products: Microorganisms developed by a Licensee and used by Licensee in its manufacturing processes to enhance production efficiency for an existing product.

Examples:
- o Microorganism developed by a pharmaceutical company to increase the yield in one of its antibiotic fermentation processes.
- o Microoganism developed by a chemical company and used in the manufacture of a chemical intermediate previously produced via a conventional chemical process.
- o Microorganism developed by an oil company and used to enhance oil recovery from its fields.
- o Microorganism developed by a mining company and used to concentrate minerals from low grade ore

GENE FRAGMENT EXAMPLE



	Product Category	Royalty
Company A produces new hormone using organism, formulates hormone into final dosage form, and markets	End	0.5%*
Company A produces new hormone using organism and sells in bulk to Company B who formulates it into final dosage form	Bulk	1.0%*
Company A uses organism to improve its production process for an existing product	Process Improvement	10% of cost saving and economic benefit
Company A sells organism to Company B	Basic Genetic	10% *** [nothing from Company B]
Company A sells expression regulator to Company B who inserts it into an organism	Basic Genetic	10% from Company A *** [Company B will owe royalties on its subsequent sale and/or use of organism**]

*assumes $10 M. in sales or greater

**Company B may credit the royalty paid by Company A corresponding to the sale of the expression regulator

***Alternatively Company B may pay royalties based on its use and sale of Licensed Products, in which case Company A would have no royalty obligation.

PHARMACEUTICAL EXAMPLE



Pharmaceutical firm develops organism internally to produce a new hormone

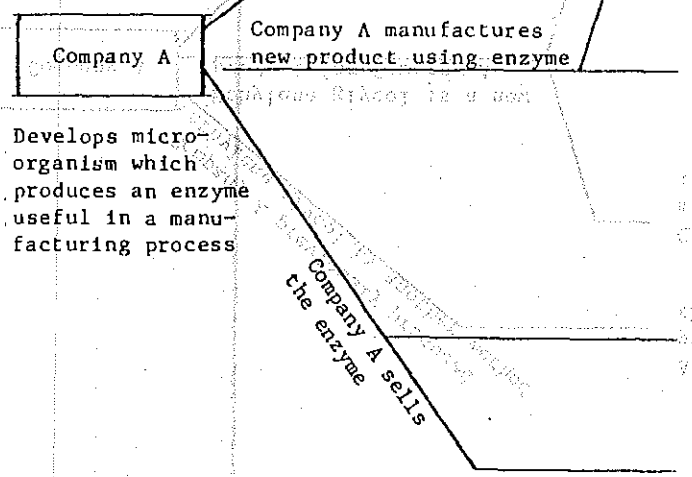
Company A produces hormone using organism

	Product Category	Royalty
Formulate hormone into final dosage form pharmaceutical and sell	End	0.5%*
Sells hormone in bulk to pharmaceutical Company B	Bulk	1.0%*, ** [nothing from Company B]
Company A sells organism to Company B for $X and/or a royalty on Company B's resulting sales	Basic Genetic	10% of total payments received by Company A ** [nothing from Company B]

*assumes $10 M. in sales or greater

** Alternatively Company B may pay royalties based on its use and sale of Licensed Products, in which case Company A would have no royalty obligation.

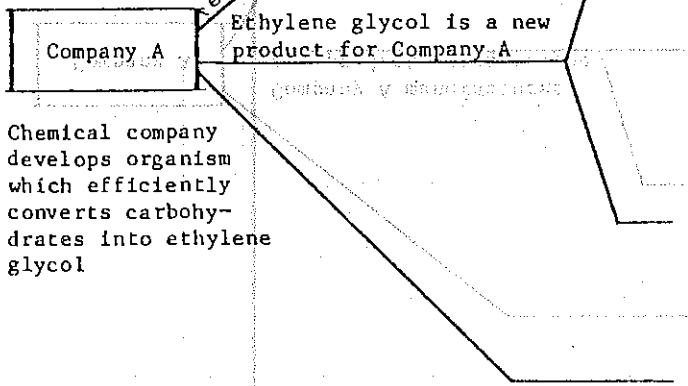
PROCESS ENZYME EXAMPLE



	Product Category	Royalty
Production process for existing product changed over to enzyme process resulting in cost savings	Process Improvement	10% of cost saving and economic benefit
Product resulting from enzyme process sold to ultimate consumer	End	0.5%*
Product resulting from enzyme process sold in bulk to Company B for further processing	Bulk	1.0%* [nothing from Company B]
Enzyme sold in bulk to Company B for use in its manufacturing process	End	0.5%* [nothing from Company B]
Company A incorporates enzyme in a product which it sells, e.g., pollution control device	End	0.5%*

*assumes $10 M. in sales or greater

COMMODITY CHEMICAL EXAMPLE



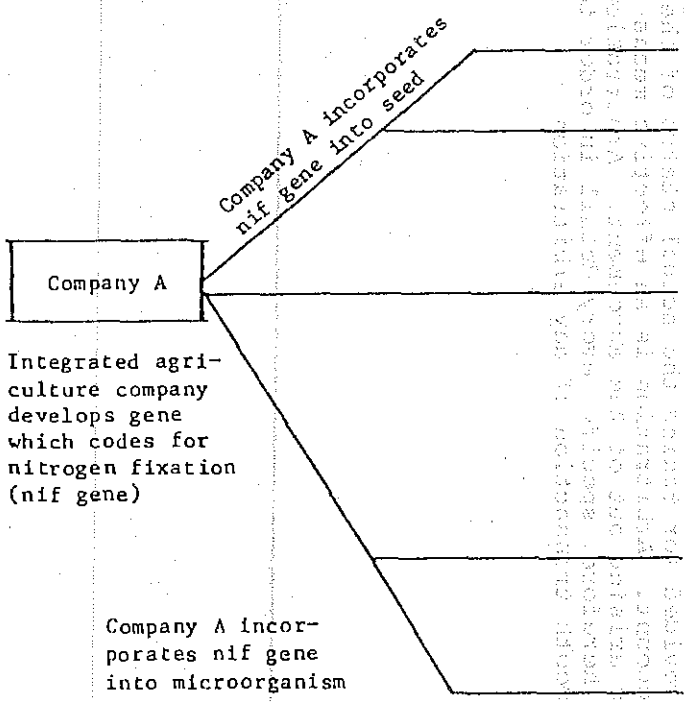
	Product Category	Royalty
Any and all ethylene glycol produced by Company A using this process	Process Improvement	10% of cost saving and economic benefit
Company A uses ethylene glycol to make automobile antifreeze which it sells	End	0.5%*
Company A sells bulk ethylene glycol to Company B for conversion into solvents and plasticizers	Bulk	1.0%* [nothing from Company B]
Company A sells organism to Company B for $X and/or a royalty on Company B's resulting sales	Basic Genetic	10% of total payments received by Company A ** [nothing from Company B]

*assumes $10 M. in sales or greater

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** Alternatively Company B may pay royalties based on its use and sale of Licensed Products, in which case Company A would have no royalty obligation.

AGRICULTURE EXAMPLE



	Product Category	Royalty
Company A sells seed to farmers	End	0.5%*
Company A uses seeds itself and sells the resulting crops	Process Improvement	10% of cost saving and economic benefit
Company A sells small quantity of nif gene to Company B which incorporates the gene into a seed which it mass produces-- Company A receives $X and/or a royalty on Company B's resulting sales	Basic Genetic	10% of total payments received by Company A ** [Company B will owe royalties or its subsequent sale and/or use of seed***]
Company A sells organism in large quantities as a fertilizer substitute	End	0.5%*
Company A sells organism to Company B which replicates it and sells as fertilizer substitute	Basic Genetic	10% of total payments received by Company A ** [nothing from Company B]

*assumes $10 M. in sales or greater

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** Alternatively Company B may pay royalties based on its use and sale of Licensed Products, in which case Company A would have no royalty obligation.

***Company B may credit the royalty paid by Company A corresponding to the sale of the nif gene.

ISSUES OF JOINT R&D AGREEMENT BETWEEN JAPANESE AND U.S. COMPANIES

Japanese Group Committee No. 2
Chairman: Juro Ichimura
(Shin-Etsu Chemical Co., Ltd)
Speaker: Hideo Doi
(Mitsubishi Electric Co., Ltd.)

Abstract

For joint research and development under an international R&D agreement between U.S. and Japanese companies, key aspects are the differences of each party's market potential, of applicable patent laws and Anti-Monopoly Laws in the two countries and of thought toward contract in the two countries. With respect to R&D achievements, especially R&D patents, joint ownership is not always appropriate and sole ownership may be employed depending upon actual cases. In such instances, of course, violation of the Anti-Monopoly Laws must be avoided and thorough consideration should be given to allowing the non-owning partner to use R&D patents under sole ownership.

As law provisions in the two countries differ in their treatment of jointly owned rights, prior discussion in this regard between the parties is indispensable. The governing laws should be provided for taking the actual status of the agreement into account. Arbitration is an effective means for settling disputes arising out of the agreement. Arbitration clauses should, therefore, specify every detail in order to facilitate the smooth transaction of any arbitration.

1. Introduction

Companies in all nations are obliged to spend a great deal of money on research and development. Their R&D objectives are new products and improvements as well as manufacturing methods and equipment. In this sector, investment in research and development plays a key role in building a successful business, a thing which is becoming harder and harder these days.

Each company has its own system and style of research and development but the following are typical examples:

a) R&D by the company's own employees

b) R&D by technical consultants

c) R&D consigned to outsiders

d) Joint R&D

To elaborate, joint R&D is carried out by two or more companies bringing their expertise and knowledge together. A fair number of patent applications are filed jointly, so it is a reasonable assumption that many companies are involved in joint R&D, though patent statistics do not always reflect the actual situation.

The following are the most likely reasons to explain the popularity of joint R&D.

1) Where joint R&D occurs between companies in different industries, the specialized expertise and technology of each supplements the other.

2) Risks are reduced because losses are shared if the R&D is not successful.

3) R&D budgets are reduced. In particular, investment can be avoided "overlapping" under a joint R&D agreement with a foreign company which has a different market.

4) Marketing risks are reduced when the product reaches the stage of production and sale.

5) Development time can be minimized.

This paper is directed to this facet of corporate R&D activity - joint research and development. It aims at discussing joint R&D agreements with emphasis on types of R&D, ownership and implementation of achievements, etc., and with particular reference to the problems of joint R&D agreements between Japanese and U.S. companies and their solutions.

2. Particulars of Joint R&D Agreements between Japanese and U.S. Companies

The major issues involved in negotiations leading to a joint R&D agreement between Japanese and U.S. companies are fundamentally the same as in the case of an agreement between Japanese companies. As it involves an international R&D activity, those concerned should take the following three points into account before they reach a final agreement.

a) Different Market

Companies in Japan and the U.S.A. generally have different markets. For Japanese companies, the major market is Japan and, in some cases, South-East Asia, whereas it is usually North America and Europe for most U.S. companies. This difference should be borne in mind when considering the future ownership and implementation of joint R&D achievements.

b) Different Governing Law

Provisions of the Patent Laws, Anti-Monopoly Laws, etc., in this respect are not identical in Japan and the U.S.A. Agreements must recognize these legal differences between the

two countries.

c) Different Thought toward Contract

This item was discussed in the 11th Tokyo Congress and the 12th New York Congress. U.S. members indicated at that time that the parties of an agreement in the U.S.A. attempt to provide for all eventualities because the courts will not look into items or problems not provided for in an agreement or not stated explicitly by the parties. Japanese membcrs, on the other hand, indicated that agreements incorporate not only written provisions but also an implied trust which plays an important role. It is sometimes more important than the written provisions and a clause calling for a consultation in good faith is indispensable in such agreements.

This point in particular should be borne in mind by companies contemplating a joint R&D agreement with a foreign company.

Based on information given above, the following discussion concerns the practical issues of a joint R&D agreement between Japanese and U.S. companies.

3. Ownership of Achievements

Ownership of know-how, inventions and other achievements made under joint R&D may be classified into three types.

1) Joint ownership (equal share ratio: e.g. 50:50)

2) Joint ownership (different share ratio: e.g. 70:30)

3) Sole ownership by either party

For classification purposes, each individual R&D achievement can be evaluated taking the following factors into consideration.

a) Whether the R&D achievement has been made jointly by

both parties or it has been made solely by either party.

b) Whether contributions toward R&D achievement have been made equally by both parties or not.

c) Which party's business or research area does it fall in?

In many cases of joint R&D by Japanese companies, R&D achievements are jointly owned and freely used by both parties, R&D achievements therefore, are assured to be for the common benefit of the parties. In some cases, ownership is simply provided for as being "common" (50-50 share) in the ownership clause and the benefit is appropriately allocated in the implementation clause.

However, in the case of joint R&D by U.S.-Japanese companies, it is not always appropriate to provide for joint ownership of inventions or subsequent patent rights.

One reason for this is the manner in which R&D is carried out by Japanses and U.S. companies. In such joint R&D, most research activity does not take place jointly by bringing researchers together. The situation where joint work results in a joint invention is unusual. Therefore, inventions under joint R&D should not be subject to joint ownership and it is preferable that ownership should be determined taking into account such matters as inventors, contribution toward invention, field of technology, etc.

Selection of the countries where patent applications are made for a joint R&D invention, closely relates to market potential of each party.

Needless to say, companies in Japan and the U.S.A. have differently aimed markets. As mentioned earlier, Japan and South-East Asia are generally major markets for Japanese companies.

In comparison, North America and Europe are major concern for U.S. companies. Each party should take the market potential of each into account. Joint ownership of all the joint R&D achievements without consideration to different market potential is questionable.

Another point to be considered is the difference in the patent systems of the two countries. The U.S. employs a first-to-invent system whereas Japan employs a first-to-file system. Under the first-to-file system, the Japanese company is suggested to file a patent application for a joint R&D achievement, at least in Japan, as soon as possible. In the case where a basic application is made in the U.S.A. and a convention application follows in Japan, the basic application should be filed as soon as possible in the U.S.A. This is because a prior application by a third party in Japan would be a strong bar against the convention application if such a prior application is made earlier than the basic application in the U.S.A. In such an instance, the Japanese company might be obliged to seek for a license from the owner of such prior art. Thus, the difference of systems in the two countries require an attention as to how and when filing procedures be taken.

With respect to filing procedures, it might be necessary for a sole owner of a R&D achievement to allow a patent application by the other party in its country at its own expense. This arrangement will facilitate the other party to protect its own market under extensive and valid patents.

It should also be noted that patent applications for any invention made within the U.S.A. must be filed in the U.S.A. first under 35 USC 184~186. Unless a special license is

issued by the U.S. Patent Office, foreign applications are not allowed within 6 months from the U.S. filing. As to this, the 5th congress in Kyoto offered an opportunity for detailed discussion.

A sample agreement is attached to this paper, including clauses concerning the ownership of industrial property rights.

4. Implementation of Achievements

As is natural, final R&D objective is to enjoy mutual benefits by implementing the R&D achievements. If the parties contribute to joint R&D on an equal basis, then profits obtained by implementing the R&D achievements, should be equally awarded to each party regardless of ownership. However, in practise, contributions are unlikely to be equal. This is particularly true in the case of joint activity by maker and user or by makers whose market sizes are very different, and should be taken into account.

With respect to R&D achievements jointly owned by the parties, they should be stated to be available for joint use, in accordance with the mind in the Japanese Patent Law, Article 73-2 and the U.S. Patent Law, Article 262 (35USC262). For readers' reference, the two laws stipulate as follows:

Article 73-2, Japanese Patent Law

"Each of the joint owners may, except as otherwise prescribed by contract, work the patented invention without the consent of the other joint owners."

Article 262, U.S. Patent Law

"In the absence of any agreement to the contrary, each of the joint owners of a patent may make, use or sell the patented invention without the consent of and without accounting to the other owners."

In the case of joint R&D activity by a maker and a user, a party should not force the other to have, in the agreement, such provisions like: "Products in accordance with R&D achievements shall not be sold to a third party" or "Products in accordance with R&D achievements shall not be purchased from a third party."

It is likely that these provisions could cause a question of unfair transaction as provided for in the Anti-Monopoly Law. Thus, a careful condiseration is necessary in this respect.

It is also important to provide for the situation where R&D achievements are in the sole ownership of one of the parties. If R&D is carried out jointly by a maker and a user, and the maker manufactures products under its partner's patents for use by the user/patentee, the user/patentee may grant a royalty-free license to the maker. In this case, there are no significant problems. However, if the maker may wish to manufacture those products for use by a third party, it is required to obtain a license from the user/patentee for this purpose.

Similarly, where R&D is carried out jointly by makers and one of the parties solely owns patents in some countries, the other party may wish to obtain licenses to work in those countries. In these situations, the terms and conditions of

such licenses will vary depending upon the kind of implementation, marketing area of licensee, etc. Some could be royalty-free, and some royalty-bearing. They may provide that the licensor has first priority to use patented inventions. Often, a general cross-license, not providing specific limitations, will be granted on a royalty-free basis, provided that both parties have contributed equally to the joint research. However, R&D under one-sided contribution by one party may require a certain restriction of use of the licensed technology rather than an overall cross-license. In any event care should, of course, be taken to avoid anti-trust infringement in these circumstances, because clauses prohibiting licenses to third parties or providing for 'tie-in' agreements are likely causes of violation. Likewise, thorough consideration is necessary as to a right of the licensee to grant a sublicense to a third party and royalty return to the licensor under such a sublicense.

It may also be necessary to provide for the licensing of patents obtained by either party, or patents to be granted on inventions made by either party's employees prior to the start of joint R&D. In some instances, they may be included in the agreement and dealt with as abovementioned patents which are under the sole ownership of either party. However, it would be reasonable to limit the field of licensing, taking into account the R&D field, the products involved and the licensee's market. Other factors of a license should follow the licensing policy of the licensor.

In Appendix, sample provisions are indicated with respect to the licensing of solely owned patents.

5. Jointly Owned Patents

It is also necessary for the parties to provide for the licensing of a jointly owned patent to a third party, in particular the terms and conditions of such a license and the treatment of royalty income. In addition, careful consideration should be given to the difference of patent laws between Japan and the U.S.A. By way of illustration, the provisions from the relevant articles of each patent law are cited below.

Article 73-3, Japanese Patent Law

"A joint owner may grant neither an exclusive license nor a non-exclusive license without the consent of all the other joint owners."

Article 262, U.S. Patent Law

"In the absence of any agreement to the contrary, each of the joint owners of a patent may make, use or sell the patented invention without the consent of and without accounting to the other owners."

Unlike the Japanese Law, the U.S. statute provides that the consent of the other party is not necessary before a license may be granted to a third party and there is no provision requiring the sharing of royalty income. Failure to state clearly the rights of the parties with respect to third party licensing is bound to cause confusion. This is a particularly important point where one of the parties is contemplating a cross-license agreement with a third party in its own country.

While the Japanese Patent Law provides:

"A joint owner of a patent right may neither transfer his share nor establish a pledge upon it without the

consent of all the other joint owners." (Article 73-1) the U.S. Law requires no specific consent from the other party (35USC262). Contractual stipulations on dealing with a jointly owned patent are therefore indispensable.

Another area of difference between the Japanese and U.S. patent laws is the right to claim an injunction against infringement. In Japan, either of two joint patentees may individually seek an injunction to prevent patent infringement but all joint owners of a patent must join in an action seeking damages for infringement. Under U.S. law the courts will not allow an action by a single joint owner in either case. This difference should also be taken into account when drafting an agreement and sample provisions relating to the treatment of jointly owned patents are given in Appendix.

6. Others

Joint R&D agreement between U.S. and Japanese companies always give rise to the question of the governing law under which issues arising out of the agreement will be settled. Accordingly, agreements must designate the applicable law. This decision may suitably be left to the discretion of the parties, according to the principle of autonomy by parties, and they may determine the governing law from a practical view point. A significant factor in this decision will be the language to be used in the agreement. If the languages in the agreement and the governing law are different, it will cause difficult problems in interpretation of the agreement and the application of the law.

Another possiblity is a provision dealing sepcifically with how disputes arising in connection with the agreement are to be settled. There are two conventional methods for settling such disputes, in court and by arbitration. Careful consideration of the merits and demerits of each should be made before deciding which is applicable. In the latter case, an arbitration clause should include the following in order to ensure a satisfactory arbitration.

1) Identification of the arbitrator
2) Applicable arbitration rules or governing law
3) Location where the arbitration is to take place
4) Definition of issues to which arbitration is applicable
5) Number and members of arbitration board and method for selecting board arbitrators
6) Method of decision-making, unanimous or majority vote by board of arbitrators

Specific provisions, if any, under the item 2) above, would be clearly applicable to matters involved in the succeeding items. However, unless these matters are clearly defined, disputes may occur regarding the conduct of the arbitration. Disputes at this stage are extremely difficult to settle and can render meaningless the very provision of an arbitration clause.

7. Conclusion

This discussion has been concerned with the ownership of joint R&D achievement, implementation thereof, treatment of jointly owned patents, governing laws and methods for settling disputes. These are major items requiring thorough consideration before joint R&D agreements are executed between Japanese and U.S. companies. However, these are not necessarily all the matters to which the parties should direct their attention. They should be fully

aware of, for example, share of the R&D expenses, dispatch of researchers to the partner, restrictions of joint R&D with a thrid party, manner and timing of R&D announcement, confidentiality treatment, etc. Thus, it is very important that agreements include detailed statements as to how and when joint R&D achievements are to be reduced to practice. Future troubles will be much reduced by making the agreement anticipatory in this respect.

In addition to standard items, a thorough study of the differences in the markets of the two companies, the differences in the laws in the two countries and the differences in the thought toward contract in the two countries should be made before an agreement for joint research and development is executed.

APPENDIX

Article X

Ownership of Industrial Property Rights

Clause X1

The Parties hereto hereby agree that each Party has, during the effective period of this Agreement, a right to obtain patent rights (including other industrial property rights) for inventions and technical achievements under a joint research and development (hereinafter called "joint R&D"), and a right to claim an ownership of the patent rights as follows:

1) Any right pertaining to invention(s) or utility model(s) made jointly by employees of the Parties hereto shall be owned by the Parties.

2) Any right pertaining to patent invention(s) or utility model(s) made solely by employee(s) of either Party shall be owned by the Party whose employee(s) made the invention(s).

3) Notwithstanding the provisions of sub-clause 1) above, either Party may claim a right to obtain patent rights in the countries where the other Party does not want to obtain patent rights for its invention.

Clause X2

Company A shall deal with applications for patent and procedures thereafter as provided for in sub-clause 1) of Clause X1 above, and maintaining patent rights granted or issued.

Company B shall cooperate with Company A in such applications and subsequent procedures as well as the maintenance of patent rights.

Clause X3

Any costs and expenses necessary for the procedures provided for in Clause X2 above, shall be borne equally by the Parties.

Clause X4

In the case where either of the Parties hereto files, in any country, an application for patent to an invention subject to Clause X1 above in its name, the filing Party is required to so inform the other Party after the application without delay and send to the other Party a copy of the application and a list of countries where a convention application is to be filed by the filing Party.

Clause X5

In the countries where the filing Party intends not to file a convention application under Clause X4 above, and where the other Party wish to file a convention application for patent, the other Party may succeed sole ownership of the patent to be issued on such application.

Clause X6

In the case where the filing Party wants an abandonment of its solely owned rights under sub-clause 2) and 3) of Clause X1, or Clause X5 hereof, it shall send a prior written notice to the other Party. The receiving Party may, if so wishes, maintain such rights instead by bearing all the expenditures including fees necessary in the future.

Article Y

License of Patents Solely Owned

Clause Y1

With respect to world patents obtained in the name of either Party hereto under this joint R&D and subject to Article X hereof, the Party who owns the patents shall grant a royalty-free and non-exclusive license, to the other Party, to make, use sell and other dispose products under this joint R&D.

Clause Y2

Such license shall remain effective until the expiry of the patents irrespective of a termination or cancellation of this Agreement.

Clause Y3

Any license granted to the other Party by the patentee hereunder, shall not be sublicensed to a third party without prior written consent of the patentee.

Clause Y4

With respect to the world patents obtained in the name of either Party hereto under this joint R&D and suject to Article X hereof, the patentee shall grant a license to the other Party for the purpose of using such license for products other than those under this joint R&D if such use for other products is proposed by the other Party.

Clause Y5

Such a license shall be non-exclusive requiring a three parcent (3%) royalty payment of a net sales price of the Licensed Product. Other terms and conditions for the license shall be determined by the Parties hereto upon mutual consultation whenever it becomes necessary.

Article Z

Patents Owned Jointly

Clause Z1

The Parties hereto may have a right to assign the patents obtained and owned jointly under Article X hereof, partially or wholly, to a third party, may establish the right of pledge upon them, or may grant a license to a third party, provided that a prior written notice for such assignment, pledge, or license is given and a consent is obtained from the other Party by the Party concerned.

In such an occasion, however, the other Party shall approve the proposed assignment, pledge or license, unless it has special reasons to refuse.

Clause Z2

Where royalties are paid to either Party under Clause Z1 above by a third party, the Party shall send to the other Party a half of the royalty within sixty (60) days from receipt.

Clause Z3

Where either Party receives consideration subject to Clause Z1 in the form of a non-cash payment, the Party shall notify the other Party prior to executing such agreement with a third party and the Parties shall determine the monetary value of the consideration.

Clause Z4

The Party shall transmit fifty percent (50%) of the consideration under Clause Z3 to the other Party within sixty (60) days from the execution of an agreement with a third party.

Clause Z5

In the case where either Party grants a license to a third party under Clause Z1 above, the Party shall inform the other Party of the execution of agreement, royalty, and major terms and conditions within thirty (30) days from the execution of an agreement with a third party.

Clause Z6

If a third party infringes patents jointly owned by the Parties hereto under Article X, the Parties shall cooperate in seeking to prevent such infringement. The Parties shall consult each other as to how to bear the expenditures necessary for prevention of infringement.

JOINT R&D AGREEMENTS

BETWEEN

U.S. AND JAPANESE COMPANIES

COMMITTEE #2

AUTHOR

W. R. NORRIS

ABSTRACT

Joint research and development agreements between Japanese and American companies are challenging documents to negotiate, draft and perform. At the outset, the parties should carefully assess compatability of their objectives. The parties should also carefully analyze their relationship under the antitrust laws of the United States and Japan to avoid risk of penalties and to assure that the results of the joint effort can be exploited as planned. So long as the principle objectives of the parties are well defined there are many details concerning the planning, reporting and harvesting of technology that might be left to decision at the time a question arises. Choice of a legal entity for joint research impacts heavily on tax and liability consequences. In spite of the many questions raised by this form of international cooperation, its advantages assure an ever increasing role for joint R&D agreements between Japanese and American companies.

JOINT R&D AGREEMENTS BETWEEN U.S. AND JAPANESE COMPANIES

Joint research and development agreements are challenging documents to negotiate, draft and perform under the best of circumstances. To surmount added difficulties due to differences in language, culture, laws, national policies and geography, as inherently apply to Japanese and American partners in joint research, it is apparent that there must be significant perceived advantages to motivate expenditures of necessary time, energy and money. Personally, I believe such advantages exist and that the future holds much promise for joint research between American and Japanese companies.

There are many reasons for jointly carrying out research and development programs. For an example in the technical vein, one of the participants may have a product to sell and the second participant, possessing technology to use the product, is seeking lower manufacturing costs or improved properties in the product it produces. A variation on this theme is joint effort to develop a new combination product which utilizes a product of each participant. It is also common to seek jointly new processes for old products or to discover and develop new products.

Sometimes legal reasons provide incentive for joint R&D undertakings. Parties possessing overlapping or supplementary patent coverage on, or possibly joint ownership in, an idea may find joining forces a logical, perhaps even necessary, extension of their relationship under law.

Spreading economic risk of product development and/or reducing lag time to commercialization can be primary objectives for joint R&D programs. Studies have shown time from discovery to market is reduced as a function of the number of participants involved in joint development(1). In view of ever accellerating technological change and transient markets, reducing time to market may be reason enough for joint R&D even though other considerations may favor handling the development phase alone.

It is important from the outset of all joint R&D undertakings for each of the participants to understand what motivates the other and to test compatibility of objectives. The happiest situation, of course, is when objectives do not

(1) LES, Vol 78, p. 1978

conflict, e.g. an American company is satisfied with using the fruits of the joint effort in United States and the Japanese participant is happy with Japan. This all presumes, of course, that such division survives antitrust scrutiny under both Japanese and U.S. laws.

Another happy situation may involve a possible division of the research results along vertical lines. For example, the party with product to sell acquires manufacturing technology while the user acquires applications technology.

Unfortunately, realities seldom permit such simple solutions. More often the formula for sharing proprietary product of joint R&D is a negotiated result of balancing and trading compromise; each party yielding in its objectives for the position it seeks from the other party.

ANTITRUST CONSIDERATIONS

American companies have for years complained about the uncertainity surrounding application of U.S. antitrust law to joint research and agreements with foreign parties. These complaints have ultimately caused the United States Department of Justice to promulgate several guidelines.

On November 25, 1980, it issued one on research joint ventures. Much has been written about this guide, which runs to 87 pages plus appendices. Its advice cannot be digested within the limits of this overview, however, the ultimate question to be assessed is whether participation in joint research renders the participants liable for damages or the joint product vulnerable[2]. The research partners should ask themselves: Will their relationship survive challenges by governmental authorities and private parties? Does it have horizontal or vertical impact in the market? Will the patents of the joint effort be enforceable? Will the results of the joint effort have to be offered for licensing to all comers? Will the background technology of the participants become vulnerable to compulsory licensing?

As a general rule, when the results of the joint research and the background technologies of the participants, are intended for licensing to all qualified applicants, the relationship is less likely to trigger antitrust

(2) An analysis of relevant case law is found in Licensing Law and Business Report, Vol. 51 No. 2, August, 1982

problems. As the participants seek to reserve some degree of exclusivity for themselves by territorial or technical field limitations, difficult antitrust questions are confronted which should be dealt with at the inception of the undertaking. It should be noted, however, that recent court cases have been encouraging for innovators who seek technical support outside their organization in bringing ideas to commercial fruition(3).

To summarize, if there is an antitrust problem at the inception of the joint research, this fact may taint the value of the end product to the participants. I suspect there is not as much risk of this consequence in Japan as in the United States, but there is hope U.S. laws will be applied less arbitrarily and more predictably in the future. Certainly the research venture guidelines are a hopeful sign for American companies. Moreover, recent legislative proposals, if passed by Congress, would require more stringent tests of effects on foreign commerce for application of antitrust laws to joint R&D agreements.

(3) SCM v. Xerox, 645 F2d. 1195 (2d Cir.) 1981 and Berkey v. Eastman Kodak, 603 F2d 263 (2d Cir.), 1979.

Finally, it appears in any event that American and Japanese companies have greater freedom in setting objectives and defining rights that flow from joint research than is possible between two American companies of like stature.

SCOPE AND DURATION OF UNDERTAKING

If we assume the parties have examined and found their intended relationship survives antitrust scrutiny, it is important to anticipate the balance of interests affecting the working interface at each stage of the joint R&D undertaking. Within practical limits the parties should provide various options, bailouts and failsafe termination possibilities to accomodate potentially changing circumstances of the parties with time.

The immediate or first stage of a joint R&D undertaking is what I term the problem solving or research phase. Many successful joint R&D relationships involve only casual commitments of the parties to the joint R&D goals. An example is discretionary exchange of independently developed data. Obviously, the roles of the parties need to be more extensively defined as expectations and reliance increase.

In defining their roles, the parties may be able to set forth complete work plans at the onset of research, but it is more likely they will want to remain flexible and operate through committees or representatives that plan the directions of joint effort as new data and opportunities unfold. Since respective efforts of the parties may not always be balanced throughout an entire program, some accounting regime to calculate balancing payments, may be desired.

As the joint efforts proceed through discovery, testing, developmental stages, consideration of ultimate commercial development may become feasible. At this point, the joint program may terminate, with each party taking away its technological bargain. If the joint undertaking should continue into a commercial phase, discussions will likely be reopened to accommodate the possibility of changed circumstances of the parties, economics of the times and consideration of the jointly developed information. Because one party may change its position on proceeding with the entire project, it is important to plan for this contingency by providing the other party with suitable options to protect its investment.

The joint research will most likely be conducted under mutual secrecy obligations to preserve the proprietary nature of new discoveries and background communications. These terms are standard but there are some special exceptions to secrecy the parties should consider. I refer to exceptions for compulsory disclosure of information by operation of law or court order and the remote but possible compulsory disclosure of safety and health data to governmental agencies. These situations may be covered by force majeure principles but uncertainity is avoided by addressing these issues in the Agreement.

Assuming that the areas of investigation have been defined and each party diligently carries out its assignments, technical results of the joint effort will begin to flow in due course. Provisions should be made for reporting these results and the identification of any discoveries or inventions. In this connection, the parties should consider the time window over which foreground inventions may be made. Do they want to include some period after the close of active research? Also, what will be the test of relevance? Applicability

to the technical field being mutually explored or a broader deriviative information basis?

The complexities of patent harvesting will assure that patent attorneys for the Japanese and American participants will earn their salaries. It is practically impossible to anticipate all questions affecting this subject by agreement. Nevertheless, careful attention should be given to questions of ownership and licenses in the foreground results of the joint effort. Where will the patents be filed first? Which party will prosecute? How will U.S. best-mode requirements be satisfied if a party does not wish to publish background technology? Is the invention of party B an improvement of the technology of party A? Is there joint inventorship and ownership? The laws of each country are specific as to rights and necessity for agreement of the parties regarding the prosecution maintenance, licensing and enforcement of such patents. What about reversionary rights in the event one party wants to give up? How will expenses, licensing fees or infringement damages be divided? Who pays inventor compensation?

My advice is to leave a lot of these questions open for good faith bargaining at the time a decision is needed. This is not to say that certain options as to major objectives should not be covered by agreement. For example, two partners may be well suited for joint research but one of them may be unable to fully capitalize or otherwise adequately exploit its share of the technology on a worldwide basis. To illustrate further, partner A may patent a process which in itself is a market for a product of partner B. Partner B will naturally want the technology to be licensed and exploited as widely as possible in order to expand its market but partner A may lack the desire or capability to proceed with development. A potential conflict in interests of this nature should be anticipated and ways sought to preserve mutual incentives. As possibilities, partner A might be committed to due diligence or partner B given territorial rights outside the marketing capabilities of A.

Another major topic that should be addressed in considering cross-options to allow for unimpeded access to the total horizons of developed technology is the background technology of each research participant. Careful planning

and draftsmanship are required if the fruits of the joint research are not to spoil on the vine.

LEGAL ENTITY

After deciding the scope and objectives for a joint R&D undertaking, the parties should give some consideration to its legal form. Should a separate jointly owned legal entity or a formal partnership be created or should the parties retain independent contractor status. If the work pursuant to the undertaking is to occur in both United States and Japan and the extent of sharing results will be some kind of cross licensing or assignment of proprietary interests, the parties may want to retain independent contractor status, each being solely responsible for its own use and licensing of the technology. To this end, the parties should consider clauses declaring the independent contractor status of their relationship and cross indemnification of any claims or damages that may result from the other's use of the technological fruits of the joint effort.

If the parties contemplate sharing of royalty income or otherwise cooperatively exploiting the results

of the joint R&D as well as sharing its costs, the arrangement may be viewed under U.S. law as a partnership regardless of how the relationship is characterized by agreement of the parties. Anticipating such a possibility, the partners may wish to consider incorporating the endeavor to gain the advantages of limited liability but tax considerations point up a potential trade-off.

While it is possible to preserve research expense deductibility from taxable income for joint owners of an incorporated entity conducting joint R&D, there is also some risk that the U.S. Internal Revenue Service will challenge current deductibility. If the IRS is successful the research expenditures would have to be capitalized and amortized over a time period. In other words there may be tax costs for limited liability.

If the work is to proceed under the auspices of a formalized legal entity in Japan, the American partner will face questions as to whether it should participate directly, or indirectly through a local subsidiary in Japan. As earlier mentioned, from a U.S. antitrust viewpoint, the location of the activities and joint

venture in Japan may allow more flexibility. In any event, each of these alternatives have important potential tax consequences that require careful long term planning. Presumably, the parties will want to currently deduct expenses for research from taxable income, avail themselves of tax credit incentives in their home countries and end up with ownership of the fruits of the joint R&D in a strategic entity. The American company, for example, may want ownership in an entity whose income from the R&D will qualify as foreign source income to the parent company.

CONCLUSION

In this short time, we have only taken a peek at the kinds of questions affecting American and Japanese partners in joint R&D. I think the future of such undertakings for American and Japanese companies is more promising today than it ever has been in the past. The antitrust risk under U.S. laws for such activities has been clarified and the trend is toward more stringent application violation criteria. Vertical relationships are relatively safe and even horizontal relationships between potential competitors, so danagerous in the

United States, may not be as much of a problem for Japanese/American joint undertakings in Japan. While details will be dictated by circumstances of the parties and objectives sought, joint R&D agreements should focus on specific roles in planned research, options upon fruition and rudiments of joint exploitation of the results, should this be the desire of the parties and legally possible. Principle topics for agreement include secrecy, limitations on use of foreground technology, patent disposition, contingency of joint inventorship, and definition and relationship of background technologies of the parties to foreground objectives.

A clear understanding between the parties as to their respective objectives, resulting technology prerogatives and markets, will aid in the resolution of numerous questions that undoubtedly will arise outside agreement formulas. And finally, there is no substitute for mutual good will of the parties in dealing with unforeseen events.

Thank you.

COMMITTEE NO. 3

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TITLE: RECENT INTERNATIONAL DEVELOPMENTS IN THE PROTECTION OF COMPUTER PROGRAMMING

COMMITTEE: #3

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ABSTRACT: THIS PAPER CONCENTRATES ON AND REVIEWS THE RAPID DEVELOPMENTS THAT ARE TAKING PLACE WORLDWIDE IN THE COPYRIGHT LAW RELATIVE TO PROTECTION OF COMPUTER PROGRAMS. THE MODEL LAW PROVISIONS PROPOSED BY THE WORLD INDUSTRIAL PROPERTY ORGANIZATION (WIPO) ARE REVIEWED AND CONTRASTED WITH THE DEVELOPMENTS IN THE NATIONAL LAWS. COMMENTS ARE MADE CONCERNING THE DIRECTION OF CHANGES AND ACTIVITIES THAT ARE LIKELY TO TAKE PLACE IN THE FUTURE.

RECENT INTERNATIONAL DEVELOPMENTS IN THE PROTECTION OF COMPUTER PROGRAMMING

COMPUTER PROGRAMMING IS ONE OF THE NEWEST TECHNOLOGIES. IT HAS EXPLODED IN TECHNICAL AND COMMERCIAL IMPORTANCE DURING THE LAST TEN YEARS. PROGRAMMING HAS INVADED AND BECOME AN INTEGRAL PART OF EVERY TECHNICAL ART - FROM THE PROGRAMMING CONTAINED IN MICROPROCESSORS USED TO CONTROL HOUSEHOLD APPLIANCES, CAMERAS AND AUTOMOBILES TO THE EXTREMELY SOPHISTICATED PROGRAMS IN LARGE COMPUTERS THAT CONTROL WORLDWIDE COMMUNICATIONS NETWORKS AND SPACE FLIGHTS. FOR EXAMPLE, IN THE UNITED STATES ALONE, IN 1971 THE INDUSTRY EARNED $102 MILLION DOLLARS IN REVENUES FROM PACKAGED SOFTWARE FOR COMPUTERS AND BY 1982 INDUSTRY REVENUES FOR SUCH SOFTWARE HAD GROWN TO $2.2 BILLION DOLLARS. NO RELIABLE SOURCE OF INFORMATION FOR THE WORLDWIDE MARKET EXISTS, BUT IT IS ESTIMATED TO BE IN EXCESS OF $3.5 BILLION DOLLARS FOR 1982. THE MARKET WILL CONTINUE TO GROW AT AN EXPONENTIAL RATE IN THE FUTURE. NOT ONLY IS THE MARKET VERY LARGE AND GROWING, BUT THE INVESTMENT BEING MADE IN COMPUTER PROGRAMMING IS TRULY STAGGERING.

THE INCREASING IMPORTANCE OF COMPUTER PROGRAMMING HAS RAISED OBVIOUS QUESTIONS AS TO HOW THIS TYPE OF

INTELLECTUAL PROPERTY CAN AND SHOULD BE PROTECTED. MUCH HAS BEEN WRITTEN CONCERNING THE PROS AND CONS OF PATENT, TRADE SECRET AND COPYRIGHT PROTECTION, AS WELL AS THE POSSIBLE NEED FOR A COMPLETELY NEW PROTECTION SYSTEM. I DO NOT INTEND TO REPLOUGH THAT GROUND TODAY. RATHER, I WOULD LIKE TO CONCENTRATE ON THE VERY RAPID DEVELOPMENTS IN THE COPYRIGHT LAW AS APPLIED TO COMPUTER PROGRAMS THAT ARE TAKING PLACE THROUGHOUT THE WORLD. I ALSO WOULD LIKE TO SUGGEST THAT WE AS INDIVIDUALS AND PIPA AS AN ORGANIZATION SHOULD BE TAKING AN ACTIVE PART IN THE DEVELOPMENT OF THIS INCREASINGLY IMPORTANT AREA OF INTELLECTUAL PROPERTY LAW.

A COMPUTER PROGRAM IS A UNIQUE PIECE OF INTELLECTUAL PROPERTY. ONCE THE GENERAL IDEA OR CONCEPT FOR A PROGRAM IS DEFINED, THE MAJOR INVESTMANET IS INVOLVED IN EXPRESSING OR WRITING THE PORGRAM IN THE FORM OF CODED STATEMENTS WHICH ACTUALLY CONTROL THE COMPUTER. THE WRITING, TESTING AND DEBUGGING OF THE CODE REPRESENTS SOMEWHERE BETWEEN 70% AND 80% OF THE TOTAL INVESTMENT IN CREATING A TYPICAL COMPUTER PROGRAM. THUS, FROM A BUSINESS STANDPOINT, A MECHANISM IS REQUIRED FOR PROTECTING THIS INVESTMENT EVEN THOUGH THE DATA PROCESSING CONCEPTS OR IDEAS ON WHICH THE PORGRAM IS BASED ARE NOT PROTECTABLE. PROGRAMS ARE UNIQUE IN THAT THEY ARE EASILY REPRODUCED AT MINIMUM COST. ABOUT ALL IT TAKES IS A TAPE OR A DISC DRIVE. THE REPRODUCTION PROCESS IS ESSENTIALLY THE SAME AS MAKING A COPY OF MUSICAL TAPE OR MUSICAL RECORD.

THESE UNIQUE CHARACTERISTICS HAVE LED TO A GROWING AWARENESS AND APPLICATION THAT COPYRIGHT PROTECTION IS THE BEST MECHANISM FOR PROTECTING THE INVESTMENT IN COMPUTER PROGRAMS. I DO NOT PLAN TO DEBATE THE MERITS OF COPYRIGHT VERSUS PATENT AND TRADE SECRET PROTECTION OTHER THAN TO NOTE THAT PATENTS PROVIDE NO PROTECTION FOR THE VAST MAJORITY OF PROGRAMS WHICH DO NOT MEET THE REQUIRED STANDARDS OF NOVELTY. WHILE PATENTS ON PATENTABLE PROGRAMS CAN PROBABLY BE OBTAINED IN THE UNITED STATES AND JAPAN, PROGRAMS ARE SPECIFICALLY DENIED PROTECTION UNDER THE EUROPEAN PATENT CONVENTION AND THIS MUST BE OF CONCERN TO ANY COMPANY OPERATING ON AN INTERNATIONAL BASIS. TRADE SECRET PROTECTION IS NOT VIABLE FOR COMPUTER PROGRAMS WHICH ARE WIDELY DISTRIBUTED TO THOUSANDS AND PERHAPS MILLIONS OF USERS. I RECOGNIZE THAT MORE THAN ONE FORM OF PROTECTION MAY BE APPLICABLE TO ANY GIVEN COMPUTER PROGRAM, BUT I STRONGLY SUBMIT THAT COPYRIGHT MUST FORM THE BASIS OR BACKBONE OF ANY BROADBASED SYSTEM FOR PROTECTING THIS UNIQUE ASSET. THE COPYRIGHT RIGHT IS EASY TO PERFECT AND EASY TO ENFORCE.

RECENT LEGISLATIVE ACTIVITY AND COURT DECISIONS IN THE UNITED STATES, GERMANY, JAPAN AND OTHER COUNTIRES CONFIRM THAT COPYRIGHT IS A VIABLE PROTECTION MECHANISM FOR COMPUTER PROGRAMS. LET'S EXAMINE THE RECENT DEVELOPMENTS ON A COUNTY-BY-COUNTRY BASIS:

UNITED STATES

THE UNITED STATES HAS BEEN VERY ACTIVE ON BOTH THE LEGISLATIVE AND JUDICIAL FRONTS. IN DECEMBER, 1980 AMENDMENTS WERE MADE TO THE COPYRIGHT LAW WHICH EXPLICITLY CONFIRM THAT COPYRIGHT PROTECTION IS AVAILABLE FOR COMPUTER PROGRAMS. THEY ALSO LIMIT AND DEFINE THE RIGHTS OF A BUYER OF A PROGRAM - I.E. HE CAN COPY THE PROGRAM INTO ONLY ONE COMPUTER AT ONE TIME. IF HE LATER TRANSFERS THE PROGRAM, HE MUST TRANSFER ALL COPIES AND CANNOT USE A COPY IN HIS COMPUTER. THE TEXT OF THESE IMPORTANT AMENDMENTS IS SET FORTH IN THE APPENDIX TO THIS PAPER.

WHILE NOT AS YET ENACTED IN LAW, SEVERAL OTHER LEGISLATIVE CHANGES ARE BEING CONSIDERED. A FIRST SERIES OF AMENDMENTS IS SUPPORTED BY THE ASSOCIATION FOR DATA PROCESSING SERVICING ORGANIZATIONS (ONE OF THE LARGEST AND MOST INFULUENTIAL COMPUTER USERS GROUPS.) THESE FURTHER AMENDMENTS ADOPT THE WIPO DEFINITIONS FOR PROGRAMMING. THEY ALSO MAKE IT CLEAR THAT TRADE SECRET RIGHTS ARE NOT LOST SIMPLY BECAUSE A PROGRAM IS SUBJECT TO COPYRIGHT PROTECTION. THE SECOND PROPOSED CHANGE WOULD SUBSTANTIALLY INCREASE THE CRIMINAL PENALTIES FOR MASS COMPUTER PROGRAM PIRACY. FOR EXAMPLE, UNAUTHORIZED REPRODUCTION OR DISTRIBUTION OF MORE THAN 65 COPIES OF A COMPUTER PROGRAM

WITHIN A PERIOD OF 180 DAYS WOULD BE PUNISHABLE BY A FINE NOT TO EXCEED $250,000 DOLLARS, AND/OR IMPRISONMENT FOR A TERM NOT TO EXCEED FIVE YEARS. AUTHORS AND MARKETERS OF SOFTWARE FOR PERSONAL COMPUTERS ARE VERY INTERESTED IN THE PASSAGE OF THIS LEGISLATION. IT IS NOT POSSIBLE TO PREDICT WHETHER THESE CHANGES WILL BE ENACTED DURING THE NEXT SESSION OF THE U.S. CONGRESS, BUT THEY DO HAVE STRONG BACKING AND SUPPORT FROM SOFTWARE AUTHORS, MARKETERS AND USERS.

THE MOST INTERESTING DEVELOPMENTS HAVE BEEN IN THE JUDICIAL AREA. NO LESS THAN NINE DECISIONS HAVE BEEN ISSUED DURING THE PAST TWO YEARS. THESE DECISIONS BEGIN TO DEFINE THE REMEDIES AVAILABLE UNDER THE COPYRIGHT LAW.

IN DATA CASH SYSTEMS, INC. VS. JS & A, GROUP, INC. THE DEFENDANT HAD COPIED A SEMICONDUCTOR CHIP OF THE PLAINTIFF, INCLUDING THE PROGRAM EMBEDDED IN THE CHIP. THIS PARTICULAR CHIP WAS USED IN A HAND-HELD CHESS GAME. THE APPEALS COURT DISMISSED THE CASE SINCE A COPYRIGHT NOTICE REQUIRED BY THE LAW THEN IN EFFECT HAD NOT BEEN APPLIED TO THE CHIPS. HOWEVER, THE STRONG IMPLICATION WAS THAT IF THE NOTICE HAD BEEN APPLIED, COPYRIGHT INFRINGMENT WOULD HAVE BEEN FOUND.

A MORE RECENT CASE INVOLVED TANDY CORPORATION VS. PERSONAL MICRO COMPUTERS, INC. THE DEFENDANT WAS CHARGED WITH DUPLICATING PLAINTIFF'S SEMICONDUCTOR CHIP CONTAINING A PROGRAM. THE COURT DECIDED THAT THE PROGRAM IS A WORK OF AUTHORSHIP AND THE CHIP IS A TANGIBLE MEDIUM OF EXPRESSION, AND THEREFORE THE PROGRAM IN THE CHIP IS SUBJECT TO COPYRIGHT PROTECTION. ON THIS BASIS, THE COURT REFUSED TO DISMISS THE CASE.

OBJECT CODE STORED IN THE ELECTRONIC MEMORY OF A VIDEO GAME IS COPYRIGHTABLE SUBJECT MATTER ACCORDING TO THE THIRD CIRCUIT COURT OF APPEALS IN THE WILLIAMS ELECTRONICS VS. ARTIS INTERNATIONAL, INC. DECIDED IN AUGUST OF THIS YEAR. THIS IS THE CASE MENTIONED BY MR. GILKES DURING HIS PRESENTATION ON WEDNESDAY. THIS MATTER WILL BE THE SUBJECT OF FURTHER CONSIDERATION IN THE PENDING CASE OF APPLE COMPUTER, INC. VS. FRANKLIN COMPUTER CORP. WHEREIN THREE DAYS BEFORE THE DECISION IN THE WILLIAMS CASE A LOWER COURT REFUSED TO GRANT A PRELIMINARY INJUNCTION AND EXPRESSED SOME DOUBT AS TO THE COPYRIGHTABILITY OF OBJECT CODE.

COMPUTER PROGRAMMING IS USUALLY WRITTEN AS SOURCE CODE IN A HIGH LEVEL LANGUAGE. THE SOURCE CODE IS THEN COMPILED OR TRANSLATED INTO MACHINE READABLE INSTRUCTIONS, CALLED OBJECT CODE, WHICH ACTUALLY OPERATES THE COMPUTER. IN A

CASE DECIDED WITHIN THE LAST SEVERAL MOTHS, GCA CORP., VS. CHANCE, THE ISSUE WAS WHETHER A COPYRIGHT ON THE SOURCE CODE PROTECTS THE OBJECT CODE. - THE COURT HELD THAT IT DID - I.E. THE OBJECT CODE IS, IN EFFECT, A DERIVATIVE WORK OR REPRODUCTION OF THE SOURCE CODE. IN DISCUSSING THE MATTER OF SOURCE CODE VERSUS OBJECT CODE PROTECTION WITH AN EMINENT JAPANESE LAWYER, HE CHARACTERIZED THE SITUATION AS BEING THE SAME AS A PRETTY GIRL WEARING DIFFERENT DRESSES - THE SUBSTANCE IS THE SAME. I THOUGHT THIS WAS A PARTICULARLY NICE WAY OF VISUALIZING THE QUESTION INVOLVED.

A SERIES OF U.S. CASES INVOLVING THE VISUAL DISPLAY OF VIDEO GAMES IS OF SIGNIFICANCE. IN THESE CASES THE PLAINTIFF CLAIMED COPYRIGHT INFRINGMENT BASED ON THE VISUAL DISPLAY THAT IS PRESENTED ON THE SCREEN TO THE USER. A RECORDING OF THE VISUAL PRESENTATION IS DEPOSITED WITH THE COPYRIGHT OFFICE RATHER THAN THE SOURCE OR OBJECT CODE. THESE CASES HOLD THAT THE VISUAL PRESENTATION IS ITSELF SUBJECT TO COPYRIGHT PROTECTION.

IN THE CASE OF STERN ELECTRONICS, INC. VS. KAUFMANN ET AL THE LICENSEE OF A JAPANESE OWNER OF THE VIDEO GAME "SCRAMBLE" OBTAINED A PRELIMINARY INJUNCTION AGAINST THE DEFENDANT BASED ON A COPYRIGHT REGISTRATION FOR AN AUDIOVISUAL WORK. THE COURT STATED THE AUDIOVISUAL DISPLAY IS APPROPRIATE SUBJECT FOR A COPYRIGHT EVEN IF THE UNDERLYING COMPUTER PROGRAM IS NOT COPYRIGHTED.

THE MAIN ISSUE PRESENTED IN THESE CASES IS WHETHER THE FORM OF EXPRESSION IS "FIXED" AS REQUIRED BY THE COPYRIGHT LAW SINCE THE PLAY MODE OF THE GAME IS INTERACTIVE AND THE DISPLAY VARIES WITH THE SELECTIONS OR MOVES MADE BY THE OPERATOR. ONE DECISION LIMITED COPYRIGHT PROTECTION TO THE SO CALLED "ATTRACT" MODE, WHICH IS INVARIABLE; BUT THE MORE RECENT CASES HAVE EXTENDED PROTECTION TO BOTH THE ATTRACT AND PLAY MODES. THE LATER DECISIONS STATE THE PROGRAM IS STORED OR EMBEDDED IN A SEMICONDUCTOR CHIP AND THEREFORE IS "FIXED", EVEN THOUGH THE SPECIFIC ROUTINES EMPLOYED AND THEIR ORDER OF USE ARE DEPENDENT UPON USER INPUTS.

IT IS BASIC THAT COPYRIGHTS DO NOT PROTECT CONCEPTS OR IDEAS. BUT HOW CLOSE DOES ONE PROGRAM HAVE TO BE TO ANOTHER TO BE A COPYRIGHT INFRINGEMENT? IN THE CASE OF ATARI INC. VS. AMUSEMENT WORLD, THE COURT CHARACTERIZED THE COPYRIGHTED GAME AS ONE IN WHICH PLAYERS COMBAT SPACE ROCKS AND SPACESHIPS, AND FOUND THAT GIVEN THE IDEA AND THE MEDIUM, THE SIMILIARITIES BETWEEN THE TWO GAMES WERE INEVITABLE, AND DENIED INFRINGEMENT.

A DIFFERENT RESULT WAS REACHED IN ATARI, INC. VS. NORTH AMERICAN PHILIPS CONSUMER ELECTRONICS, DECIDED MARCH 2, 1982 BY A CIRCUIT COURT OF APPEALS, IN WHICH THE K. C. MUNCHKIN GAME WAS HELD TO INFRINGE THE PAC-MAN GAME. HERE THE COURT

CHARACTERIZED THE PLAINTIFF'S GAME BROADLY AS A MAZE CHASE WITH A CENTRAL GOBBLER FIGURE AND GHOST OPPONENTS. IT FOUND THE SAME ELEMENTS IN THE DEFENDANT'S GAME AND GRANTED A PRELIMINARY INJUNCTION. THE UNITED STATES SUPREME COURT WAS ASKED TO REVIEW THIS DECISION BUT ON OCTOBER 5 IT REFUSED TO HEAR THE CASE AND THE INJUNCTION REMAINS IN EFECT.

IN ANOTHER RECENT U.S. CASE, MICROPRO AND DIGITAL RESEARCH WERE SUCCESSFUL IN OBTAINING RELIEF, INCLUDING A PERMANENT INJUNCTION AND $250,000 DOLLARS IN DAMAGES, UNDER THE 1980 AMENDMENTS TO THE U.S. COPYRIGHT ACT AGAINST A CERTAIN INDIVIDUAL AND COMPANIES WHO WITHOUT LICENSE WERE REPRODUCING AND SELLING THEIR PERSONAL COMPUTER SOFTWARE.

ALSO, THERE HAVE BEEN TWO PROCEEDINGS BEFORE THE U.S. INTERNATIONAL TRADE COMMISSION INVOLVING JAPANESE TECHNOLOGY LICENSED TO A U.S. MANUFACTURER WHICH RESULTED IN ORDERS BANNING IMPORTS INTO THE U.S. OF CERTAIN INFRINGING VIDEO GAMES. THESE CASES INVOLVED BOTH PROGRAM COPYRIGHT INFRINGEMENT AND TRADEMARK INFRINGEMENT.

GERMANY

THE SITUATION IN GERMANY IS UNSETTLED, BUT IT HAS BEEN CLARIFIED BY RECENT COURT DECISIONS, AND IS EXPECTED TO BE CLARIFIED EVEN FURTHER IN THE NEAR FUTURE. IN JUNE, 1981, THE MANNEHEIM REGIONAL COURT RENDERED A DECISION INDICATING THAT PROGRAMS ARE NOT SUSCEPTIBLE TO PROTECTION UNDER THE COPYRIGHT LAW BECAUSE PROGRAMS ARE NOT AN ARTISTIC WORK, AND DO NOT HAVE THE NECESSARY CREATIVITY. THIS WAS THE FIRST PUBLISHED COURT DECISION IN GERMANY CONCERNING COPYRIGHT PROTECTION FOR COMPUTER SOFTWARE. THE RESULT CAME AS A SURPRISE, SINCE THE GERMAN ACADEMIC COMMUNITY AND THE DEPARTMENT OF JUSTICE OF THE GOVERNMENT HAD SPOKEN IN FAVOR OF COPYRIGHT PROTECTION FOR COMPUTER PROGRAMS. THIS CASE IS NOW UNDER APPEAL TO THE KARLSRUE STATE SUPREME COURT, AND A DECISION IS EXPECTED SHORTLY AFTER THE FIRST OF THE YEAR.

HOWEVER, THERE HAVE BEEN SUBSEQUENT DECISIONS IN GERMANY WHICH AFFIRM THE COPYRIGHTABILITY OF COMPUTER PROGRAMS. IN TOTAL, THERE ARE FOUR DECISIONS RELATIVE TO THIS SUBJECT, THREE OF WHICH WERE HANDED DOWN BY REGIONAL COURTS, AND THE FOURTH BY A REGIONAL LABOR COURT. ONLY THE MANNEHEIM DECISION, WHICH IS UNDER APPEAL, DENIES COPYRIGHT PROTECTION. TWO OF THE DECISIONS (KASSEL AND SCHLESWIG-HOLSTEIN) ASSUME THAT COMPUTER PROGRAMS ARE PROTECTED BY

COPYRIGHT. THE MOST RECENT DECISION (MOSBACH) SETS FORTH DETAILED REASONS WHY COPYRIGHT PROTECTION APPLIES. IT COMPARES THE CREATION OF A PROGRAM TO THE WRITING OF POETRY. THE RULES OF GRAMMAR AND SYNTAX IN WRITING POETRY ARE LIKENED TO THE RULES THAT ARE IMPOSED ON A PROGRAMMER WHEN HE CREATES A PROGRAM. IT ANALYZES THE MANNEHEIM DECISION AND FINDS THAT IT IS WRONG, AND CANNOT BE FOLLOWED.

THE MAJOR ISSUE IN GERMANY IS WHETHER A COMPUTER PROGRAM HAS INTELLECTUAL AND AESTHETIC SUBSTANCE SO THAT IT IS SUBJECT TO COPYRIGHT PROTECTION. JUST BECAUSE A COMPUTER PROGRAM IS RELATED TO A TECHNICAL FIELD IS NO REASON TO DENY IT COPYRIGHT PROTECTION. A SCIENTIFIC ARTICLE OR A TEXTBOOK IS NOT DENIED COPYRIGHT PROTECTION.

FOR THOSE DESIRING A MORE DEFINITIVE AND THOROUGH TREATMENT OF THIS ISSUE AND THE CURRENT STATE OF AFFAIRS IN GERMANY, I HIGHLY RECOMMEND THE RECENT ARTICLE BY EUGEN ULMER AND GERT KOLLE WHICH HAS RECENTLY BEEN PUBLISHED IN THE GRUR INTERNATIONAL JOURNAL. THIS ARTICLE BY INTERNATIONALLY RECOGNIZED COPYRIGHT SCHOLARS ARGUES VERY PERSUASIVELY AND FORCEFULLY THAT COPYRIGHT PROTECTION APPLIES TO COMPUTER PROGRAMS. I ALSO UNDERSTAND AN EFFORT IS BEING MADE TO PUBLISH THIS ARTICLE IN JAPAN.

JAPAN AND OTHER COUNTRIES

BEFORE COMMENTING ON THE SITUATION IN JAPAN, A FEW REMARKS ON THE STATUS OF ACTIVITY IN THE UNITED KINGDOM, CANADA AND TAIWAN ARE IN ORDER. THE U.K. AND CANADA ARE IN THE PROCESS OF REVISING THEIR COPYRIGHT LAWS, AND IN BOTH COUNTRIES GOVERNMENT POSITION PAPERS INDICATE EXISTING COPYRIGHT LAWS APPLY TO COMPUTER PROGRAMS. HOWEVER, TO REMOVE ANY CONFUSION OR UNCERTAINTY THAT MAY EXIST, IT IS PROPOSED TO MAKE THIS EXPLICIT IN THE LEGISLATION. IN TWO RECENT U.K. CASES DISCOVERY ORDERS WERE GRANTED IN RESPECT OF ALLEGED COPYRIGHT INFRINGEMENT IN COMPUTER PROGRAMS. THIS GIVES A STRONG PRESUMPTION - ALMOST AMOUNTING TO COURT FINDINGS - THAT COPYRIGHT EXISTS IN COMPUTER PROGRAMS. LAST YEAR TAIWAN ACCEPTED COMPUTER PROGRAMS FOR REGISTRATION, AND NUMBER OF COMPUTER PROGRAMS HAVE BEEN SO REGISTERED. IN JAPAN UNTIL RECENTLY THERE WAS NO COURT DECISION WHICH ADDRESSED IN A DEFINITIVE MANNER THE QUESTION OF COPYRIGHT PROTECTION FOR COMPUTER PROGRAMS. LEGAL SCHOLARS AND OTHER WRITERS GENERALLY SUPPORTED THE PROPOSITION THAT COPYRIGHT PROTECTION IS AVAILABLE, ALTHOUGH SOME DIFFERENCE OF OPINION EXISTED AS TO HOW COPYRIGHT PROTECTION EXTENDED TO OBJECT CODE. HOWEVER, I AM INFORMED THAT VERY RECENTLY JAPANESE DISTRICT COURTS HAVE ISSUED TEMPORARY INJUNCTION OR ATTACHMENT ORDERS AGAINST COPYRIGHT INFRINGERS IN TWO CASES INVOLVING VIDEO GAMES. A DISTRICT COURT GRANTED SEGA ENTERPRISES A

TEMPORARY INJUNCTION ORDER AFTER CONSIDERING THE DEFENDANT'S ARGUMENTS THAT A PROGRAM IS NOT COPYRIGHTABLE SUBJECT MATTER AND THAT A READ ONLY MEMORY IS NOT A TANGIBLE MEDIUM OF EXPRESSION WITHIN THE MEANING OF THE JAPANESE COPYRIGHT LAW. IT IS UNDERSTOOD THAT SEGA HAS OTHER SUITS PENDING IN THE TOKYO DISTRICT COURT, AND HEARINGS WILL BE HELD IN THESE CASES IN EARLY SPRING.

THE SECOND DECISION INVOLVED NAMCO AS PLAINTIFF. IN MAY OF THIS YEAR THE TOKYO DISTRICT COURT ISSUED A TEMPORARY ATTACHMENT ORDER IN A VIDE GAME CASE ON THE BASIS THAT EITHER THE OBJECT CODE CONTAINED IN A READ ONLY MEMORY IS COPYRIGHTABLE OR THAT THE OBJECT CODE IN THE ROM IS A REPRODUCTION OF THE SOURCE CODE AND CONSTITUTES AN UNAUTHORIZED COPY OF THE SOURCE CODE. IN JUNE 1982, NAMCO WAS GRANTED AN INJUNCTION ORDER THAT STOPS MANUFACTURE AND DISTRIBUTION OF THE INFRINGING VIDEO GAME. THIS IS THE CASE REFERRED TO BY PRESIDENT OZU IN HIS OPENING ADDRESS. THESE CASES WOULD SEEM TO CONFIRM COPYRIGHT PROTECTION FOR COMPUTER PROGRAMS. IT IS IMPORTANT TO NOTE THE SIMILIARITY OF ISSUES BEING RAISED IN THE VIDEO GAME CASES IN THE UNITED STATES AND JAPAN AND THE SIMILIARITY OF RESULT.

THE MINISTRY OF INTERNATIONAL TRADE AND INDUSTRY (MITI) HAS UNDERTAKEN AN INFORMAL INTER-DEPARTMENTAL STUDY AS TO WHAT LEGISLATIVE STEPS, IF ANY, SHOULD BE TAKEN TO PROVIDE ADDITIONAL PROTECTION FOR PROGRAMS IN JAPAN. THIS STUDY WAS INITIATED IN RESPONSE TO A SUGGESTION BY A MEMBER OF THE DIET THAT MITI SHOULD CONSIDER THIS MATTER AS PART OF ITS INDUSTRY PROMOTION POLICY. THE INTER-DEPARTMENTAL REVIEW MAY RESULT IN THE FORMATION OF A MORE FORMAL STUDY GROUP WHICH WOULD INCLUDE LEGAL SCHOLARS, LAWYERS AND INDUSTRY REPRESENTATIVES. MITI IS ATTEMPTING TO ARRIVE AT A POSITION RATHER QUICKLY SINCE THE DIET MAY ASK FOR THE RESULTS OF THE MITI STUDY AT THE NEXT SESSION.

WIPO ACTIVITIES

ANY COMMENTARY CONCERNING THE INTERNATIONAL STATUS OF THE PROTECTION PROVIDED COMPUTER PROGRAMS WOULD BE INCOMPLETE WITHOUT A DISCUSSION OF THE ACTIVITIES OF WIPO. IN 1978 WIPO ISSUED A BOOKLET ENTITLED MODEL PROVISIONS ON THE PROTECTION OF COMPUTER SOFTWARE. THESE PROVISIONS WERE THE RESULT OF SEVERAL MEETINGS OF AN ADVISORY GROUP OF NON-GOVERNMENTAL EXPERTS HELD DURING 1974-1977. IT IS EXTREMELY IMPORTANT TO UNDERSTAND THAT THE PRUPOSE OF THE MODEL PROVISION "IS TO ASSIST COUNTRIES IN COMPLEMENTING, OR INTRODUCING CERTAINTY INTO, THEIR LAWS APPLICABLE TO THE PROTECTION TO COMPUTER SOFTWARE." THUS, WIPO FORSAW THE NEED TO ENHANCE PROTECTION FOR COMPUTER SOFTWARE, AND RECOGNIZED

THAT THIS COULD BE ACCOMPLISHED BY EITHER AMENDING EXISTING PROTECTION LAWS OR BY IMPLEMENTING A SPECIAL LAW. IN FACT, TO-DATE, A NUMBER OF COUNTRIES, INCLUDING THE UNITED STATES, HAVE REVISED OR ARE IN THE PROCESS OF REVISING, THEIR COPYRIGHT LAWS TO ENHANCE AND ASSURE PROTECTION FOR COMPUTER PROGRAMS; BUT NOT ONE STATE HAS ADOPTED, OR IS SERIOUSLY CONSIDERING ADOPTING, THE WIPO MODEL PROVISIONS AS A SPECIAL LAW. HOWEVER, THE WIPO MODEL LAW PROVISIONS DO SERVE AS A USEFUL LIST OF ITEMS OR PROTECTION CONCEPTS THAT SHOULD BE CONSIDERED IN AMENDING EXISTING COPYRIGHT LAWS.

THE REASON IS THAT THE WIPO PROVISIONS PROVIDE PROTECTION VERY SIMILAR TO COPYRIGHT PROTECTION. THE RIGHTS OF A PROPRIETOR OF A PROGRAM UNDER SECTION 5 (iii) - (viii) OF THE MODEL PROVISIONS ARE AS FOLLOWS:

(iii) COPYING BY ANY MEANS OR IN ANY FORM THE COMPUTER SOFTWARE;

(iv) USING THE COMPUTER PROGRAM TO PRODUCE THE SAME OR A SUBSTANTIALLY SIMILAR COMPUTER PROGRAM OR A PROGRAM DESCRIPTION OF THE COMPUTER PROGRAM OR OF A SUBSTANTIALLY SIMILAR COMPUTER PROGRAM;

(v) USING THE PROGRAM DESCRIPTION TO PRODUCE THE SAME OR A SUBSTANTIALLY SIMILAR PROGRAM DESCRIPTION OR TO PRODUCE A CORRESPONDING COMPUTER PROGRAM;

(vi) USING THE COMPUTER PROGRAM OR A COMPUTER PROGRAM PRODUCED AS DESCRIBED IN (iii), (iv) OR (v) TO CONTROL THE OPERATION OF A MACHINE HAVING INFORMATION-PROCESSING CAPABILITIES, OR STORING IT IN SUCH A MACHINE;

(vii) OFFERING OR STOCKING FOR THE PURPOSE OF SALE, HIRE OR LICENSE, SELLING, IMPORTING, EXPORTING, LEASING OR LICENSING THE COMPUTER SOFTWARE OR COMPUTER SOFTWARE PRODUCED AS DESCRIBED IN (iii), OR (v);

(viii) DOING ANY OF THE ACTS DESCRIBED IN (vii) IN RESPECT OF OBJECTS STORING OR REPRODUCING THE COMPUTER SOFTWARE OR COMPUTER SOFTWARE PRODUCED AS DESCRIBED IN (iii), (iv) OR (v).

THESE CORRESPOND DIRECTLY TO THE RIGHTS OF A COPYRIGHT OWNER TO CONTROL THE MAKING OF COPIES OR REPRODUCTIONS: THE MAKING OF MODIFICATIONS, DERIVATIVE WORKS, AND TRANSLATIONS: AND THE DISTRIBUTION AND PERFORMANCE OF THE COPYRIGHTED WORK.

ALL OF THESE RIGHTS ARE THE CLASSIC COPYRIGHT RIGHTS WHICH ARE WELL KNOWN AND WELL UNDERSTOOD, AND AROUND WHICH A LARGE BODY OF LEGAL DECISIONS EXIST WHICH POINT THE WAY AS TO WHAT IS, OR IS NOT, INFRINGEMENT.

SEVERAL OF THE OTHER RIGHTS SET FORTH IN THE MODEL PROVISION RELATE TO RIGHTS OF THE PROGRAM OWNER TO REGULATE DISCLOSURE OF THE PROGRAM. THESE RIGHTS ARE ALREADY SUBJECT OF PROTECTION UNDER THE CONTRACT, TRADE SECRET AND UNFAIR COMPETITION LAWS OF MOST INDUSTRIAL COUNTRIES. AN ADDITIONAL REASON FOR PROCEEDING IN THE DIRECTION OF AMENDING EXISTING COPYRIGHT LAW IS THAT INTERNATIONAL CONVENTIONS CLEARLY APPLY TO COPYRIGHTS. THEY MAY NOT BE APPLICABLE TO A NEW AND SEPARATE PROTECTION SCHEME. THE UNIVERSAL COPYRIGHT CONVENTION, THE BERNE CONVENTION AND THE VARIOUS BI-LATERAL COPYRIGHT TREATIES BETWEEN NATIONS PROVIDE ESTABLISHED MECHANISMS FOR ASSURING SUCH PROTECTION AS EXISTS UNDER THE COPYRIGHT LAWS OF EACH OF THE MEMBER COUNTRIES FOR WORKS PUBLISHED IN ANOTHER MEMBER COUNTRY. IN THIS CONNECTION IT IS IMPORTANT TO NOTE THAT MUCH OF THE DEVELOPING COPYRIGHT LAW INVOLVES JAPANESE DEVELOPED PROGRAMS WHICH HAVE BEEN TRANSFERRED TO OTHER COUNTIRES AND CASES DECIDED UNDER THE LAWS OF SUCH COUNTRIES.

FURTHER, ENACTMENT OF DETAILED, SPECIAL LEGISLATION ON AN INTERNATIONAL LEVEL, SUCH AS BY ADDING THE WIPO MODEL PROVISIONS TO ONE OF THE EXISTING INTERNATIONAL CONVENTIONS, IS NOT ONLY UNNECESSARY BUT COULD PROVE TO BE A VERY DIFFICULT TASK. SUCH AN INITIATIVE COULD VERY WELL RESULT IN A CONFRONTATION BETWEEN DEVELOPED AND DEVELOPING NATIONS SIMILAR TO THAT WHICH NOW EXISTS RELATIVE TO PROPOSED AMENDMENTS TO THE PARIS CONVENTION. THIS IS NOT A MATTER OF IDLE SPECULATION, BUT IS A VERY REAL POSSIBILITY WHEN THE COMMENTS WHICH ACCOMPANIED THE WIPO MODEL PROVISIONS CONCERNING THE ESTABLISHMENT OF A MANDATORY SYSTEM OF DEPOSIT OF COMPUTER PROGRAMS ON AN INTERNATIONAL LEVEL TO TRANSFER TECHNOLOGY TO THE DEVELOPING COUNTRIES ARE CONSIDERED.

WIPO RECENTLY CIRCULATED A QUESTIONAIRE TO GOVERNMENTS AND OTHER INTERESTED PARTIES RELATIVE TO COMPUTER SOFTWARE. MANY REPLIES WERE RECEIVED. THE GREAT MAJORITY OF THESE REPLIES RECOGNIZED THE NEED FOR PROTECTION OF COMPUTER SOFTWARE, AND AGREED THAT IT WOULD BE APPROPRIATE TO TAKE ACTION TO CONFIRM THAT SOFTWARE IS PROTECTED UNDER THE EXISTING INTERNATIONAL CONVENTIONS.

OUR INFORMATION IS THAT WIPO INTENDS TO CONVENE A MEETING OF THE ADVISORY COMMITTEE IN GENEVA IN JUNE, 1983 TO DISCUSS AN ADDITIONAL INTERNATIONAL CONVENTION THAT WOULD SIMPLY

RE-AFFIRM THAT THE EXISTING CONVENTIONS APPLY TO COMPUTER SOFTWARE. THIS HOPEFULLY WOULD AVOID THE CONTROVERSY WHICH WOULD SURROUND ANY ATTEMPT TO ENACT THE MODEL PROVISIONS AT AN INTERNATIONAL LEVEL, AND LEAVE THE ENHANCEMENT OF SPECIFIC LEGISLATION TO THE INDIVIDUAL COUNTRIES. IT WOULD ALSO BE CONSISTENT WITH, AND STRENGTHEN, THE PRESENT TREND OF AMENDING EXISTING COPYRIGHT LAWS TO INSURE AND ENHANCE PROTECTION FOR COMPUTER PROGRAMS.

IN SUMMARY, THE PROTECTION OF COMPUTER PROGRAMMING IS AN IMPORTANT SUBJECT, AND EFFORTS ARE BEING MADE IN THE MAJOR INDUSTRIAL COUNTRIES TO IMPROVE AND ENHANCE EXISTING PROTECTION. THESE EFFORTS ARE DIRECTED TO AMENDING EXISTING COPYRIGHT LAWS RATHER THAN IMPLEMENTING NEW PROTECTION SCHEMES. I WOULD SUGGEST THAT PIPA AND ITS INDIVIDUAL MEMBERS CAN, AND SHOULD, TAKE A VERY ACTIVE INTEREST IN SHAPING SUCH CHANGES IN THIS RAPIDLY DEVELOPING AREA OF THE INTELLECTUAL PROPERTY LAW.

THANK YOU FOR YOUR ATTENTION.

APPENDIX

U.S. COPYRIGHT LAW AMENDMENTS

SECTION 101

A "COMPUTER PROGRAM" IS A SET OF STATEMENTS OR INSTRUCTIONS TO BE USED DIRECTLY OR INDIRECTLY IN A COMPUTER IN ORDER TO BRING ABOUT A CERTAIN RESULT (AS ADDED BY P.L. 96-517, §10,94 STAT. 3028, DECEMBER 12, 1980.)

SECTION 117

NOTWITHSTANDING THE PROVISIONS OF SECTION 106, IT IS NOT AN INFRINGEMENT FOR THE OWNER OF A COPY OF A COMPUTER PROGRAM TO MAKE OR AUTHORIZED THE MAKING OF ANOTHER COPY OR ADAPTATION OF THAT COMPUTER PROGRAM PROVIDED:

(1) THAT SUCH A NEW COPY OR ADAPTATION IS CREATED AS AN ESSENTIAL STEP IN THE UTILIZATION OF THE COMPUTER PROGRAM IN CONJUNCTION WITH A MACHINE AND THAT IT IS USED IN NO OTHER MANNER, OR

(2) THAT SUCH NEW COPY OR ADAPTATION IS FOR ARCHIVAL PURPOSES ONLY AND THAT ALL ARCHIVAL COPIES ARE DESTROYED IN THE EVENT THAT CONTINUED PROSSESSION OF THE COMPUTER PROGRAM SHOULD CEASE TO BE RIGHTFUL.

ANY EXACT COPIES PREPARED IN ACCORDANCE WITH THE PROVISIONS OF THIS SECTION MAY BE LEASED, SOLD, OR OTHERWISE TRANSFERRED, ALONG WITH THE COPY FROM WHICH SUCH COPIES WERE PREPARED, ONLY AS PART OF THE LEASED, SALE, OR OTHER TRANSFER OF ALL RIGHTS IN THE PROGRAM. ADAPTATIONS SO PREPARED MAY BE TRANSFERRED ONLY WITH THE AUTHORIZATION OF THE COPYRIGHT OWNER. (AS AMENDED BY P.L. 96-517, §10,94 STAT. 3028, DECEMBER 12, 1980.)

RECENT COPYRIGHT DECISION - COMPUTER SOFTWARE

United States

DATA CASH SYSTEMS, INC. v. JS & A GROUP, INC. 203 USPQ 735 (N. D. ILL. 1979) AFFIRMED ON OTHER GROUNDS 628 F. 2D 1038, 208 USPQ 197 (CA7 1980)

TANDY CORP. v. PERSONAL MICRO COMPUTERS, INC. 524 F. SUPP. 171, 214 USPQ 179 (N.D. CAL. 1981)

GCA CORP. v. CHANCE, ___ USPQ ___ (N.D. CAL. 1982)

APPLE COMPUTER, INC. v. FRANKLIN COMPUTER CORP., ___ USPQ ___ (E.D. PENN. JULY 30, 1982)

STERN ELECTRONICS v. KAUFMAN, 213 USPQ 443 (CA2 JANUARY 20, 1982) AFFIRMING 213 USPQ 75

MIDWAY MFG. CO. v. ARTICLE INTERNATIONAL, INC. 211 USPQ 1152 (N.D. ILL. JUNE 2, 1981)

MIDWAY MFG. v. DIRKSCHNEIDER, 214 USPQ 417 (D. NEB. JULY 15, 1981)

ATARI INC. v. AMUSEMENT WORLD, ___ USPQ ___ (D. MD. NOVERMBER 27, 1981)

ATARI v. NORTH AMERICAN PHILIPS COMPUTER ELECTRONICS, ___ USPQ ___ (CA7 MARCH 2, 1982) REVERSING ___ USPQ ___ (N.D. ILL. DECEMBER 4, 1981) PETITION FOR WRIT OF CERTIORARI DENIED OCTOBER 5, 1982

DIGITAL RESEARCH, INC. AND MICROPRO INTERNATIONAL v. DATAFORCE INTERNATIONAL, INC., DATA EQUIPMENT, INC. AND DANIEL M. O'ROURKE, ___ USPQ ___. (N.D. CAL. AUGUST 26, 1982)

Western Germany

DISTRICT COURT MANNHEIM, 06/12/81, FILE NO. 7 O 143/80, PUBLISHED IN THE JOURNAL "BETRIEBS-BERATER" 1981, PAGES 1543 TO 1545.

DISTRICT COURT MOSBACH, 07/13/82, FILE NO. KFH O 35/82, PUBLISHED IN "BETRIEBS-BERATER" 1982, PAGES 1443, 1444

DISTRICT SUPREME COURT KOBLENZ, 08/13/81, FILE NO. 6 U 294/80, NOT PUBLISHED IN PRINTING.

DISTRICT COURT KASSEL, 05/21/81, FILE NO. 8 O 84/80, NOT PUBLISHED IN PRINTING.

DISTRICT LABOR COURT SCHLESSWIG-HOLSTEIN, 07/24/81, FILE NO. 2 SA 605/81, NOT PUBLISHED IN PRINTING.

United Kingdom

GATES v. SWIFT 1982 RPC NO. 13

South Africa

MICRO COMPUTER (PTY) LTD. v. ROSENSTEIN (SUPREME COURT OF SOUTH AFRICA)

Japan

NACO LTD v. JACKSON LTD. ET AL

(TOKYO DISTRICT COURT SHOWA 57 (YO)2544)

PATENT SYSTEM OF THE REPUBLIC OF KOREA AND ITS BACKGROUND

Japanese Group Committee No. 3

Yujiro Kodama, Sumitomo Electric Industries, Ltd.
Hidenori Inose, Fujitsu Ltd.
Hisao Tatsumi, Ricoh Co., Ltd.

Speaker: Naoyuki Yonomoto
Mitsubishi Rayon Co., Ltd.

Abstract

Korean Economy was driven into ruin by the Korean War.

Economic growth after the war, which was called "the miracle of Han Gan," was derailed by a depression caused by the second oil shock.

Under the fifth 5-year Economic Development Plan, the Korean government is aiming at high economic growth by expanding exports.

Concerning the Korean economy, inducement of foreign advanced technology and foreign capital is essential for growth. Therefore, the Korean government enforced its Third Automatic Technology Inducement Policy in 1980. Also, the government announced moves to relieve restrictions on investment by foreigners.

Even in the field of industrial property, a series of substantial amendments to the laws were made, which led the current laws.

The enforcement of the present laws should be understood as a point on a path which Korea is walking toward full development of the country.

The numbers of applications for patents, utility models, designs and trademarks in Korea show increases. Most of the patent applications have been filed by foreigners, while almost all applications for utility models have been filed by Koreans.

The existing Korean Patent Law is similar to the present Japanese Patent Law in many respects. However, there are several important differences between them, one of which is concerned with the compulsory grant of license.

Chapter 1. Introduction

In recognition of the fact that the patent system in Korea is not well known in Japan and America, we will now mention the results of the investigation we have so far conducted. However, as we think that the contents of any patent system can be understood only after the background of the system is fully understood, we considered it very important to discuss certain historical, industrial and economic factors, including relationships with various other countries. This background of the Korean patent system appears first and then, at the end, we briefly explain the characteristic features of the current patent system of the country.

It would indeed be our great pleasure if this report could help you to acquire a deeper understanding of the current Korean patent system.

Chapter 2 - Summary of Economy and Industry

1. History and Economic Trend

The South Korean economy was driven into ruin by the Korean War, 1950-53. Although there was gradual recovery after termination of the war, the average economic growth rate was only around 3 percent until 1960, which fact is generally attributed to a shortage of natural resources, want of accumulated capital, and a lower level of technology.

1962 is the year from which it may be fairly said that South Korea was at last truly on the road to modern economic health. In that year, the first 5-Year Economic Development Plan was put into action, serving as a preparatory stage for industrialization. By the second 5-Year Plan (1967-71), the rate of industrialization was 20.6 percent. From 1972-76, under the third 5-Year Plan, the South Korean government engineered a shift in emphasis toward heavy and chemical industries, and designated machinery, electronics and shipbuilding as areas for growth.

As a consequence of these policies, industrialization reached a rate of 31.5 percent, and the rate of industrial exporting hit 87.6 percent in 1976.

Then clouds began to form. Although the average rate of economic growth remained at 11 percent during 1977 and 1978, it fell to 7.1 percent in 1979, largely as a result of

the second oil shock. This was in sharp contrast to the previous economic vigor. The situation became even more critical in 1980, and the economic depression in '80 resulted in minus 5.7 percent of real economic growth, with both foreign and domestic factors to blame. There was, of course, the continuing world-wide depression of the leading developed countries, including the United States and Japan. Crude oil prices were repeatedly increased, and interest rates remained high. Within South Korea, President Park was assassinated in October, 1979, and the period from March to May, 1980, was marked by violent disturbances in the city of Kwang Ju. All of this had a negative effect on both the investment climate and on consumer behavior.

Under these economic circumstances, consumer prices increased from January to September, 1980, by 24.3 percent. Unemployment reached 5.6 percent, with 840,000 people out of work. To stimulate business activity and spur recovery, the government emphasized increasing exports, with financial support in that sector, while at the same time maintaining a tight money policy to restrain commodity price increases. The won was devalued and a floating exchange rate system instituted to improve the country's balance of payments.

In spite of all these efforts, the South Korean economy continued in a state of serious depression.

There were, fortunately, a few positive aspects. The previous decline in mining and manufacturing appeared to hit bottom, and exports began to expand once more. However, many areas of difficulty remained through 1979 and 1980, although with significant differences depending on the type of industry and the size of the corporation. In particular, serious deficits were the result in the aviation field, and in automobile, electronics and lumber manufacturing. Continuing oil price run-ups were a major cause.

Finally, the government announced a new "Comprehensive Economic Policy" in June, 1980, and began, in September and November, respectively, to enforce various "short-term" and "comprehensive" measures to stimulate the economy.

During the current 5-Year Economic Plan -- the fifth such plan -- for 1982-86, the government is attempting to stabilize the economic foundation, improve productivity and efficiency, maintain a steady balance of international payments, ensure stable growth, modernize the industrial structure, and integrate social and environmental concerns into the plan of national development. This plan also aims toward increasing savings in order to provide a solid base for investment. Seven to eight percent growth is seen as necessary if a stable employment pattern is to emerge.

In particular, the government is determined to strengthen the industrial sector by, among other things,

increasing the competitiveness of the machinery and advanced electronics industries through energy conservation, technological innovation and manpower development.

Moreover, in order to cope with an expanding financial demand in areas such as education, social security and national defense, measures are contained in the current 5-Year Plan which are intended to improve efficiency in public corporations, encourage the growth of private enterprise, and stem the increase in the number of government officials.

2. Summary of Industry

South Korea's economy formerly included a large proportion of primary industry, principally agriculture. Such primary industry accounted for 48.8 percent of the whole in 1955, but had dropped to 15.8 percent by 1980. In contrast, during the same period, the proportion of secondary industry (manufacturing) grew, and tertiary industry (service) remained nearly constant at around 40-50 percent.

The growth from 16.2 percent to 42 percent of secondary industry during the period 1965 to 1980 arose largely from a policy since the beginning of the 1960's of keeping export expansion abreast with industrialization.

In the 1960's, the key industries of textiles and foods prospered. In the 1970's, under the third 5-Year Plan,

heavy industries, such as machinery, iron and steel, and metals, and chemical industries achieved striking growth. As already mentioned, this just reflects a general change from a primary-industry-centered to a secondary-industry-centered economic structure.

After the Kwang Ju incident, the government strengthened itself and announced a policy of economic reconstruction beginning with the reorganization of the heavy and chemical industries -- essentially the granting of industry-wide monopolies to selected firms, a move which was a great shock in South Korean economic circles. In August, 1980, the automobile and electric power industries were added to the scheme and, in September, heavy electrical machinery, copper refinement, electronic switchboards and diesel engines were included.

Korean heavy industry had been caught in a depression since 1979 and its operation rate was down remarkably except in the areas of steel and shipbuilding. Many textile companies and electric companies, which had contributed to high economic growth and export expansion, also showed deficits due to overstock. Thus, the government's moves for a reorganization of industry in order to salvage the South Korean economy -- an economy on the path to self-destruction -- can easily be understood.

Concerning the automobile industry, the government changed its policy in February, 1982, to the effect that

both Hyundai Motor Co., Ltd., and Sae Han Motor Co., Ltd., could deal in passenger car production, rather than, as the initial policy had been, having passenger car production monopolized by Hyundai. Regarding trucks under five tons, monopolized production by Ki-A Industrial Co., Ltd., was at first the intention; later it was decided that an amalgamated company of Ki-A and Dong-Ah Motor Co., Ltd., would handle production of compact trucks, buses and special vehicles, exclusively.

On September 13, 1980, the government announced production adjustments in four categories of industry -- heavy electrical machinery, copper refinement, electronic switchboards and diesel engines -- and, immediately after the announcement, it demanded that the industries concerned submit voluntary adjustment plans to the government by the end of the month. At the same time it was made clear that the government itself would intervene if the industries did not make the adjustments in the requested time.

As was to be expected, the conferences among the enterprises concerned were nothing but a clash of interests, and, except for the copper refining industry, no industry could come up with a satisfactory plan. Thus, the government formally announced that it was stepping in.

3. General Financial Situation

The South Korean economy still shows the potential for considerable expansion, and the 1982 budget was 3.6 times larger than that of 1977. The citizen's tax burden is likely to become significantly heavier from now on, too, as the government attempts to achieve a balanced budget and to overcome the current debt.

Despite the fact that more than 30 percent of annual expenditures goes for national defense, the new government is stressing economic growth together with social welfare and education. This is a shift from the days of the Park administration, when concern seemed to be exclusively with economic growth.

Defense spending by North Korea, the United States, Japan, the U.S.S.R. and Saudi Arabia, in comparison with that of South Korea, is shown in Table 2-1.

Table 2-1

Country	Defense Expenditures as percentage of total budget (%)		Defense Expenditures as percentage of GNP (%)	
	1980	1981	1979	1981
South Korea	34.4	36.0	5.5	6.0
North Korea	(15.4)*	-	11.2	-
U. S. A.	21.5	23.3	5.2	-
Japan	5.19	5.13	0.93	0.91
U. S. S. R.	-	-	11~13	-
Saudi Arabia	28.1	-	15.0	-

* 1977

4. Technology Inducement

In April, 1977, the South Korean government took institutional steps to shift technological development leadership from the government to the private sector.

To this end, the government promulgated the First Automatic Technology Inducement Policy. The Second Automatic Technology Inducement Policy was put into effect in April, 1979, and the third in April, 1980, continuing to this day.

The reasons for such a policy of repeated technology-inflow liberalization measures are as follows:

(1) South Korea had to become more internationally competitive in industry by developing heavy and chemical industries as a preponderance of its export effort, and by fostering strategic industries, by which the country could cope with the rapidly increasing need for advanced technology.

(2) Radical expansion of exports from South Korea, especially rapid increase in construction-related exports and services to the Middle East -- supported by South Korean technology, endurance, faithfulness and a decisive attitude -- improved the balance of international payments, which led to less necessity for control of technology inflow.

(3) With the founding of strategic research and development organizations with excellent staffs, each

domestic industry grew in ability to use and improve upon the technology acquired from abroad.

(4) By switching from the traditional government-led economic structure to one that was privately led, it became possible for civilian enterprises to make their own decisions on technology inflow.

(5) Observing the trend toward capital and trade liberalization in the world, the government felt a necessity to positively participate in the international exchange of advanced technology, as a means to spur the development of an industrial state.

(6) It was recognized that, historically, in spite of ever changing times and shifts in public and private attitudes, past policies relating to approving technology inflow had remained very severe and the procedures complicated. Thus, it was feared that, if policies were not finally changed, not only the chance for acquisition of useful technology, but also the chance to participate more fully in the international community, might be lost forever.

Under the current Third Automatic Technology Inducement Policy, contracts for technology introduction wherein the royalty payment is under 10 percent of the net selling price, or wherein the term of the contract is within 10 years, are automatically approved by the Chief Director of the department concerned. However, according to Article 5 of the enforcement regulations of the Foreign Capital

Inducement Law, the following types of contracts cannot be automatically approved:

(1) Where mere use of a design or trademark, or an exclusive sales right, is the object of the contract;

(2) Where mere sale of raw materials, parts or appurtenances is the object of the contract;

(3) Where technology determined by the Director of the Science and Technology Agency to be necessary for domestic development, in accordance with Article 14 of the enforcement regulations of the Technology Promoting and Developing Law, is the object of the contract;

(4) Where technology which is very primitive is the object of the contract; or

(5) Where a contract for the transfer of technology contains provisions of notable unfairness or includes one of the following limitations:

(a) a "tying" clause which requires the purchase of materials or appurtenances from the technology transferrer or a trader designated by the transferrer;

(b) an unfair restriction with respect to the selling area, the selling price or the selling quantity, except for cases where the technology supplier has a patent covering products included in the contract in the area of the restriction, or is selling products included in the contract in said area, or has an agreement with a third party for a technical tie-up

or exclusive sales right for the products included in the contract in said area;

(c) a restriction on the use of technology previously introduced by the transferee;

(d) a demand that the technology receiver pay an amount in royalties for technology that it is unnecessary for the receiver to use;

(e) a clause under which the technology receiver must return to the supplier after the expiration of the contract all technical specifications, drawings and other materials furnished by the supplier; or

(f) a "grant back" clause which requires that the technology receiver transfer to the technology supplier, or to an enterprise designated by the supplier, any improved technology developed by the receiver in the course of using the technology supplied by the supplier.

Technology inflow contracts which fall into any of the categories (1) to (5) above are reviewed individually and the final decision on the question of whether they should be approved is made by the head of the Department of Treasury.

Table 2-2 shows the contents of technology inflow contracts which were approved and published as of February 12, 1980.

5. Foreign Capital Inducement

The South Korean government announced on September 25, 1980, a course of action to relieve restrictions on investment by foreigners. Its outline is as follows:

(1) Capital subscription by foreigners up to 100 percent is permitted in certain industries where the limit had been, at maximum, 50 percent;

(2) Minimum capital investment is reduced from $500,000 to $100,000;

(3) Foreign capital investment is permitted in the food and medical industries, and in commercial distribution services;

(4) Restrictions on extraction of the face amount of foreign capital are relaxed; and

(5) Restrictions on land acquisition by foreigners are relaxed.

These measures are explained in more detail as follows:

(1) Although the limits of maximum foreign capital investment had been, in accordance with official regulations, up to 50 percent, investment up to 100 percent is to be allowed henceforth, based on agreement by the parties. This foreign investment above 50 percent, up to 100 percent, will be permitted as follows:

(a) when investment induces highly advanced technology;

(b) in investment activities assumed by a multinational enterprise allowed to invest in capital above 50 percent in other countries;

(c) when investment contributes to diversification of the invested in enterprise;

(d) by Koreans living outside the country;

(e) in businesses started in a free export zone;

(f) when investment significantly contributes to the increase of exports;

(g) in businesses for which a long period of tie up with foreign capital at a ratio of more than 50 percent is believed necessary from the viewpoint of needed capital, accumulation of technology and initial risk-bearing;

(h) in businesses operating under the condition that the foreign capital share will be reduced to under 50 percent after a certain period of time;

(i) in businesses operating under the condition that the foreign capital does not enjoy a preferential tax duty exemption under the regulations of the Foreign Capital Inducement Law; and

(j) in businesses designated by the Director of the Economic Planning Agency.

(2) The minimum foreign capital investment was considerably reduced to $100,000 from the previous limit of $500,000.

(3) Up to this time, foreign capital investment had been permitted only in (a) large scale plant industries in which promotion of business by domestic enterprises alone was difficult because of insufficient technical or administrative ability, (b) machinery industries, (c) metal industries, (d) electronic and electrical industries, (e) chemical industries, and (f) energy related industries and industries which contributed to the exploitation of underground resources. By the announcement of 1980, however, the government broadened the list of permissible industries and businesses to include the food, medical and service fields, with those service industries including sightseeing hotels, construction, service, banking and insurance.

(4) The government had prohibited the extraction of foreign capital during the first two years, and had limited the rate of extraction thereafter to 20 percent per year. This control was abolished in 1981 and, now, foreigners may withdraw their capital as they wish.

(5) The government eased the restrictions on land acquisition by approving the purchase of dormitories for profit-making enterprises and land for businesses. Previously, those actions were permitted only by foreign embassies and non-profit-making enterprises.

Table 2-2 Approved Technology Inflow

Enterprise	Technology Supplier	Patent License	Know-How License	Technical Service	Term (Years)	Consideration
Sam Chully Heat Treating Co.	Oheatal Engineering (Japan)	o	o	o	3	I.[3] $20,000 R.[4] 1%
Sam Hung Heat Treating Co.	〃	o	o	o	3	〃
Hyundai Heavy Industries Co.	Envirotech Corp. Buell Emission Control Div. (U.S.A.)			o	3	I. $48,000 R. 3%
Sae Han Motor Ind. Co.	Isuzu Motors Ltd. (Japan)		o	o	3	$. ¥6,000 or 25,000/car
Hyundai Construction	Alcan Asia Ltd. (Hong Kong)	o	o	o	6[2]	R. 565,000, $10,000 (for Trademark)
Gold Star Co.	Zenith Radio Corp. (U.S.A.)	o			3.5	R. ¢28/set
Poong San Food Ind. Co.	JBS BIG BOY Homlly Restaurants Inc. (U.S.A.)		o	o	3	R. $50,000/Y, 1%
Sam Sung Co.	Hart Schaffnor & Mark Co. (U.S.A.)	o	o	o	3	R. 3%
Tongil Industry Co.	Pittler (W. Germany)	o	o	o	5	I. DM 900,000, R. 3%
Jung Poong Products Co.	Sansui Electric Co., Ltd. (Japan)	o	o	o	3	R. 3%
Kang Wong Industrial Co.	Boving & Co., Ltd. (U.K.)			o	5	R. 5%
Taihan Electric Wire Co.	Dolby Laboratories Inc. (U.S.A.)	o	o		3	I. $5,000, R. $450∼410/set
Kuk Je Development Co.	Japan Airline Development Co., Ltd. (Japan)		o	o	4.5	I. $140,000, F.[5] $150,000
Bek Yun Industry Co.	Seibu Giken Co., Ltd. (Japan)	o	o	o	5	I. $100,000, R. 3%
Energy Controller Co.	The Robertshaw Controls Co. (U.S.A.)			o	5	I. $25,000, R. 3%
Appollo Co.	Shibata Engineering Co., Ltd. (Japan)		o	o	3	I. $20,000, R. 15%
Han Mi Chemical Industry Co.	Totaku Industries Co., Ltd. (Japan)	o	o	o	6	I. ¥5,000,000, R. 3%
Kuk Dong Oil Co.	TEXACO Development Corp. (W. Germany)		o		20	I. $250,000
Je Il Pharma Co.	Daiichi Seiyaku Co., Ltd. (Japan)		o		3	I. $95,000
Ssang Yong Electric Ind. Co.	Toshiba Corp. (Japan)		o		5	I. ¥15,000,000, R. 2.5%
Hyundai Motor Co.	Tokyu Car Manufacturing Co., Ltd. (Japan)		o		3	I. $90,000, R. ¥20,000∼¥60,000/set
Hwa Kyung Trading Co.	Renown Co., Ltd. (Japan)	o	o	o	3	R. 3%

Enterprise	Technology Supplier	Patent License	Know-How License	Technical Service	Term (Years)	Consideration
Tae Hwa Co.	Union Seika Co., Ltd. (Japan)			o	3	F. ¥30,000,000
Hyundai Heavy Industries Co.	South West Favricating & Welding Co., Inc. (U.S.A.)			o	4	I. $30,000, R. 3%
Han Kuk Gilding Material Ind. Co.	Sanshin Manufacturing Co., Ltd. (Japan)			o	3	I. $30,000, R. 3%
Miwon Machinery Co.	Tanabe Iron Works Co., Ltd. (Japan)			o	3	I. $10,000, R. 3%
Hyosam Control Maintenance Co.	Sanryo Electric Co., Ltd. (Japan)		o	o	4	I. $25,000, R. 3%
Tong Sung Machinery Ind. Co.	Seibu Electric Industries, Ltd. (Japan)	o	o	o	3	I. ¥5,000,000, R. 2%
Kolon (Nylon) Inc.	Saint-Gobain Ind. (France)		o		8	R. 3.25∼3.75%
Tong-A General Development Co.	Owens Corning Fibergirs Corp. (U.S.A.-Korea)		o		8	R. 3.5%
Dae Sung Electric Industry Co.	Tenkosha Tokei Co., Ltd. (Japan)		o		5	R. 3%
Sam Yung Cable Co.	Yasaki Cable Co., Ltd. (Japan)		o		5	I. ¥3,000,000, R. 2%
Sam Sung Engineering & Shipbuilding Co.	Ikeuchi Kengyo Co., Ltd. (Japan)		o		3	F. $982,956
By-Water Korea	Nippon Paero Shamrook Co., Ltd. (Japan)		o		8	F. ¥5,000,000

1) Published on February 12, 1980
2) 10 years for trademark license
3) Initial Payment
4) Royalty
5) Fixed Amount Payment

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Chapter 3. History of Laws Concerning Industrial Property Rights

1. Outline

Changes in the laws of Korea concerning industrial property rights are linked with the close relationship of Korea to certain foreign countries. That is to say, they were intensely influenced by Japan and the United States until 1961, when the country become a republic and began to enact industrial property laws of its own, and to take other independent steps, for the first time.

Currently, on the other hand, the South Korea patent system is under the influence of various international patent treaties, and has included its present four revised laws on industrial property rights since December, 1980. These changes should be understood together with the progress of the Economic Development Plans which were described in Chapter 2.

The history of the laws of Korea concerning industrial property rights may be divided into the following five periods, as shown in Table 3-1.

(1) Japan/Korea Coalition Period (1910-1945)
(2) Military Ordinance Period (1946-1960)
(3) Independence Period (1961-1972)
(4) Japan/Korea Patent Agreement Period (1973-1976)
(5) Internationalization Period (1973-present)

2. Japan/Korea Coalition Period (1910 - 1945)

The first patent system which Korea had was the Patent Ordinance of Korea, promulgated and enforced as Royal Ordinance No. 196 on August 12, 1908, towards the end of the Ri Dynasty.

Two years later, the Patent Law, Utility Model Law, Industrial Design Law and Trademark Law of Japan were given effect in Korea by Japanese Imperial Ordinance No. 335 of August 29, 1910, as a result of the coalition of Japan and Korea, and Japanese patents, etc., came into force in Korea.

This condition lasted for 36 years, until the termination of World War II in 1945 -- applications for patents and registrations of inventions, etc., by Korean people being filed with the Patent Office of Japan during this period. In consequence, the patent and other laws were based on the Japanese Laws of the 42nd year of Meiji (1909) and of the 10th year of Taisho (1921), the principle of domestic prior art with respect to the novelty of an invention, the system of opposition to a published application, etc., being the mainstays of these laws.

In those days Japan was already one of the signatories of the Paris Convention (1899) and recognized aliens as eligible for such rights.

3. Military Ordinance Period (1946 - 1960)

After Japan was defeated in World War II, Korea was placed under the military administration of the U.S. Armed Forces and, on October 5, 1946, a patent law was promulgated by Military Ordinance No. 91, establishing a Patent Office having a director, deputy director and chief examiner, and consisting of 8 sections and 2 offices (a hearing office and an appeals hearing office).

The contents of that patent law comprised those of the Japanese Patent Law, Utility Model Law, Industrial Design Law and a part of the U.S. Patent Law, adoption of plant patents being a result of the introduction of the U.S. Law.

In 1948 the government of Korea was established, but Korean industries suffered great damage from the Korean War, 1950-1953. After that the economy of the country gradually recovered, but its growth was very slow.

A characteristic feature of those patent rules by Military Ordinance was that patents, utility models and industrial designs were consolidated under one law, which remained in force until 1961.

The numbers of applications filed for patents and utility models during that period were about as shown below:

Year	:	1954	1957	1960
Patents	:	180	430	620
Utility Models	:	200	750	1,200

In the later half of that period, Korea entered into agreements for mutual protection of industrial property with eleven countries, including the U.S.A. and West Germany, as shown in Table 3-2.

4. Independence Period (1961 - 1972)

As the Republic was established in 1961, the patent laws by U.S. Military Ordinance which had been in force until then were greatly revised, and the under-mentioned three industrial property laws were promulgated on December 31, 1961.

Patent Law	(Act No. 950)
Utility Model Law	(Act No. 952)
Industrial Design Law	(Act No. 951)

Thus, Korea came to have its own independent industrial property laws. In 1962 the first 5-year Economic Development Plan was initiated and the Republic of Korea began taking steps on the road to substantial industrialization.

The contents of the above-mentioned three laws closely resembled those of the Old Law of Japan (the Law of 1921, 10th Taisho) and had the characteristic features mentioned in section 2.

The structure of the Patent Office was also revised on March 12, 1966, by Presidential Decree No. 2467, and came to have, under the Director-General of the Patent Office, 5

sections, 3 chief examiners and 2 offices (the First Hearing Office and the Second Hearing Office).

During this period of promulgation of its own legislation, the country took a positive attitude toward mutual protection in agreements with twelve countries, as can be seen from Table 3-2, and maintained its efforts at modernization and internationalization.

Korea also, in this period, made progress in industrial development as a result of the second 5-year Economic Development Plan. This is supported by the fact that patent and utility model applications, which numbered 900 and 1700 respectively in 1961, showed a rapid increase to 1500 and 5100 in 1968.

5. Japan/Korea Patent Agreement Period (1973-1976)

This period -- when importance was given to heavy chemical industries by the third Economic Development Plan -- was also a period when Korea's exporting of products grew rapidly.

In 1973, a Japan/Korea Patent Agreement was made to allow the people of Korea and Japan to file applications for patents and utility model registration in each other's countries. The Agreement took effect from January 1, 1974.

Taking advantage of that opportunity, the patent law and utility model law of Korea were greatly revised and the

revised laws were put into effect from January 1 of the following year, as Revised Law No. 2658 of December 30, 1973.

A part of the contents of the Japanese Law of the 34th year of Showa (1959) were adopted in the revised law. For example, with respect to the requirement of novelty, the principle of judgment by domestic novelty was changed to the principle of judgment by international novelty. Other characteristic features were the explict rule of non-patentability of substance patents and use patents, emphasis on the obligation for working (compulsory grant of license), elimination of the five-year limit for invalidation trial, etc. The law consists of 167 articles. It is also stipulated that failure to meet demands for exports within one year is to be considered as similar to an abuse of patent right. Here also is observed an attitude reflecting a determination to accelerate exporting.

The law concerning trademarks was also revised. The new Trademark Law, consisting of 69 articles, which explictly stipulated a system for licensing the use of trademarks, adoption of a five-year limit, etc., also took effect on January 1, 1974. As to industrial designs, a new Design Law of 67 articles took effect as Law No. 2507.

At the Patent Office itself, 4 departments (Management, First - Third Examination), 2 offices (First and Second Hearing Office) and 6 sections of the Management Department

were established under the Director-General of the Patent Office (Law No. 2433, January 5, 1973).

In those days, furthermore, Korea exchanged with Greece on January 25, 1973, a memorandum for the enjoyment of patent and trademark rights.

6. Internationalization Period (1977 - Present)

On December 1, 1978, Korea deposited its application for affiliation with the World Intellectual Property Organization (WIPO) and it was accepted on March 1, 1979. On May 5, 1981, Korea's subscription to the Paris Convention took effect, putting the country further into its internationalization period. Elsewhere, world internationalization of patent systems was making progress, with the Patent Cooperation Treaty (PCT) in 1970 and the European Patent Convention (EPC) in 1977.

Under such circumstances, Korea considered revision of its laws for the purpose of promulgating patent laws more helpful for the technical progress and industrializtion of the country, and, after studying and comparing the patent laws of various countries, PCT and EPC, promulgated the under-mentioned revised industrial property laws on December 31, 1980.

Patent Law (Law No. 3325) 167 articles
Utility Model Law (Law No. 3328) 39 articles
Design Law (Law No. 3327)
Trade Law (Law No. 3326)

These four laws were put into effect on September 1, 1981, when ordinances and regulations for their enforcement had been completed. These laws were based on Law No. 950 promulgated in 1961 and were carried into effect as a revision of that Law.

Of the aforementioned four laws, the new Patent Law (in force at the present time) is similar to the present Japanese Law (1978) on many points because of its historical background. The Korean Patent Law introduced a multi-claim system for the first time here (Article 8), and also an early laying-open system (2 of Article 83), examination request system (2 of Article 80), preferential examination system (4 of Article 80), the right to claim convention priority and definite mention of reasons for refusal of applications (Article 82), etc.

On the other hand, there are such differences from the Japanese Patent Law as mentioned below:

Appellate examination in the examination system (Article 125);

Provisions for trial for confirmation of scope of right (Article 12, 13);

Non-patentability of uses of chemical patents, chemical substances, medical drugs, foods, drinks, etc. (Article 4);

Absence of decision to reject amendment and absence of system for appealing that decision;

Request for provisional disposal or provisional attachment by reason of patent infringement not allowed for goods for which export customs clearance has been declared (Article 46);

Director of the Patent Office can order a patentee to report concerning the working of the patent (Article 79), etc.

In 1976, the Law for Organization of Government was partly revised, and, in accordance with that revision, the new organization of the Patent Office was officially announced on March 12 of that year. The Patent Office comprises, under its Director and Deputy-Director, 6 bureaus and 2 offices (Hearing Office and Appellate Hearing Office).

It can be seen from the above that the structure of the Patent Office became such as to enable it to carry out patent administration from an international point of view, standing on an equal footing with developed countries, as South Korea joined the Paris Convention in 1980.

As of July 1, 1981, the total number of the Patent Office officials was 319, including 72 examiners, 10 hearing officers and 9 appellate examiners.

At the present time, South Korea is engaged in the next 5-year Economic Development Plan. In order to ensure technical progress and development at a time of worldwide slow growth, will it be possible to have the patent laws fully attain their objective of contributing to the development of industry in the country? Much is expected from the efforts which Korea will make from now on.

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Table 3-1 History of Korean Patent System and Concerning Items

Year	Period	KOREA	Period	JAPAN	U.S.A.	International Patent Treaties
1700	Ri Dynasty		Tokugawa	Inventions (i.e., any variations from established forms, designs, methods, thinking) prohibited.	Independence (1776) Constitution promulgated	
1900	Japan/Korea Coalition	First Japan/Korea Agreement Korean Patent Ordinance (1908) Japanese Patent Law (1910) "Japan-Korea Coalition Treaty" forced Lasted for 36 years	Meiji	Provisional regulations for monopoly promulgated (1871) Law of 1889 (32nd Meiji) Law of 1899 (42nd Meiji)		Unified Patent Law Conference Vienna (1973) Paris (1978) Paris Treaty (1883)
			Taisho	Joined Paris Convention Law of 1921 (10th Taisho) Principle of first application System of opposition System of publication		
1940	Military Ordinance	Establishment of Korean Patent Office (1946) U.S. Military Ordinarce No. 91 (1946)	Showa		Patent Law of 1952	European Conference (1949) African Madagascar Patent Agreement (12 countries) Study of EPC Draft of Treaty
1950		Korean War broke out (1950) Korean War ended (1953)		Law of 1959 (34th Showa) Principle of judgment by foreign publications Combined application		
1960	Independence	Republic established (1961) Korean Patent Law, Utility Model Law, Design Law (1961)				
1970				Law of 1970 (45th Showa) Laying-open system Examination-upon request system		Patent Cooperation Treaty PCT (1970)(20 countries)
	Japan/Korea Agreement	Revised Law No. 2658 (Dec. 30, 1973)				
1975		Japan/Korea Agreement took effect (Jan. 1, 1974)		Law of 1975 (50th Showa) Substance patent system Multi-claim system adopted	Partial revision of Patent Law	EPC took effect (1977) EPC PCT Commencement of Acceptance (1978)
	Internation-alization	Revised Trademark Law took effect (Jan, 1974) Joined WIPO (Dec. 1978) Agreement with INPAOOC (1978) Joined Paris Convention (May 4, 1980) Revised 4 Laws on Industrial Property (Dec. 31, 1980)		Law of 1978 (53rd Showa) Joined Patent Cooperation Treaty		
1980						

Table 3-2 Industrial Property Mutual Protecting Agreement

No.	Contracting Countries	Date of Agreement	Kind of Agreement	Contents of Agreement
1	U.S.A.	11/28/1956	Treaty	Friendship treaty (40 articles in total) Article 10 and 25 concern all industrial properties (Mutual protection).
2	West Germany	12/1/1955	Agreement	Agreement concerning protection of trademark
		12/24/1959	Memorandum	Concerning mutual enjoyment of patent right
3	Denmark	12/9/1960	Agreement	Mutual regulation of trademark
		10/11/1963	Agreement	Mutual protection of patent rights
4	France	2/1/1961	Agreement	Mutual protection of trademark rights
		4/25/1963	Agreement	Protection of patent rights
5	Italy	3/7/1961	Agreement	Mutual protection of patent and trademark
6	Belgium	1/16/1962	Agreement	Protection of trademark rights
		1/12/1972	Agreement	Mutual protection of Patent, utility model and trademark
7	Norway	4/13/1965	Agreement	Mutual protection of patent, utility model and design rights
8	Netherlands	4/29/1966	Agreement	Mutual protection of patent and trademark
9	Switzerland	11/24/1959	Memorandum	Mutual enjoyment of trademark
		3/5/1960	Memorandum	Mutual enjoyment of patent rights
10	U.K.	1/20/1960	Memorandum	Enjoyment of trademark rights
11	Canada	4/27/1960	Memorandum	Enjoyment of trademark rights
		11/2/1967	Memorandum	Enjoyment of patent rights
12	Panama	4/28/1960	Memorandum	Enjoyment of patent and trademark rights
13	Australia	5/2/1960	Memorandum	Enjoyment of trademark rights
		4/11/1968	Memorandum	Enjoyment of patent rights
14	Hong Kong	6/11/1960	Memorandum	Enjoyment of trademark rights
15	Austria	8/16/1960	Memorandum	Enjoyment of patent and trademark rights
16	China	8/30/1960	Memorandum	Enjoyment of trademark rights
		3/31/1972	Agreement	Protection of patent, utility model and trademark
17	Sweden	7/15/1961	Memorandum	Enjoyment of trademark rights
		5/20/1969	Memorandum	Enjoyment of patent rights
18	Japan	12/3/1968	Agreement	Mutual protection of trademark rights
		1/1/1974	Agreement	Mutual protection of patent and utility model
19	Argentina	8/14/1972	Agreement	Protection of patent, utility model and trademark rights
20	Greece	1/25/1973	Memorandum	Enjoyment of patent and trademark rights

Chapter 4: Statistics on Applications and Examinations

1. Applications

Table 4-1 to Table 4-4 respectively show the number of applications for patents, utility models, designs and trade marks in South Korea over the years. Regarding patents, applications in the fields of chemicals and machines predominate, while for utility models it is applications in the fields of machines and miscellaneous articles. Applications in almost all fields show a generally increasing trend.

2. Applications by Foreigners

Table 4-5 and Table 4-6 show the number of patent applications by foreigners in each year. Regarding patents, applications by foreigners constitute the greater part, while, in contrast, almost all applications for utility models are by Koreans. In addition, applications for designs and trade marks are also mostly by Koreans. Of applications by foreigners, those from the U.S.A. and Japan are the most numerous.

3. Examinations

Table 4-7 shows the number of applications and the number of examinations in each year. The number of

applications examined generally increases year after year, and the number of applications also shows a generally increasing trend. It can be noted that the number of applications remaining unexamined, particularly those for patents, is increasing.

4. Oppositions

Table 4-8 shows the number of public announcements on applications and number of oppositions in each year. Regarding the patents, the rate of oppositions per given number of public announcements on applications is going down, and has recently become lower than the rate for the utility models.

Table 4-9 shows the number of oppositions and the number of oppositions found reasonable in each year. The rate of oppositions found reasonable seems rather lower than in Japan.

5. Trial, Retrial and Appeal to the Supreme Court

The trial system in Korea is characterized in that trial at the patent office is a double-instance system consisting of a trial and a retrial.

Only when an applicant is dissatisfied with the final refusal on examination can he request a trial in the patent office, without a trial. In addition, an applicant

dissatisfied with the determination of the retrial may appeal to the Supreme Court.

Table 4-10 shows the number of trial requests and number of trials determined in each year. Table 4-11 shows the number of requests for retrial and the number of retrials determined. Table 4-12 shows the number of appeals to the Supreme Court and number of appeals determined.

The fact that the number of requests for retrial is much larger than the number of trials determined reveals that most requests for retrials were made against final refusals. Moreover, it is distinctive that the number of retrials still remaining undetermined is increasing.

References:

(1) "Explanation about Patent System in Korea" by Shoji Matsui, published by HATSUMEI KYOKAI (Japan Institute of Invention and Innovation), April 20, 1982.

(2) "Summary of Patent Administration Agency in Korea" by Hisashi Mizuno et al., in "Tokkyo (Patent)," pp 16 to 21, No. 114, March, 1982.

Table 4-1 Number of Patent Applications

Field \ Year	1972	1973	1974	1975	1976	1977	1978	1979	1980
Machines	248	257	653	351	500	487	974	1,225	1,144
Chemicals (general)	649	1,013	1,431	1,222	1,163	1,062	1,196	1,400	1,702
Thread	155	173	449	202	296	223	201	225	216
Electrical and Telecommunication	257	271	971	380	410	494	615	699	837
Civil Engineering and Construction	118	97	147	119	144	189	162	176	201
Mining and Metallurgy	69	108	274	119	171	144	171	241	241
Drinks, Medical and Hygienical	437	350	254	241	263	221	314	346	356
Stationery and Printing	53	57	71	67	95	71	94	105	82
Equipment for Farming Industry	9	21	55	82	98	111	87	72	103
Miscellaneous Articles	-	51	150	131	121	137	201	233	188
Total	1,995	2,398	4,455	2,914	3,216	3,139	4,015	4,722	5,070

Table 4-2 Number of Utility Model Applications

Field \ Year	1972	1973	1974	1975	1976	1977	1978	1979	1980
Machines	2,533	2,287	1,869	1,440	1,680	1,361	1,582	2,012	1,915
Chemicals (general)	560	360	246	235	273	209	220	204	248
Thread	571	494	504	487	566	511	333	407	395
Electrical and Telecommunication	1,871	1,146	1,118	871	917	1,025	804	1,051	939
Civil Engineering and Construction	1,296	918	775	809	782	927	705	927	1,195
Mining and Metallurgy	364	155	59	55	48	69	81	92	86
Drinks, Medical and Hygienical	129	355	299	384	491	426	229	212	242
Stationery and Printing	351	445	296	377	456	414	579	628	750
Equipment for Farming Industry	72	475	320	502	645	542	409	519	555
Miscellaneous Articles	-	926	1,347	2,130	2,520	2,117	1,703	1,905	2,233
Total	7,747	7,561	6,833	7,290	8,378	7,601	6,645	7,957	8,558

Table 4-3 Number of Design Applications

Field \ Year	1972	1973	1974	1975	1976	1977
Thread and Accessories	678	632	1,193	1,281	1,290	988
Machines	1,369	1,453	1,248	1,000	871	1,691
Tableware	425	503	696	1,622	1,291	1,371
Vessels	1,261	1,201	1,041	1,236	1,091	658
Miscellaneous Articles	2,258	2,544	2,042	1,568	1,475	812
Total	5,991	6,333	6,220	6,707	6,018	5,520

Field \ Year	1978	1979	1980
Woven Goods and Accessories	968	1,437	1,530
Food and Medicines	11	33	39
Kitchen Articles and Furniture	1,236	1,644	1,865
Toys and Athletic Goods	351	508	560
Packing Containers and Medical	822	854	1,029
Physical and Chemical Machines and Instruments	181	225	301
Machines and Instruments for Industry	575	530	636
Electrical and Telecommunications	481	632	853
Civil Engineering and Constructions	453	692	781
Miscellaneous Articles	1,187	1,816	2,481
Total	6,265	8,371	10,075

Table 4-4 Number of Trade Mark Applications

Field \ Year	1972	1973	1974	1975	1976	1977	1978	1979	1980
Machines	862	1,459	1,288	1,136	1,411	1,527	2,080	2,203	2,281
Thread	1,008	1,315	1,402	1,347	1,392	1,391	1,686	1,825	1,696
Chemical Industry	119	208	260	246	222	253	1,921	2,256	2,071
Medical and Hygienical	1,713	2,174	2,032	2,253	2,634	2,286	1,844	2,115	2,095
Food	1,614	1,758	1,870	1,925	2,444	1,282	1,584	1,992	2,140
Miscellaneous Articles	1,093	1,725	1,569	1,761	2,119	1,805	2,286	2,547	2,565
Others	349	572	385	517	509	509	68	64	42
Service Marks	120	351	247	291	306	362	571	787	668
Total	6,878	9,562	9,053	9,476	11,037	9,415	12,040	13,789	13,558

Table 4-5 Number of Applications by Foreigners

Country	Patent					Utility Model				
	1976	1977	1978	1979	1980	1976	1977	1978	1979	1980
U. S. A.	441	532	805	1,047	1,151	13	17	20	27	61
U. K.	88	84	154	145	170	-	1	6	4	7
West Germany	131	199	271	282	274	1	2	1	3	19
France	65	64	114	147	199	-	-	1	3	-
Canada	12	13	6	21	9	-	-	-	-	-
Switzerland	102	54	112	127	135	-	-	1	2	8
Australia	6	10	15	35	21	-	2	-	2	-
Italy	39	29	34	49	55	-	-	-	4	2
Holland	20	40	54	81	87	-	-	-	4	13
Denmark	3	4	9	9	9	-	-	-	1	1
Hong Kong	-	1	7	3	1	-	-	-	-	1
Taiwan	14	10	17	21	10	9	14	31	19	26
Panama	7	7	1	1	2	-	-	-	-	-
Norway	2	6	7	7	2	-	-	-	-	-
Belgium	16	10	12	19	8	-	-	-	-	-
Sweden	9	21	42	53	30	-	5	-	-	-
Austria	3	-	3	7	9	-	-	-	-	-
Japan	860	870	1,348	1,615	1,622	236	361	372	668	483
Others	7	8	10	19	35	2	0	1	5	1
Foreigners Total	1,825	1,962	3,021	3,688	3,829	261	402	433	742	622
Domestic	1,436	1,177	994	1,034	1,241	8,117	7,119	6,212	7,215	7,936
Grand Total	3,261	3,139	4,015	4,722	5,070	8,378	7,601	6,645	7,957	8,558

Table 4-6 Number of Applications by Foreigners

Country	Design					Trade Mark				
	1976	1977	1978	1979	1980	1976	1977	1978	1979	1980
U. S. A.	22	98	59	113	83	769	824	1,180	1,744	1,651
U. K.	-	4	2	9	8	263	225	292	304	371
West Germany	-	-	-	15	4	339	302	487	603	523
France	-	-	-	11	28	138	142	312	377	338
Canada	-	-	-	1	-	7	5	18	28	37
Switzerland	-	-	-	3	8	154	133	205	227	276
Australia	-	12	3	3	11	9	7	20	46	31
Italy	-	-	-	24	1	31	36	67	111	93
Holland	-	-	40	36	16	34	29	54	34	89
Denmark	-	-	-	-	1	3	3	12	22	24
Hong Kong	-	-	-	9	5	17	22	30	36	34
Taiwan	-	2	5	3	1	2	4	10	8	16
Panama	-	-	-	-	-	8	39	22	11	26
Norway	-	-	-	1	-	1	1	3	-	7
Belgium	-	-	-	-	-	9	47	23	22	22
Sweden	-	-	-	9	3	16	20	39	57	81
Austria	-	-	-	-	-	2	4	2	23	7
Japan	-	-	-	-	170	817	875	1,289	968	1,086
Others	1	-	8	2	9	37	15	62	45	61
Foreigners Total	23	116	117	239	339	2,656	2,733	4,124	4,666	4,773
Domestic	5,995	5,404	6,148	8,132	9,736	8,381	6,682	7,913	9,123	8,785
Grand Total	6,018	5,520	6,265	8,371	10,075	11,037	9,415	12,040	13,789	13,558

Tabl3 4-7 Number of Applications and Examinations

	Year	Applications	Examined	Unexamined
Patent	1968	1,463	1,094	1,224
	1969	1,701	1,079	1,846
	1970	1,846	1,328	2,364
	1971	1,906	1,760	2,510
	1972	1,995	1,366	3,139
	1973	2,398	1,463	4,074
	1974	4,455	1,581	6,948
	1975	2,914	1,432	8,430
	1976	3,261	2,025	9,666
	1977	3,139	1,817	10,988
	1978	4,015	2,249	12,754
	1979	4,722	3,910	13,566
	1980	5,070	4,061	14,523
Utility Model	1968	5,129	4,086	3,149
	1969	5,573	4,759	3,963
	1970	6,167	5,175	4,955
	1971	6,810	8,827	2,938
	1972	7,747	6,476	4,209
	1973	7,561	6,947	4,823
	1974	6,833	5,680	5,976
	1975	7,290	4,487	8,779
	1976	8,378	7,498	9,659
	1977	7,601	5,141	12,119
	1978	6,645	9,410	9,354
	1979	7,957	7,670	9,541
	1980	8,558	7,737	10,444
Design	1968	3,277	2,750	874
	1969	4,536	3,413	1,997
	1970	4,522	4,381	2,138
	1971	5,348	6,296	1,190
	1972	5,991	5,513	1,668
	1973	6,333	5,588	2,413
	1974	6,220	6,435	2,198
	1975	6,707	3,309	5,596
	1976	6,018	4,790	6,824
	1977	5,520	7,968	4,376
	1978	6,265	8,016	2,625
	1979	8,371	8,098	2,898
	1980	10,075	8,742	4,214
Trade Mark	1968	6,619	3,486	3,881
	1969	9,111	3,495	9,497
	1970	5,124	4,439	10,182
	1971	5,816	6,665	9,333
	1972	6,878	6,139	10,072
	1973	9,562	9,632	10,002
	1974	9,053	8,660	10,305
	1975	9,476	5,864	14,007
	1976	11,037	8,512	16,533
	1977	9,415	13,929	12,018
	1978	12,040	13,216	10,842
	1979	13,789	16,179	8,452
	1980	13,558	15,426	6,320

Table 4-8 Publications and Oppositions

Year	Patent			Utility Model			Trade Mark		
	(B) Publi-cations	(C) Opposi-tions	% (C/B)	(B) Publi-cations	(C) Opposi-tions	% (C/B)	(C) Publi-cations	(B) Opposi-tions	% (C/B)
1972	244	53	22	1,218	165	13.5	-	-	-
1973	230	61	26	1,440	150	10.4	-	-	-
1974	493	88	17.8	1,500	160	10.6	-	-	-
1975	452	129	28.5	1,106	194	17.5	5,292	118	2
1976	535	78	14.5	1,609	283	17.5	4,988	220	4
1977	332	85	25.6	761	136	17.8	8,853	360	4
1978	762	83	11	1,752	244	14	6,892	281	4
1979	2,008	164	10	2,244	279	10	9,500	459	4.8
1980	1,636	100	6.1	2,174	250	11.5	9,113	384	4.2

Table 4-9 Oppositions and Those Found Reasonable

Year	Patent		Utility Model		Trade Mark	
	Oppositions	Found Reasonable	Oppositions	Found Reasonable	Oppositions	Found Reasonable
1972	53	35	165	109	-	-
1973	61	31	150	93	-	-
1974	88	16	160	34	-	-
1975	129	25	194	43	118	27
1976	78	17	283	68	220	70
1977	85	7	136	28	360	25
1978	83	16	244	44	281	23
1979	164	16	279	50	459	124
1980	100	41	250	81	384	144

Table 4-10 Number of Trials Requested and Determined

Year	Trials Requested					Trials Determined					Carry-over
	Patent	Utility Model	Design	Trade Mark	Total	Patent	Utility Model	Design	Trade Mark	Total	
1972	43	159	72	69	343	51	155	98	100	404	132
1973	40	153	69	79	341	42	155	69	74	340	133
1974	43	193	96	103	435	35	177	82	85	379	189
1975	47	190	146	136	519	37	180	106	97	420	288
1976	66	215	121	139	541	32	128	94	107	361	468
1977	49	172	109	88	418	54	194	123	136	507	379
1978	35	146	161	100	442	64	218	142	100	525	296
1979	40	161	156	139	496	27	137	161	95	420	372
1980	71	170	178	154	573	55	169	171	162	557	388

Table 4-11 Number of Retrials Requested and Determined

Year	Retrials Requested					Retrials Determined					Carry-over
	Patent	Utility Model	Design	Trade Mark	Total	Patent	Utility Model	Design	Trade Mark	Total	
1972	105	207	50	119	481	92	168	65	106	431	415
1973	99	195	37	100	431	126	251	71	126	574	272
1974	66	145	50	130	391	84	203	49	139	475	188
1975	81	152	58	147	438	55	64	28	85	232	394
1976	142	282	83	148	655	72	136	34	74	316	733
1977	129	229	181	204	743	88	246	73	148	555	921
1978	189	380	180	365	1,114	143	261	116	132	652	1,383
1979	233	371	119	403	1,126	209	329	213	388	1,139	1,370
1980	319	360	174	725	1,578	196	407	143	379	1,125	1,823

Table 4-12 Number of Appeals to Supreme Court and Those Determined

Year	Appeals					Appeals Determined					Carry-over
	Patent	Utility Model	Design	Trade Mark	Total	Patent	Utility Model	Design	Trade Mark	Total	
1972	7	15	20	10	52	12	16	5	8	41	42
1973	11	18	6	18	53	8	12	9	10	39	56
1974	13	27	11	25	76	6	17	9	20	52	80
1975	6	13	2	11	32	5	10	3	10	28	84
1976	7	17	6	8	38	9	14	5	12	40	82
1977	18	27	8	6	59	15	27	16	14	72	69
1978	7	12	2	13	34	13	27	8	10	58	45
1979	17	24	14	40	95	19	27	7	26	79	61
1980	15	35	11	58	119	8	29	12	48	97	83

Chapter 5. Character of Korean Patent Law

1. Preface

The patent application procedure in Korea will first be described with reference to the accompanying flow chart (Table 5-1), and then the character of the system will be explained with respect to unpatentable inventions, examinations, trials and patent rights.

Table 5-1 shows the principle actions during patent prosecution in Korea. The procedure itself is similar to the patent application procedure in Japan.

2. Unpatentable Inventions

Certain inventions unquestionably meet the requirements for patentability, but are unpatentable primarily from a policy viewpoint -- for example, they relate to national defense, public benefits, public order or morality. Empirically, domestic technology which is judged to still fall short of worldwide technical standards is most often unpatentable. Such inventions in Korea are proscribed by Article 4 of the Patent Law:

> Article 4 (Unpatentable Inventions) - inventions according to any one of the following paragraphs shall not be patented, notwithstanding Article 6:

(1) inventions for food or drink, articles of taste, or stimulants;

(2) inventions of medicine or processes for preparation of novel medicines from the mixing of two or more medicines;

(3) inventions of substances to be prepared by chemical processes;

(4) inventions of substances to be prepared by nuclear transmutation processes;

(5) inventions relating to use of chemical substances;

(6) inventions liable to contravene public order, morality or public health.

Of these, items (1), (2), (3), (4) and (6) are found in essence in similar provisions in other countries, but item (5) seems to be a proscription peculiar to Korea. It should be noted that item (5) applies to inventions relating to the use of chemical substances but not to inventions relating to the use of other substances.

In many countries, a delineation of unpatentable inventions covers inventions relating to use of medicines; but, in Korea, the proscription applies to all uses of chemical substances, regardless of the industrial fields in which such chemical substances are used.

3. Examinations

3-1 Examination of a patent application is normally conducted by an examiner. However, the Korean Patent Law prescribes that assistance for examinations shall be sought from related organizations of the government, special organizations in related technical fields, and persons well informed in the patent business, when the Director-General of the Patent Office deems it necessary.

(i) The Director-General of the Patent Office may request assistance from related organizations of the government when he deems it necessary for an examination, and the chiefs of the organizations who are asked for such assistance shall be obliged to comply with such a request unless there is a rational reason (Article 80, Sections 3 and 4);

(ii) The Director-General of the Patent Office may request assistance from or consult with special organizations in related technical fields, or persons well informed in and familiar with the patent business, when he deems it necessary for an examination (Article 80, Section 5);

(iii) The Director-General of the Patent Office may request that the patent applicant, when any patent applications based on the same invention as the invention of the patent application filed by said applicant in Korea have already been filed in foreign countries, file documents of international investigative reports which may clarify results of examinations conducted in those countries (Article 80, Section 6).

Such provisions as mentioned above are probably intended to improve the examinations conducted solely by the examiner, in terms not only of quality but also of quantity.

3-2 As a rule, examinations of patent applications are conducted in order of date on which the requests for examination were filed, as prescribed by Article 41, Section 2, of the enforcement regulations. However, when the Director-General of the Patent Office recognizes that a certain patent application should be urgently examined, he may direct the examiner to examine this application in preference to other patent applications according to Presidential decree, as prescribed by Article 80, Section 4, of the Patent Law.

Article 13 of the enforcement regulations describes particular examples of applications to be preferentially examined:

(i) applications relating to the defence industry;

(ii) applications relating to energy saving or alternative energy;

(iii) applications contributing to export promotion;

(iv) applications contributing to pollution control;

(v) applications based on inventions filed by the government or local autonomous entities or research institutes belonging thereto and recognized as being in the public interest;

(vi) applications for inventions which have already been worked on an industrial scale after laying-open and before publication of these applications by persons other than the applicants for these inventions.

This system of so-called preferential examination is usually implemented in cases where the invention of the application has already been worked by competitors of the applicant. Such preferential examination is recognized within a relatively wide range, probably in response to demand from the industrial sector in Korea.

4. Trials

The system of trial in Korea includes two steps, i.e., the so-called trial and retrial, and the applicant can appeal to the Supreme Court when dissatisfied with the decision of the retrial.

With respect to the contents, the trial may be classified into trial for invalidation of patent, trial for definition of patent right's scope, trial for grant of non-exclusive license, trial for correction and trial for invalidation of correction. In exceptional cases, the applicant may directly obtain a "retrial," omitting the trial, when dissatisfied with the decision on examination.

Trial for invalidation of patent -
trial to invalidate a patented invention based on statement of reasons for invalidity after registration of the application;

Trial for correction -
trial to correct the specification or the drawings of a patented invention when an imperfection is contained therein;

Trial for invalidation of correction -
trial to invalidate a correction when the decision of the trial for correction was beyond the acceptable limit of correction;

Trial for grant of non-exclusive license -

(1) trial to obtain a non-exclusive license when a patented invention of a person is in mutually utilized relation with another patented invention filed by another person prior to the date of the later application, and said other person refuses grant of the license without sufficient reason; or

(2) trial to obtain a non-exclusive license when it becomes necessary for the licenser in the case of (1) above to work the patent of the licensee in the case of (1) above, but this licensee refuses grant of the demanded license to said licenser without sufficient reason;

Trial for definition of the scope of the patent right - trial to define the scope of the patent right

The Korean Patent Law provides that the "protective scope of a patented invention shall depend on the description of the claims in the specification accompanying the request," and, so far as such prescription is concerned, the scope of a patent right seems to be the scope of protection rather than the technical scope. The legal character of the trial for definition of the scope of the patent right is presently unclear. It is an open question whether an irrevocable judgment relating to the scope of right given by a court of justice in an action for

infringement of a patent restrains a decision in a trial for definition of the scope of a patent right separately appealed to the Patent Office. This question must be answered by judicial decisions in the future.

5. Patent rights

5-1 Effect of patent right

In Korea, patent rights are classified into rights relating to the invention of an article and rights relating to the invention of a process or method.

With respect to the invention of an article, the patentee shall have the exclusive right to commercially produce, use, sell, import and distribute the subject article.

Concerning the invention of a process or method, the patentee shall have the exclusive right not only to commercially use the related process or method, but also to commercially use, sell import and distribute the article produced by this process or method. Accordingly, acquisition of a patent relating to a process for preparation of a chemical substance in Korea means that the patentee will be able to obstruct import of articles prepared by the patented process in foreign countries. It is also provided in Korea that novel, identical articles shall be regarded as having been produced by the same

process or method and, in view of such a provision, a patent for a process or method can be very valuable in Korea.

5-2 Duties of patentee

The Korean Patent Law prescribes punishment for non-working of a patented invention, and this fact suggests that the working of a patented invention is a positive duty of the patentee. Specifically, Article 51, Section 1, of the Patent Law prescribes that "the patentee shall be obliged to faithfully work his patented invention in Korea," and Article 51, Section 2, prescribes that, "when a patentee has not worked his patented invention for any 3 continuous years after registration of establishment of his patent right without natural disaster, terrestrial upheaval, inevitability or the sufficient reasons prescribed by Presidential decree, the Director-General of the Patent Office may grant a non-exclusive license for this patented invention to another person except that such a non-exclusive license shall not be granted unless the period of 4 years has elapsed since the application date of this patented invention."

The "sufficient reasons" mentioned above are prescribed by Article 6 of Presidential Decree No. 7006 as follows:

(1) the patentee has not been able to work his patented invention due to psychosomatic functional disorder;

(2) working of the patented invention is premised on permission, authorization, consent or approval of government authorities, and the patentee has not been able to work his patented invention because he has not able to obtain such permission, authorization, consent or approval;

(3) the patentee has not been able to work his patented invention because production, use, selling, import or distribution of the article attending on working of the patented invention shall be legally inhibited or restrained;

(4) the patentee has not been able to work his patented invention because raw materials or facilities necessary for working of his patented invention are unavailable in Korea and import thereof is legally inhibited;

(5) the patentee has not been able to work his patented invention because demand for the article attending on working of the patented invention could not, or could hardly be, expected, and working on a commercial scale has thus been impossible.

The Presidential decree mentioned above provides also that the Director-General of the Patent Office may cancel on his authority or upon a request from an interested person a patent right when the non-exclusive licensee of this patent right has not worked the patented invention continuously for 2 or more years. In view of such fact, punishment for non-working of a patented invention is very rigorous in Korea.

5-3 Abuse of patent right

The Korean Patent Law prescribes that the patentee shall not abuse his patent right. The patent right shall be regarded as abused in 4 cases as follows:

(a) the patented invention has not been commercially worked for any 3 continuous years after patenting, in spite of the fact that working of the patented invention is adequately possible;

(b) domestic demand for the product realized by the patented article, plant patent, patented technique or patented process or method has not been satisfied to a proper degree, without sufficient reason, within 3 years after patenting;

(c) export demand for the product realized by the patented article, plant patent, patented technique or patented process or method has not been

satisfied to a proper degree and under proper conditions, without sufficient justification, for any continuous 3 years after patenting (except in the case that a period of 4 years has not elapsed after the application date in all three cases (a), (b) and (c));

(d) the patentee unreasonably refuses granting of a license and, in consequence, has injured industry and country, or business of a resident in Korea.

In any one of these cases, the Director-General of the Patent Office may grant a non-exclusive license to another person upon a request from that person. In other words, an exclusive patent right shall be allowed only when this is recognized as adequately contributing to development of Korean industry.

5-4 Extent free from effects of patent right

In addition to an exception for the working of a patented invention for the purpose of research or testing, and for articles merely passing through Korea, or which have been available in Korea since the application date, etc., the following extremely extraordinary case is provided for: For articles of which export has already been permitted or approved, and custom clearance for export has been declared, it is impossible to obtain an order of provisional

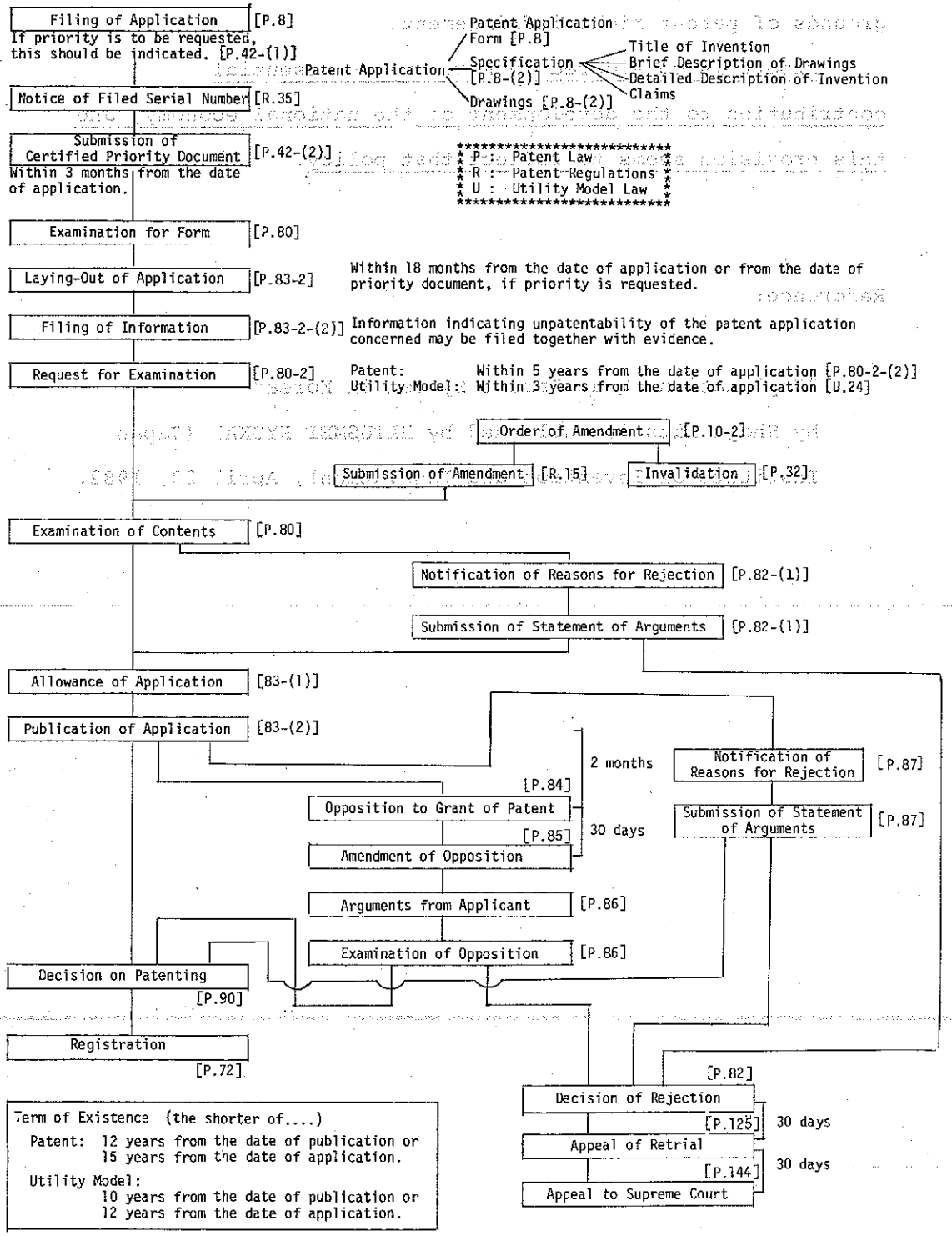
disposition, provisional seizure or attachment on the grounds of patent right infringement.

Export is considered in Korea as an essential contribution to the development of the national economy, and this provision seems to reflect that policy.

Reference:

"Explanation About Patent System in Korea" by Shoji Matsui, published by HATUSMEI KYOKAI (Japan Institute of Invention and Innovation), April 20, 1982.

TABLE 5-1 FLOW CHART OF PATENT APPLICATION PROSECUTION IN KOREA



Chapter 6. Conclusion

Korean economic growth, once called "the miracle of Han Gan," fell into a depression caused by the second oil shock.

The new government, modifying former economic policies, is aiming at high economic growth by expanding exports again.

Concerning the Korean economy, while the international economic situation is becoming more severe, inducement of foreign advanced technology and foreign capital is essential for growth.

But, on the other hand, heavy borrowing from abroad is depressing the Korean economy, and revival is said to be dependent on resolution of the wage problem with workers.

Although the government projected a fifth 5-year Economic Development Plan, economic revival will encounter difficulties.

If competitiveness in exporting, which is a main support for economic growth in Korea, is lost, there will be certain limits on Korean economic growth.

Since Korea, like Japan, has few natural resources, it is a laborious task for Korea to maintain a high economic growth rate in this severe economic environment.

However, the capability of Korea as a semi-advanced country is undeniable, and Korea is making every effort, with prudence and confidence, to join the group of developed

countries. Korea's government's determination to develop the Korean economy is far above the average.

And we should not forget that the Government is earnestly seeking to formulate a technology development strategy with efficient industrial policies and good utilization of manpower.

Even in the field of industrial property, a series of substantial amendments to the laws were made which led to the current laws.

The enforcement of the present laws should be understood as a point on a path which Korea is walking toward full development of the country.

The numbers of applications for patents, utility models, designs and trademarks in Korea show increases. Most of the patent applications have been filed by foreigners, while almost all applications for utility models have been filed by Koreans.

The existing Korean Patent Law is similar to the present Japanese Patent Law in may respects. However, there are several important differences between them, some of which are concerned with compulsory licenses, reports on patent working, and exporting of products which infringe patents.

With respect to analysis of the points which are drastically different from Japanese laws, we should be careful to take Korea's position on political, economic and defense matters into consideration, and we should refrain from carelessly criticizing.

CLIMATE OF INDUSTRIAL PROPERTY PROTECTION AND TECHNOLOGY TRANSFER IN CENTRAL AND SOUTH AMERICA

COMMITTEE 3 - U.S. GROUP

by

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ABSTRACT

The Andean Common Market consists of five member countries which have ratified the Cartagena Agreement of 1969. The two major industrial property decisions that have been enacted under the Agreement are discussed, and this is followed by a few comments about the current situation in certain member countries. Of the remaining countries in Latin America, comments are limited to Brazil, Chile, Argentina and Mexico.

CLIMATE OF INDUSTRIAL PROPERTY PROTECTION AND TECHNOLOGY TRANSFER IN CENTRAL AND SOUTH AMERICA

A purely geographical definition of Central and South America would encompass twenty countries, each of which provides some form of protection for industrial property rights. The level of interest in specific countries will, of course, vary considerably depending upon our individual business activities. However, from a practical standpoint, the discussion which follows will be confined to those few countries which are generally recognized as representing major business opportunities and to the group of countries commonly referred to as the Andean Common Market.

Andean Common Market

In 1969, the Andean Subregional Agreement, or Cartagena Agreement, was entered into by Bolivia, Colombia, Chile, Ecuador and Peru, and the terms of this Agreement became effective in these countries in 1971. Venezuela became a member of this group in 1973, and Chile withdrew its membership in 1976. The primary purposes of the group were to accelerate industrial growth, to enhance opportunities for economic development, and to establish a

foundation for what might eventually become a common market organization for all of Latin America. The mechanisms to be employed in achieving these objectives included harmonization of economic policies, gradual elimination of trade barriers and coordinated regulation of foreign investment and business interests.

Activities under the Agreement are coordinated by a Commission on which each member country is equally represented. The Commission has the highest authority, and it convenes regularly to establish policies, approve rules and regulations, and adopt so-called "Decisions" to direct the activities of the members. Over 100 such Decisions have been authored by the Commission to date, and each Decision defines the manner in which it is to be made operative within the member countries. In some instances, a Decision becomes effective by simple ratification by a country, while in other cases, the substance of the Decision must be incorporated into national legislation. The Agreement also provides for a Board composed of three members, and the duties of this Board are to implement the Agreement, carry out the directives of the Commission, and prepare recommendations for the Commission.

Two of the Decisions promulgated by the Commission are of the most particular interest. Decision No. 24 was enacted in 1971 and was subsequently ratified by each of the member countries over a period of two years. This Decision contains the regulations relating to foreign investment, and it also provides the rules governing license agreements which concern patents,

trademarks and technology transfer. Decision No. 85 was enacted in 1974, and it covers the subject of obtaining and maintaining patent, design and trademark rights. This Decision requires the enactment of national legislation to implement its provisions, and this has now been done in each member country with the exception of Venezuela and Bolivia.

Within Decision No. 24, the following provisions are of primary significance:

Article 18 requires that all agreements relating to the importation of technology, or to patents and trademarks, must be submitted for review and approval by the competent agency within the member country.

Article 19 requires that technology transfer agreements must contain specific identification of the means of transfer, definition of the contractual value of each element of technology to be transferred, and a finite term of validity of the agreement.

Article 20 recites a list of contract provisions which are prohibited. These include raw material tie-ins, fixed resale prices, limitations on production quantities, export restrictions and grant-back of improvements made by the licensee.

Article 21 forbids royalties for intangible technological contributions, and also forbids royalty payments to a foreign parent by a local subsidiary.

Article 24 requires governments of the member countries to give preferential treatment to acquisitions of technology from other member countries.

Article 25 relates to trademark licenses, and it defines substantially the same list of prohibited provisions as recited for patents and technology licenses in Article 20.

Article 26 directs the Board to recommend to the Commission the kinds of inventions which will be patentable and the manner in which to treat rights already granted.

Article 38 authorizes each member country to reserve certain sectors of economic activity solely for national enterprises, either public or private.

Based upon the direction given in Article 26 of Decision No. 24, the Commission enacted Decision No. 85, and the following provisions should be especially noted:

Article 1 provides for patents of invention for new creations susceptible of industrial applications and improvements thereon.

Article 5 lists several classes of inventions for which patents shall not be granted. These include: (1) plant varieties and animal breeds, and the biological procedures for producing these varieties and breeds, (2) pharmaceutical products, medicines, active therapeutic substances, beverages and foods for humans, animals and plants, and (3) foreign inventions which were first applied for in another country more than one year before application in a member country.

Article 28 provides that the patent owner shall have the exclusive right to exploit the invention, either directly or through licensees. The patent owner does not have an exclusive right for importation of the patented product or of the product of

a patented process.

Article 29 sets a maximum patent term of ten years, but requires proof of exploitation to secure the last five years of the term.

Article 30 requires that the patent owner notify the competent national office of the start of exploitation within three years after the grant, and it also requires registration of all licenses or assignments relating to the patent.

Article 31 defines exploitation as the permanent and stable use of the patented process, or the production of the patented product, in the country of grant to adequately supply local market demand.

Article 34 provides for compulsory licensing for failure to exploit within three years after grant or for suspension of exploitation for more than one year.

Article 75 provides that the owner of a trademark cannot oppose the importation of goods bearing the same mark if such goods come from another member country and are clearly labeled with the country of origin.

Article 85 provides that all industrial property rights validly granted prior to enactment of appropriate national legislation will continue for the term for which they were originally granted.

The full text of Decision No. 24, and a number of later, relevant Decisions, has been published in 79 Patent & Trademark Review 18-38 (1981). The full text of the Decision No. 85 has been published in 73 Patent & Trademark Review 17-25, 48-55

(1975).

In general, the Cartagena Agreement has so far been quite unsuccessful in achieving the industrial growth and economic development that had been projected for the group of member countries. Although the withdrawal of Chile was offset by the addition of Venezuela, the group has not worked as well together as had been hoped. The lack of long-term, stable governments in the member countries has contributed greatly to the problem, and there has been considerable speculation that one or two of the present members may also withdraw in the near future. A few comments on developments in some individual member countries follows.

Peru

The organization responsible for the regulation and approval of technology transfer agreements is the National Commission of Foreign Investments and Technology, known as CONITE. After approval has been obtained, the agreement must be registered with the Institute for Industrial Technological Investigation and Technical Norms. Although Decision No. 24 provides the legal framework which governs the activities of CONITE, the practical application of that framework is often quite uneven.

In general, CONITE presently approves an average royalty of 1-2% in the case of trademarks and up to 5% for patents and technology. Even higher royalties can be obtained if the agreement involves the manufacture of a new product in the country. While minimum or guaranteed royalties are not permitted,

additional payment can sometimes be obtained as a disclosure fee if the technical information provided at the outset of the agreement is particularly valuable. Semiannual royalty payments are preferred, although quarterly payments are possible. In most cases, a maximum term of agreement will be five years.

While Article 21 of Decision No. 24 prohibits royalties for intangible technological contributions, and also prohibits royalties from a local foreign enterprise to its foreign parent, definitions of these important terms are not provided in the Decision. CONITE's present definition of "technology" does not include technical services whereby royalties for such services can be obtained. The problem with a local foreign enterprise can be avoided by having mixed national and foreign ownership, and CONITE has approved royalties in such situations. Thus, in practice, many means have been devised to get around the restrictive provisions.

Venezuela

There appear to be three reasons why this country has refused to accept Decision No. 85, and the first of these is the dissatisfaction with the manner in which the group has functioned to date. The Venezuelans fear that if strong steps are not taken soon to eliminate delays and demonstrate economic progress, the Andean Common Market will fall apart.

A second reason lies in the specific provisions of Article 75 regarding importation of trademarked products from member countries. Local industrialists see their market as the

richest within the group, and they are strongly opposed to an invasion of foreign products having freedom to use their most important trademarks. This opposition has contributed greatly to the government's refusal to ratify Decision No. 85.

The final reason is the numerous changes that would be required in the Patent & Trademark Office to provide such features as novelty examination and the International Classification system. The present budget is very modest, and the present staff is already overworked. For these reasons, it is most unlikely that there will be any change in the Venezuelan position with respect to Decision No. 85.

Ecuador

Patent activity has been very limited in recent years as evidenced by the grant of fewer than 200 patents of invention in the two-year period of 1979-1980. The present government believes that exclusive rights lead only to higher prices for products, and that this contributes to a high rate of inflation. These beliefs, coupled with the restricted rights available since the adoption of Decision No. 85, have served to discourage attempts to patent in Ecuador, and no change can be expected in the near future.

Technology transfer agreements require review and approval by a Committee of the Ministry of Industries, Commerce and Integration, and a minimum period for Committee action is about six months. Even after approval, an agreement is not considered effective until it has been recorded by the Central Bank of Ecuador and the Patent & Trademark Office.

The main factors which the Committee considers in its study of an agreement are: (1) the cost of the technology to the consumer when purchasing the product, (2) how much local labor and raw materials will be used, (3) the current state of Ecuador's balance of payments, (4) the financial state of the local licensee with reference to the profits he will earn, and (5) the degree of exclusivity of the rights transferred. Payments to the licensor are permitted in the form of a fixed initial sum, royalties which can be based upon production volume, net sales price or profits, and fees for various specific services rendered.

Colombia

The Trademark Office is currently experiencing delays of over two years in publishing new marks in the Industrial Property Gazette. Significant delays are also found in the processing of renewal applications because of the strict requirements for proof of use of the mark. Local officials are said to be greatly concerned about these problems, and some progress is hoped for soon.

For quite some time, the general attitude of the Patent Office has been negative toward inventions, and this led to a systematic rejection of all applications. The procedure reached a point where there were years in which absolutely no patents of any kind were granted. This created a huge backlog of appeals to the Juridicial Office of the Ministry of Economic Development. Through the efforts of the local bar, the general problem is slowly being resolved, and patents have again begun to issue in

the past few years. A new government was inaugurated in August, and, although no formal policy has been announced, informal comments by some of the new officials indicate a more favorable attitude toward the protection of industrial property rights. It does not appear, however, that this change of attitude will apply to inventions relating to herbicides and insecticides. Applications for patents in this field continue to be rejected on the ground that they are designed to protect plants from pests or to regulate plant growth. Such inventions are thus considered to be pharmaceutical preparations for treatment of the plants and are held to be unpatentable subject matter under Article 5 of Decision No. 85. A number of these cases have been appealed to the highest tribunal, the Counsel of State, but no decision is expected for at least another year. To date, every government department that has been involved in these matters has been completely negative on patenting these inventions.

Although industrial property rights continue to be difficult to obtain in Colombia, the recently enacted Penal Code provides severe penalties for violations of such rights. One who fraudulently uses a trademark, or who infringes a patent, or who illegally discloses a trade secret is subject to a fine of up to 500,000 pesos and a prison term of up to six years.

The comments which now follow deal with other countries in Latin America which are not members of the Andean Common Market. As noted at the outset, the countries selected are believed to be those in which major business opportunites are available.

Chile

The requirement that all licenses and technology transfer agreements have to be recorded and registered with the Central Bank of Chile has been eliminated. This change took place simultaneously with the establishment of a free market for foreign currency. The Bank is no longer involved since a licensee is now free to buy the foreign exchange he may need to make royalty payments.

Early this year, a new set of trademark regulations was enacted, and drastic changes were made in the time periods allowed for filing oppositions, responding to oppositions and submitting proofs. The new periods were each set at just eight days, which effectively deprived all foreigners, and many resident trademark owners, of any practical opportunity to protect their rights. A great amount of vigorous argument followed, and, as a result, the regulations were amended in August to extend the time periods. The amendments provide 25 days in which to file an opposition, 20 days in which to reply to an opposition, and 10 days in which to submit evidence. It is hoped that this represents recognition by the government of the practical problems involved, and that further realistic amendments will appear in the near future.

In May of this year, the Patent Office issued new regulations requiring full identification of the inventor and a legalized assignment from the inventor to the applicant. Each application must include a separate summary sheet containing the field of the invention, the advantages over the prior art, and a

brief description of the basic steps or elements of the invention. The regulations also required that all documents must be on legal-size paper. Following numerous complaints to the Patent Office, the regulations were amended in August to permit the use of the internationally accepted A-4 size paper. Further, it is now necessary to identify the inventor only by name, and the requirement for a formal assignment has been withdrawn.

Argentina

The present Patent Law has been in force since 1864, and a number of attempts at new legislation have been made in the last two decades. The draft law which was proposed in 1980 appeared to be headed toward approval, but a change in the government caused all activity to cease. Substantially, the same draft was again being actively considered early this year, but the Falklands/Malvinas conflict has disrupted all normal government activities, and it cannot be predicted when the situation will stabilize.

The draft law which was under study contained several important improvements over the current law. While the patent term remained at 15 years, provision was made for an extension of three years under certain circumstances. The time for working was extended to four years from filing or three years from grant, and automatic forfeiture for failure to work was eliminated. In the case of a product whose process of manufacture has been patented, use of the patented process is presumed, and the burden of proof is placed upon the accused infringer.

In the trademark area, a new law was enacted in early 1981, and it provided for the adoption of the International Classification of marks for goods and services. The initial term for a mark remains at ten years, but proof of actual use during the last five years of the term is now required for any renewal. Although there is no provision for automatic lapsing of a non-used mark, any interested party can petition for cancellation of a mark for failure to use. Violation of trademark rights is a public criminal act under the new law, and the government is obliged to prosecute infringers. Penalties include both fines and prison terms.

A new technology transfer law was also enacted in early 1981, and it provides that government approval is no longer required if the foreign party to the agreement does not control the local party. Such an agreement needs only to be registered for information purposes, and the previous restrictions on royalties and other provisions are no longer applicable. Agreements between parent and subsidiary companies still require approval and registration. It has been established that the failure to register an agreement will not affect its validity or enforcement. However, it should be noted that unregistered agreements will be subject to higher taxes.

Mexico

After the enactment of the 1976 Law on Inventions and Trademarks, a group of U.S. companies with business interests in Mexico began a study of the legal and economic implications of the

law. That study identified the following four areas which were considered to be of the greatest concern: (1) the law eliminated patent protection for certain critical areas of industrial activity including metal alloys, biological inventions, agricultural chemicals and health care compounds; (2) the law provided a short patent life, ten years, and a short period after which a patent will lapse for failure to exploit (four years); (3) the law required the forced transfer of know-how in connection with the grant of a compulsory license of a patent or certificate of invention; and (4) the law required the linking of foreign-originated marks with Mexican marks and provides for the compulsory licensing of trademarks.

Based upon its study, the group has engaged in extensive dialogue with the local industrial community and with many government officials. Recommendations for change have been offered by the group, but expectations are uncertain due to the current financial crisis in Mexico. Any prognosis is further complicated by the fact that a new government will take office at the beginning of 1983.

A revised Technology Transfer Law became effective in February of this year. The spirit of the original 1973 law is not altered, but there are a few changes which should be noted by those doing business in the country. These changes are intended to expand the regulatory authority to cover new aspects of technology interchange, and they aim to foster more local technological development.

One of the changes in the law is the inclusion in the roster of contracts that must be registered with the National Registry of Technology Transfer, of those pertaining to consulting and evaluation performed by foreign individuals or companies and those relating to computer programs. Registration is still required for agreements covering transfer of patents, designs, trademarks, models, engineering plans, management services and technical assistance. Still excluded from activities needing registration and approval are those involving plant and machinery installation, repairs, emergency services and training.

The new law gives the Secretariat of National Properties and Industrial Development considerable authority in regulating technology transfer and directs consultation with appropriate public and private organizations when setting policy. The Secretariat responsibilities include guiding the choice of suitable technology, determining maximum payments after studying charges for comparable technology, diversifying and increasing production of priority goods, and encouraging assimilation of foreign technology and development of domestic R&D. Foreign companies may find that Secretariat officials will be more insistent that local firms look for a domestic substitute for foreign technology, and they will strongly favor contracts geared to local adaptation of and improvement on foreign processes. .

The list of contractual conditions that Mexico will not permit in technology transfer agreements is largely unchanged. Officials will reject clauses that allow the technology supplier to interfere in the management of the acquiring company, restrict

its ability to conduct research, prohibit the use of complementary technologies, impose production volumes or maximum prices, limit freedom to sell, oblige the local company to permanently employ persons designated by the supplier, require acquisition of specified goods or raw materials or impose confidentiality requirements beyond the term of the contract.

The previous prohibition against grant-back clauses was slightly changed in a practical recognition of common industrial practice. Mexican firms are now allowed to share with the supplier of technology new developments they make in that technology if the arrangement is reciprocal or other benefits are provided. The ruling against mandatory sales or representation contracts with the supplier has also been eased. The Secretariat may allow such contracts for exports if the Mexican purchaser agrees and can show that the foreign supplier has greater expertise or is in a position to do a better marketing job than the local firm.

An interesting and possibly troublesome addition to the law is the requirement that the supplier contractually guarantee the quality and results of the technology provided. The contract must also specify that the supplier assumes responsibility for any infringement of the industrial property rights of third parties.

The legislation does not set maximum royalty levels, leaving officials free to set competitive rates, and the maximum term of technology transfer agreements continues to be ten years. The sanctions which are provided for violations of the law are new, and these include heavy financial penalties.

Brazil

The National Industrial Property Institute (INPI) is actively engaged in two programs of interest. One of these is an effort to improve the timing and quality of decisions on patent applications. In this regard, the staff of examiners has been increased from about 25 in 1976 to more than five times that number today. Examination of chemical patents had formerly been the greatest problem, but this can now be expected within four years of filing, less than half of the time previously necessary.

The other program involves public education, and it is designed to encourage the development and patenting of inventions made in Brazil. Publications are being distributed and seminars are being organized to explain the patent system and the value of locally-made inventions. Brazilian industry does not normally provide its employees with the assistance of in-house patent counsel to identify and patent new developments, and considerable work will be needed to overcome the employees' lack of knowledge and understanding of these matters.

About ten years ago, INPI replaced the Banco Central of Brazil as the authority responsible for the review and approval of technology transfer agreements. Since that time, INPI has primarily placed its emphasis on the elimination of restrictive clauses from such agreements. The most objectionable clauses are those which place restrictions upon exports and those in which the term of secrecy extends beyond the life of the licensed patent. Another clause which is strongly opposed is one where payments for

technology must continue over an extended period of time without a correspondingly continuous flow of technology to the licensee. Starting in 1975, INPI has formalized its basic concepts and rules in a series of Normative Acts. These Acts established five categories into which agreements are classified, defined the procedures for mandatory prior consultation with respect to agreements and established special regulations for certain specific fields of technology. In addition, over the last two years, INPI has begun to set up work groups in particular industrial areas, and these groups serve to provide advice and consultation to INPI in their respective areas of expertise.

Conclusion

Generally speaking, the laws now in force in Latin America do not provide a favorable climate for the proper protection of industrial property rights. There appear to be some opportunities for the enactment of desirable amendments, but this will require a concerted effort by the commercial and legal sectors to identify the particular changes to be made and to convince the appropriate officials of the need for such changes. The primary obstacles to achieving these goals are the almost continuous instability of most of the national governments and the financial crises that exist due to inflation.

RECENT SITUATION OF PATENT AND TECHNOLOGY TRANSFER IN TAIWAN

Japanese Group Committee No. 3

K. Imai, Toshiba Corp.

S. Yonezawa, Hitachi, Ltd.

K. Yamashita, Sumitomo Chemical Co., Ltd.

T. Kubo, Nissan Motor Co., Ltd.

Speaker: M. Takada, Mitsubishi Electric Corp.

Abstract

There has been no amendment of the Taiwanese patent laws since April of 1979. Accordingly, the content of the present patent laws seem to be already well known. However, the actual situation of operations is not well known in general because of the shortage of information. The purpose of this report is to introduce statistics for patent, utility model and design applications; a brief of the National Bureau of Standards; the present status of examination procedures; miscellaneous topics; and an outlook of technology transfer. As is known, very little official data is available regarding patents from the Taiwanese Government. Much of the data and information introduced here was obtained by the cooperation of four major patent firms in Taiwan.

I. INTRODUCTION

In the area of world diplomacy, Taiwan is isolated from the major members of the international society, and the future security of Taiwan seems to depend upon its economic development.

In the last decade, Taiwan has achieved very rapid economic growth. As shown in Table 1 (See apended Figs. and Tables pages 16-31), which illustrates the market size of Taiwan for 1980, gross domestic product reached $40.3 billion, and per capita income exceeded $2,000 in 1980.

So far, Taiwan has relied upon its labor intensive industries in pursuing its economic goal. In recent years, however, Taiwan is trying to diversify its industrial structure by moving into high technology areas such as micro-computers, optical fibers and the like. It is expected that the diversification of its industry will increase the understanding of the importance of industrial property.

Taiwan has revised its patent law three times since 1949 when the original patent laws were enacted. The most recent revision of the patent laws was enacted in April, 1979.

Since we believe that most of you are familiar with the revised patent laws, we will report only on the present situation and activities regarding Taiwan's industrial property field including statistics on technology transfer, which were obtained from various patent agents in Taiwan.

II. PATENT, UTILITY MODEL AND DESIGN

1. Statistics

Table 2 illustrates the number of patent applications filed from 1978 through 1981, and the number of patent applications published in the same period. This data is graphically indicated in Fig. 1.

As apparent from Table 2 and Fig. 1, the number of patent applications has been increasing rapidly. This increase is due to the filings by foreigners, as the number of applications filed by domestic applicants has not substantially increased.

The number of published applications indicates that foreign applicants obtained most of the patents issued during the past four years. More than 90% of the patent applications published from 1978 through 1981 are those applications filed by foreign applicants, mainly from the U.S. and Japan.

During the past four years, approximately 13,400 patent applications were filed, and about 6,000 of those applications were published. This suggests that the rate of allowance is about 45%.

Table 3 illustrates the number of applications for utility model filed from 1978 to 1981, and the number of the applications published in the same period. Fig. 2 is the graphical indication of these numbers. Table 4 and Fig. 3 show the number of design applications, and the number of design applications published. In both cases, the numbers of applications rapidly increased over the past four years. In contrast to patent applications, more than 80% of the

applications for utility model, and more than 70% of the design applications were filed by domestic applicants.

From 1978 to 1981, about 23,800 applications for utility model, and about 9,900 design applications were filed. In the same period, about 8,800 applications for utility model, and about 3,100 design applications were published, which indicates that the rate of allowance is approximately 35% for utility model, and 30% for designs.

Table 5 shows the total number of patent, utility model, and design applications and publications thereof from 1970 to 1981. The total number for 1981 indicates an increase of more than three times over the past decades.

2. Organization of the National Bureau of Standards

The competent authorities in Taiwan which governs industrial property is the Department of Patents and the Department of Trademarks, the National Bureau of Standards (NBS), and the Ministry of Economic Affairs. The Ministry of Economic Affairs is similar to the Ministry of International Trade and Industry (MITI) in Japan. The National Bureau of Standards is the central office which governs the standardization of industrial products and the management of weights and measures, in addition to industrial property, as shown in Fig. 4.

The Department of Patents is responsible for examining patent, utility model, and design applications, while the Department of Trademarks is responsible for examining trademark applications.

The Department of Patents consists of the following three divisions.

Division 1 assumes the responsibility for general patent administration and the formalities regarding examination of patent, utility model, and design applications. Division 2 and Division 3 are responsible for substantial examination of applications. Division 2 examines patent applications in the field of machinery equipment & instruments, and electric & electronic appliances, while Division 3 examines those in the field of chemicals, articles for daily use and miscellaneous goods, together with the substantive examination of design applications.

The personnel of the National Bureau of Standards numbers about 300. The total number of personnel numbers about 80 to 90 in the Department of Patents and about 60 in the Department of Trademarks. The number of full-time examiners is very limited, with only 9 presently being employed. Therefore, a large portion of examinations has been performed by outside examiners.

3. Examination

(1) Flow-chart for patent applications

Fig. 5 shows a flow-chart for patent applications. There are basically five stages in the examination, i.e. (a) primary examination, (b) re-examination, (c) appeal, (d) re-appeal, (e) administrative suit. The respective stages are under the administration of the following authorities.

(a) Primary examination:

National Bureau of Standards

(b) Re-examination:

National Bureau of Standards

(c) Appeal:

Ministry of Economic Affairs

(d) Re-appeal:

Executive Yuan

(e) Administrative suit:

Administrative Court

The specified terms and related provisions are indicated in the flow-chart.

(2) Actual condition of examination

(i) Standard of examination

Presently there is no standard of examination. However, the National Bureau of Standards is now working to complete a general standard of examination. It is expected to be completed within another six months. An industry by industry guideline prepared after completion of the general standard of examination.

The examination in Taiwan is very strict compared to that in the United States and Japan. For example, if the principle is already disclosed, an invention relating to the improvement of the known equipment or construction, which would be patented in the United States and Japan without difficulty, is in general not allowed to issue as a patent, but is requested to be changed to a utility model application. Also a new use invention is not

patentable based on a notice by the Ministry of Economic Affairs issued about six years ago, although it is not specifically marked unpatentable under the patent laws.

Most of the examinations in the primary examination and re-examination stages are sent to the outside examiners, and as will be explained more fully hereinafter. There exists a problem with the uniformity of the examination. Re-examination is performed by a different examiner from the primary-stage examiner. The distribution of applications to the examiners is based on the International Patent Classification (IPC). An examiner interview is not allowed.

Attachment of cited references to the office actions has been improving, but is not yet sufficient. It is reported that the aforesaid problem has been fairly improved with respect to chemical cases.

(ii) Examiners

There are nine inside (full-time) examiners and about 250 outside examiners in the National Bureau of Standards. Most of the examinations are conducted by outside examiners. Six out of the nine inside examiners are in charge of chemical applications, and they perform re-examination more frequently than primary examination. According to the information from the Taiwanese patent agents, the National Bureau of Standards is now planning to employ twenty new inside examiners.

The outside examiners are constituted from authorities in technology such as professors of

universities and high ranking managers responsible for technical matters in industries of the public sector. They are elected according to the notice entitled "Election of patent examiners and its guide" issued on January, 1982.

(iii) Actual terms for prosecution

At present, the average term from filing an application to publication takes about eighteen months in the case of patents and utility models, and from nine to twelve months for design cases. If a patent is allowed without any official action, it takes from six to ten months. If allowed after re-examination and appeal, the average terms become eighteen months and two years, respectively. If the published application is opposed, it takes another six months. In the case of entering into a revocation proceeding, it takes an additional six months or more.

As the statistics show, the number of patent applications have been increasing very rapidly. This increase might have the effect of extending the prosecution time even more.

(iv) Allowance rate

No statistics are officially available, but it is reported that the allowance rate at the primary examination stage is between twenty and thirty percent. The rate after re-examination increases to about fifty percent. However, as the publication statistics show, there is a considerable difference in the number of

publication between Chinese and foreign origin applications. Accordingly, the allowance rate for foreigners is higher than the averge figure.

(3) Appeal, Re-appeal, Administrative Suit

As shown in the flow-chart, the Ministry of Economic Affairs and Executive Yuan review appeals and re-appeals respectively. The application is examined under the Administrative Appeals Law. The administrative suit is under the administration of the Administrative Court. The Ministry of Economic Affairs and Executive Yuan correspond to the MITI and Cabinet in Japan.

The reversal rate at the appeal stage is presently between ten and twenty percent, however, very few are reversed at the re-appeal stage.

(4) Opposition, Revocation Proceedings

There are no statistics on the number of opposition and revocation proceedings. An agent gave the following informal numbers which can be considered as a guide.

Year	Number of Opposition	Number of Revocation Proceedings
1979	189	86
1980	319	159
1981	475	249

The number has been increasing year by year and it may be considered that the concern for patent in Taiwan is growing in

proportion with the development of domestic industries.

(5) Change of Application

The change from a patent application to a utility model application is frequent and common. Particularly, most of the cases for improvement inventions are required to be changed to utility model applications from patent applications during the course of prosecution. Care must be taken for the timing of the change, since no change is allowed after the appeal stage.

4. Infringement Suit of Patent, Utility Model and Design

According to unofficial information provided by the patent agents in Taiwan, the following data is available concerning the number of infringement cases relating to patents, utility models and designs.

Number of Suits Brought in Civil Court

	Number of Suits Brought	Number of Cases Terminated
1979	38	40
1980	52	44
1981	75	84

The number of suits is increasing. No information is available regarding the contents of each of the suits.

The penalty provisions in Taiwan for patent infringements include imprisonment and/or a fine. In most of the suits a relatively low fine was levied upon person found guilty in each of the suits.

5. Topics

(1) Movements Toward Revision of the Patent Law

Movements to revise the Patent Laws are delayed because of the replacement of the Director General of NBS. Thus, it is not known when the revision of the Patent Laws will be effected.

(2) Replacement of the Director General of NBS

In May of this year (1982), Mr. Wan Wei Chun was appointed as Director General in place of Mr. Kou. It is expected that the patent system will be improved under the new director general.

(3) Patent Agent

There are presently approximately 1,600 patent agents, and among them approximately 100 are engaged in business. It is said that the number of patent agents who are constantly engaged in business is approximately only 50. About one half of patent agents are engaged in patent proceedings for clients abroad.

No examination is provided for registration of a patent agent. Attorneys at law, registered technical advisers, registered accountants and those who have engaged in examination may be registered as patent agents. The draft of new regulations for patent agents is pending. It is said that no drastic revision is incorporated in this draft. The draft is said to set up a three-month training institute for persons prior to their registration as a patent agent. It is not yet

known when the new regulations will become effective.

(4) Publications Relating to Patents

(i) The Official Journal (patent utility model and design)

The Journal is published twice a month. It contains the claims of a published application accompanied by a drawing.

(ii) Classification/applicant index of patents

The published applications are classified according to the International Patent Classification system. In December of 1981, the first publication was issued which contains all of the applications published between 1974 and 1980. The next publication containing all of the applications published in 1981 was issued in June of this year. The following publications will be issued yearly. With these publications, it will become easy for us to conduct a search of patents in Taiwan.

(iii) The other publications relating to patents

"Patents for Industry" published monthly by NBS.

(iv) "The Patent" published monthly by a private association.

The publications mentioned in paragraphs (iii) & (iv) contain notices and news relating to industrial property.

III. OUTLOOK OF TECHNOLOGY TRANSFER

It can be said that the vigorous development of the economy in Taiwan can be attributed to the successful introduction of capital and technology from Japan and the United States. Fig. 6 shows the amount and the number of foreign investments in Taiwan over the past 10 years.

Fig. 7 and Fig. 8 are the breakdown of the above figures by country/area. Fig. 9 and Fig. 10 are the graphic indication of the cumulative amount of foreign investments from 1953 to 1981 by country/area and by industry respectively.

Fig. 11 is the cumulative number of foreign investments by country/area during the same period.

As shown in Fig. 7, the amount of investment from Japan and the United States in Taiwan dropped after the peak of 1973 but in recent years, the amount of investments from the United States has remarkably increased.

On the other hand, with respect to the actual number of investments, Japan exceeds the United States. But the number of investments from Japan has not increased since the peak of 1973.

There is a big difference in the amount of investment per case between the United States and Japan.

As indicated in Figs. 9, 10 and 11, the United States averages 2.8 million dollars and Japan 0.7 million dollars in the amount of investment per case. Thus it can be said that the amount of investment per case from the United States is much greater than that of Japan.

In the cumulative amount of investment from 1953 to 1981, the United States shares 46% and Japan 25%. By industry, the Electric & Electronic field overwhelms the other fields and shares 43%. Chemicals share 15% and Mechanical equipment & instrument and metals share 9%, respectively. For reference, a profile of foreign investment rule in Taiwan, published in "Business International", is attached as Table 6.

Fig. 12 shows the number of technical cooperation agreements in Taiwan for the past 10 years by country/area. Fig. 13 and Fig. 14 are the graphic indications of the cumulative number of technical cooperation agreements from 1952 to 1981 by country/area and by industry, respectively.

It is noted that the number of technical cooperation agreements from Europe has increased, while those from Japan and the United States have decreased since the peak of 1980. Japan greatly exceeds the other areas with respect to the cumulative number of technical cooperation agreements, sharing an amazing 67%, while the United States shares 20% and ranks second.

By industry, the Electric & Electronic field shares 26%, Chemicals 20%, Mechanical equipment & instrument 16% and Metals 14%. The average royalty rate is 2.9% in the Electric & Electronic field and 3.5% in the mechanical field according to the study by the Investment Commission of the Ministry of Economic Affairs.

IV. CONCLUSION

The industry in Taiwan, developed in compliance with the success of export processing, has already reached a certain industrialized level. Many developing countries are in a position to weaken the patent right in their countries, as the recent movement for the revision of Paris Convention indicates. Taiwan is one of the minority countries which takes an attitude in favor of industrialized countries. The patent applications are likely to increase unless an unexpected change of attitude arises. We expect the further improvement of the infrastructure for the protection of industrial property right so that the patent will effectively contribute to the future development of industry in Taiwan.

Table 1. Indicator of Market Size

Population	17.8	million (1980)
Gross Domestic Product	40.3	billion dollars (1980)
Five year increase	62	percent (constant price)
Per Capital Income	2,078	dollars (1980)
Export	19,810	million dollars (1980)
Five year increase	273	percent
Import	19,733	million dollars (1980)
Five year increase	231	percent
From U. S.	4,673	million dollars (1980)
From Japan	5,353	million dollars (1980)

(Source: Business International)

Table 2. Patent (1978-1981)

Number of Applications

Year	Total Number	Domestic Applicant	Foreign Applicant	Japanese Applicant	U.S. Applicant
1978	2,800	747 (26.7%)	2,053 (73.3%)	717 (25.6%)	894 (31.9%)
1979	3,075	677 (22%)	2,398 (78%)	894 (29.1%)	1,078 (35.1%)
1980	3,675	833 (22.7%)	2,842 (77.3%)	1,024 (27.9%)	1,099 (29.9%)
1981	3,871	846 (21.9%)	3,025 (78.1%)	1,075 (27.8%)	1,183 (30.6%)

Number of Published Applications

1978	658	62 (9.4%)	596 (90.6%)	156 (23.7%)	281 (42.7%)
1979	1,350	105 (7.8%)	1,245 (92.2%)	356 (26.4%)	559 (41.4%)
1980	1,951	131 (6.7%)	1,820 (93.3%)	647 (33.2%)	563 (28.9%)
1981	2,076	150 (7.2%)	1,926 (92.8%)	605 (29.1%)	768 (37%)

Fig. 1

Number of patent applications and number of publications thereof

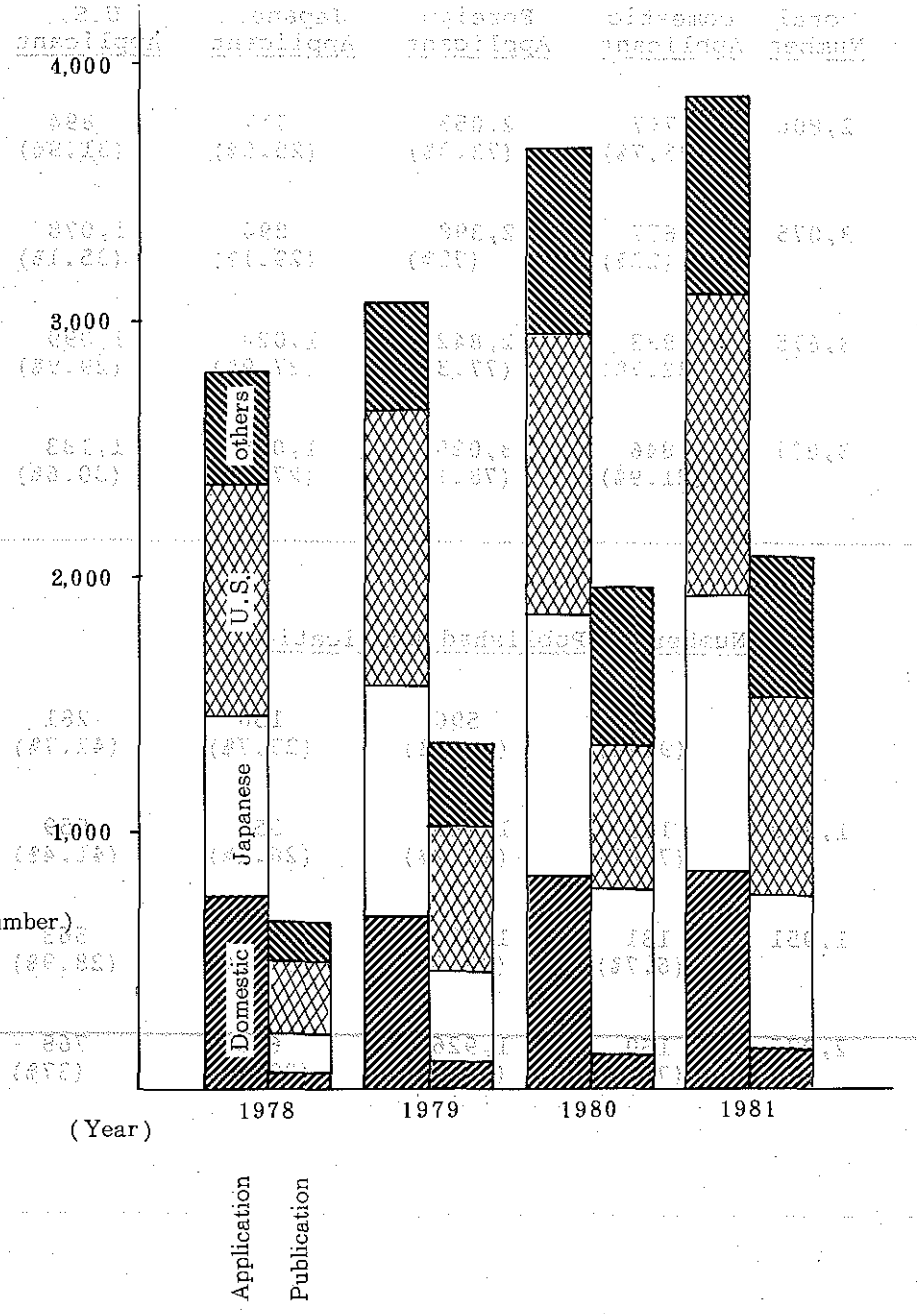


Table 3. Utility Model (1978-1981)

Number of Applications

Year	Total Number	Domestic Applicant	Foreign Applicant	Japanese Applicant	U.S. Applicant
1978	4,482	3,831 (85.5%)	651 (14.5%)	433 (9.7%)	118 (2.6%)
1979	5,320	4,262 (80.1%)	1,058 (19.9%)	670 (12.6%)	217 (4.1%)
1980	6,634	5,478 (82.6%)	1,156 (17.4%)	663 (10%)	306 (4.6%)
1981	7,408	6,297 (85%)	1,111 (15%)	658 (8.9%)	256 (3.4%)

Number of Published Applications

1978	824	532 (64.6%)	292 935.4%)	174 (21.1%)	73 (8.9%)
1979	1,844	1,143 (62%)	701 (38%)	414 (22.5%)	169 (9.2%)
1980	3,182	2,019 (63.5%)	1,163 (36.5%)	697 (21.9%)	261 (8.2%)
1981	2,905	1,950 (67.1%)	955 (32.9%)	548 (18.9%)	223 (7.7%)

Fig. 2

Number of applications for utility model and number of publications thereof

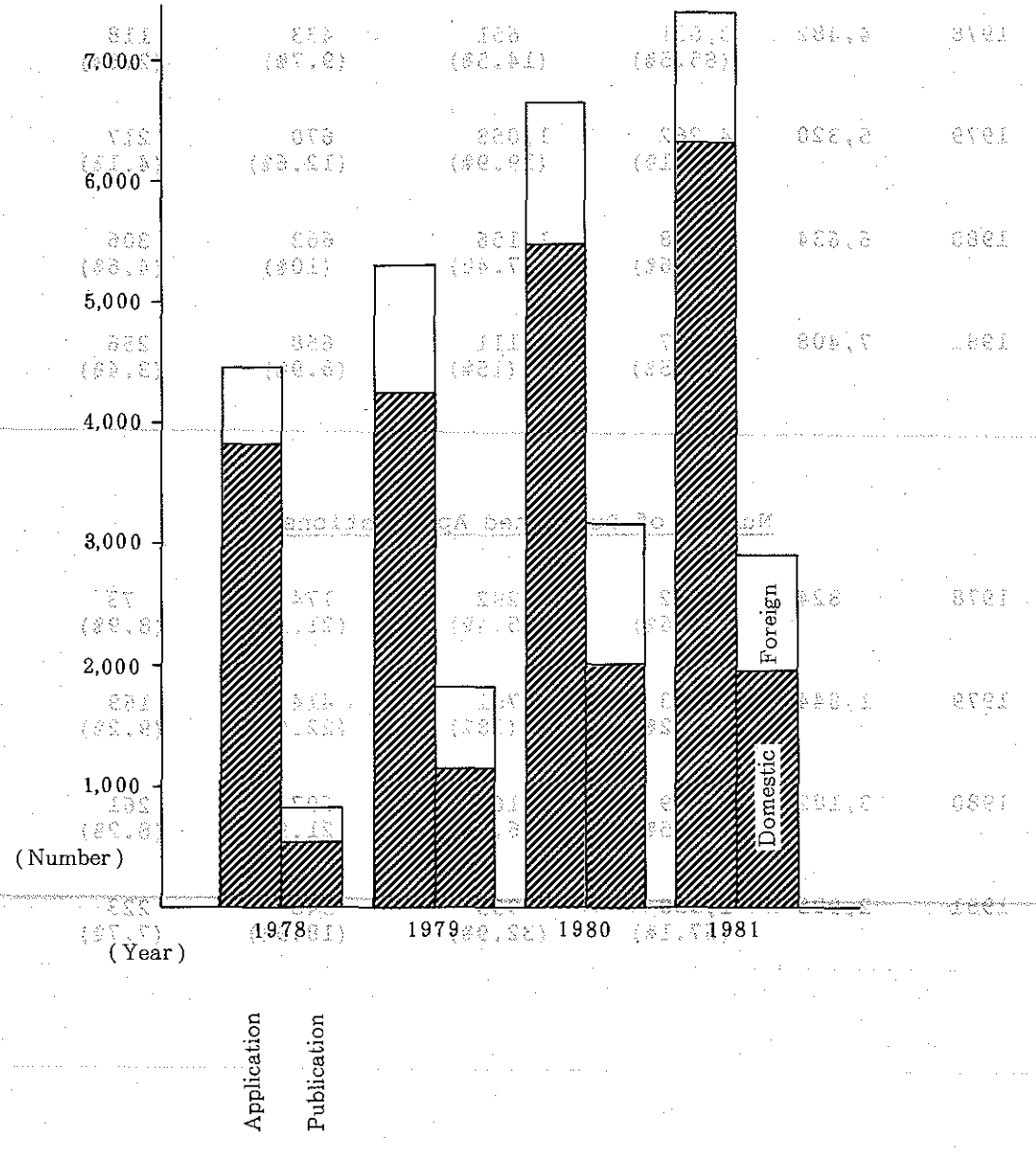


Table 4. Design (1978-1981)

Number of Applications

Year	Total Number	Domestic Applicant	Foreign Applicant	Japanese Applicant	U.S. Applicant
1978	1,481	1,163 (78.5%)	318 (21.5%)	154 (10.4%)	70 (4.7%)
1979	2,016	1,581 (78.4%)	435 (21.6%)	213 (10.6%)	135 (6.7%)
1980	2,659	2,179 (81.9%)	480 (18.1%)	244 (9.2%)	101 (3.8%)
1981	3,748	2,989 (79.7%)	759 (20.3%)	385 (10.3%)	131 (3.5%)

Number of Published Applications

1978	304	170 (55.9%)	134 (44.1%)	64 (21%)	26 (8.5%)
1979	491	275 (56%)	216 (44%)	89 (18.1%)	41 (8.4%)
1980	1,023	620 (60.6%)	403 (39.4%)	198 (19.4%)	84 (8.2%)
1981	1,288	797 (61.9%)	491 38.1%)	293 (22.7%)	73 (5.7%)

Fig. 3

Number of applications for design and number of publications thereof

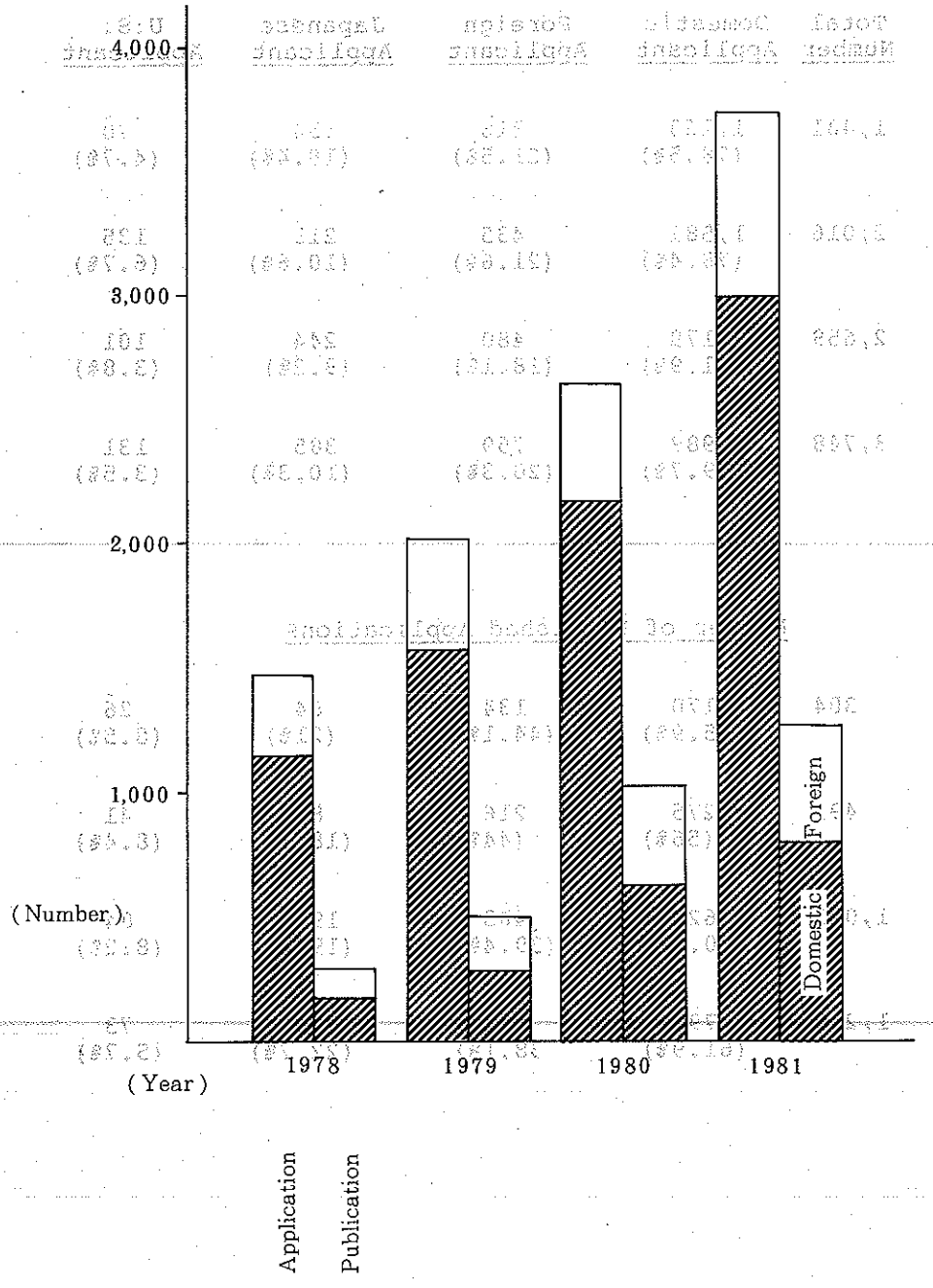


Table 5

Total Number of Applications
for Patent, Utility Model and Design Right

Year	Total Number of Applications	Total Number of Published Applications
1970	4,218	1,951
1971	4,640	2,524
1972	4,457	1,861
1973	5,926	2,591
1974	8,398	3,187
1975	8,812	2,161
1976	8,071	1,449
1977	7,683	1,205
1978	8,763	1,786
1979	10,411	3,685
1980	12,968	6,176
1981	15,027	6,269

FIG. 4 Organization Chart of National Bureau of Standard, Ministry of Economic Affairs

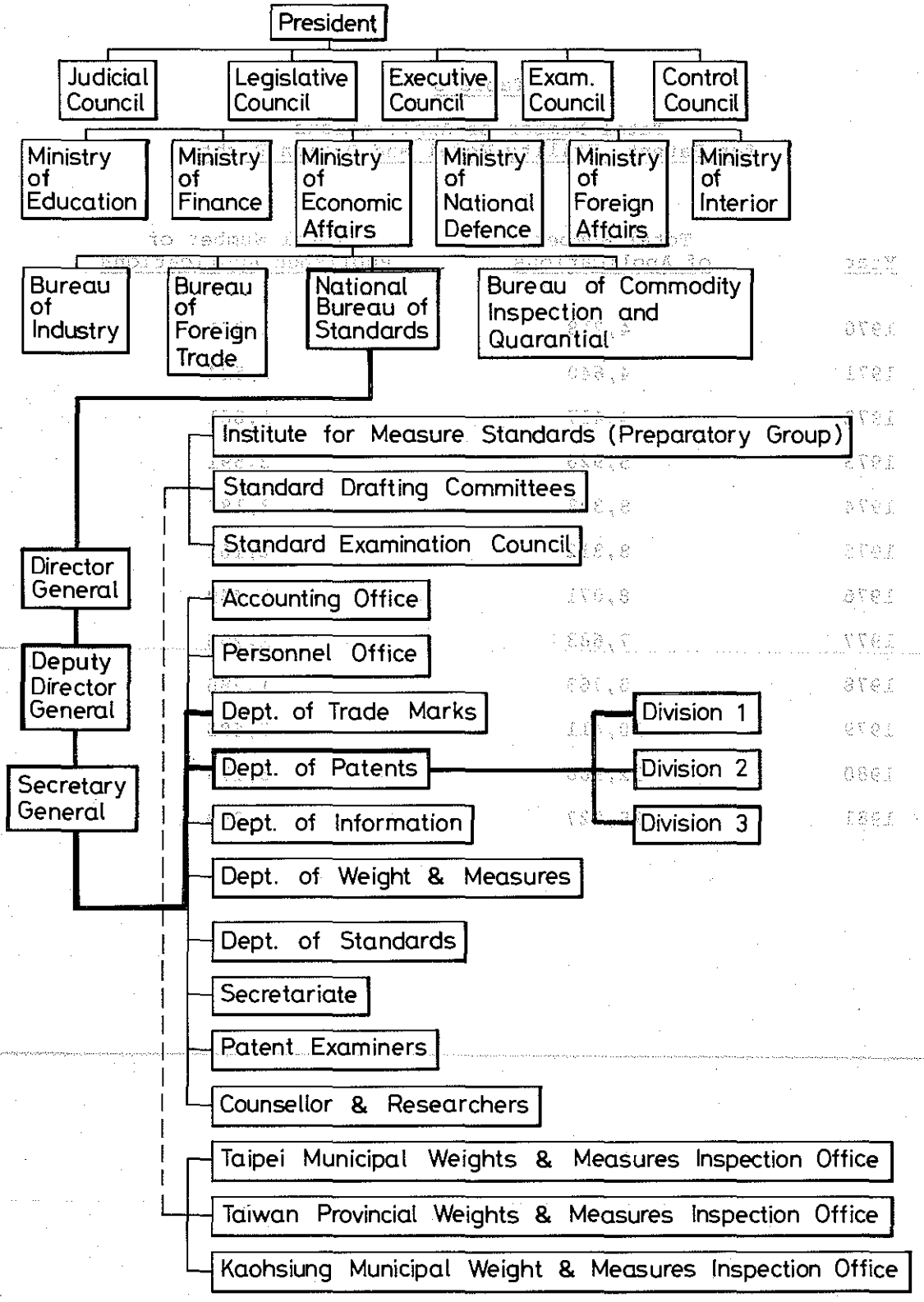


Fig. 5

FLOW CHART FOR PATENT APPLICATION IN TAIWAN

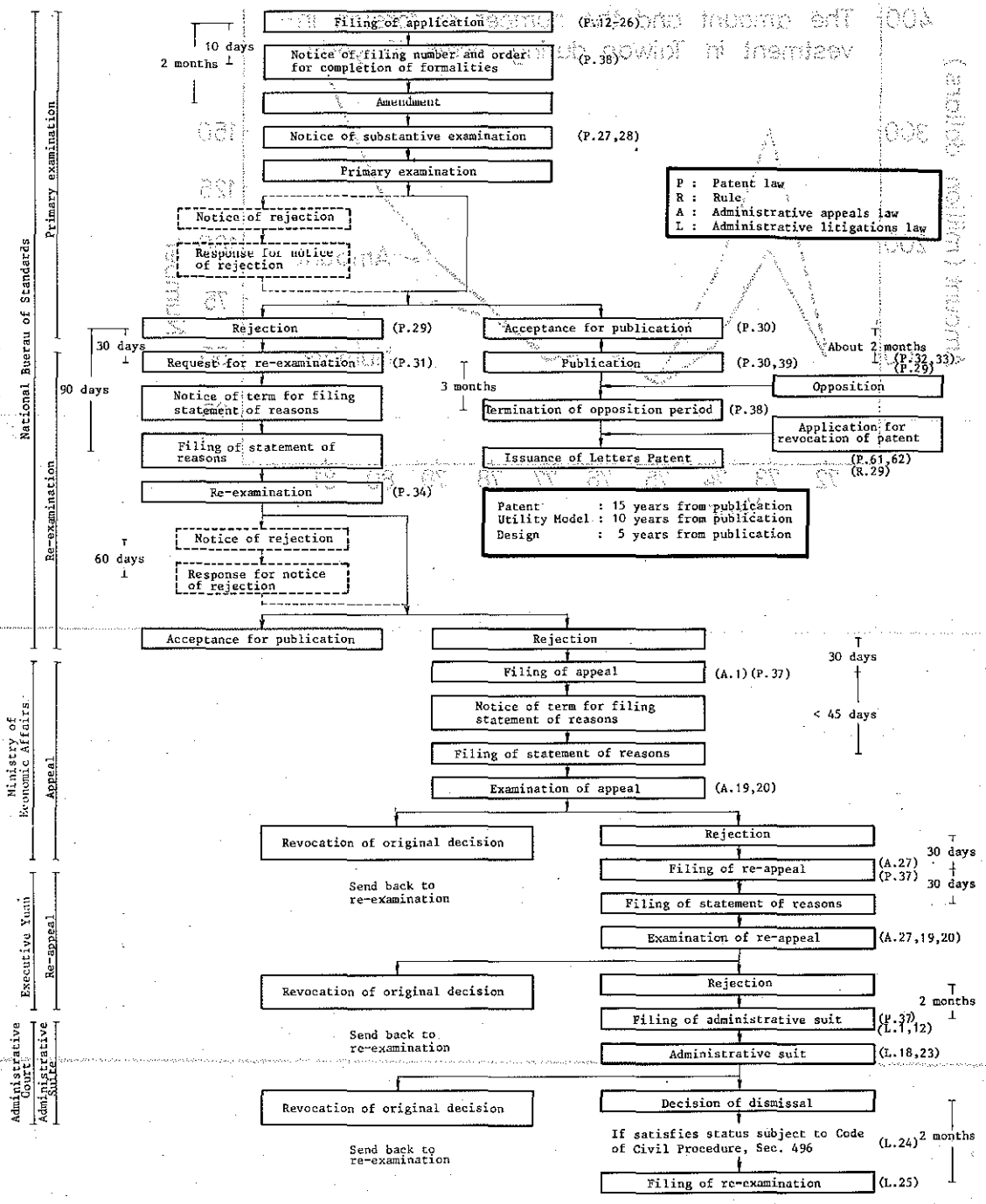


FIG. 6

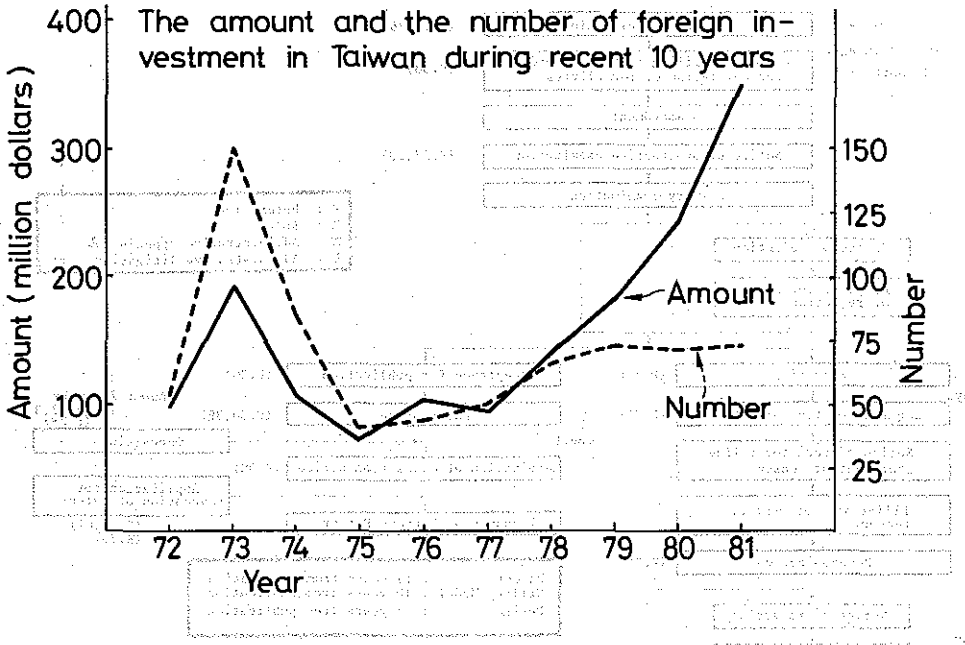

The amount and the number of foreign investment in Taiwan during recent 10 years
Amount (million dollars)
400
300
200
100
150
125
100
75
50
25
Number
Amount
Number
72
73
74
75
76
77
78
79
80
81
Year

FIG. 7

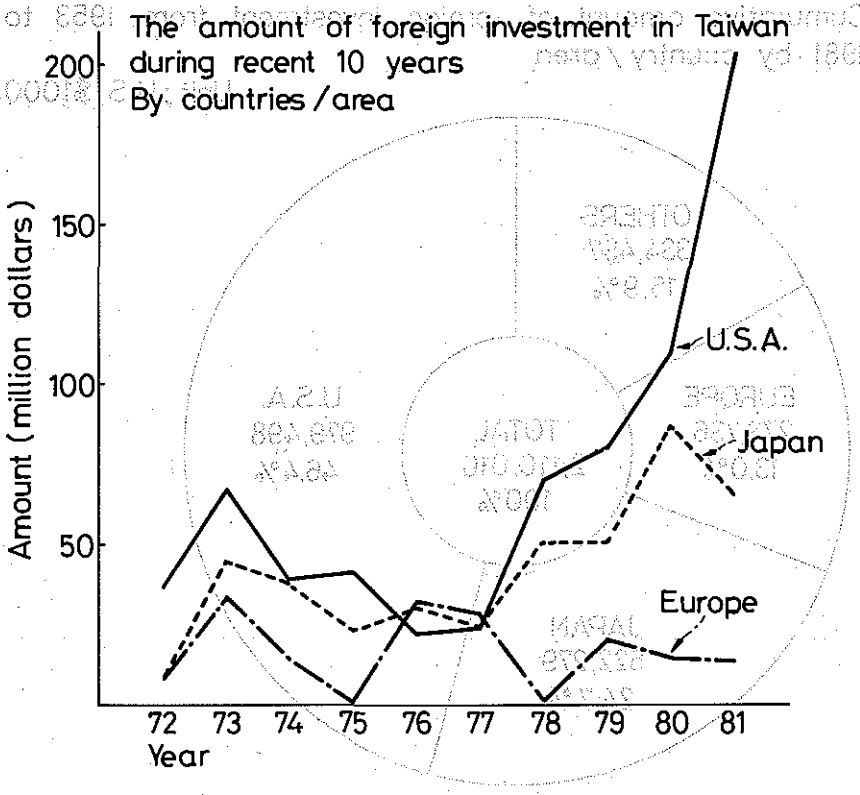

The amount of foreign investment in Taiwan
during recent 10 years
By countries / area
Amount (million dollars)
200
150
100
50
U.S.A.
Japan
Europe
72 73 74 75 76 77 78 79 80 81
Year

FIG. 8

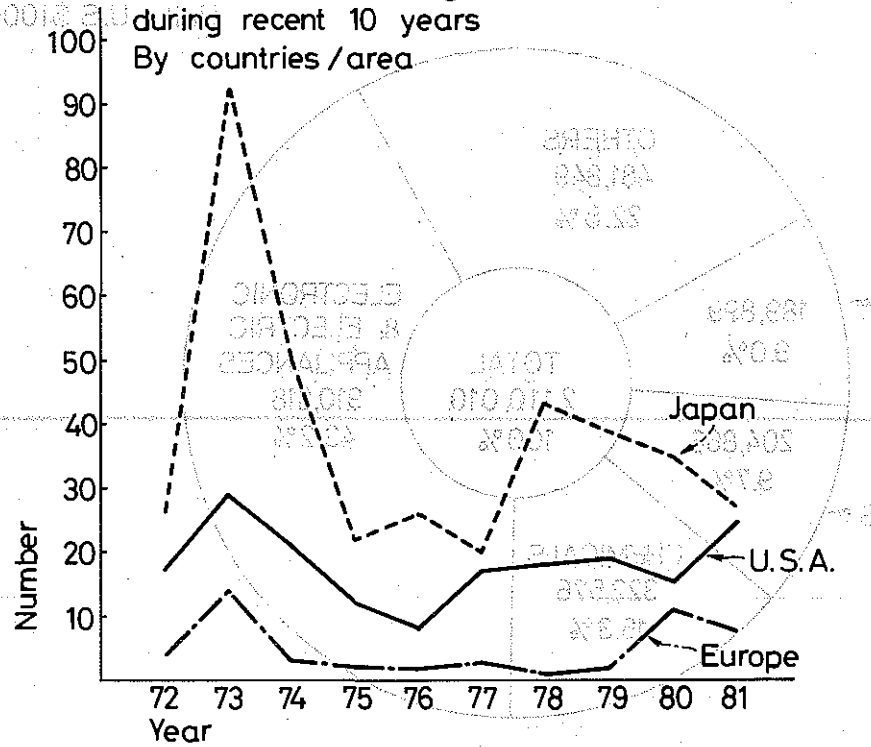

The number of foreign investment in Taiwan
during recent 10 years
By countries / area
Number
100
90
80
70
60
50
40
30
20
10
Japan
U.S.A.
Europe
72 73 74 75 76 77 78 79 80 81
Year

FIG. 9 Cumulative amount of foreign investment from 1953 to 1981 by country / area

Unit : U.S. $1000-

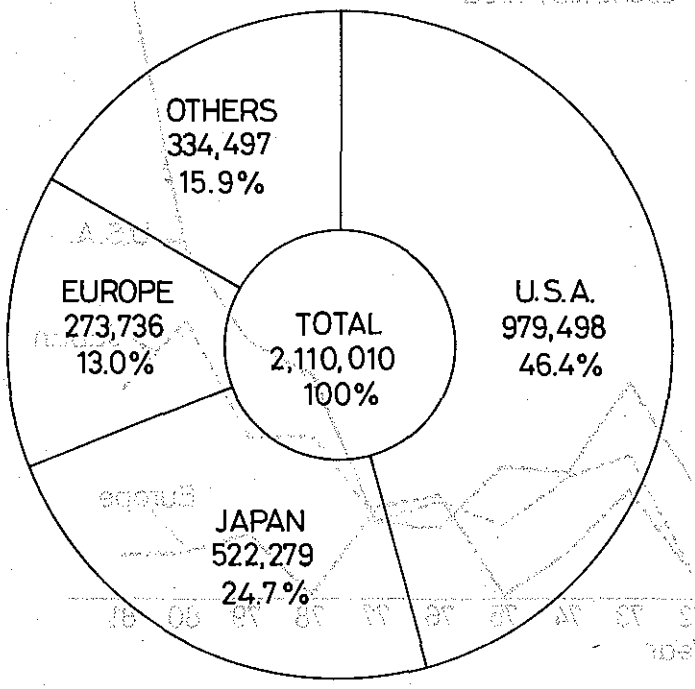


FIG. 10 Cumulative amount of foreign investment from 1953 to 1981 by industry

Unit : U.S. $1000-

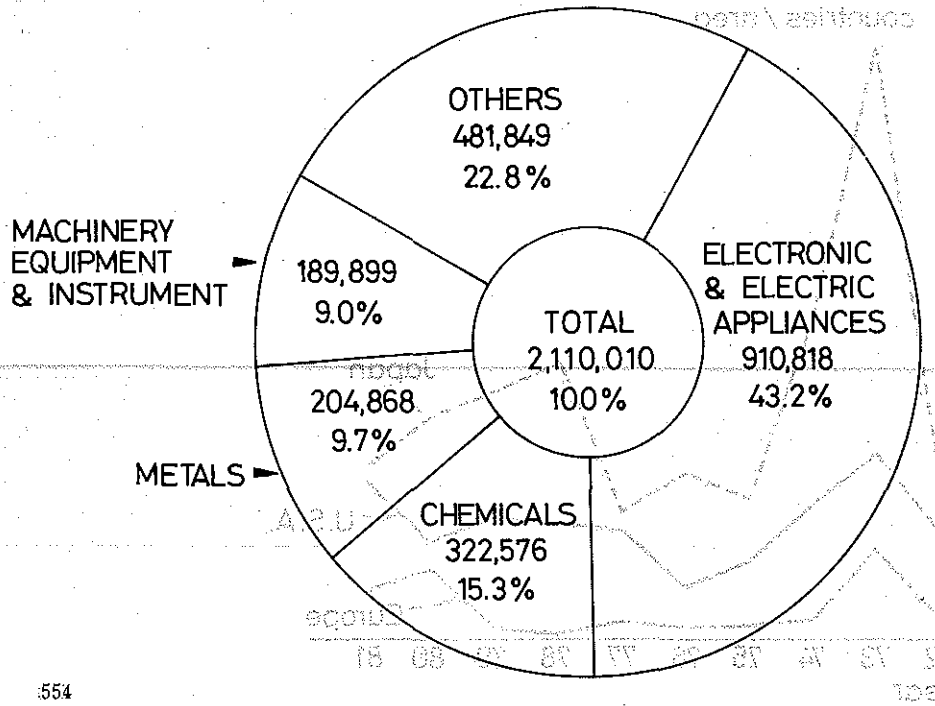


FIG. 11 Cumulative number of foreign investment from 1953 to 1981 by country / area

Unit : Case

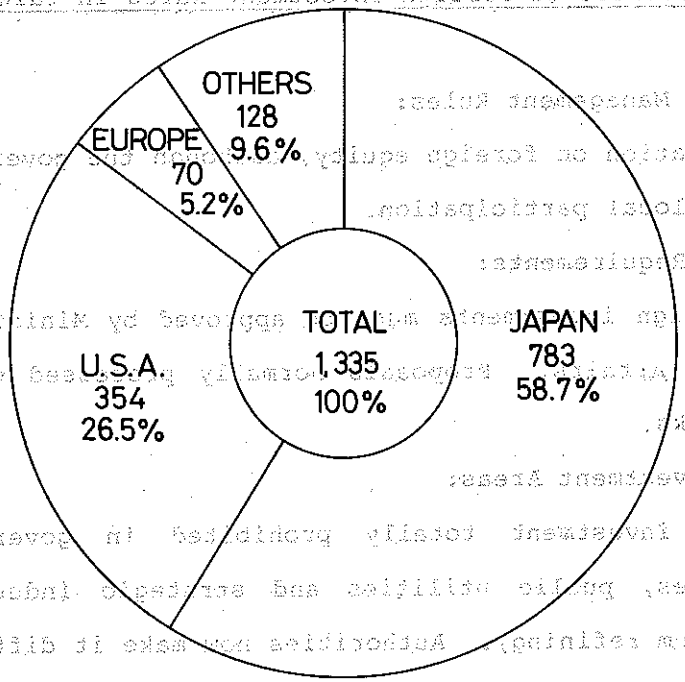


FIG. 12

The number of Technical Cooperation in Taiwan during recent 10 years

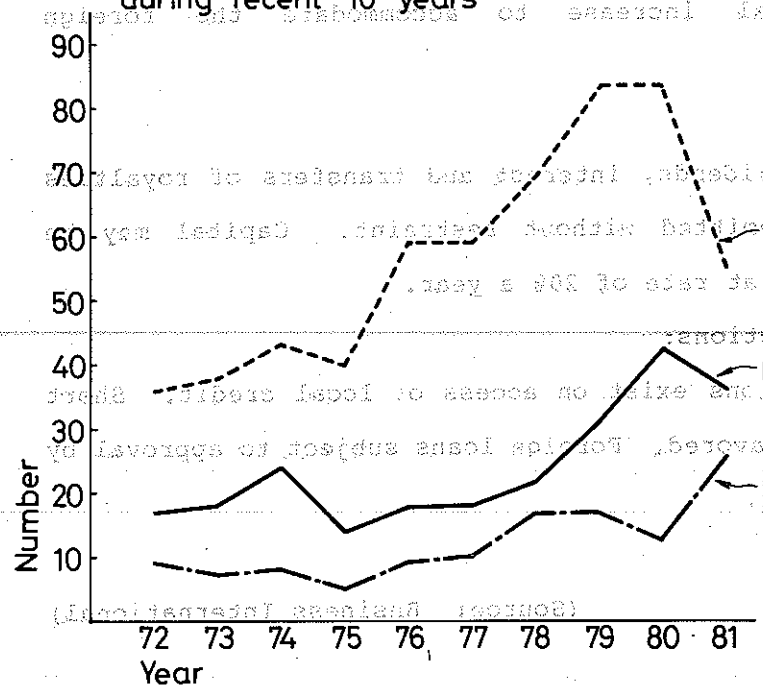


Table 6. Profile of Foreign Investment Rules in Taiwan

Ownership and Management Rules:

No limitation on foreign equity, although the government prefers local participation.

Registration Requirements:

All foreign investments must be approved by Ministry of Economic Affairs. Proposals normally processed within four weeks.

Restricted Investment Areas:

Foreign investment totally prohibited in government monopolies, public utilities and strategic industries (petroleum refining). Authorities now make it difficult for foreigners to invest in light manufacturing.

Acquisitions and Takeovers:

No special law. Foreign acquisitions require same approval as new projects. In most cases to date, acquisition was made through joint arrangement, usually with capital increase to accommodate the foreign investment.

Remittance Laws:

Profits, dividends, interest and transfers of royalties and fees remitted without restraint. Capital may be repatriated at rate of 20% a year.

Borrowing Restrictions:

No restrictions exist on access of local credit. Short term loans favored. Foreign loans subject to approval by Central Bank.

(Source: Business International)

FIG. 13 Cumilative Number of Technical Cooperation from 1952 to 1981 by country / area

Unit : Case

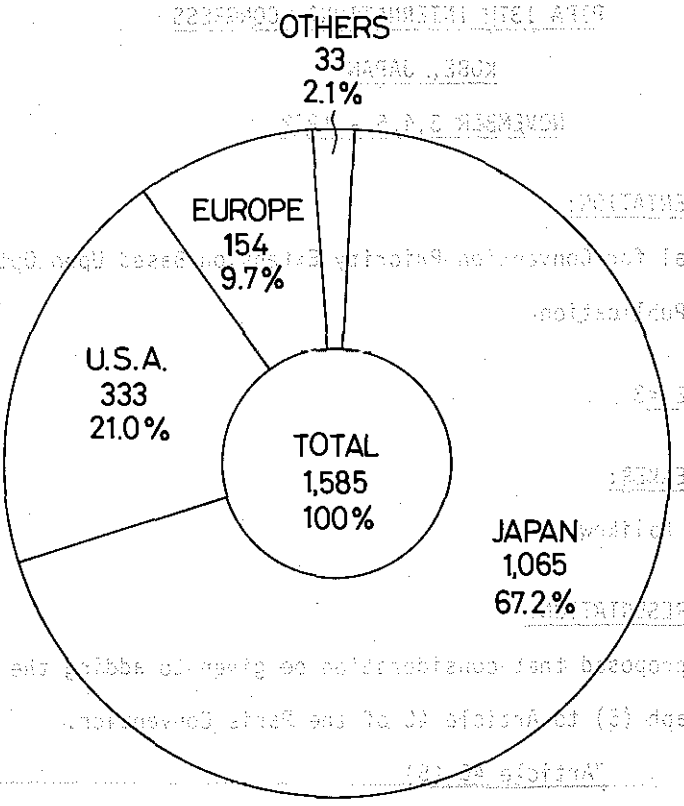
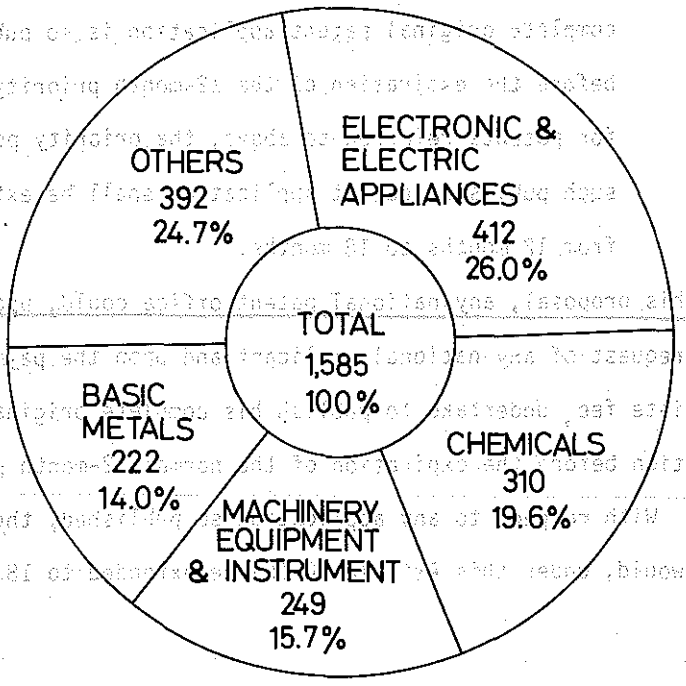


FIG. 14 Cumulative number of Technical Cooperation from 1952 to 1981 by industry

Unit : Case



PIPA 13TH INTERNATIONAL CONGRESS

KOBE, JAPAN

NOVEMBER 3,4,5 - 1982

TITLE OF PRESENTATION:

Proposal for Convention Priority Extension Based Upon Optional Early Publication

PIPA COMMITTEE #3

AUTHOR AND SPEAKER:

Martin Kalikow

ABSTRACT OF PRESENTATION:

It is proposed that consideration be given to adding the following paragraph (5) to Article 4C of the Paris Convention.

"Article 4C (5)

If any country of the Union requires publication or provides for optional publication of the complete original patent application of its nationals, and a complete original patent application is so published before the expiration of the 12-month priority period for patents referred to above, the priority period for such published patent application shall be extended from 12 months to 18 months."

Under this proposal, any national patent office could, upon the timely request of any national applicant and upon the payment of an appropriate fee, undertake to publish his complete original patent application before the expiration of the normal 12-month priority period. With respect to any application so published, the priority period would, under this Article 4C (5) be extended to 18 months.

PROPOSAL FOR CONVENTION PRIORITY EXTENSION BASED UPON OPTIONAL EARLY PUBLICATION

It is proposed that consideration be given to adding the following paragraph (5) to Article 4C of the Paris Convention.

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I. FEASIBILITY

A. In the U.S.A., since this early publication would be at the request of the applicant, there would be no violation of our mandate for secrecy of patent applications. This "early publication" service could be provided by the U.S. Patent Office on a full-cost recoupment basis, probably without any necessity for amendment of the U.S. patent law. There is a precedent in the present practice of the Patent Office which provides for the optional "defensive" publication of abandoned applications.

B. In most European countries and Japan there is already a mechanism for such early publication of local applications within 18 months after filing, and it would be a simple matter for these countries to accelerate such publication to within 12 months. They already publish foreign-originated cases within 6 months after receipt.

II. GENERAL BENEFITS

The extension of the priority period from 12 months to 18 months would have substantial professional and business advantages to all applicants as follows:

A. The applicant would have more time to reach commercially valid foreign filing decisions.

B. The normal period of foreign patent protection would be delayed an additional 6 months so that it would more often correspond to the period of use of the patented invention of the foreign country.

C. The applicant would more likely have received a first action from his home country patent office before it became necessary to complete his foreign filings.

III. SPECIFIC COUNTRY BENEFITS

A. To the U.S. Applicant:

In addition to the extension of the priority period from 12 months to 18 months, such early publication would prevent patents from being obtained by others on the same invention on the basis of applications filed after the date of such publication in those foreign countries where the U.S. applicant does not file (i.e., the benefits of "defensive" publication).

A. To the U.S. Applicant: (Cont'd)

Since the U.S. applicant could, of course, elect not to request such "early publication", he would still have the option of keeping his application secret and filing convention cases within the present 12-month priority or filing non-convention cases thereafter.

B. To European and Japanese Applicants:

Since the applicants of these countries do not have the option of keeping their applications secret beyond 18 months, such a 6-month acceleration in the publication of their applications would be a small price to pay for the benefits of priority extension and greater prevention of adversely held foreign patents. However, European and Japanese applicants may still wish to file their corresponding applications in the United States as soon as possible even though they would have the right to delay U.S.A. filing until the 18th month. This is because under U.S. law (in re Hilmer case) the foreign applicant cannot claim the benefit of his priority date for matter disclosed but not claimed in his application. In other words, the prior art (anticipatory) effect in the U.S. of a foreign originated application is based upon the date the application is actually filed in the U.S. (rather than upon the claimed priority date). Nevertheless, since the U.S. is the only country having this special prior art rule, many European and Japanese applicants would probably elect such early accelerated publication in order to obtain the benefits of the 6-month extension of the priority period for all countries except the U.S.

B. To European and Japanese Applicants: (Cont'd)

There may, of course, be a corresponding delay in local publication in Europe and Japan of these foreign-originated (U.S.A., etc.) applications that are made subject to this priority period extension from about the 18th month (as at present) until about the 24th month. However, this extra 6-month delay in local publication would have little substantial effect on the patent/legal/business community since these "delayed"applications would already have been published in their originating countries.

C. To the Patent Offices of the World:

All such accelerated early publications would be searchable and available for full citation throughout the world, thereby greatly simplifying the examination process.

D. To the Public:

The inventions contained in these accelerated early publications would be disclosed to the engineering and scientific community (rather than being kept secret for longer periods of time) and would thus be available for earlier further development.

IV. EFFECT ON THE PCT

To the extent that applicants used this early publication option rather than the PCT in order to obtain an extension of the priority period, this may, of course, decrease use of the PCT. However since there would be substantial costs, at least for U.S. applicants, in any such

accelerated early publication, applicants may still prefer the PCT route. Moreover, an applicant would need to request such accelerated publication within about 6 months of his filing date, and he may prefer to wait several more months before making his decision whether to seek foreign protection and/or to have his application published. If he did so, his only option would then be to use the PCT route if he wanted to obtain an extra 8-month delay in completing his foreign filings.

V. EFFECT ON DEVELOPING COUNTRIES

Such accelerated early publication would, of course, make the inventions and technology contained in the published applications available to developing countries at an earlier date. However, some developing countries do not publish their patents or patent applications, and their nationals could not take advantage of this convention priority extension unless such a local publication mechanism was provided.

VI. COSTS

In those countries that already provide for publication within 18 months, the added costs for acceleration to within 12 months would be minimal. In the U.S., it would be necessary only to publish in some "official" organ, a copy of the originally filed application. This could be a simple compilation of such application copies, bound and issued as inexpensively as possible.

VII. RECOMMENDATION

The merits of this proposal are now being studied by the USPTA, the ABA and the APLA in the United States. It is recommended that PIPA, as well as other patent associations in Japan, also undertake similar studies.

M. Kalikow/sk
October, 1982

7

PROPOSAL FOR CONVENTION PRIORITY EXTENSION BASED UPON OPTIONAL EARLY PUBLICATION

INTRODUCTION

Ladies and Gentlemen:

Before I begin the formal presentation of this "Proposal for Convention Priority Based upon Optional Early Publication" I would like to take one minute to explain how this proposal arose and why I asked that it be included in the program of this PIPA Congress.

As you know, during this past year there has been much discussion throughout the world concerning the revision of the Paris Convention. However, almost all of the proposals for revision under discussion were being promoted by the developing counties and were aimed at weakening, rather than strenghtening, the patent protection available, particularly in such developing countries. It therefore occurred to some of us in the United States that we ought to develop some proposals of our own that would strengthen and facilitate the international patent protection available not only to developing countries, but also the industrialized countries.

With this in mind, we noted that the developing countries had proposed that the Convention priority period for filing foreign patent applications should preferentially be extended from 12 months to 18 months for patent applications originating only in the developing countries. Such extension of the convention priority period to 18 months was thus obviously considered by the developing countries to be beneficial to them. This led us to consider more carefully whether such an extension of the priority period would also be beneficial to the industrialized countries.

With this in mind, the American group of the United States Patent and Trademark Association established a Committee, of which I am the chairman, for the purpose of investigating the advantages and disadvantages of such an extension. After due deliberation, the Committee concluded that a simple extension of the priority period from 12 months

to 18 months would cause delays in available prior art that might be unacceptable to Japan and most European countries. On the other hand, the proposal for such Convention priority extension based upon optional early publication which I shall describe to you today appears to overcome the problems inherent in such a simple extension of the Priority Period while retaining all of the advantages of a longer priority period.

I asked that this proposal be placed on the PIPA agenda in the hope that enough interest could be achieved in this proposal that it might eventually be made one of the questions placed upon the Agenda of the AIPPI and WIPO in connection with the next Diplomatic Conference for Revision of the Paris Convention a few years from now.

Martin Kalikow
GENERAL ELECTRIC COMPANY
October, 1982

Supplement to Proposal for Convention Priority Based Upon Optional Early Publication

(By Martin Kalikow)

On page 3 of the above-identified presentation, there is a discussion of the "Specific Country Benefits to European and Japanese Applicants" of this proposal for convention priority extension (to 18 months) based upon optional early publication (before the 12 month).

In this discussion, the point is made that European and Japanese applicants may still wish to file their corresponding applications in the United States as soon as possible even though, under the above proposal, they would have the right to delay the U.S. application until the 18th month and still obtain convention priority. This is because under U.S. law (in the Hilmer Case) the prior art (anticipatory) effect in the USA of matter disclosed but not claimed in a foreign-originated case is based upon the date the application is actually filed in the USA rather than upon the priority date.

It is thus advantageous, both under the present 12 month priority period or under the proposed 18 month priority period extension, that a Japanese or European applicant file his corresponding application as soon as possible after his home-country filing date; preferably within only a few months thereafter, rather than to wait until the 11th or 12th month.

However, it is important to recognize that if the Japanese or European applicant usually waits until the 11th or 12th month to file his USA application, he might as well elect this optional early publication and obtain the extra 6-month priority period extension. This is because the early publication at the 11th or 12th month of the original application in Japan or in Europe will have exactly the same prior art (anticipatory) effect in the U.S.A. as the actual filing of the US application with respect to matter disclosed but not claimed. Under the Paris Convention, Article 4, the Japanese or Eurpoean applicant will always obtain the benefit of his original priority date in the USA for matter which he claims in his original application.

Nov./1982

By Dr. Pauline D. Newman

Ex. Officio, PIPA

General Patent Counsel, FMC Corporation

Postponement of 5A

It had been proposed prior to the Geneva conference that Article 5A would not be considered further in Geneva, but that the other remaining issues would receive primary attention. These other remaining issues related to trademarks and geographical designations, the states of inventors certificates, and some less critical provisions.

All of us knew that the patent questions in Article 5A, relating to compulsory licensing and forfeiture of patents, were the most important, Nevertheless the various nations accepted postponement, for varying reasons: the United States, because we were extremely unhappy with the Nairobi text, and were concerned that it might be adopted despite our objection; the Group of 77, because they were quite pleased with the Nairobi text, and didn't want to renegotiate it; and the European countries, because they had supported the Nairobi text and were now getting extreme pressure

from their industries to retreat from their prior position, and it's always hard to retreat.

Thus the Conference turned to the trademark questions, and there the major topic of debate was not defferences between the developed countries (Group B) and the developing countries (Group of 77), but within Group B itself. Article 10 quater relates to " appellations of origin " and rules governing the use of geographical designations. The position of the European members of group B can best be understood by using the example of the word " champagne ", which to France is a geographic designation of origin, and in the United States is a generic descriptive word independent of origin. A consumer the purchases California champagne is not deceived as to its origin, and a major difficulty with Article 10 quater was the provision that would require the return to controlled appellation of words that have passed into our language. We have thousands of such words: Swiss cheese, Panama hats, Turkish delight (candy). You can see why weeks, and in fact years, could be spent on this argument, without resolution. Nevertheless, it appeared that there was not effective dissent to this change in the Paris convention,--- as with the other changes, the United States seemed to staud alone.

But it also seemed that there were a few nations which shared

these trademark concerns, and the private conversations among these nations came into the open at Geneva, in the form of Group P. P for Pacific. As Director General Wakasugi (WAKASUGI) mentioned in his opening address, Group P became an effective force in the debate. Group P consisted of Japan, Canada, Australia, New Zealand, and the United States. None of these countries stood alone against the organized weight of the European Community; each supported the other. Japan was a particularly effective member of the team, because they made it clear to Group B that they stood firmly and forcefully for the position of the strongest possible industrial property rights, and against the proposals that would weaken these rights.

This was, in my view , a crucial development in the early days of the Conference. By the end of the first week there had been preliminary discussion of most of the issues, and it looked as if there might be an opportunity for a reasonable conclusion at Geneva. Therefore concern arose about article 5A, because of the possible scenario whereby all secondary issues would be settled or abandoned, and the Nairobi text of 5A might be adopted in the theory that it was already settled.

Therefore there began informal, private conversations on 5A, at the initiative of Dr. Bogsch, Director of WIPO. He recognized

that there was a better attitude at the Conference than at any prior session. There were new leaders of the Group of 77, less confrontational than before --- and it was clear that within the developed countries, the United States was no longer alone: there was group P, and there was a split within the European community, there was support from some Scandinavian countries, and there was much stronger industrial rather then political influence.

With this foundation, I left Geneva, as did Mr. O'Brien who was also present the first week of the Conference. The results that were achieved by the end of the Conference will be discussed by those who were there, Mr. Nakamura and Mr. Jorda.

THE PARIS CONVENTION REVISITED - AGAIN

E.W. Adams, Jr.

Today you will hear reports from PIPA's observers at the Third Session of the Diplomatic Conference on the Revision of the Paris Convention for the Protection of Intellectual Property. It is my purpose now to summarize the events leading up to that conference in the hope that it will be useful in evaluating the outcome of the session.

The story begins in 1974 when a group of developing countries, headed by India, requested WIPO to initiate a study of what were called "necessary" revisions to the Paris Convention to include, among other things, the addition of special provisions for the benefit of the developing countries. Behind this request was the fact that the Paris Convention, as it existed in the Stockholm and earlier texts, was viewed by developing countries as an impediment to the free transfer of technology to developing countries, as required by their drive for a New Economic Order.

In response to the request, WIPO convened an Ad Hoc Group of Governmental Experts, including participants from all states, members of either the Paris Union or entitled to be members of WIPO. Following U.N. practice, the states were grouped to include, in Group B, the market economy states; in Group D, the socialist states; and the Group of 77, all developing countries, it being understood that the determination of what is a developing country involved no more than a country declaring it wished to be so considered.

The Ad Hoc Group of Experts met twice in Geneva in 1975, and once in Lausanne in 1976. Emerging from these meetings, which PIPA attended as an observer, was a Declaration of Objectives. This declaration, which was solely political in nature and proceeded from the assumption that the Paris Convention was, indeed, unsatisfactory in permitting the transfer of technology to developing countries, was first proposed by the Group of 77, considered in private in small group meetings, and agreed to for presentation to the plenary session. In the plenary session, it was declared by the Chairman that the declaration "had been adopted", despite the fact that no vote had been taken, and despite statements from several delegates that any adoption was necessarily ad referendum. These actions involving the Declaration of Objectives gave a clear indication of what the future was to bring, namely that the substantive content of future meetings would be generally determined by political considerations, and that time-honored procedures involving unanimous consent to changes were not likely to be observed.

In 1976, the Ad Hoc Group of Governmental Experts was reconstituted with a more impressive title and became the Preparatory Intergovernmental Committee on the Revision of the Paris Union. The goal of this committee was to draft a proposed revision of Stockholm text for consideration at a diplomatic conference to be held in the future. This committee met in Geneva once in 1976, twice in 1977, and three times in 1978.

Great difficulties were encountered in reaching the stated goal. Following U.N. procedures, the three national groups were represented by spokesmen; and issues arising in the plenary sessions, which were infrequent, were referred to the national groups for consideration. The results of such considerations were reported to the plenary session by the spokesmen. Observers, though present, took no part in any debate, since the conclusions of the national groups, as reported by the spokesmen, were merely noted as either resolving the issue, or else as requiring further referral to the national groups. As was not surprising, there was failure of the national groups to agree on such issues as ① the assimilation of inventors' certificates to patents, ② sanctions for failure to work, ③ the conflict between appellations of origin and trademarks, and ④ special provisions for the benefit of developing countries. When this occurred, smaller working groups, having representatives of the three national groups, were formed, and met in private seeking compromise proposals, which could be agreed to by the national groups.

Wherever agreement was found and reported back to the plenary session as having been approved by the three national groups, they were incorporated in the draft. Whenever agreement was not reached, the draft included multiple alternative proposals. In some instances, there were more alternatives than there were national groups, thus requiring alternative texts within the national group proposals. The result of all this activity was a considerably revised text of the Paris Convention, which became the working draft for a diplomatic conference first convened in February 1980 in Geneva.

Although the voting rule by which revisions of the Paris Convention might be adopted was not a part of the draft text and, indeed, has never appeared in any text of the Paris Convention, the question as to whether the traditional requirement of unanimity would be continued, or whether the typical U.N. voting rule, requiring a two-thirds majority would apply was raised by the WIPO draft Rules of Procedure, the adoption of which was presented as the first order of business on the agenda of the diplomatic conference. The question of the voting rule was of extreme importance in view of the numerical distribution of states present, it being clear that the Group of 77 had the potential of out-voting the other national groups on any substantive issue.

There ensued a month of wrangling and maneuvering during which the B Group of nations debated internally as to how much retreat from the rule of unanimity might be acceptable, and the Group of 77 rejected all proposed rules, while the D Group neither made proposals nor rejected them, but merely stated that its authority to participate in the conference depended upon the adoption of the proposed rules. In desperation, the Chairman convened an informal group, including representatives of the three national groups to seek a compromise. Meeting in private, this group reflected upon the views of the three national groups; and it is important to note that, at this point, all members of the B Group, save the United States, were committed to some compromise rule. Finally, on the last day of the conference, the chairman proposed a voting rule which has become famous, if not notorious, and stated that since it had the approval of the three national groups, it was adopted. This was done despite the fact that, within the B Group, the United States had never agreed; and followed an unavailing protest in the plenary session by the United States.

Obviously, no substantive issue was considered at Geneva, and agreement was reached only as to the desirability of holding another session of the diplomatic conference. Such a session was convened in the fall of 1981 in Nairobi, Kenya, and was proceeded by numerous informal preparatory meetings during which the U.S. sought support for reopening of the issue of the voting rule. Such support was not forthcoming, and the second session of the diplomatic conference opened in Nairobi with a protest by the United States that no rules had been adopted. Nevertheless, the Chairman announced that the rules of procedure had been adopted at the Geneva session. In accordance with these rules, various committee chairmen were appointed. Although all three main committees met during the month-long session, main committee 2 met rarely and reached no agreement with regard to inventors' certificates; and main committee 1 dealt only with the question of sanctions for failure to work and, particularly, with the protest of the U.S. concerning draft proposals for revision of Article 5A.

As the conference moved toward a close, no agreement had been reached in main committee 1; and a group, christened Friends of the Chairman, was convened to seek a compromise text which might be acceptable to all three national groups. The work of this informal group, embodied in a nonpaper (a paper not issued as an official paper of the conference), was agreed to in a meeting having no official status and over the sole protest of the U.S., and

on the final day, was reported as adopted, despite the fact that no vote was taken in main committee 1, and despite the fact that no action of any sort was taken in the plenary session.

It was clear that yet another session of the diplomatic conference would be required. This was agreed to in the plenary session and resulted in the session just completed in Geneva. In the interval between the Nairobi and Geneva sessions, so-called interested circles; that is, users of the intellectual property system and the creators of the technology which was sought by the Group of 77, became highly concerned over the language of the compromise proposal for Article 5A which would permit compulsory exclusive licensing as a sanction for failure to work within 30 months after the issue of a patent in a country, and would permit forfeiture of a patent for failure to work within five years of issue, whether or not a license had failed to produce working. At this time, interested circles within the U.S., which had always enjoyed consultation with their Government, were urged to express their concerns to their counterparts in other B Group countries, and to urge them, in turn, to express their concerns as to the outcome of the Nairobi session to their respective governments.
Such communications were indeed undertaken.

As a result of similar concerns in Europe, UNICE (The Union of Industries of the European Communities) sought an international meeting of the interested circles, inviting the U.S. Chamber of Commerce and the Keidanren of Japan to send representatives to Brussels to discuss possible proposals acceptable to the industries of the B Group countries for resolution of the 5A and other substantive issues where the negotiating text included alternative proposals.

The U.S. Chamber of Commerce delegates included five from PIPA member companies, Dr. Bartholomew Kish, William Roberson, Richard Witte, Glen Korfhage, and myself. The U.S. Chamber delegation, as a group, represented, through their individual associations, substantially all of the organizations in the United States interested in intellectual property matters.

The delegation from Keidanren was considerably smaller, but no less impressive, and consisted of Aoki-San, a well-known member, not only of PIPA, but of other Japanese organizations interested in intellectual property.

The three-day meetings in Brussels were very useful; and, at their conclusion, UNICE adopted a proposal agreed to by all present which, it was hoped, might resolve the outstanding issues regarding inventors' certificates, revision of Article 5A, revision of Article 5 Quatar, and appellations of origin, and also adopted a proposal regarding the final clauses, it being clear that, with respect to the final clauses, no language used there could reverse any unsatisfactory text regarding substantive issues.

It was further agreed that participants at this meeting would communicate the proposals to their governments, urging that these or similar resolutions of the issues be discussed within the B Group with the goal of reaching a unified B Group position for presentation at the third session of the Diplomatic Conference. It is known that since the Brussels meeting, all of the B Group governments were made aware of these proposals. It is clear that great and effective efforts were made in Japan I can also report that they were considered in detail in meetings with U.S. government representatives and found to be consistent with U.S. views at that time.

One result of the Brussels meeting involved two informal meetings involving B Group members held in Europe to consider strategies and possible changes in position at the Geneva conference. From these meetings came the now well-known understanding that the issue of Article 5A would be discussed informally and not brought to final considerations or vote at Geneva. No government within the B Group had changed its position at that time. It was further understood that the issue regarding appellations of origin would be discussed formally and that at least another session of the diplomatic conference would be required.

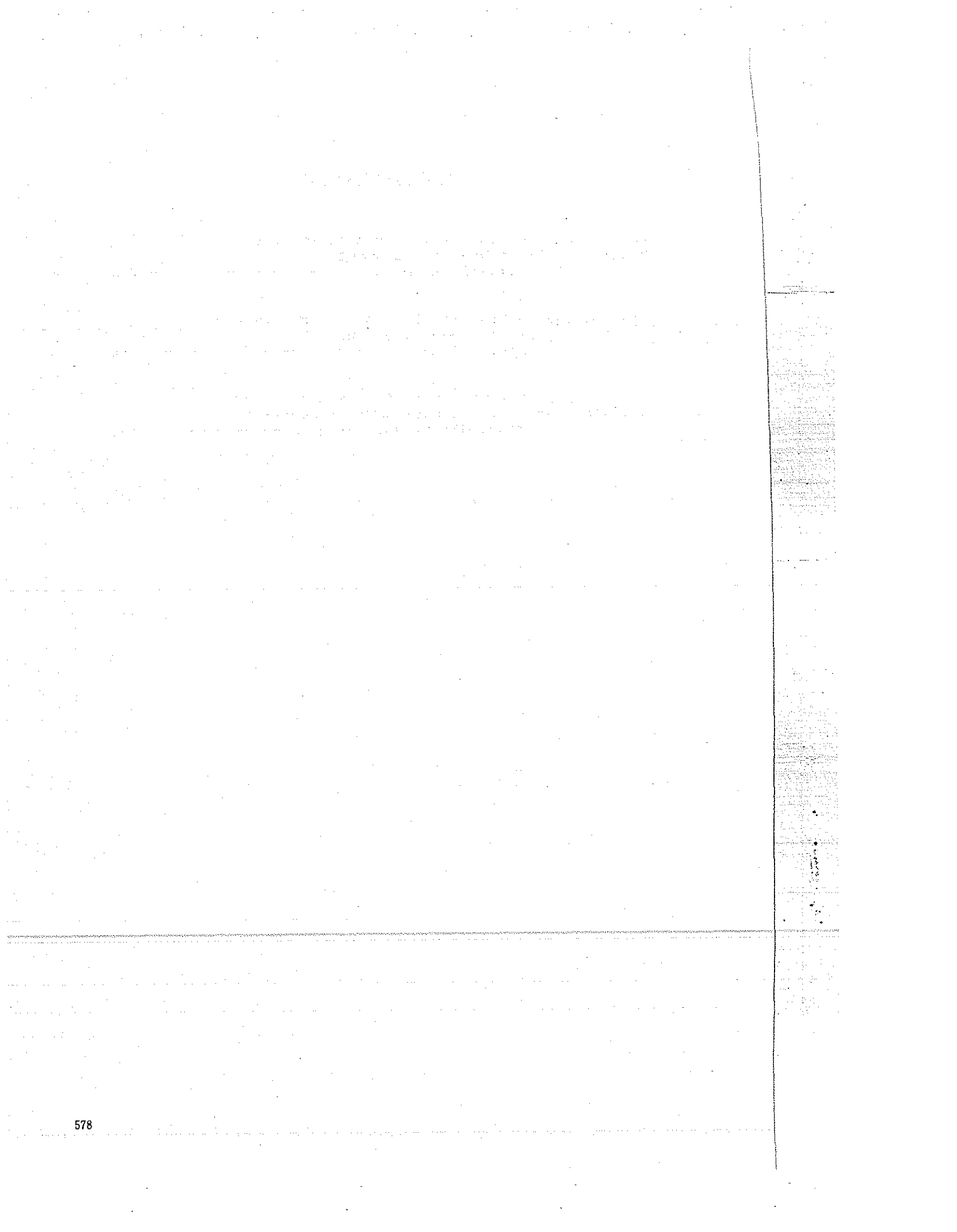
Finally, prior to the opening of the Geneva session, some opposition arose within the U.S. to the UNICE proposals from organizations which believed that they represented a compromise, and that the position of the B Group should be to refuse to accept any provisions weakening the Stockholm text. Despite this opposition, it was clear that the UNICE proposals had become one of the options available to the B Group governments at the onset of the conference.

COMMITTEE NO. 4

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RECENT COURT DECISIONS IN JAPAN RELATING TO DOCTRINE OF FILE WRAPPER ESTOPPEL

Japanese Group
Committee No.4

K. Tanaka
M. Ando
H. Ozeki
K. Hayashi
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Speaker: H. Yamamoto

Abstract

Since Japanese patent prosecution is essentially based upon the inter parte proceedings, approaches for the construction of Japanese patent claims are somewhat different from the ones for that of U.S. patent claims.

In spite of such different approaches, it is recognized that the doctrine of file wrapper estoppel, which is a doctrine developed under Anglo-Saxon law, has been expressly applied to a recent Japanese court decision in a patent infringement suit.

From the view point of comparative law, this paper deals with the recent development of court decisions in Japan relating to a concept similar to the doctrine of file wrapper estoppel.

As a result, although the doctrine of file wrapper estoppel is not well established under the Japanese case law, it has been gradually adopted in recent decisions, which, however, appear to be much more severe with respect to the patentee than the U.S. case law.

Introduction

We shall discuss the approach for patent claim interpretation under Japanese practice, and elucidate how the doctorine of estoppel, or of file wrapper estoppel, which is a concept under Anglo-Saxon law, is applied by the Japanese courts in recent decisions.

1. Claim Interpretation

(1) Statutory rules concerning claim interpretation

Article 70 of the Japanese Patent Law stipulates that "the technical scope of a patented invention shall be determined on the basis of the statement of the claim in the specification attached to the application", and Article 36, Section 5 further states that "in the claim or claims of a patent, there shall be stated only the indispensable constituent features of the invention."(1) Art icle 70 was newly provided in the 1959 Law, and its purport is:

> Under the old Law (1921 Law), there prevailed opinions that the technical scope of a patented invention should be limited only to what had been described in the Claim, and that it should be judged from the whole specification including the Detailed Description of the Invention. The most extreme interpretation of the latter opinion was that the claim merely served as an index for the invention. The present Law clearly states that the technical scope of a patented invention shall be determined on the basis of the statement made in the Claim. Therefore, any invention described in the specification but not in the claim is not included in the technical scope of the patented invention.(2)

A similar provision exists with respect to the technical scope of a registered utility model under Article 26 of the Utility Model Law.

(2) Trend in claim interpretation in the court

It is quite interesting to review the trend in claim interpretation made by the Japanese courts when studying the decisions of the Tokyo and Osaka District Courts.(3)

At the Tokyo District Court: 1) We might say that the Court closely adheres to a formal construction which is not even a step removed from the contextual interpretation of the statement in the claims by rigidly interpreting the provisions of Article 36, Section 5 and Article 70 of the Patent Law. They do not scrutinize nor pass judgement on the constituent elements of the Claim and detect where the essential elements of the invention lie, but treat them all as equal constituents.

2) They are inclined toward not allowing assertions of equivalency, not only for apparently remote equivalents but also for seemingly obvious equivalents, unless they are to be subsumed from the language of the Claim and unless the specification includes alternative embodiments. 3) When the Claim was in abstract language, the court declared that it had no alternative but to rely on the Detailed Description and Drawings, and sometimes specified the technical scope of the patented invention as that which is described in the embodiments (examples). In other words, the court's position was that "the technology not concretely disclosed cannot be allowed to be claimed as part of the monopoly".

At the Osaka District Court: 1) Their unique attitude is to clearly distinguish the essential and the non-essential components of the claimed invention, thus recognizing the differences in weight of the components. As for recognizing the essential components, they suggest that the more subjective statement (admission) in the Detailed Description of the Invention supersedes the objective technical standards prevalent at the time of filing. The prosecution of the application is given consideration only for making a limited judgement.

2) The court consistently takes the stand that no equivalent is recognized with respect to the essential part of the invention, but that equivalency

is to be recognized in respect of a non-essential part so long as set requirements (sub-stutablility and obviousness of substitution) are satisfied in view of the high inventive step of the essential portion and the illegalness of infringements. 3) As for the highly creative patented invention, they note the illegality of infringement by the infringer and adjudge that there exists infringement by often allowing the equivalency which may be considered to be quite broad, if viewed objectively, by recognizing what may be termed as a protective region outside the technical scope where the infringer copies the essential part of the invention in its entirety and deftly replaces the non-essential components with other construction. 4) There are a less number of decisions concerning abstract wording of the Claim.

It should be noted, however, that the recent decisions of the Osaka District Court and judgements of the higher courts have not followd the same claim construction as mentioned above.

(3) Fundamental decisions related to claim interpretation

According to the provision of Article 70 of the Patent Law, "the technical scope of the patented invention, ... shall be determined on the basis of the statement in the claim". We shall now examine what relationship this provision has with the prosecution documents (file wrapper) such as the specification, drawings, and others up to the grant of the patent.

The Osaka District Court rendered a decision on May 4, 1969[4] (Re: Polystyrol Foams) holding;

..... since the statement in the Claim aims at none other than but to simply and clearly indicate the essence of the invention (essential matters for construction of the invention) as explained in "Detailed Description of the Invention", its statement may sometimes be too abstract or too simplified

in other instances to enable easy determination of its technical scope. Although the statement in the Claim shall be relied on for determining the technical scope of the patented invention, it shall be also permissible to make a supplementary judgement in light of other materials and data such as the descriptions in the specification, the technical standard prevailing at the time of filing, the representations made by the applicant during the prosecution, as well as the interpretation of the Patent Office's intent regarding grant of a patent .....

However, there has been strong criticism of this decision for even allowing consideration of the prosecution documents, in addition to the Detailed Description of the Invention, Drawings, etc., which may be conceded as allowable at times.(5),(6)

On the other hand, the two Supreme Court decisions(7),(8) of December 14, 1972 rendered an opinion as to whether the amendment in question complied with Article 126, Section 2(9) of the Patent Law "which substantially enlarges or modifies the scope of the patent claim" indicating the limit of amendments allowable in the trial for correction. By sufficiently taking into account the fact that allowing the correction resulted in changing the statement in the Scope of Patent Claim, thereby expanding the scope over which the effect of the patented invention extended, the decision referred to the provisions of Article 70 and Article 36, Section 5 of the Patent Law as follows:

..... the significance of the Claims in the specification cannot possibly be discussed on the same plane as the Detailed Description of the Invention or the Drawings.

Since the Claim clarifies the effective scope of the patent right which is an absolute right against the public, it should be used as the standrd to

> define the technical scope of the patented invention, ... the view that it should be made in light of the whole description of the specification can hardly be adopted.

Although the above mentioned Supreme Court Decisions were not cited, the Tokyo High Court's September 27, 1979 decision (Re: Naphthyridine)(10) based on the same principle holding:

> ..... a matter related to a patented invention which is described in the example but not in the Claim cannot be regarded as being automatically included in the scope of the patent right. Although it is assumedly recognized that the appellant who is the patent applicant consistently had subjective intent to seek the grant of patent right on the method of preparing, 1, 8-naphthyridine having a substituent Q at an optional position of 2, 5, 6 and 7 positions of naphthyridine nucleus, since the invention is absolutely clear from the statement in the Claims, the scope of the patent right should not be determined by further considering the subjective intent of the applicant or the view of the Patent Office ..... (11)

In some publications, this decision is deemed as having issued a warning against the tendency of some of the patent practitioners who think that the technical scope of a patented invention cannot be interpreted correctly or accurately unless one had skimmed through the descriptions in the Detailed Description of the Invention and Examples (Embodiments) in the specification and even the statement made by the applicant in the Responses to the Official Action during prosecution.(12)

The latter decision on claim interpretation must come as a surprise to patent practitioners in the U.S. if nothing else. Claim interpretation under U.S. practice

takes into consideration not only the specification and drawings, but the technical standard prevailing at the time of filing, the representations by the applicant during the prosecution, and the view of the Patent Office reflected in the allowance as positive information for judgement, not as complementary references.

Why do these differences in the approach toward claim interpretation occur? One of the major reasons is that the patent procurement procedure in Japan is essentially "inter parte" proceedings which allow participation by any person through the opposition to the grant of patent under Article 55 of the Patent Law while the procedure in U.S. is "ex parte" which in essence does not allow third party participation, as the procedure is similar to the contractual proceedings (13) between the Patent Office representing the public interest and the applicant who is a private party.

Although the interpretation of Japanese Patent claims is based on the above principle, it seems impossible to judge whether the patented invention is absolutely and objectively self-evident from the Claims without any knowledge or hint. Therefore, it would be naturally conducted based on the prerequisite of understanding the invention as a whole by considering the Detailed Description of the Invention, Drawings and other materials such as documents presented during the prosecution. It should be explicitly noted, however, that whether this understanding is to be reflected or not in the decision is another problem.

As for the Naphthyridine case (Tokyo High Court decision), we may determine by analogy that a patented invention which is not absolutely and objectively clear from the Claims may be interpreted in light of such other materials as the statement in the Detailed Description of the Invention and Drawings as well as

the documents submitted during prosecution. This interpretation coincides with the gist of the Polystyrol Foams case.

In view of these aspects, the Naphthyridine case (Tokyo High Cour decision) may be regarded merely as repeating the intent of the law[14] discussed above that 1) the statement in the claims is an objective representation of the patented invention which supercedes other statements in the specification and matters to be subjectively understood from the prosecution of the application; and 2) despite the statement in the specification (which is an objective matter), the invention which is not stated in the claim should not be the object of Claim interpretation.

As shall be discussed below, there are many decisions similar to the Polystyrol Foams case which allow consideration of the prosecution documents in interpreting the claims. This is called the doctrine of considering the application procedures. There are two theories, one which holds applying this doctrine in all instances, and the other which supports such an application only when the meaning of the claim is not understandable clearly by considering only the technical standard prevailing at the time of filing. From the standpoint of the principles of good faith, fairness and prudent judgement, the former theory is deemed reasonable.[15]

2. File Wrapper Estoppel

There have been many decisions in Japan which allow consideration of the prosecution documents in claim interpretation although they are undermined by the unique Japanese concept mentioned above. It does not mean that the doctrine of estoppel or that of file wrapper estoppel has been applied without modification. This began with the use of prosecution procedures as reference material based on the principle of good faith. However, recently

there have been decisions which made reference to the doctrine of estoppel[16] and which applied the doctrine of file wrapper estoppel.[17] It is also true that there is a tendency for the doctrines of Anglo-Saxon Law to be integrated with the Japanese Patent Law and applied to the interpretation of claims.

We propose, therefore, to first outline the doctrine of file wrapper estoppel of the United States, and then compare it with the decisions in Japan which considered the prosecution documents in interpretation of Japanese Patent claims.

(1) Doctrine of File Wrapper Estoppel in U.S.

File wrapper estoppel as applied under Ango-Saxon Law is an estoppel arising from the file wrapper, or the Patent Office File, which includes all of the records for a patent application and subsequent proceedings, and is deemed to be an estoppel by representation in a broad sense. Estoppel by representation is a doctrine to prohibit a party from making an assertion which is contradictory to the fact once represented when (i) the party representing approved arbitrarily a fact related to a matter, or performed an act, or failed to perform an act in spite of duty to perform; (ii) the other party acted believing such an act, failure to act or an approval, or became affected; and (iii) the other party is adversely affected if the party making the representation is allowed to cite evidence contrary thereto. "The representation", which gives rise to estoppel, is a statement related to a fact made by the party so representing on its own or by proxy by a method of affirming or denying or otherwise to let the same be known to other party or other parties. Accordingly, in the estoppel by representation, the reason which caused the party to make such a representation is not so important; the fact that the party considering the representation has understood the fact as represented is important. Therefore, the

history or the development which lead to such a representation is irrelevant.(18)

The doctrine of file wrapper estopped precludes a patent owner in an infringement suit from obtaining a construction of a claim that would in effect resurrect subject matter surrendered during the course of proceedings in the Patent and Trademark Office. The estoppel applies most frequently where an applicant amends or cancels claims rejected by the Office as unpatentable in light of the prior art. Some decisions extent it to amendments entered for other purposes and even to arguments by the applicant's attorney.(19)

(2) Recent Decisions

In order to analyze and study recent decisions to see how the prosecution documents (including those filed after the grant related to invalidation trial) are considered, we classified them into 5 categories by considering how the factors enumerated below have been applied in the decisions;

(i) whether the prior art has been cited in the official action, the opposition filing, or the demand for invalidation trial;

(ii) whether the Claim has been amended;

(iii) whether the statement in the Detailed Description of the Invention has been amended;

(iv) whether any arguments have been made in response to the official action, or the opposition.

Category I : The case where the official action, or the opposition (to be collectively referred to as "the official actions, etc.") has been issued and/or submitted, and the amendment of claims and the remarks stating differences between the prior art and the invention were submitted, and the interpretation of the claim was made by considering these.

Category II : The case where the official actions, etc. had been issued based on the prior art, and, in order to overcome then, the amendment for the specification and the remarks stating differences between the prior art and the invention were submitted, and the interpretation of the claim was made by considering these.

Category III: The case where the official actions, etc. had been issued based on the prior art, and the remarks alone were submitted to assert differences between the prior art and the invention, and the interpretation of the claim was made by considering these.

Category IV : The case where the official actions, etc. not based on the prior art had been issued, and the amendment of the claim was submitted to overcome the same, and the interpretation of the claim was made by considering it.

Category V : The case where the applicant volunatarily submitted the amendment of the claim, or the specification and the amendment was considered in the interpretation of the claim

Other categories are also conceivable from the above factors, but we used only the above in studying more than 20 decisions. The decisions discussed below are summarized or outlined only in connection with the doctrine of file wrapper estoppel so that reference should be made to the full texts for dtails and other points of disputes.

Decisions in Category I

(i) Case No. (ne)2466 of 1966 at the Tokyo High Court

(Re: Dryer for grains) dated July 30, 1970[20]

During the examination of the utility model application, the Patent Office examiner issued the prior art rejection. In response, the registrant (the applicant) clarified the points where the band steel vanes were to be attached, and asserted that since the structure was not suggested by the prior art, it had a novel and special operational effect, and concurrently amended the scope of the claim. The Patent Office Commissioners then ordered the operational effect of the structure to be described more concretely and in more detail. The applicant (title holder) complied with the order, further delineated the invention structure in the specification, and concretely described the operational effects generated thereby.

Based on the judgement that the subject utility model registration was allowed to pass to publication after the examination procedure as above mentioned, the court adjudged that "the point of attachment for the band steel spiral vanes" was a major feature in structure of the subject utility model registration, and held that the act of the plaintiff (the title holder) alleging at a later date a fact contrary to his earlier assertion was inadmissible, and that the defendant's product lacking in such a structure

was not within the technical scope thereof.

(ii) Case No. (wa) 9786 of 1971 at the Tokyo District Court
(Re: Lighter) dated February 15, 1971[21]

The utility model registration of the plaintiff (the title holder) concerns a lighter of which the encasing member for the flint is provided rotatably on the support axis of the igniting wheel. The defendant's product accused of infringement has an encasing member which is fixedly, not rotatably, provided.

The plaintiff discussed the prior art cited by the examiner during examination, and amended the claim to make it a rotatable type as mentioned above, and discussed the effects of the rotatable structure as compared to the prior art in his argument.

The plaintiff asserted that the product for which infringement had been accused was equivalent to that claimed in the subject utility model registration since those skilled in the art could easily and without efforst choose the rotatable type or the fixed type. The court decided that, from development in the examination procedure, it should be understood that the plaintiff had limited the product to the fixed type, and his assertion for equivalency should not be allowed.

Decisions in Category II

(i) Case Nos. (wa) 8787, 4465, 8123 of 1972 at the Tokyo District Court
(Re: Dragnet) dated December 11, 1967[22]

In judging the technical scope of a patented invention, the court referred to the prior art references submitted anew in the trial, the amendment of "the Detailed Description of the Invention" (not the

amendment of the claims) in the specification and other materials submitted by the applicant to overcome the prior art references cited by the examiner during examination, and adjudged that the technology which is used for realizing the configuration described in the specification but not clearly stated in the Claim is deemed as an indispensable and essential component of the invention when considering the operation of the claimed invention.

This case is acclaimed because of its diversion from the so-called "theory to exclude prior references"(23) where the known technology is excluded from the scope of the patented invention.(24)

(ii) Case No. 12843 of 1969 at the Tokyo District Court
(Re: Refractory Fibrous Material) dated December 27, 1972(25)

In this case, the patentee asserted that even through the refractory fibrous material had been described as the additive substance throughout the prosecution, the agent for the applicant failed to correctly understand this, stated erroneous opinions in the argument and amendment, and made erroneous amendment. However, the court decided the following:
In the Claim, there appears the description reading "less than 2%", more particularly 0.4 and 1.4%, of refractory fibrous substance , and according to the statement in the Detailed Description of the Invention, the refractory fibrous substance is added to additionally enhance the strength, and adhesion or binding property of the inner mould. Since the Patent Claim is supposed to state only the matters which are indispensable to the construction of the invention, it would be reasonable to understand that the refractory fibrous substance according to this invention is required to be contained at less than 2%, or 0.4%

at the lowest, or at the limit which can increase the strength of the inner mould and the adhesion or binding property. This may be affirmatively recognized from the intent or recognition of the applicant which became apparent during the examination of the subject patent application.

In order to overcome the examiner's rejection based on prior art, the plaintiff submitted an amendment of the specification, and referred to this point in his remarks. The claim was also amended, but the decision did not refer to it.

(iii) Case No. (wa) 952 of 1978 at the Osaka District Court
(Re: Cylinder) dated February 29, 1980 (26)

The decision, first of all, referred to the patent prosecution and the technical standard (prior art) at the time of filing of the Patent A as the facts to be considered in interpretation of the claim in judging the technical scope of Patent A. Having reviewed these and according to these facts, the court declared that "although patent A was filed based on the statement in the Claim represented by an extensive scope of expressions, the applicant filed the reply brief of the patent opposition in which he stated that further limitations of the claim were as if the indispensable parts thereof, emphasized the novelty of such a construction, and indicated differences in the operational effects between the patent and the above known patented inventions B and C; and that such an emphasis placed by the defendant seems to have been reasonable in light of the prior art as mentioned above, and it is clear that the Patent Office agreed to the defendant's opinion in issuing the decision of the patent opposition". The court admonished that "the situation as above is a point which could not possibly be disregarded in

determining the technical scope of the 1st invention", and showed as reasons for impossibility of disregard that "the scope of the patent claims generally is not increased beyond that of what a patent applicant desires", and that "the defedant's intent and view as above mentioned during the prosecution of the 1st invention may be established objectively by any party by merely looking into the record (file wrapper), the defendant assertions contrary thereto in enforcing his right under the patent obtained based on such views is quite contrary to good faith for third parties (file wrapper estoppel)". The decision further declared that "it is possible to understand the examination procedure in the following manner ..... Thus, if the defendant had considered it difficult to prove the novelty of the invention without emphasizing the above points, then the defendant should have added such a factor in a suitable stage of prosecution and filed an amendment to limit the Claim. Accordingly, it is assumed that the 1st invention, althoug maintained in the original claim, has been in effect reduced in substance to come to have the same result as a claim including such limitations. This aspect of prosecution cannot be disregarded in claim interpretation. If, indeed, the above holds true, then the technical scope of the 1st invention of the present case should not rely merely on the literal language of its claims, but should be established by taking into consideration the above situation, and the claim language which expresses even the broader concept should be restrictively interpreted in substance or in a way to suit its purpose". The decision taught that "if this interpretation is to be followed, the alleged machine "a" does not fall under the technical scope of the invention of Patent A".

This case is a leading case which discussed the doctrine of file wrapper estoppel distinctly, and is quite interesting in that it showed the court's attitude toward file wrapper estoppel.

Decision in Category III

Case No. (wa) 3746 of 1964 at the Tokyo District Court (Re: Method of Preparing Water Proof Film) dated March 25, 1970[27]

The patented invention concerned a method of forming a water proof film on fabric, which comprises press-adhering the second fabric by rolls on the thermoplastic resinous film which is being heated by calendering. The plaintiff asserted in the patent infringement suit that the accused product which the defendant had manufactured thermally fusing the second fabric on the thermoplastic resinous film available in the market was equivalent to the patented invention. However, the court did not allow this assertion of equivalency in view of the response filed in the patent opposition, the supplementary statement of reasons filed in the invalidation trial, and the statement in the request for interpretation under Article 71 of the Patent law.

In the decision, no direct reference was made to the differences between the prior art cited in the opposition, the invalidation suit and the request for interpretation and the subject invention of this patent, but the court mainly dealt with the admission of the plaintiff and then rendered the decision as above mentioned.

The present case is valued as one illustration where the doctrine of file wrapper estoppel was applied in full and the assertion of the title holder for infringement of his right was denied.[28]

Decision in Category IV

Case No. (wa) 11105 of 1972 at the Tokyo District Court
(Re: Naphthyridine) dated July 21, 1976[29]

During the examination of this patent, the plaintiff received the examiner's objection as to inadequacy of claims under provisions of Article 36, Section 5 of the Patent Law. The plaintiff (patentee) filed an amendment of the claims deleting the description of substituent which was not related to the reaction described in the specification, and remarks stating that "it should be noted that the invention be given an extensive scope of protection since this application is related to a method of preparing a novel substance". The patent was subsequently granted. The court indicated in the decision that omitting the description of the substituent not related to the reaction in the general formula means abandoning the specific description of the compound, and the even when there is a description in the specification, but an absence of description of the substituent in the Claims, the substituent cannot be deemed as being included within the technical scope of the patented invention.

This case is the Tokyo district court decision of the Naphthyridine case. It is noteworthy in that the decision dealt with the relation between claims and the description in the specification, the question of whether the reference could be made to the prosecution documents in claim interpretation, as well as the matter discussed above, viz. when reference could be made to the prosecution documents in claim interpretation, the original claims are considered as abandoned since the amendment has been made to the claims.

Decisions in Category V

(i) Case No. (wa) 214 of 1969 at the Tokyo District Court
(RE: Antenna) dated August 30, 1976(30)

In this case, the court indicated the following in its judgement.

While it is recognized that the terms of thermo-setting resin and thermoplastic resin had been used distinctly to mean resins having different properties as the mould material prior to filing of the first invention in the case, ---- the applicant described the insulating material of the first invention as "the insulating meterial of the resinous type" in the Claim and the Description dealing with the properties, action and effect of the utility model in the original specification attached to the application paper, but later he amended the same to read as "the thermosetting insulating material" in the Claim and the Description of the Utility Model. According to the above, it is understood that the applicant intentionally limited the insulating material of the first invention to the thermosetting insulating material which does not include the thermoplastic insulating substance. The understanding is not influenced by the fact that the reason for the amendment is not objectively clear. The assertion of the plaintiff is without grounds.

(ii) Case No. (wa) 1536 of 1968 at the Tokyo District Court
(Re: Insecticidal composition) dated January 31, 1972(31)

In this case, the court declared its decision as follows:

..... It is not known from these evidences what course this patent application for the present invention followed prior to its publication, and what development there was before the registration ..... the application limited the carrier of a very extensive scope of "organic macromolecular substance in solid form" at the initial filing, to a narrow scope of five types in the final stage. There are no evidences to indicate the rationale for this limitation. Assuming that, as the plaintiff asserts, the patent applicant was trying to obtain a patent on a substance which mixed very well as a carrier with insecticidal phosphoric ester to be formed in solid solute substance ----- putting aside the question of whether this would be subject to final rejection or not ----- there would have been need to change the initial expression of "organic macromolecular substance in solid form" to the above mentioned 5 types of substances. ----- In the Detailed Description of the Invention in the application orginally filed, numerous substances which had been described as suitable or preferable organic macromolecular substances in solid form have been deleted except for the 5 types of carriers, and since the intent to have the carrier cover of other substances than these five has not disclosed, we must say that the above mentioned limitation has been made consciously and intentionally by the applicant, even though the reasons for this limitation by the applicant are not necessarily understandable. ----- In summary, we must say that the accused carrier is not included within the technical scope of the present patent unless it includes one of the five substances, and that there is no room to discuss the equivalency of the substance used in the accused carrier and the 5 different carriers of this patent.

(3) Some Discussions of Comparative Law

Although we are not experts on the legal system and decisions in the United States and there may be some errors in our opinions, we would still like to briefly discuss the subject matter of this paper from the standpoint of comparative law.

Although there may be a divergence of opinion, we shall assume that the decisions discussed in Categories I to V applied the doctrine of file wrapper estoppel.

(i) Actions giving rise to file wrapper estoppel

(A) Under United States practice, amendment of claims (including cencellations and additions) to overcome prior art rejections will give rise to file wrapper estoppel. Japanese decisions basically follow the same trend concerning this point. In claim interpretation, more importance is attached to the claims than to the detailed description of the invention or the prosecution documents. As the decision in Category II indicates, since the statement made in the remarks is taken into consideration in interpreting claims, the amendment of claims without other amendments to overcome the prior art rejection would have been given more consideration in the interpretation of the claim.

(B) In the situation as discussed in Category III, decisions are divided as to whether the doctrine of file wrapper estoppel can be applied even in U.S. Especially in the second and the forth circuit courts, the statements made in the remarks are not always held as constituting file wrapper estoppel.

(C) In the situation discussed in Category IV, the general practice in the United States is that an amendment to clarify the claims does not constitute file wrapper estoppel. However, we

should like to point out that this is handled in the same way as file wrapper estoppel in Japanese decisions. Here, too, the statement in the claim supercedes that made in the remarks, and the more rigorous doctrine of estoppel under which the objective representation is relied on more than the mere intention of the applicant is applied. Decisions in Category IV seem to regard the original claims, before the amendment, as abandoned. This creates a problem since the intention of the applicant to amend is indicated in the remarks.

(D) In the situation in Category V, there are instances under U.S. practice that the scope of claims of the original patent can be enlarged if the re-issue application is filed for within 2 years from the grant of the original patent. Under the Japanese law, the trial for correction does not allow broadening of the claims. Even if no re-issue application is filed, the doctrine of equivalents seems to be applicable under the U.S. practice, because in Category V, there is a greater possibility that file wrapper estoppel does not arise.

(ii) Effect of File Wrapper Estoppel

(A) The doctrine of file wrapper estoppel usually is applied when the doctrine of equivalents is applied, and it is clear from the Japanese decisions as well that the former supercedes the latter.

(B) As illustrated by Category V, there exists under the Japanese practice a concept of intentional limitation or exclusion as represented by the applicant which may be similar to file wrapper estoppel.(32),(33) For details, reference should be made to these references, but both refer to

intentional limitation and exclusion as not applicable to the doctrine of equivalents. However, Shinagawa reports that the intentional exclusion still leaves room for applying the doctrine of quivalents concerning the constituents of the claims other than those excluded, while there was no room whatsoever for applying the doctrine of equivalents in the intentional limitation based on his analysis of decisions, and raises questions regarding intentional limitations[33].

3. Conclusion

The recent Japanese decisions have elucidated the following points:

(i) There are unique approaches for the interpretation of Japanese patent claims since the patent procurement procedure is inter parte proceedings. The tendency is, however, toward adoption of the doctrine of file wrapper estoppel which is a concept of Anglo-Saxon Law.

(ii) Regarding the application of file wrapper estoppel to interpret Japanese patent claims, the decisions appear to severly restrict the patentee.

Notes

(1) The corresponding provision is found in 35 U.S.C. 112, Paragraph 2 as follows:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his vention.

However, there is no statutory provision in the U.S. law corresponding to Article 70 of the Japanese Patent Law.

(2) Ed. Japanese Patent Office: Consecutive Commentaries on Articles of Industrial Property Laws. (Hatsumei Kyokai, July 10, 1981), p. 188

(3) Kotani, E., Tokkyo Hanrei Vol. 29, No. 7, pp. 801 - 809

(4) Osaka District Court, May 4, 1961 Decision (Re: Polystyrol Foams), Kakyuminshu, Vol. 12, No. 5, p. 927

(5) Miyake, M., 100 Patent Decisions, Jurist, 1966, p. 142
----- And yet, I cannot help but question the standpoint which takes into consideration "the intent of the applicant represented during the prosecution and the intent and interpretation of the Patent Office toward grant of patent, even though I may accede to the stand of allowing consideration of the specification and drawings. This is in relation to the principle of examination by the public. Indeed, these matters are not generally to be known by the public, and should not be discussed on the same plane as interpreting the contractual intent which has only the relative effect. The fact that the prosecution documents and appended substances become accessible after publication to any party within the Patent Office building (Article 51, Section 4) cannot influence this thinking of mine -----

(6) Toyosaki, M., Patent Infringement Suits (Jitsumu Minji Sosho Koza) Vol 5, p. 217

----- To what extent other materials should be considered if the statement in the Claims is not clearly worded? There would be no opposition against referring to other portions of the specification, particularly to "Detailed Description of the Invention". The same would also apply to the drawings. The question is the intent of the applicant represented during the course of prosecution from the filing to the grant, and the views of the Patent Office expressed in the course of prosecution. Although there are decisions and academic theories affirming that other materials including the prosecution documents should be taken into consideration in interpreting the technical scope of a patented invention, there are also views which are sceptical about these. The author agrees to the latter. -----

(7) Supreme Court, December 4, 1972 Decision (Re: Alkylene), Minshu, Vol. 26, No. 10, p. 1888

(8) Supreme Court, December 4, 1972 Decision (Re: Freezing Temperature of Rice Cake), Minshu, Vol. 26, No. 10, p. 1909.

(9) (Trial for correction)

126. - (1) A patentee may demand a trial for correction of the specification or drawings attached to a request only where such correction has any of the following objects:

(i) the restriction of a claim or claims;

(ii) the correction of errors in the description;

(iii) the clarification of an ambiguous description

(2) The correction of the specification or drawings under the preceding subsection may not be such as to substantially enlarge or modify the claim or claims.

(10) Tokyo High Court, September 27, 1979 Decision (Re: Naphthyridine), showa 52 (wa) 1135.

(11) c.f. Universal Oil Products Co. v. Globe Oil & Reinfing Co., 322 U.S. 471, 1944

----- As noted previously, courts hold that if the claims read in the light of the specification and drawings are clear and unambiguous, then declarations to the Patent Office are merged in the issued patent, making remarks to the Patent Office irrelevant. However, a patentee is his lexicographer, and in the course of his arguments to the Patent Office, he may define his terms in a manner which differs from their normally accepted meaning. In short, while the claims on their face may seem to have one meaning when read in the light of the patentee's definition, they may have an entirely different meaning. Thus, proper claim interpretation requires that the claims be carefully read in the light of terms purposely inserted in the claims. -----

(12) Homma, T., Tokkyo Kanri, Vol. 31, No. 3, p. 265.

(13) Eustis Mining Co. v. Beer, Sondheimer & Co., Inc. 239 Fed. 276, DC SNY 1917.

----- The doctrine of file wrapper estoppel in patent claim interpretation may be said to correspond generally to the rule of contract interpretation whcih permits proof of attendant facts constituting the setting of a contract if helpful to interpret the meaning of the written words. -----

(14) See (2), supra.

(15) Yoshifuji, S., Tokkyofo Gaisetsu, p. 338.

(16) Osaka District Court, January 27, 1976 Decision (Re: Mechanical Joint), Tokkyo Kanri, Special Edition, 1976 Hanketsushu III, p. 733 - 752.

(17) Osaka District Court, February 29, 1980
Decision (Re: Cylinder), Showa 53 (wa) 952

(18) Shinagawa, S., Tokkyo Kanri, Vol. 31, No. 6, p. 662

(19) Chisum "Patents" Vol. 4, p. 18 - 55

(20) Hanrei Times, No. 253, p. 192

(21) Tokkyo Kanri, Special Edition, 1974 Hanketsushu,
p. 39 - 53

(22) Hanrei Times, No. 218, p. 239 - 241

(23) Supreme Court, August 4, 1964 Decision, Showa 37 (wa)
871, Hanrei Times, No. 166, p. 120

(24) Noguchi, A., Patent, Vol. 23, No. 29, p. 17

(25) Ed. Japanese Patent Office, Shinketsu Torikeshi Soshoshu,
Chi 62, p. 453 - 465

(26) Tokkyo Kanri, Special Edition, 1981 Hanketsushu II,
p. 8 - 27

(27) Hanrei Times, No. 247, p. 263 - 266

(28) Noguchi, A., Patent, Vol. 23, No. 29, p. 17

(29) Ed. Japanese Patent Office, Sinketsu Torikeshi Shosho
Hanketsushu, Chi 185, p. 393 - 402

(30) Tokkyo Kanri, Special Edition, 1977 Hanketsushu,
Chi 185, p. 393 - 402

(31) Hanrei Times, No. 276, p. 358 - 360

(32) Yoshifuji, S., Tokkyo Kanri, Vol. 21, No. 3, p. 167 - 178

(33) See (18), spura, p. 662 - 666.

PIPA Committee #4
American Group
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WHAT LITIGANTS CAN EXPECT FROM THE NEW U.S. COURT OF APPEALS FOR THE FEDERAL CIRCUIT

By
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Presented at the Pacific Industrial Property Association
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On October 1, 1982 a new court, known as the U.S. Court of Appeals for the Federal Circuit ("CAFC"), having exclusive jurisdiction over patent appeals, came into existence. Historians will record that the bill signed into law April 2nd had wide support from the patent bar and the business community. They will also record that the bill was overwhelmingly approved by both branches of the U.S. Congress. Inventors, businesses contemplating capital investment or commercial exploitation of patents as well as members of the patent bar engaged in the day-to-day battles litigating patent matters and perhaps more concerned with the possible effects of the creation of this new appeals court may appropriately ask "So what? What does this mean to me?"

To answer these questions, it is appropriate first to review very briefly how patent appeals were decided before the enactment of this bill as well as the jurisdiction and make-up of the new appeals court.

I. PRIOR APPEALS JURISDICTION

The United States has twelve federal judicial circuits. Each judicial circuit has a Court of Appeals to hear appeals taken from the various District (lower) Courts within its circuit. It is not difficult to understand that each Circuit Court of Appeals (absent a prior decision from the Supreme Court which is its "boss") would have its own views on how a given point of law, e.g., a particular point of patent law, ought to be decided. Some circuits have earned a reputation of disfavoring patents; others are generally regarded as being more favorably inclined.

In the floor debate on the bill in the House of Representatives it was reported that over 50 percent of the patents challenged are held to be invalid. Yet, in the eighth and ninth circuits, of all patent cases appealed from the district courts, 80% hold the patent to be invalid. From the hearings held to consider the bill, it was concluded that one wanting to bring a lawsuit attacking the validity of the patent would most likely file such a lawsuit in the eighth circuit covering 9 of the mid-western states. On the other hand, if you were trying to have a patent held valid, you would try to have the suit filed in the fifth circuit (covering Mississippi, Louisiana and Texas). The problem is further complicated in that the Supreme Court in the last 35 years has only taken one case to resolve a conflict between circuits [Appeals to the Supreme Court may not be taken as a matter of right. The Supreme Court will only entertain appeals in such matters as it elects and considers important enough to hear.] Consequently, it is indeed possible to have one prevailing decision in some states, an opposite holding in other states and still other states where the issue has not been fully decided at all.

II. THE NEW CAFC

A. Jurisdiction

The new court, formed by a merger of the U.S. Court of Customs and Patent Appeals (which, among other matters, heard appeals by applicants from the U.S. Patent Office) and the U.S. Court of Claims, will have exclusive jurisdiction over patent

(and certain federal contract) appeals. This means that a single court, rather than twelve Courts of Appeal, will have sole jurisdiction for appeals from any of the District Courts in the various states.

While this paper is directed to patent appeals from inter parte decisions in the lower courts, it should nevertheless be noted that, in addition to patent and federal contract appeals, the new court will also review decisions of the Commissioner of Patents and Trademarks and of the Trademark Trial and Appeal Board with respect to aplications for registration of marks, as well as cancellation and opposition proceedings. Cases decided by the U.S. International Trade Commission will also be sent to the new court for appellate review.

B. Make-Up

By the enacted bill, the court will consist of twelve judges who will hear cases in panels of at least three, making it possible for as many as four cases to be heard at any given time. The Court is empowered to hear cases in any of the states and, indeed, the Hon. Howard Thomas Markey (Chief Judge of the former Court of Customs and Patent Appeals [CCPA] and now Chief Judge of the new CAFC) has publicly stated this will be a traveling court. [For those who might find it of interest, a biographical sketch of Chief Judge Markey is appended to this paper. Of course, included in the eleven other judges comprising the court are all of the former judges of the CCPA, bringing with them a

considerable number of years experience and wisdom in patent matters, particularly the issue of patentability.

III - NOW FOR THE "SO WHAT?"

With the foregoing brief background material so one can understand how inter parte patent appeals from lower court decisions were handled, before and now, we can address ourselves to my "So What?" question, namely what effect, if any, this change in Federal Court jurisdiction for appeals may have to inventors, the private business community and the patent bar as well.

I am in full agreement with its supporters that this is a very important piece of legislation that will provide many benefits and significant advantages over the former appeals procedure.

In the following comments I will first respond to my "So What?" question by pointing out some of the broad benefits common to patent appeals in general. I will then refer to some specific issues illustrating where conflicts as to the rule of law should be resolved.

A. In General

1. The establishment of a single court to hear patent appeals has been identified (according to testimony before Congress) as one of the most far-reaching reforms that could be made to strengthen the U.S. patent system in such a way as to foster technological growth and industrial innovation which is regarded as a key to increase productivity. The new CAFC will

provide nationwide uniformity in patent law and will make litigation results more predictable.

Under the former system where different decisions could be reached in different circuits, the validity of a patent was dependent, to a certain degree, upon geography. It was therefore particularly difficult for small businesses to make useful and knowledgeable investment decisions where patents are involved when they have any reason to fear a patent may be attacked and tied up for years in expensive litigation.

The fact that the standard of patentability will not vary under the new CAFC appellate review should be a stimulus encouraging both technological growth and management decisions for investment.

As was reported by the sponsors of the bill before the U.S. Senate, the restructuring (creating the CAFC) will solve the fearful attitude many corporations, large and small, have with regard to investing the resources needed to develop and implement new technology, an attitude which is the result of the vague, unclear body of patent law which has developed through often conflicting decisions rendered by the various circuit courts of appeal.

2. As has been alluded to earlier in this paper, the creation of a single appeals court will create uniformity within the circuits. [For those not familiar with the judicial process in the United States, it should be noted that a decision by an

appellate court is binding as to the law in lower courts within its jurisdiction. Thus, when the CAFC speaks, their ruling will be the law within the United States until they, the Supreme Court or, in appropriate cases Congress, see fit to change it.]

Consequently, the expensive and time-consuming custom of "forum-shopping" (finding the most favorable forum or circuit to try a case) will tend to be eliminated.

As was pointed out on the floor of the House of Representatives during debate of the proposed bill, a great deal of the instability in patent litigation is attributable to forum-shopping. Although a great number of cases are not involved, this is very disturbing to everyone who holds a patent. It is especially discouraging for the single inventor and the small business man who does not have the resources for prolonged litigation. As reported, the average cost of legal fees for routine patent litigation runs $250,000 per party. Removing the incentive to forum-shop will also reduce the costs to litigants.

Much the same view was expressed in the Senate debate. From the testimony presented in Senate hearings discussing the bill, it was concluded that forum-shopping on the scale that occurs in patent law increases the cost of litigation and demeans the entire judicial process and the patent system as well. Moreover, as the new court brings uniformity to this field of law, the number of appeals resulting from attempts to obtain different rulings on disputed legal points can be expected to decrease.

3. As mentioned, the new Court will travel and sit throughout the land. This will tend to make the appellate court truly national for all the states rather than regional and thereby dispel concern or suspicion that regional influence may have had a bearing on the appeal decision, e.g. a northern court favoring a northern party or a western court favoring a western litigant.

B. Summary of General Benefits

What Congress was seeking to accomplish by forming the new Court of Appeals for the Federal Circuit, a view I fully and enthusiastically support, was eloquently stated during the Senate floor debate:

> " The present patent adjudication system is a forum shopper's delight and an innovator's nightmare. It is a quagmire of doctrinal inconsistency and is slow and outrageously expensive for litigants whether they be small inventors or large corporations. We intend to finish the business of cleaning up that quagmire and ending that nightmare..."

What Congress had in mind, along with the many organizations supporting the bill can perhaps be illustrated by the saga of Allen v. Blaisdell.

IV. ALLEN V. BLAISDELL

Allen and Blaisdell both filed patent applications in 1946 directed to a certain kind of bearing shim for use in automobiles.

Under the U.S. Patent System which does not have a first-to-file rule, an interference proceeding was instituted to determine who was the first inventor. The Patent Office found Blaisdell to be the first inventor and the Court of Customs and Patent Appeals affirmed Allen's appeal from this decision.

Normally, this would be the end of the story. Blaisdell would get a patent and Allen's application would be rejected. However, it was not.

A third party, Cocklin, caused a "public use" proceeding to be instituted in the Patent Office, claiming essentially that the invention was in public use more than a year before either Blaisdell or Allen filed and, accordingly, under U.S. law, neither was entitled to a patent.

Briefly, the facts showed that Blaisdell, an automobile mechanic operating his own shop, conceived of the invention to solve a particular repair problem. He tested his idea by placing the shims in an old car which was later sold. In the public use proceedings, Blaisdell admitted that his shims were in use more than a year before he filed his application. However, he argued this was an experimental use reasonably incident to the development of a suitable commercial product and this is not a "public

use" which would be a bar to his patent application. He argued further that it was unreasonable and unnecessary for him to have to remove the shims before he sold the car. Moreover, it was necessary that the shims remain in the car for continued experimentation to perfect the device. There was no testimony that the purchaser of the car knew these shims were in there.

The Board of Appeals of the Patent Office ruled that there was indeed a fatal public use and the applications were rejected.

Blaisdell, who was already held to be the first inventor, appealed this decision of rejection to the CCPA, as permitted by our patent laws (35 USC 144). After reviewing all the arguments, the Court affirmed this decision in 1957 (In re Blaisdell, 242 F2d 779, 113 USPQ 289). Following this decision the application of Blaisdell, the first inventor, eventually became abandoned.

But that's still not the end of the story. Allen, who lost the interference took the alternate appeal route permitted by our statutes (35 USC 145) and appealed the rejection to the U.S. District Court for the District of Columbia. The facts in Allen's appeal were of course the same as those decided by the CCPA against Blaisdell. However, the District Court came to the exact opposite conclusion and ruled there was no public use. The Patent Office appealed this decision to the Court of Appeals which, while noting the opposite conclusion reached by the CCPA,

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affirmed this decision (Watson, Commissioner of Patents v. Allen, 254 F2d 342, 117 USPQ 68).

While Allen's court suit was going on, Blaisdell's case became abandoned, as mentioned. Since Allen was now the only combatant left in the arena with a pending application, we have the fascinating situation caused by the disagreement between two appellate courts, of the party, Allen, who was not the first inventor, being the one to be awarded a patent. (U.S.P. 2,844,420).

This patent does not appear ever to have been litigated and I leave to others more skilled in litigation matters whether the Patent Office, with all the facts before it, issued a valid patent.

There is a sidenote to the saga of Allen and Blaisdell. As already mentioned, an applicant dissatisfied with an adverse decision of the Patent Office could at his election appeal to either the CCPA or the District Court.

In the most specific instance of forum-shopping, an applicant having a similar legal issue (if indeed it could arise) would naturally not go to the CCPA asking them to reverse their earlier holding in the Blaisdell case. He would simply go to the District Court where its "boss", the Court of Appeals had already ruled in his favor. This in turn created a dilemma within the Patent Office which has never been fully resolved. Normally, they are bound to follow the rulings of the CCPA. Both decisions

remain unchanged. It would seem pointless to adhere to the decision of the CCPA when you know very well the applicant will simply appeal to the District Court where he will prevail].

A seniormember of the Patent Office Board of Appeals recently expressed to me his view that the Patent Office should, and he believes would, follow such an adverse ruling by the circuit court as an exception to the general policy of following the CCPA. Of course, the matter is now moot.

It should be easy to understand this horrifying tale of judicial contradiction cannot be repeated under the unified appeals procedure now in force. All lower courts will now follow the older CCPA rulings along with the newer decisions of the CAFC.

V. A SPECULATION

The foregoing discussion of changes and the benefits derived therefrom are well documented and supported by the legislative hearings and the floor debates before both branches of Congress. [Other administrative benefits not germane to this paper were also mentioned].

There is another change (if you want to call it that) I believe will happen and I want to share this with you.

Under the U.S. appellate review procedure, reversals are made only when the appeals court finds "reversible error". How deeply the appeals courts dig into the facts to search for reversible error, only they can answer. Particularly in patent matters in which the Appeal Judges have no great familiarity, the tendency

should be towards affirmance of the lower court's decision, that is to say, a finding of no reversible error.

I have a feeling, shared by respected members of the patent bar to whom I have addressed the question, that the new CAFC, because of its experience and expertise in patent matters, will tend to scrutinize the record more closely. While this may not be good news to the appellee awarded the favorable decision below, I would expect to find a greater percentage of reversals on appeal.

It should also be noted that the old CCPA (or at least the current members of it) have a general reputation of being more liberal in their views on inventorship than the other circuits. I have a suspicion, and I stress it is only that, we will see a greater number of reversals on decisions such as a lower court holding invalidating a patent for lack of invention. This is not to say that the number of reversals on such points will be startling or unsettling. I simply mean to say I would expect justice to be better served in individual appeal cases.

VI. A SELECTED FEW AREAS OF CONFLICT

A. I have previously mentioned my belief that the CAFC would tend to dig quite thoroughly into the facts in reaching its decision.

1. This view is consistent with the current difference of opinion between some of the circuits and the old CCPA on the relevancy of secondary considerations such as commercial success,

long felt need, failure of others, etc. in determining whether the claimed subject matter would be obvious.

The circuits tend to view secondary considerations as a "fall back test" to be reached only in close cases when obviousness cannot be decided from the primary criteria of examining differences from the prior art and level of ordinary skill in the involved art. The CCPA exhibits a tendency to emphasize and examine secondary considerations routinely, not just in close cases. [Note also Chief Judge Markey's comment, infra, on full consideration of all relevant evidence.]

2. There is conflict in the circuits as to whether obviousness is a question of law or fact. Findings of fact are not usually reviewed on appeal; whereas conclusions of law are. The CCPA has held obviousness to be a legal conclusion. Accordingly, the CAFC will very definitely explore thoroughly whether the issue of obviousness was properly decided by the lower court.

B. I have also expressed the feeling that the CAFC may tend to be more liberal in their interpretation of the standards for patentability. I offer the following as illustrations.

1. Some circuits require synergy as a condition for patentability of combinations of old elements. While this issue does not appear to have been expressly addressed to date by the CCPA, dicta by one of its members pointed out that synergy is not a requirement for patentability.

2. The doctrine that unexpected results can be basis for patenting compounds that are structurally obvious from the prior art has been questioned by at least one District Court. The CCPA, on the other hand, has held that a previously unsynthesized compound having a formula which could be considered to be structurally obvious from a prior art compound may be patentable upon a showing of beneficial properties that would be unexpected from the prior compound.

3. In the U.S. there is a presumption of validity of a patent. Most circuits have held that the introduction of even one piece of prior art at trial which is more relevant to the patented invention than the art cited by the Examiner destroys the presumption of validity. The CCPA, however, has held that the presumption of validity continues until invalidity is established, notwithstanding presentation of prior art more pertinent than that cited by the Examiner.

C. Acknowledgment

The foregoing selected illustrations have been excerpted from a paper presented by Laurence H. Pretty, Esq. at the 1982 CCPA Judicial Conference in Washington, D. C. and I gratefully acknowledge Mr. Pretty's research in preparing this paper.

For those who may be interested in a further study into prediction of CAFC holdings, in view of CCPA precedents, on issues presently unsettled in the circuits, his paper is annexed in its entirety in the Appendix with his permission.

POSTSCRIPT

No paper on what litigants can expect from the new CAFC would be complete without sharing some of the views of Chief Judge Markey.

On Innovation

In noting that the new court will necessarily be plowing new ground in the field of court structuring, Judge Markey has stated:

> " There is, in all such restructuring, an imperative need to think anew, to avoid insistence on the comfort of a past procedure on the sole ground that 'we always did it that way', to continue only those past practices able in their intrinsic merit to pass muster in the new milieu, and to devise new, innovative procedures for accomplishing the Court's mission in the new environment."

On Panels of Judges

A unique feature of the new court is that it may sit in panels of more than three but less than in banc. Judge Markey believes that panels of 7 and 9 judges, while authorized, are likely to be rare. While five judge panels would tend to reduce productivity below that obtainable with three judges (the minimum number), he believes that five judge panels may be desirable during at least the early years to achieve two major goals:

(1) decisions in sensitive cases new to the court may be better received and more readily accepted by litigants and the bar if made by five judges; and (2) judges sitting in five judge panels will gain experience sooner with each other and with legal areas relatively new to some of them.

On Thoroughness of Judicial Review

> "I would hope also to see the day when all relevant evidence is always fully considered before a final conclusion is reached on any issue, including that of obviousness/nonobviousness."

On Perception of Role

Judge Markey has correctly noted that the most fundamental change [in the appellate restructuring] lies in the area of substantive jurisdiction.

> "The expectation is that a uniformity and reliability in the interpretation and application of the involved statutes will result. It is certain that forum shopping among appellate circuits in patent cases will cease."

On The Use of Slogans as Decisional Rubrics

> "I would suppose and trust that the CAFC will take the opportunity of avoiding the use of slogans as decisional rubrics, and that it might suggest that trial courts eschew the practice. I hope... to see the end of such phrasings as 'a

combination of old elements is unpatentable' used as statements of the law, in light of a more widespread recognition that every invention is a combination of old elements..."

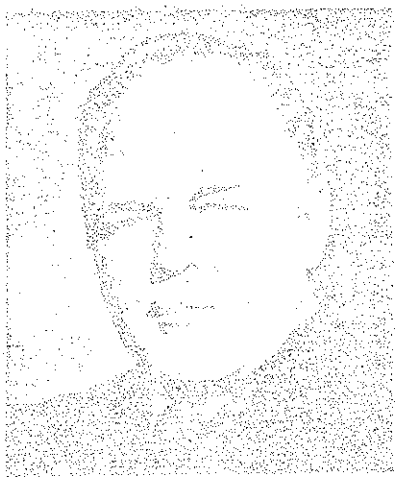
On Philosophy

"Though every Federal Court serves the role on numberous occasions, the Court of Appeals for the Federal Circuit should in a special way earn the title of 'The Conscience of the Government'. In perhaps 90% of the cases coming before the Court, the Government will be a party, having been most often a defendant in the tribunal from which appeal has been taken. [Ed. note: This high percentage includes cases brought against the Government in the former Court of Claims and which will now be heard by the CAFC.] By 'conscience' it is not meant, of course, that the court will decide automatically against the Government, or even that it will or should lean in that direction. On the contrary, it is as much a matter for the governmental conscience to know what it can and must do in meeting its duty to govern as it is to know what it cannot in justice do."

Referring to the need to enable the government to control the governed and the necessity of obliging the government to control itself, Judge Markey noted:

"The Court of Appeals for the Federal Circuit will serve a major role in meeting those difficulties if it always remembers the words of Abraham Lincoln carved in stone on the wall of the Court's lobby: "It is as much the duty of the government to render prompt justice against itself, in favor of citizens, as it is to administer the same between private individuals.'"

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APPENDIX

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MARKEY, HOWARD THOMAS



Judge Markey was appointed Chief Judge of the United States Court of Customs and Patent Appeals on June 22, 1972 and entered on duty June 26, 1972. He attended Loyola University, receiving a J.D. degree, cum laude, in 1949, and John Marshall Law School, receiving a Masters Degree in patent law in 1950. During World War II he served in the Army Air Corps, 1941-1946, as Engineering Officer and Test Pilot of jet aircraft, attaining the rank of Major. He was recalled to active service during the Korean War and served as Deputy Commander of the 315th Air Division. He is a retired Major General of the Air Force Reserve.

Judge Markey has been a member of the Judicial Conference of the United States since 1972; Coordinator of the Committee on Bicentennial of the Constitution since 1975; a member of the Committee on Court Administration and Chairman of the Advisory Committee on Codes of Conduct since 1979. He also serves as Chairman of the Science Liaison Task Force of the Federal Judicial Center; on the Board of Certification for Circuit Executives and the Supreme Court Historical Society. He was formerly a member of the Subcommittee on Judicial Improvements, 1975-1979.

Judge Markey is married to the former Elizabeth Catherine Pelletier and has three children: Jeffrey Howard, Christopher Gerard, and Mary Frances. He is a member of the American Bar Association, the American Judicature Society, the World Conference of Judges, the Federal Bar Association, and a Fellow of the American Bar Foundation.

1982 CCPA JUDICIAL CONFERENCE

PREDICTING CAFC HOLDINGS, IN VIEW OF CCPA PRECEDENTS, ON ISSUES PRESENTLY UNSETTLED IN THE CIRCUITS

By

Laurence H. Pretty*

I. METHODOLOGY

1. "Traditional" CCPA patentability issues.

2. Nontraditional CCPA areas, e.g. infringement issues.

   (i) ITC appeal holdings of CCPA

   (ii) Opinions of CCPA judges sitting with Circuit Courts

II. PATENTABILITY ISSUES

CIRCUITS: The sale or offering for sale of a later patented item places it on sale for 102(b) unless there is an express or clearly implied condition of exerimentation. Robbins Co. v. Lawrence Mfg. Co., 482 F.2d 426 (9th Cir. 1973). This view was criticized as "excessively rigid" by the Fifth Circuit in In re Yarn Processing Patent Validity Litigation, 498 F.2d 271, 287 (5th Cir. 1974) where the court held that an inventor should be free to introduce evidence of a bona fide experimental intent even if that is not indicated within a contract of sale or offering.

CCPA: Application of Dybel, 524 F.2d 1393 (CCPA 1975); Application of Theis, 610 F.2d 786, 204 USPQ 186 CCPA 1979).
Both follow the stricter Robbins approach.

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*Partner, Fulwider, Patton, Rieber, Lee & Utecht, Los Angeles, California. Edward Hejlek, an associate of the firm, also assisted in the preparation of this paper.

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CIRCUITS: The Fifth, Sixth and Eighth Circuits require synergy as a condition for patentability of combinations of old elements, Reed Tool Co. v. Dresser Industries Slip Opinion No. 80-2170 (5th Cir. 1982); Vulcan Inc. v. Fordees Corp., 658 F.2d 1106, 211 USPQ 852 (6th Cir. 1981); Reineke Mfg. Co. v. Sidney Mfg. Corp., 594 F.2d 644, 201 USPQ 344 (8th Cir. 1979). Synergy requirement rejected in Second, Third and Seventh Circuits, Champion Plug Co. v. Gyromat Corp., 603 F.2d 361, 202 USPQ 785 (2nd Cir. 1979); Rengo Co. Ltd. v. Molins Machine Co., 657 F.2d 535 (3rd Cir. 1981); Republic Industries, Inc. v. Schlage Lock Co., 592 F.2d 963 (7th Cir. 1979).

CCPA: The CCPA's decisions determining patent validity, for example, in ITC proceedings, have been silent on synergy. This issue does not appear to have been expressly addressed yet by CCPA. However, note the following decisions by judges from the present CCPA and the Court of Claims.

Judge Miller of the CCPA, writing for the Tenth Circuit in Plastic Container Corp. v. Continental Plastics of Oklahoma, Inc., 607 F.2d 885, 904, 203 USPQ 27 (10th Cir. 1979) pointed out that synergy is not a requirement for patentability.

Judge Nichols of the Court of Claims, writing for the D. C. Circuit in Robintech, Inc. v. Chemidus Wavin, Ltd., 628 F.2d 142, 205 USPQ 873 (D.C. Cir. 1980) held that the Court did not need to decide whether synergy was a requirement for patentability.

B. Improbability of Finding Invention in Combination of Old Elements

CIRCUITS: Circuits have continued to repeat the rubric of the improbability of finding invention in a combination of old elements, even in cases where the synergy test was disapproved. Republic Industries, Inc., supra; Sarkisian v. Winn-Proof Corp., 662 F.2d 596 (9th Cir. 1981).

CCPA: The CCPA has avoided making this observation in its opinions. Its ITC opinions, for example, focus strictly on the analysis of Graham v. Deere, 383 U.S. 1 (1966), 148 USPQ 459, as the only correct approach to determining obviousness.

C. Secondary Considerations

CIRCUITS: The Circuits exhibit a tendency to view secondary considerations as a fall back test only necessary to be reached in close cases when obviousness cannot be decided

from the primary criteria of Graham v. Deere alone. C.f. Republic Industries, Inc., supra.

CCPA: The CCPA exhibits a tendency to emphasize and examine secondary consideration routinely, not just in close cases. Stevenson v. U. S. Intern. Trade Com'n, 612 F.2d 546, 553, 204 USPQ 276 (CCPA 1979); Astra-Sjuco, A.B. v. U. S. Intn'l. Trade Com'n, 629 F.2d 682, 207 USPQ 1 (CCPA 1980).

II.3. UNEXPECTED RESULTS IN CHEMICAL INVENTIONS

CIRCUITS: The doctrine of unexpected results as a basis for patenting compounds that are structurally obvious from the prior art has been questioned by at least one District Court. C.f. Monsanto Co. v. Rohm & Haas Co., 312 F. Supp. 778, 164 USPQ 556 (E.D. Pa. 1971).

CCPA: A previously unsynthesized compound having a formula which would be structurally obvious from a prior art compound may be patentable upon a showing of beneficial properties that would be unexpected from the prior compound. Application of Papesch, 315 F.2d 381, 137 USPQ 42 (CCPA 1963).

II.4 LATE CLAIMING

CIRCUITS: There has been confusion concerning the implications of the late claiming doctrine of Muncie Gear Works v. Outboard Marine, 315 U.S. 759 (1942), 53 USPQ 1, since the passage of the new matter section of the statute, 35 U.S.C. 132, in 1952. The Second Circuit has taken an extreme view that claims not presented by amendment until more than one year after a public use or sale of the claimed invention, even though supported by the originally filed disclosure, are barred for late claiming. Kahn v. Dynamics Corp. of America, 508 F.2d 939 (2nd Cir. 1975).

CCPA: The CCPA rejects the Kahn rationale and construes Muncie Gear as limited to a new matter rejection, i.e. to the situation where claimed subject matter introduced after a statutory bar, is not disclosed in the original application. Westphal v. Fawzi, 666 F.2d 575, 212 USPQ 321 (CCPA 1981).

II.5 REFORMATION OF INVENTORSHIP

CIRCUITS: A patent issued in the name of one inventor could not be corrected to show the name of the alleged true inventor only because no proper inventor was named ab initio. Garrett Corp. v. United States, 422 F.2d 874, 881 at fn. 5, 164 USPQ 521, 526 (Ct. Cls. 1970).

CCPA: Reformation of inventorship from one sole inventor to a different sole inventor approved. Markey, CJ of CCPA, writing for the D. C. Circuit, in A. F. Stoddard Co. Ltd. v. Dann, 564 F.2d 556, 195 USPQ 97 (D. C. Cir. 1977).

II.6 PRIOR ART NOT PUBLIC AT TIME OF APPLICATION

35 U.S.C. 102(g) + 103

CIRCUITS: There is a shortage of cases in the Circuits as to the availability of non public work of another, who has not abandoned, suppressed or concealed his work, as prior art under 35 U.S.C. 102(g) for purposes of determining obviousness under 35 U.S.C. 103. C.f. Sutter Products Co. v. Pettibone Mulliken Corp., 428 F.2d 639 (7th Cir. 1970).

CCPA: The prior work of another who has not abandoned, suppressed or concealed, and which was not publicly known at the time the application was filed but was known to the applicant, is available as prior art against the applicant for a combined 102(g) + 103 rejection. Application of Bass, 474 F.2d 1276 (CCPA 1980).

The prior work of another who has not abandoned, suppressed or corcealed, and which was not publicly known at the time the application was filed or known to the applicant, is not available as prior art under 35 U.S.C. 102(g) for purpose of determining obviousness under 35 U.S.C. 103. In re Clemens, 672 F.2d 1029, 206 USPQ 289 (CCPA 1980).

II.7 FRAUD ON THE PATENT OFFICE

Subjectivity or Objectivity of the "But For" Test

CIRCUITS: Different tests for materiality are being applied. One is the "objective but for test," i.e. the Applicant's misrepresentation or omission was so material that the patent would not have issued under an objective standard, Swift Chemical Co. v. Usamex Fertilizers, Inc., 490 F. Supp. 1343, 197 USPQ 10 (E.D. Ca. 1977). Another test is the "subjective 'but for' test," i.e. the Applicant's misrepresentation or omission was such that it caused the Examiner to allow the application for patent when he would not otherwise have done so. Plastic Container Corp. v. Continental Plastics, supra [opinion written by Judge Miller of the CCPA]. C.f. Carter-Wallace, Inc. v. Davis-Edwards Pharmacal Corp., 443 F.2d 867 (2nd Cir. 1971).

CCPA: The CCPA applies the "subjective 'but for'" test, Norton v. Curtiss, 433 F.2d 779 (CCPA 1979).

II.8 PRESUMPTION OF VALIDITY

A. Effect of Art More Relevant Than That Cited by the Patent Examiner

CIRCUITS: Most Circuits have held that the introduction of even one piece of prior art at trial which is more relevant to the patented invention than the art cited by the Examiner destroys the presumption of validity. E.g. Globe Linings, Inc. v. City of Corvallis, 555 F.2d 727, 194 USPQ 415 (9th Cir. 1977).

CCPA: Presumption of validity continues until invalidity is established notwithstanding presentation of prior art more pertinent than that cited by the Examiner. Solder Removal Co. v. U. S. Intn'l. Trade Com'n, 582 F.2d 628, 199 USPQ 129 (CCPA 1978).

B. Weight to Be Given to Confirmation of Patent by Reexamination in Subsequent District Court Litigation

CIRCUITS: To date, there are no decisions involving any reexamined patent. However, dicta concerning the value of the reissue protest procedure, under the former practice, suggests that trial courts are likely to be inconsistent in the weight they attach to the outcome of PTO review. Contrast Pic Inc. v. Prescon Corp., 205 USPQ 228, 240 (D.Del. 1980) [a PTO proceeding sustaining validity over prior art enhances presumption of validity] with Johnson & Johnson v. Wallace A. Erickson & Co., 627 F.2d 57, 62, 206 USPQ 873 (7th Cir. 1980) [to say reissue process would strengthen presumption of validity is to say nothing].

CCPA: No precedent yet.

II.9 OBVIOUSNESS AS A FACT OR LAW QUESTION

There is a need for consistency on this issue because of its effect on jury litigation and on standard of appellate review.

CIRCUITS: One view, in the Tenth Circuit, for example, is that obviousness is a question of fact, Moore v. Schultz, 491 F.2d 294 (10th Cir. 1974) [reversed trial court's entry of judgment n.o.v. after jury had sustained patent finding it was not obvious on special interrogatory]. Other Circuits, for example, the Ninth Circuit, hold that obviousness is a

question of law, Carson Manufacturing Co. v. Carsonite International Corp., Inc.*, 658 F.2d 1306 (9th Cir. 1981) [reversed jury verdict for patentee which had found patent was not obvious].

CCPA: Obviousness is a legal conclusion, Stevenson v. Intn'l. Trade Com'n, 612 F.2d 546, 204 USPQ 276 (CCPA 1980).

In a jury context, see opinion of Markey, CJ CCPA, writing for the Sixth Circuit in Nickola v. Peterson, 580 F.2d 898, 198 USPQ 385 (6th Cir. 1978) [affirmed trial court's entry of judgent n.o.v. after jury had sustained patent finding it was not obvious on special interrgatory].

II.10 DESIGN PATENT

Level of Skill for Designs

CIRCUITS: The Third, Tenth and D. C. Circuits set the level of skill in the art, for the purpose of determining obviousness of a design, as that of the "ordinary designer." Ninth Circuit has used lower test of "ordinary observer," Schwinn Bicycle Co. v. Goodyear Tire and Rubber Co., 444 F.2d 295, 168 USPQ 258 (9th Cir. 1970).

CCPA: The CCPA recently abandoned the "ordinary observer" test in favor of the "ordinary designer" test in In re Nalbandian, 211 USPQ 782 (CCPA 1981).

III. INFRINGEMENT ISSUES

III.1 DOCTRINE OF EQUIVALENTS

CIRCUITS: No particular inconsistency exists among the Circuits. However, this subject is raised for anyone who may not be familiar with the CCPA's ITC cases involving Doctrine of Equivalent's analyses.

CCPA: Conventional doctrine of equivalents application in Sealed Air Corp. v. U. S. Intn'l. Trade Com'n, 645 F.2d 976, 209 USPQ 469 (CCPA 1981); Hale Fire Pump Co. v. Tokai Ltd., 614 F.2d 1278, 205 USPQ 123 (CCPA 1980). C.f. also Markey, CJ CCPA, writing for the Seventh Circuit in Panther Pumps & Equipment Co. v. Hydrocraft, Inc. 566 F.2d 8, 196 USPQ 81 (7th Cir. 1977).).

*Since vacated and now set for reconsideration before the Ninth Circuit for an en banc hearing on June 14, 1982.

III.2 FILE WRAPPER ESTOPPEL

CIRCUITS: A difference exists between the Circuits regarding whether file wrapper estoppel applies only to amendments to the claims or whether it also applies to an attorney's argument without amendment. The former view is found, for example, in Williams Bit & Tool Co. v. Christensen Diamond Products Co., 399 F.2d 628 (5th Cir. 1968) [citing supporting authority from the Second and Fourth Circuits]. The latter view is found, for example, in Welch v. General Motors Corp., 330 F. Supp. 80 (E.D. Va. 1970).

CCPA: File wrapper estoppel is not confined to claim amendments. It applies to statements made during prosecution to secure allowance even though not directed to references cited by the Examiner. Coleco Industries, Inc. v. U. S. Intern. Trade Com'n, 573 F.2d 1247, 197 USPQ 472 (CCPA 1978).

IV. SOME CLEAN SLATE ISSUES

-Patent Misuse

-Discrimination Between Licensees

-DJ Royalty/Termination Issues

-Preliminary Injunction Issues

-Beyond Question Test

-Computation of Damages Issues

-Laches/Estoppel Issues

Assertion of New Evidences in the Action for Revoking Patent Invalidation Trial Decision

Japanese Group, Committee No. 4

Speaker : Masao SHIMOKOSHI;
Mitsuomi WAKAHARA;
Hiroatsu KANEKO;
Hirohito KOIDE

Abstract

Opinions on the allowable scope of examination and judgment of grounds and/or facts for patent invalidation in an action before the Tokyo High Court for revocation of the trial decision rendered in a patent invalidation trial before the trial examiner at the Patent Office may vary, depending on the interpretation of the relation between the judicial and the executive powers under the current Consititution of Japan, from the position giving the most extensive scope to the position giving the narrowest possible scope. In this presentation, all the relevant Supreme Court Decisions will be reviewed and some inferences drawn from their interpretation will be given. Some citicisms will also be given.

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1. Introduction.....Where the Problem Lies
2. Present Constitution and Doctorines related to the Problem
3. Precedents.....Decisions at the Tokyo High Court and the Supreme Court
4. Interpretation of the Supreme Court Decisions and Some Criticisms

1. Introduction.....Where the Problem Lies

In the United States, the validity of a patent is judged by the judicial organ (civil court) and the executive organ (PTO). For instance, where an alleged infringer defendant finds grounds for invalidating the subject patent, the defendant may file the counterclaim for invalidating the patent, i.e., the defence of patent invalidity, in the court where the infringement case is pending, and the court ajudges the validity of the said patent. Under the re-examination system, the patent validity may also be judged at the PTO.

Whereas in Japan, the patent validity is judged only by the executive organ (Patent Office). Although the judgement of the Patent Office (the trial decision) may be reviewed by a court (judicial organ), the court merely supports or revokes the judgment (trial decision); it does not pass any direct judgment as to the validity or invalidity of the patent.

Japanese Patent Law stipulates, as follows:

A demand for a patent invalidation trial may be filed with the Patent Office in respect of a patent for which some statutory grounds for invalidation related to novelty, inventiveness, etc. exist (Art. 123). An action with regard to the matters on which a trial may be demanded may be instituted only against a trial decision (Art. 178(6)) and such an action cannot be instituted after a prescribed period of time has elapsed (Art. 178(3)). The Patent Office's judgment shown in the form of a trial decision becomes final and conclusive upon expiration of the period unless the parties are dissatisfied with it. If they are, the trial decision becomes final only after the court has decided the case. The Tokyo High

Court has the exclusive jurisdiction over the action brought against a trial decision (Art. 178(1)), and an appeal may, in turn, be lodged with the Supreme Court against a decision rendered by the Tokyo High Court. Where the action is found to be with grounds by the Tokyo High Court, the trial decision in question must be revoked (Art. 181(1), and the Patent Office (trial examiner) must carry out a further trial examination and render a trial decision in the event the court's decision for revocation has become final and conclusive (Art. 181(2)).

The problem arises over the scope of examination and judgment in (i. e., the object of) an action against a trial decision (i. e., an action for revocation of a trial decision) before the Tokyo High Court. An illustrative example is that a party demanding a patent invalidation trial asserted the invention lacked inventiveness and therefore had to be invalidated, citing a prior reference (A), at the Patent Office trial proceedings, and had their assertion rejected by the trial examiners. In other words, the demand for a patent invalidation trial was dismissed at the Patent Office. Then, this demandant brought an action to revoke the trial decision dismissing the demand at the Tokyo High Court, and additionally submitted another stronger prior art reference (B). If it is considered by the Tokyo High Court that the patentability of the invention is barred by Reference (B) although not by (A), then there arises the question of whether (a) the patent is invalidated by (B) and therefore the trial decision dismissing the demand for a patent invalidation trial should be revoked or (b) since the trial examiner did not consider

the patentability of the invention in connection with Reference (B), the Tokyo High Court cannot examine and judge the patentability of the invention on the basis of (B) in the action for revoking the trial decision, and, on the other hand, the trial examiner's judgment on Reference (A) submitted in the trial was correct, therefore the trial decision should be endorsed. In other words, the question is whether the action for revoking the trial decision (based on the foregoing) should be dismissed or not. In more general terms, is the Tokyo High Court permitted to examine and judge new facts additionally submitted in the trial decision revocation proceedings concerning the grounds of invalidation of a patent which had not been examined or judged by the trial examiner at the Patent Office? In other words, is it legal for the Tokyo High Court to pass a judgment on the illegality of a trial decision on the basis of such invalidation grounds newly submitted?

The reason why such a problem has arisen lies in the change of the Constitution of Japan. We will discuss the details concerning the change and several doctorines.

2. Present Constitution and Doctorines related to the Problem

Under the old Constitution, the Patent Law at that time stipulated that the party dissatisfied with the trial decision should appeal to the then Supreme Court and only on the ground that the decision violated the laws and ordinances. In other words, the former Supreme Court tried as a court of jokoku appeal /i.e., a court of matter-of-law instance, against trial decisions, dealing with only /the matter of law, not /the matter of fact, and did not allow allegation or

substantiation of new facts. This was permissible under the old Constitution.

The new Constitution (effective as of May 3, 1947) provides that administrative litigations shall fall under the jurisdiction of the judicial power vested wholly in a supreme Court and in such inferior courts as are established by law, and also that any organ or agency of the Executive shall not be given final judicial power, in other words, such an organ cannot conduct trials as a court of last resort i.e., the final instance. See Constitution Art. 76(1) and (2). The judicial power such as the legal actions by a judicial court includes the finding of fact in dispute as well as the applying of law, and it followed from this that it was not in line with the intent of the Constitution that such a judicial court acts merely as a court of matter-of-law instance, holding the finding of fact by an executive organ as final. Consequently, the Patent Law was amended, and the above type of litigation, i. e., an action against a trial decision, a type of administrative disposition, shall fall under the exclusive jurisdiction of the Tokyo High Court. From the intent of the Constitution as above discussed, the Tokyo High Court should be interpreted as a court for the trial of fact, i.e., a court of finding-of-fact instance, and from the interpretation, there arises, in turn, an idea that it would be only natural to allow the assertion and substantiation of new facts before the court. On the other hand, as this type of litigation before the Tokyo High Court deals with a trial decision rendered at the Patent Office, there also arises a doubt whether this assertion of new facts should be allowed without limitation, in other words, a suspicion that new facts should be limited to those facts which substan-

tiate or negate the grounds and/or facts relied upon by the trial decision.

The doctorines on the allowable scope of examination and judgment of grounds and/or facts for patent invalidation in an action before the Tokyo High Court for revocation of the trial decision rendered in a patent invalidation trial vary from (1) the position giving the most extensive scope, i. e., the stand that no restrictions are imposed on an action demanding the revocation of a trial decision in respect of its scope of examination and judgment, similar to ordinary administrative disposition to (2) the position limiting the same to the narrowest possible scope, i. e., the stand that "the so-called substantial evidence rule" should be applied analogously to an action for revocation of a trial decision as in an action for revocation of a decision by the Fair Trade Commission under the Anti-Monopoly Law. There is also (3) an intermediate position between the two extremes, i. e., the stand that, although no application of the substantial evidence rule should be made, some specific restrictions should be placed on the scope of judgment and examination in view of the unique character of the trial system under the Patent Law. Depending on how close the position (3) is to either of the two extremes (1) and (2), the restrictions become different.

Incidentally, in the United States, we understand, the finding of fact made by an administrative commission is deemed final and conclusive if supported by substantial evidences. This concept of the substantial evidence rule was, as you might know, imported from the United States to Japan under the present Constitution, and the Anti-Monopoly Law and

two more laws are regulated thereunder. The Anti-Monopoly Law stipulates in respect of litigations under Art. 77(1) that the fact finding made by the Fair Trade Commission if supported by substantial evidence shall govern the court, prohibiting as a principle the presenting of new evidences to the court (Art. 88(1)), while providing for exceptions where the presentation may be made (Art. 81). It also stipulates, however, that the court is to judge whether the evidence is substantial or not (Art. 80(2)). This is the actual status of the substantial evidence rule in Japan. Under these circumstances, it is thought that the substantial evidence rule in Japan is not in violation of the current Japanese Constitution.

3. Precedents ..... Decisions at the Tokyo High Court and the Supreme Court

The practical business carried out at the Tokyo High Court concerning the scope of examination and judgment by the court to see whether the decision in a patent invalidation trial is legal or not has followed the position (3), but quite close to the position (2). In other words, it may be said that the Tokyo High Court has always kept the position shown in the decision (g) described in Table 1.

The practical business at the Supreme Court also has followed the position (3), but had been very close to the position (1) till up to the 1960's. This position is one that there are no specific limits on the scope of examination and judgement of facts in an action before the Tokyo High Court for revocation of the trial decision made in a patent

invalidation trial as in an ordinary action brought before a court for revoking an administrative disposition, or that the scope is limited to those facts substantiating the violation of the specific statutory provisions disputed in the trial, thus extending the scope of examination and judgement of facts. See Decisions (a), (c) and (e) in Table 1. A radical change in the stand of the Supreme Court happened, as is apparent from the decision (g) of 1976 under which the scope is interpreted as limited to the particular facts examined and judged in the trial and some new limited facts such as corroborating or complementary facts or evidences. /This latter stand has continued to date, because while all the decisions except (g) were rendered by the Petty Bench, the decision (g) was rendered by the Grand Bench which made changes in respect of the past decisions (a), (c) and (e) and there have been no supreme court decisions since then altering the Grand Bench decision.

Table 1 lists all the ten Supreme Court decisions, together with their teachings, concerning the scope of examination and judgment by the Tokyo High Court for judging the legality of the Patent Office's judgements (trial decisions)rendered in trials, including not only trials for invalidation of patent but also other types of trials. Although not all these ten cases are related to actions for revocation of trial decisions rendered in the patent invalidation /trial, nor are they all under the present Patent Law (effective as of April 1, 1960), the underlying rationale for these decisions is clearly applicable to an action for the revocation of the trial decision rendered in a patent invalidation trial. As mentioned above, all the decisions were made by the Petty

Bench except (g) which was made by the Brand Bench.

Table 1 Decisions of the Supreme Court

(a) Decision of October 16, 1953 on the (o) No. 745 of 1951 case regarding the trial decision in a trial against examiner's decision of refusal of a patent application

Since an action at the Tokyo High Court for revoking a trial decision is the trial of fact, i.e., the fact finding instance, the Tokyo High Court is permitted to adopt as the basis for their judgment those facts which had not appeared in the trial at the Patent Office but asserted for the first time in the action for revoking the trial decision. The particular situtation is that a prior art reference A was relied upon in the Patent Office trial as the ground for barring the patentability of the invention, while the Tokyo High Court denied the patentability by taking three prior art references B, C and D which were submitted anew there, in combination with Reference A.

(b) Decision of September 22, 1960 on the (o) No. 637 of 1959 case regarding the trial decision in a trademark registration revocation trial

Concerning the specific fact finding made in a trial at the Patent Office, it is permitted for the Tokyo High Court to carry out again the fact finding by using evidences arising after the trial decision, together with the facts examined and judged in the Patent Office trial, in an action for revoking the trial decision, so long as the evidences are related to the specific facts in the Patent Office trial.

(c) Decision of December 20, 1960 on the (o) No. 567 of 1958 case regarding the trial decision in a trademark registration invalidation trial

So far as the new facts or evidences (including those facts arising after the trial decision was rendered) are related to the specific provision disputed in the trial, they may be used for judging whether the violation of the provision existed. Incidentally, this decision explicitly excluded the application of the substantial evidence rule seen in the Anti-Monopoly Law.

(d) Decision of July 1, 1966 on the (Gyo-tsu) No. 108 of 1965 case regarding the trial decision in a utility model

invalidation trial

The court ruled, referring to the decision (c), that it is permissible for the Tokyo High Court to independently carry out a fact finding by overall review of the evidences including not only those adopted by the trial decision but also those newly submitted in the action for annulling the trial decision in order to confirm the factual relation concerning the point of dispute in the trial.

(e) Decision of April 4, 1968 on the (Gyo-tsu) No. 62 of 1964 case regarding the trial decision in a utility model invalidation trial

Since an invalidation trial is the system for the judgment upon a dispute over the violation of a specific provision cited as a ground for invalidation, it is not permissible to assert a different provision to be violated in an action for revocation of the trial decision. However, as far as the allegation and/or substantiation which has newly been submitted is related to the violation of the specific provision, it is permitted to examine and judge the new allegation and/or substantiation by the Tokyo High Court, similarly to a usual revocation action of an administrative disposition. The particular situation is that a new powerful prior art reference was submitted before the Tokyo High Court in addition to the two prior art references which had been submitted in an invalidation trial.

(f) Decision dated May 28, 1968 on the (Gyo-tsu) No. 3 of 1965 case regarding the trial decision in a patent invalidation trial.

Referring to the decisions (a), (c) and (e), and in regard to a prior art reference submitted before the trial examiner at the Patent Office to substantiate the ground for invalidation, the court held it permissible to adopt, in an action for revoking a trial decision, other prior art references as an evidence to show the state of the art on which the interpretation of the prior art reference was to be based.

(g) Decision dated March 10, 1976 on the (Gyo-tsu) No. 28 of 1977 case regarding the trial decision in a patent invalidation trial

In view of the structure and character of the trial proceedings and the attacking system of trial decisions which is different from the system for attacking ordinary administrative dispositions, an action before the Tokyo High Court asking for revocation of a trial decision by the trial examiner at the Patent Office should be limited to the specific

ground for invalidation, i.e., the violation of specific provision(s) and specific evidence(s) to substantiate the violation, which had been examined and adjudged in the Patent Office trial. This understanding is in conformity with the provision of Article 167 of the Patent Law which allows no one to demand a trial for invalidation of patent on the basis of the same facts and the same evidence.

While determination of a specific invalidation ground is to be made in the light of the overall mechanism of the patent system, assertion of patent invalidation based on the comparison with some specific prior art and that based on the comparison with other specific prior art are two different invalidation grounds even if they both refer to the identical provision of the novelty of invention (Art. 29(1)).

The court held that it was not permissible before the Tokyo High Court to assert additionally an invalidation ground based on another prior art independent from the invalidation ground examined and adjudged in the invalidation trial at the Patent Office, and made the precedents change of the decisions (a), (c) and (e).

(h) Decision of April 30, 1976 on the (Gyo-tsu) No. 9 of 1976 case regarding the trial decision in a trial against examiner's decision of refusal of a utility model application

When the state of the art prevailing at the time of filing on which the judgment of inventiveness was to be based questioned in the Patent Office trial, it is permissible was to assess the state of the art by publications put in circulation after the filing of application and submitted additionaly in the action before the Tokyo High Court.

(i) Decision of June 21, 1979 on the (Gyo-tsu) No. 81 of 1978 case trgarding the trial decision in a trial against examiner's decision of refusal of a patent application

In addition to prior art references on which the trial decision was based, additional corroborating publications for substantiating the state of the art may be adopted in an action before the Tokyo High Court for revoking the Patent Office trial decision.

(j) Decision of January 24, 1980 on the (Gyo-tsu) No. 2 of 1979 case regarding the trial decision in a utility model invalidation trial

Having given the similar teaching as in the decision (f), the court held that this way of thinking was not contrary to the purport of the decision (g) made by the Grand Bench.

The decision (g) of the Grand Bench made changes from some past Supreme Court decisions in arriving at the conclusion that the scope of examination and judgment made by the Tokyo High Court in regard to the substantive illegality of the trial decision rendered in a patent invalidation trial should be confined only to those related to the specific invalidation grounds actually disputed and adjudged in the trial, and that the specific invalidation ground resides in the respective prior art facts compared with the invention. The decision also scrutinized the trial system and the action against a trial decision under the Patent Law. So, this decision is worth going through.

How to determine the individuality of a certain prior art fact in relation to the decision (g) of the Grand Bench is another question. This should not be determined formally but substantially, i.e., should be based on whether the substantial identity between different prior art facts exists or not. For instance, if a new fact or evidence is found to have the substantial identity with the material used in the adjudication in a Patent Office trial, it is understood that the new fact or evidence not examined and judged in the Patent Office trial may be asserted in an action against the trial decision. The correctness of this understanding is supported by the precedents (b), (d) and (f) of the decision (g) which were not altered, and (h), (i) and (j) made thereafter, particularly from the fact that the decision (j) cited (g).

It is understood further that even a well-known prior art may not be relied anew in an action before the Tokyo High Court asking for revocation of a trial decision as an

independent invalidation ground.

4. Interpretation of Supreme Court Decisions and Some Criticisms

Contemplating the decisions of the Supreme Court, in in respect of the allowable scope of examination and judgment by the Tokyo High Court on the illegality of the trial decision made in a patent invalidation trial, it may be said that:

(i) Statutory provisions for invalidation which are different from those relied upon in the Patent Office can not be resorted to in an action before the Tokyo High Court. Decision (g)

For instance, in an action for revoking the trial decision dismissing the demand for a trial rendered in a patent invalidation trial based on insufficient evidences on prior use (the Patent Law, Art. 29(1) ii), the plaintiff (the party demanding the trial) cannot be allowed to assert that the subject patent is invalid because the patent invention is disclosed in a prior art reference submitted anew by the claimant. (Patent Law, Art. 29 (1) iii)

(ii) Assuming that the statutory provision for invalidation before the Tokyo High Court is the same as in the Patent Office trial, the evidences newly submitted in support of the invalidation are not examined nor judged. Decision (g)

For instance, if the demand for a patent invalidation trial was dismissed, the demand being based on the reasons that the subject invention lacks inventive step in view of the prior art reference A (Patent Law, Art. 29(2)), the plaintiff (the party demanding the trial) is not allowed, in the action against the trial decision ruling against the demand for invalidation trial, to assert the lack of inventiveness of the patent invention over a prior art reference B which is quite independent from A (Patent Law, Art. 29(2)).

However, the plaintiff is of course permitted separately to demand another trial for the invalidation of the subject patent based on the prior art reference B.

(iii) The evidence which was not used in the

trial decision even though submitted in the trial proceedings is not to be examined or judged before the Tokyo High Court. Decision (g)

For instance, in a patent invalidation trial demanded on the ground that the invention lacked inventiveness in view of a prior art reference A and/or B (Patent Law, Art. 29(2)), a trial decision was rendered holding that the patent was invalid because the invention lacked the inventive step over the reference A, not making any reference to the reference B. In the action for annulling the trial decision, the invalidation based on the prior art reference A was found groundless as a result of counter argument by the plaintiff (the Patentee). In this case, the defendant (the party demanding the trial) cannot be allowed to assert that the inventiveness of the patent invention is barred by the prior art reference B, even if not by A. demandant

However, the / may be allowed to demand a separate trial for patent invalidation based on the reference B.

(iv) An additional evidence which merely serves to fortify the evidence adopted as the basis for judgment in a trial decision can be taken up for examination and judgment even if the additional evidence is submitted anew at the Tokyo High Court. Decisions (b), (d), (f), (h), (i) and (j).

For instance, when a demand was dismissed for a trial for the invalidation of a patent based on the lack of inventiveness over a prior art reference A (Patent Law, Section 29 (2)), the plaintiff (the party demanding the trial) is allowed, before the Tokyo High Court, to submit another reference B, as fortifying, corroborating or complementary evidence, showing the state of the art on which the reference A should be intepreted and assert that the patented invention lacks the inventiveness over the reference A in view of the reference B.

Of the above inferences drawn from the interpretation of the Supreme Court decisions, it is our opinion that (i), (ii) and (iv) are reasonable, but not (iii). Since the parties almost always make their best efforts to produce means of attack and of defence in connection with the evidences submitted during the trial proceedings at the Patent Office, good use should be made of such efforts before the Tokyo High Court in the interest of the parties, even though they have not been used as the basis for judgement in the Patent Office

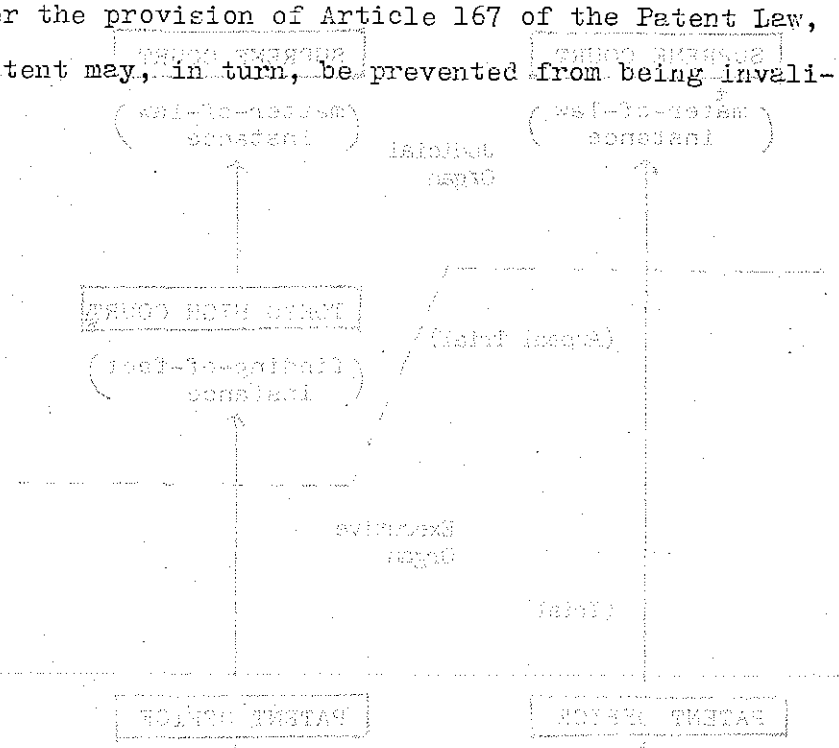
trial decision. From this point of view, the inference (iii) which does not allow that is therefore in conflict with the interest of the parties.

At any rate, so long as we are to act in compliance with the decisions of the Supreme Court, we must accept all the inferences, including (iii).

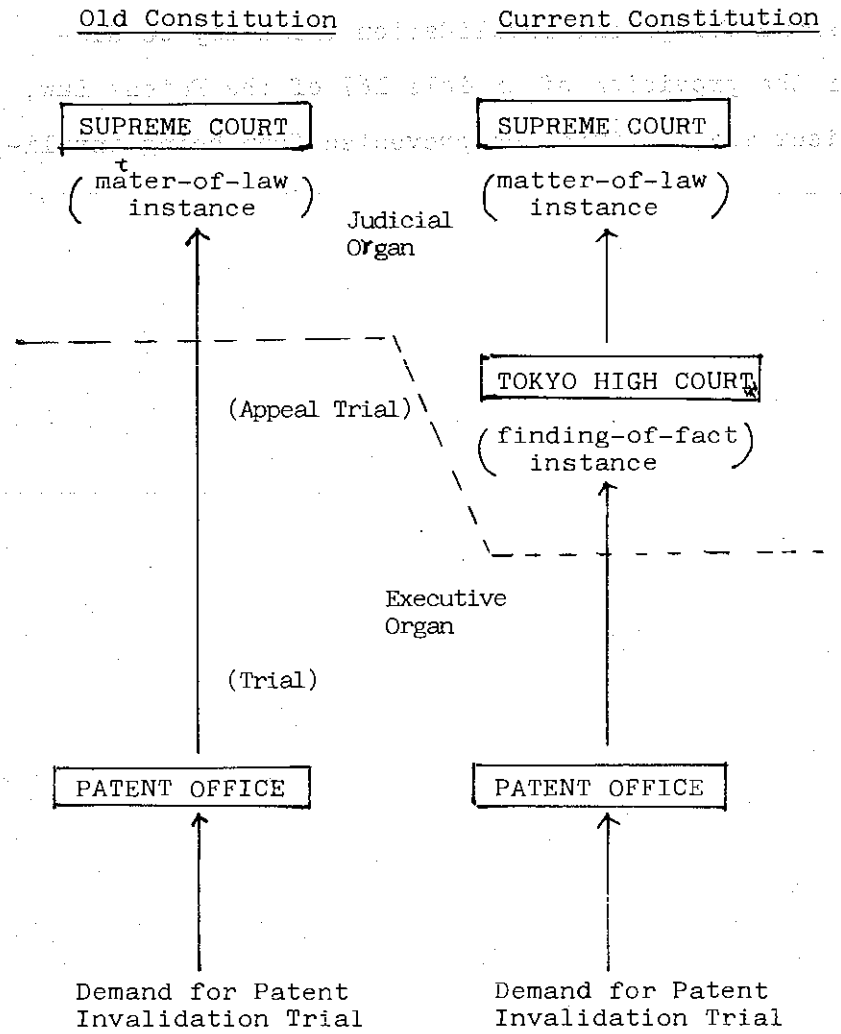
Moreover, we should be aware of the application of "the same facts and the same evidence" provision as stipulated in Article 167 of the Patent Law in considering the Supreme Court decision.

For instance, suppose that a demand for a trial for the invalidation of a patent on the basis of a prior art reference A was dismissed at the Patent Office, and, in the action for revoking the trial decision, the Tokyo High Court, however, held the patent is invalid after consideration of another reference B newly submitted before the court, as well as the reference A, and revoked the trial decision accordingly (Patent Law, Art. 181 (1)), and that the case was remanded to the Patent Office and further examined by the Patent Office trial examiner (Patent Law, Art. 181 (2)), and then a new trial decision was rendered and became final and conclusive that the patent is invalid. Whereas, under the same circumstances, suppose that the plaintiff (the party demanding the invalidation trial) failed to submit the prior art reference B and the trial decision in the demand for a patent invalidation trial was endorsed or supported by the Tokyo High Court. It is to be noted that in the latter case, if the party demands afterward another trial for invalidation of the patent on the ground that the patent is invalid because the subject

patent invention does lack the inventive step over the prior art reference A in combination with the prior art reference B, such a demand for patent invalidation trial may be dismissed under the provision of Article 167 of the Patent Law, and this patent may, in turn, be prevented from being invalidated.



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W.G. No. 2



* Assertion of new evidences in the action before the Tokyo High Court for revoking a patent invalidation trial decision is not allowed, according to the Supreme Court decisions.

